

Child Marriage and Its Impact on Indonesian Women's Fertility (2017 IDHS Data Analysis)

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ABSTRACT

Child marriage is still a crucial issue in various developing countries, especially Indonesia. The many health impacts arising from child marriage are a reason to further explore the relationship between child marriage and fertility outcomes for women in Indonesia. This study uses data from the 2017 IDHS with the number of women of childbearing age who meet the criteria as the unit of analysis, namely 23,755 respondents. This research uses a quantitative approach with a cross-sectional design and statistical methods of logistic regression analysis. The dependent variable in this study is fertility outcome (early fertility, repeat childbirth, use of modern contraception, and total fertility). Meanwhile, the independent variable is child marriage (<19 years) and the covariate variable consists of the demographic characteristics of the respondents (age, place of residence, education, work status, wealth index, mass media exposure). The research results showed that 40.9% of respondents had child marriages. Child marriage is significantly associated (p -value <0.001) with early fertility (aOR=0.466), repeat childbirth (aOR=1.202), use of modern contraception (aOR=1.163), and total fertility (aOR=1.217) after being controlled by variables demographic characteristics.

Keywords: child marriage, fertility outcomes, early fertility, repeat childbirth, contraceptive use, total fertility

INTRODUCTION

UNICEF defines child marriage as a marriage carried out either formally or informally where one or both parties are under 18 years of age [1]. Meanwhile in Indonesia itself, based on Marriage Law no. 16 of 2019 article 7 paragraph (1), a person is permitted to marry at the age of 19 for both men and women. At that age, a person is considered to have matured in body and soul to be able to carry out a marriage well without ending in divorce [2]. Although the practice of child marriage has continued to decline over the last decade, this practice still continues to occur, especially in low and middle income countries [3]. According to UNICEF, more than 12 million girls in the world are married at a young age, and around 37% of them occur in Sub-Saharan Africa and 30% in South Asia [4].

Apart from that, UNICEF stated that in the next 10 years there will be more than 10 million girls around the world who are at risk of becoming child brides due to the Covid-19 pandemic [5]. This is also reinforced by data on applications for marriage dispensation in Indonesia which has increased from 2017 (12,579 cases) to 2020 (34,413 cases), as well as an increase in the number of dispensation cases received by 35% [6].

Child marriage is a violation of human rights which has negative effects, especially for girls who enter into such marriages. Pregnancy at less than 17 years of age can increase the risk of medical complications, both for mother and baby [7]. WHO explains that complications during pregnancy and childbirth are the main causes of death for women aged 15-19 years [8]. The anatomy of teenage mothers not being ready to conceive and give birth causes complications in the form of obstructed labor and obstetric fistula which poses a risk of prolonged labor, thereby increasing infant and neonatal mortality rates [7]. Young age at sexual intercourse and immaturity of the reproductive organs also increase the risk of sexually transmitted diseases, transmission of HIV infection, cervical cancer, bleeding, and miscarriage [7], [9].

Another thing that can happen is competition for nutrition with the fetus they are carrying, so that pregnant women often find it difficult to gain weight and can be accompanied by anemia [7] and there

is a risk of giving birth to a baby with a low birth weight [7], [9], [10], *premature* [10], *stunting* [9], to the death of the baby [11]. UNICEF states that babies born to mothers aged under 20 years are almost twice as likely to die during the first 28 days as babies born to mothers aged 20-29 years [12].

Apart from risks to reproductive health, child marriage also risks domestic violence and weakens women's status and ability to make decisions [13]. This occurs because of the age gap between husband and wife, imbalance of power, social isolation and lack of women's autonomy. Globally, 30% of girls (aged 15-19) experience violence from their partners [14].

The Indonesian government's efforts to eliminate the practice of child marriage are included in the 2020-2024 National Medium Term Development Plan (RPJMN), where the government targets child marriage to fall by 8.74% by 2024 [15]. In line with this, the Sustainable Development Goals (SDGs) also have a target for eliminating child marriage, namely in goal 5, target 3, where the SDG's target is 6.94% by 2030 [16]. Based on data of Statistics Indonesia, the trend of child marriage in the last 10 years (2008-2018) tends to fluctuate and only decreased by 3.46% [17]. As of 2021, the child marriage rate in Indonesia is still at 9.23% [17], this shows that the government must make efforts to reduce the rate of child marriage by around 2.29% over the next 9 years.

Despite the incidence of child marriage and its health and social impacts, the relationship between child marriage and fertility has not been explored further. This scarcity of literature can hinder effective efforts, policies and intervention programs related to child marriage. Therefore, further research is needed on women who engage in child marriage in Indonesia. This research aims to determine the relationship between child marriage on fertility and fertility outcomes using the 2017 IDHS dataset.

MATERIALS & METHODS

This research uses a quantitative approach with a cross sectional design. The data used is secondary data from the 2017 Indonesian Demographic Health Survey (IDHS). Further analysis was carried out in April-July 2023. The population in this study was all married women of childbearing age aged 15-49 years in Indonesia. The sample in this study was all married women of childbearing age aged 15-49 years who were selected as respondents in the 2017 IDHS and met the research inclusion criteria. The inclusion criteria in this study were married women who had given birth at least once and filled out the survey data completely. After the data cleaning process was carried out and adjusted to the inclusion criteria, a sample of 23,755 respondents was obtained.

The dependent variable in this study is fertility outcome (early fertility, repeat birth, use of modern contraception, and total fertility). Meanwhile, the independent variable is child marriage (<19 years) and the covariate variable consists of the demographic characteristics of the respondents (age, area of residence, education, work status, wealth index, exposure to mass media such as newspapers, radio and television). Data analysis was carried out univariate, bivariate and multivariate using the SPSS data processing application.

