

## *Determinant of Early Marriage Adolescent to Risk Giving Birth Child in Case of Stunting*

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### ABSTRACT

**Background:** Early marriage by adolescents aged less than 16 years can affect the reproductive health readiness of mothers or prospective mothers in giving birth to children with low birth weight potential and risk of stunting. **Method:** The method used for systematic article review was obtained from 5 databases with 15 relevant articles screened using the PRISMA method. **Results:** The results of the data obtained are that economic status is very influential on the incidence of stunting, this is due to poor fulfillment of toddler nutrition, lack of education of parents of toddlers, and lack of information and access to good health services. **Conclusion:** Educational background, economic status, cultural background and environment are the strongest factors that can encourage early marriage for adolescents with the majority living in less developed areas.

**Keyword:** Adolescent, early marriage, low birth weight, stunting

### INTRODUCTION

Cultural, ethnic, racial, and religious diversity throughout the world can be a factor causing stunting, especially in developing countries such as Indonesia, India, Africa, and others. The factors of stunting itself are very diverse, namely in addition to having to pay attention to improvements in diet, parenting, as well as improving sanitation and access to clean water, people who have many educational, cultural, and economic backgrounds can also be factors that can support high and low stunting cases (Pranata *et al.*, 2021; Safitri *et al.*, 2022; and Zihui *et al.*, 2020). The incidence of stunting toddlers can be one of the imbalanced factors in population growth, therefore the importance of controlling the number of quality population growth by paying attention to the growth and development of toddlers as potential successors of the nation (WHO, 2018; and Salam *et al.*, 2020).

Stunting is a chronic malnutrition problem caused by lack of nutritional intake for a long time, resulting in

impaired growth in children, namely the child's height is lower or shorter (dwarf) than his age standard (Quamme and Per, 2022; and Tamirat *et al.*, 2020). One of the cases and handling of stunting is a national development priority which is one of the Output Indicators in the National Action Plan for Food and Nutrition in 2021 - 2024. In realizing fair welfare, community equality is needed, namely not seeing and distinguishing from a gender perspective in providing or being given education (Santhya *et al.*, 2008). Men and women play a very important role in the process of solving the incidence of stunting toddlers. Men who will become husbands need an educational background on health and nutrition issues in order to become a standby husband and participate in providing support to mothers or prospective mothers for child growth and development (Elwani and Firman, 2020; and Kartika, 2015).

In an effort to reduce the incidence of stunting, apart from a gender equalization approach, it must also be with the right target, namely young

people or adolescents (Manoarfa, 2020). Adolescents are one of the potential targets in reducing the incidence of stunting in toddlers because adolescents are the forerunners of the nation's successors who must be considered and educated about reproductive health to find out preventive actions from the incidence of stunting and reduce the high rate of early marriage in the world (Elwani and Firman, 2020; and Prakash *et al.*, 2021). The number of cases of underage marriage in the world can reduce the quality of children's health in terms of growth, development, and nutritional intake so that the decline in the quality of health of children under five can cause suboptimal growth and stunting (UNICEF, 2020). So this study aims to determine the dominant factors in various countries that encourage young marriage in adolescents aged <15 years and determine the factors of toddlers growing with the incidence of stunting in young parents.

## METHODS

The method used in the preparation of systematic review articles using PRISMA with a database of research articles for

2020-2022 from Scopus, ScienceDirect, SAGEPUB, PubMed, and PLOSONE. Article screening is done with the help of [convidence.org](https://www.convidence.org) website application. Article screening is done manually by the author through titles and abstracts, exclude criteria such as completeness and eligibility of full text articles, then continued with full text screening of articles using the help of the Mendeley application as a whole, namely disqualified articles that are not in English as a whole, review articles, articles not using quantitative methods, article outcomes that are not in accordance with the topic, and article incompleteness. The results of the article screening obtained 15 relevant articles consisting of 7 articles about stunting, 5 articles about adolescents, and 3 articles about early marriage. Article searches in 5 databases using the keywords "Early Marriage", "Adolescent", "Health Reproduction", "Stunting", and "Baby Birth Low Rate". The PRISMA diagram from the systematic review of this article is in Figure 1. The PRISMA method is carried out to facilitate the preparation of systematic review articles to make it more structured and easier to obtain relevant research articles.

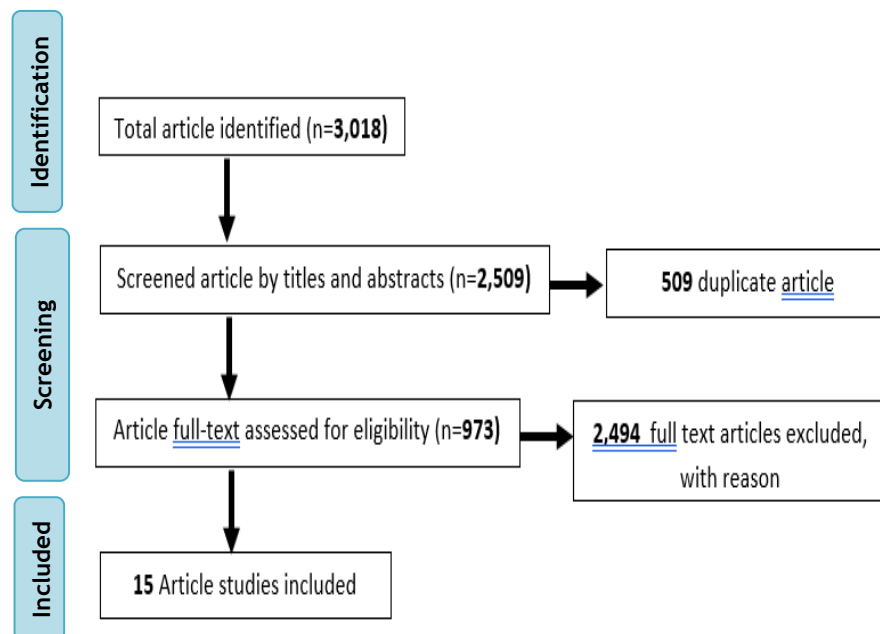


Figure 1. PRISMA diagram of systematical database search review

## RESULTS AND DISCUSSION

The results of research on marriage at the young age of <16 years who will

then become parents at an early age will cause someone to have less skills in caring for their children, in contrast to people who have toddlers in adulthood (Santhya

*et al.*, 2008; and Santhya, 2011). Therefore, toddlers born from early marriage have a higher risk of developmental delays compared to toddlers born to parents who are not married early. Getting married at a young age while still a teenager will have a negative impact on his children. Based on the findings of the article, it is stated that the factors causing growth delay in

toddlers are maternal health history (age), economic status, and lack of nutritional fulfillment. In **Table 1** there is an article with research findings that mentions the unpreparedness of reproductive organs in adolescents so that it can result in babies born with low body weight (Pangaribuan *et al.*, 2020; and Santhya *et al.*, 2008).

**Table 1.** Systematical review research article database.

Author	Year	Heading	Location	Study Type	Research Design	Participant Sample	Research Focus	Findings
Tamirat, K.S., Tesema, G.A., and Zemeru, T.T.	2020	Determinants of maternal high-risk fertility behaviors and its correlation with child stunting and anemia in the East Africa region: A pooled analysis of nine East African countries	East African	Regression model	Quantitative	31,873 mothers	Children, stunting	Social and economic conditions can affect a woman's medical history. Mothers aged <18 years have a child birth interval with an increased incidence of stunting and anemia in children.
Zhihui, L., Kim, R., Vollmer, S., and Subramanian, V.	2019-2020	Factors Associated With Child Stunting, Wasting, and Underweight in 35 Low- and Middle-Income Countries	Cambridge, Massachusetts, USA	Cross-sectional study	Quantitative	299,353 children aged 12-59 months	Children, stunting	Socioeconomic status of the household and The nutritional status of parents is The main factor associated with malnutrition cases in most countries. Environmental conditions, health behavior, prevalence of disease, and Maternal reproductive care is often associated

								with the incidence of stunting in children.
Mulu, N., Mohammed, B., Woldie, H., and Kegnie, S.	2021- 2022	Determinants of stunting and wasting in street children in Northwest Ethiopia: A community-based study	Gondar, Bahir Dar, Northwest Ethiopia	Cross-sectional study	Quantitative	422 children aged 5-18	Children, stunting	Stunting is one of the critical problems in street children. Based on age, diet, illicit drug use is also a significant cause that can cause stunting and fulfillment of children's nutritional status.
Quamme, S.H., and Per, O.I.	2022	Prevalence of child stunting in Sub-Saharan Africa and its Risk factors	Sahara Africa	Cross-sectional study	Quantitative	43 regions	Children, stunting	The incidence of stunting occurs in children aged >1 years with a low proportion of birth weight, shorter pregnancy time intervals (premature), low maternal education, low economy, and environmental factors.
Mtongwa, R.H., Festo, C., and Ester, E.	2021	A comparative analysis of determinants of low birth weight and stunting among under Five Children of Adolescent and Non-adolescent mothers using 2015/16	Zanzibar and Tanzania	Cross-sectional study	Quantitative	13,266 mothers with children <5 years	Children, Stunting, Adolescent	Stunting in children is caused by birth weight, gender, and age of toddlers. Mothers with a more mature age than adolescents have less risk of giving birth to children with low body weight compared to mothers who are teenagers.

		Tanzania Demographic and Health Survey (TDHS)						
Safitri, H.O., Fauzinyas, R., Indarwati, R., Efendi, F., and Lisa, M.	2022	Determinant factors of low birth weight in Indonesia : Findings from the 2017 Indonesian demographic and health survey	Indonesia	Cross-sectional study	Quantitative	14,239 respondents	Stunting, Children birth	Women who have a low level of education (uneducated or only completed primary school) are at greater risk have a BBLR baby compared to a highly educated woman (university level).
Guthold, R., Moller, A.B., Adebayo, E., <i>et al</i>	2021	Priority Areas for Adolescent Health Measurement	Switzerland	Cross-sectional study	Quantitative	148 countries; teenagers 18-29 years	Adolescent, Health reproduction	Mental health, adolescent weight, sexual life and proportion, lifestyle, HIV / AIDS, self-harm, and various other diseases both infectious and non-communicable can affect adolescent health.
Salam, R.A., Das, J.K., Lassi, Z.S., and Zulfiqar, A.B.	2020	Adolescent Health and Well-Being: Background and Methodology	Sub-Saharan Africa	Cross-sectional study	Quantitative	10% young man; 15% young women 15-24 years old	Adolescent, Health reproduction	Sexual/reproductive health interventions , nutritional fulfillment, immunization , Mental health, substance abuse, and accidents/injuries can affect the health status of adolescents and their environment.
Rokicki, S.	2021	Impact of family	Sub-Saharan	Quasi-experi	Quantitative	Women aged	Adolescent,	Pregnancy in early

		law reform on adolescent reproductive health in Ethiopia: A quasi-experimental study	Africa	mental Study		15-24 years	Health reproduction	mothers or adolescents can be a factor in the death of newborns or babies born with low body weight at the birth of their first child.
Pranata, A.K., Wahyudi, A.S., Handoyo, L., and Ferry, E.	2021	Determinants of birthplace among middle-to lower-class women in Indonesia : A study using the Indonesian Demographic and Health Survey	Indonesia	Quasi-experimental Study	Quantitative	49,627 females aged 15-49 years	Adolescent, Health reproduction, Health Education	The birthplace preference of lower-middle-class women in Indonesia correlates with several Factors include the woman's age, education level, husband's employment status, perception access to health facilities, number of children, and adequate housing.
Aychiluhm, S.B., Tesema, A.K., and Abay, W.T.	2021	Early Marriage and Its Determinants among Married Reproductive Age Group Women in Amhara Regional State, Ethiopia: A Multilevel Analysis	Amhara, Ethiopia	Multilevel Analysis Study	Quantitative	2,887 married women	Adolescent, Health reproduction, Early Marriage	The prevalence of early marriage in rural areas tends to be high, therefore the government has an important role to make policies by paying attention to education and women's power in deciding the time of marriage in order to reduce early marriage.
Li, C., Cheng, W., and Hui, S.	2021	Early marriage and maternal	Sub-Saharan Africa	Cross-sectional study	Quantitative	6,222 females aged 15-18	Early Marriage, Maternal	Getting married before the age of 15-16

			health care utilization: Evidence from sub-Saharan Africa			years	Health Care	years	can cause disruption to the health of the mother / mother-to-be.
Pangaribuan, I.K., Sari, I., Simbolon, M., Manurung, B., and Kosheila, R.	2020		Relationship between early marriage and teenager pregnancy to stunting in toddler at Bangun Rejo Village, Tanjung Morawa District, Tanjung Morawa, Deli Serdang 2019	Deli Serdang	Cross-sectional study	Quantitative	645 toddlers aged 0-59 months	Early Marriage, Adolescent, Stunting	Mothers / expectant mothers who experience pregnancy at a young age biologically can be disrupted pregnancy because of less than optimal blood flow to the cervix and uterus has not fully developed in some adolescents at an early age.
Prakash, R., Singh, A., Pathak, P.K., Parasuraman, S.	2021		Early marriage, poor reproductive health status of mother and child well-being in India	Bengaluru, India	Multiple Linear Regression Bivariate Analysis	Quantitative	124,385 females aged 15-49 years; 74,369 males aged 15-54 years	Early Marriage, Health Reproduction	Woman those who marry early have lower rates of schooling, poor socioeconomic status, limited exposure mass media or access to information and the majority live in demographically underdeveloped areas.

Child marriage in the majority of adolescents in *South Asia, sub-Saharan Africa*, and in Indonesia is largely motivated by the determinant group variables in table 2 (UNICEF, 2019; UNICEF 2022; and UNICEF 2016). The sub-determinants in **Table 2**. mentioned that gender is more dominant, adolescent girls aged <16 years carry out child marriages

with educational backgrounds who graduated from equal school and lack of family economic income. Adolescent girls aged 16-24 years carry out early marriage with an educational background that has graduated from junior high school and high school and family economic income is lacking (Zhihui *et al.*, 2020). The background that is quite dominant is in



*lifestyle* where in adolescence generally do a lot of activities and wide associations so that not a few cases of teenagers who get married due to juvenile delinquency factors and poor lifestyles. The next background that is dominant with the incidence of child marriage is cultural factors. Each country and region has its own culture towards marrying off their

sons and daughters. Cultural background is a strong factor because an area that is still thick in customs is more common that children who have entered the age of 12 years and over can be married off to reduce the family's economic burden and help increase family income (Santhya, 2022; and GSDRC, 2011).

**Table 2.** Factors affecting teen marriage <15 years

Determinant Group	Sub-Determinants	Information
Gender	Male Woman	Fewer males are married <15 years. The majority of women are married <15 years.
Age of Married	<16 years old	Often called <i>child marriage</i> , it has a higher percentage in <i>South Asia, Sub-Saharan Africa</i> and especially Indonesia
	16-24 years	It is often called <i>early marriage</i> , and has a greater percentage of adolescents in <i>South Asia, Sub-Saharan Africa</i> and especially Indonesia
Education	Elementary School	Many married women with primary school education backgrounds
	Junior School	High More men and women married with junior high school education
	Senior School	High The majority of early marriages are carried out by couples with high school education
	Bachelor	Couples with higher education usually tend to marry once they are ready
Culture	Environment	Culture is the dominant factor in some countries and regions for <i>early marriage</i>
Life Style	Nutrients	The importance of meeting good nutrition 4 healthy 5 perfect from an early age
	Sanitation	Clean and healthy living habits can improve the degree of health of adolescents
	Smoking, Alcohol	Habits that become a tendency for adolescent boys and some adolescent girls
	Juvenile Delinquency	Juvenile delinquency habits are often carried out by both male and female adolescents
Socio-economic	Low Income	Families with lower income backgrounds are more likely to marry off children at an early age

\*\*Source: UNICEF child marriage factsheet data for 2016, 2019, 2020, 2022 and

\*Results of several article findings that the author reviewed

### 3.1 Risk of Young Pregnancy Giving Birth to BBLR

Early pregnancy in adolescence can make it possible to give birth to premature babies or give birth to babies with a low birth weight greater due to the unpreparedness of the reproductive organs of the mother-to-be. Unplanned teenage pregnancies or teenage pregnancies from early marriage are more common in people with economically disadvantaged backgrounds (Santhya *et al.*, 2008). Young mothers who are still teenagers tend to have less experience in parenting due to lack of educational background (Pangaribuan *et al.*, 2020; and Arthur *et al.*, 2018). Research reveals that most stunting incidents occur within the first 2 years of a child's life. The

initial period of malnutrition in children is during fetal development caused by malnourished mothers. Therefore, maternal nutrition during pregnancy plays an important role in the growth and survival of the child (Pangaribuan *et al.*, 2020). Some research suggests that women who have a low level of education (uneducated or only completed primary school) are at a greater risk of having a BBLR baby than women who are highly educated (have attended university). This is because adolescent girls with highly educated backgrounds prefer to complete their education and have a good career as a household provision (Arthur *et al.*, 2018). The findings of the study are in line with studies in Ethiopia and Cambodia, where the results showed that



related to education, the lower the mother's education level the higher the risk of giving birth to a BBLR baby (Safitri *et al.*, 2022).

### 3.2 Lifestyle Factors to Adolescent Health

Another factor that can trigger stunting in children with mothers aged <16 years is the lifestyle of each individual and their environment. Lifestyle and environment such as smoking, drug consumption, and alcohol use are also significant health concerns among adolescents. The habit of starting a new lifestyle such as alcohol consumption and smoking is an unhealthy activity commonly done by teenagers who start smoking before the age of 20 years. Teenagers begin to develop these bad habits throughout life after they become addicted. Drug abuse is one of the contributing factors to unemployment, poor health, accidents, suicide, and mental illness. These things are one factor in the majority of adolescent lifestyles (Manoarfa, 2020). So that with the unhealthy in this lifestyle, it is hoped that adolescents can pay more attention to themselves and their mental readiness before becoming parents even better. Being a parent, giving birth, and parenting at a young age is not as easy as expected, so the importance of a *well-educated parent background* is very important for adolescents around the world (Salam *et al.*, 2020).

A good educational background can encourage adolescents to be more careful in sorting out the environment and associations and decide to follow the prevailing culture or not. Good education can encourage individuals to have better incomes, thereby increasing self-awareness and caring for their own health (GSDRC, 2011). Increasing self-awareness of the health of adolescents <15 years can reduce the incidence of underage marriage (Haikiki *et al.*, 2020) and reduce the incidence of toddlers born with low body weight where low birth weight can potentially disrupt the toddler growth and development process which can eventually lead to the incidence of stunting toddlers (PUSKAPA, 2020; and Marshan *et al.*, 2020).

### CONCLUSION

The majority of factors that cause early marriage are cultural and environmental background, educational background, economic status, and lifestyle. Early marriage under the age of 15 can be risky for expectant mothers who are pregnant and at the time of giving birth to their children. In addition to cultural background, lack of education on reproductive health in adolescents is one of the causes of the high number of adolescents who have married early. Pregnancy at an early age can increase the chances of a baby being born at risk with low body weight. The birth of a baby with low body weight can inhibit the growth and development of toddlers and cause stunting if parenting, adequate nutrition, and sanitation are not provided properly by parents. Further research is expected to discuss more deeply the factors causing early marriage in adolescents in terms of support for local health services to better know the development of the influence of the environment around the place where adolescents live.

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