RESULTS

Respondent Characteristics

Table 1. Distribution of Child Marriage by Demographic Characteristics (n= 23,755)

Variable	n	%	Child Marriage (<19 years) (95%CI)	Adult Marriage (≥19 years) (95%CI)
Age (years):				
15-19	275	1,2	1,2 (1-1,3)	0 (0-0)
20-24	1986	8,4	4,6 (4,3-5)	3,7 (3,5-4)
25-29	3680	15,5	5,2 (4,8-5,6)	10,3 (9,8-10,8)
30-34	4536	19,1	6,5 (6,1-7)	12,5 (12-13,1)
35-39	4963	20,9	7,8 (7,4-8,3)	13,1 (12,5-13,7)
40-44	4241	17,9	7,4 (6,9-7,8)	10,5 (10-11)
45-49	4073	17,1	8,2 (7,7-8,7)	9 (8,5-9,5)
Place of residence				
Rural	12755	53,7	26,3 (24,6-28,1)	27,4 (25,9-28,9)
Urban	11000	46,3	14,6 (13,4-15,8)	31,7 (29,8-33,8)
Education:				

No education	503	2,1	1,5 (1,2-1,7)	0,6 (0,5-0,8)
Primary	8957	37,7	22,9 (21,7-24,0)	14,8 (14,2-15,5)
Secondary	12064	50,8	16,1 (15,4-16,8)	34,7 (33,5-35,9)
Higher	2231	9,4	0,4 (0,3-0,5)	9 (8,4-9,6)
Working Status:				
No	9466	39,8	16,5 (15,6-17,3)	23,4 (22,5-24,3)
Yes	14289	60,2	24,4 (23,4-25,4)	35,7 (34,7-36,8)
Wealth Index:				
Poorest	4455	18,8	9,9 (9-10,8)	8,9 (8,3-9,5)
Poorer	5036	21,2	10,4 (9,7-11)	10,8 (10,3-11,4)
Middle	5010	21,1	8,8 (8,3-9,4)	12,3 (11,6-12,9)
Richer	4959	20,9	7,6 (7,1-8,1)	13,3 (12,6-14)
Richest	4296	18,1	4,2 (3,8-4,6)	13,9 (12,8-15)
Reading newspaper:				
Yes	1597	6,7	1,1 (1-1,3)	5,6 (5,2-6,1)
No	22158	93,3	39,8 (38,4-41,1)	53,5 (52,3-54,7)
Listening to radio:				
Yes	2795	11,8	4,2 (3,8-4,5)	7,6 (7,1-8,2)
No.	20960	88,2	36,7 (35,5-38)	51,5 (50,3-52,7)
Watch TV:				
Yes	20349	85,7	34,7 (33,5-35,9)	51,0 (49,7-52,2)
No	3406	14,3	6,2 (5,7-6,7)	8,1 (7,6-8,7)
Total			40,9	59,1

Based on Table 1, it is known that from 23,755 respondents, 40.9% of women were involved in child marriage. Based on the demographic characteristics of respondents, the highest child marriage occurred in respondents aged 45-49 years (8.2%), residing in rural areas (26.3%), with primary education (22.9%). Among women with child marriages (40.9%), more than half (24.4%) were employed. The highest incidence of child marriage was among the respondents with poorer category (10.4%), followed by poorest (9.9%), middle (8.8%), richer (7.6%), and richest (4.2%). Child marriage incidents also occurred most frequently among respondents with mass media exposure as follows: not reading newspapers (39.8%), not listening to the radio (36.7%), and watching TV (34.7%),

Distribution of Child Marriage by Fertility Outcomes

Tabel 2. Distribution of Child Marriage by Fertility Outcomes

Variable	n	%	Child Marriage (<19 years) (95%CI)	Adult Marriage (≥19 years) (95%CI)
Early Fertility				
Yes	15019	63,2	21,3 (20,5-22,0)	41,9 (40,8-43,1)
No	8736	36,8	19,6 (18,6-20,6)	17,2 (16,5-17,9)
Repeat Childbirth				
< 24 months	2372	10	4,5 (4,2-4,8)	5,5 (5,1-5,9)
≥ 24 months	21383	90	36,4 (35,1-37,7)	53,6 (52,4-54,9)
Modern Contraceptive				
Yes	8271	34,8	16,2 (15,3-17,1)	18,6 (17,9-19,3)
No	15484	65,2	24,7 (23,8-25,6)	40,5 (39,3-41,8)
Total Fertility				
≥ 3 children	13899	58,5	25,4 (24,3-26,4)	33,2 (32,2-34,1)
<3 children	9856	41,5	15,5 (14,9-16,2)	26 (25,1-26,9)
Total	23.755	100	40,9	59,1

Based on Table 2, more than half of respondents (63.2%) had early fertility. It was further explained that there were 21.3% of women who had child marriages and early fertility and 41.9% of women who did not have child marriages but had early fertility. In addition, only 10% of respondents carried out repeated childbirth of their second child at an interval of <24 months after their first birth

(4.5% had child marriages). Around 16.2% of respondents who had child marriages had used modern contraception and 25.4% of respondents had at least 3 children.

Association between Child Marriage and Fertility Outcomes

Table 3 shows that there is a significant relationship ($p < 0.001$) between child marriage and fertility outcomes (early fertility, repeated childbirth, use of modern contraception, and total fertility). From the analysis it was found that women who had child marriages were less likely to have early fertility compared to women who had adult marriages ($uOR = 0.445$, $CI = 0.414-0.478$) and this persisted after being controlled by covariate variables ($aOR = 0.466$, $CI = 0.435-0.500$). Women who engage in child marriage tend to repeated childbirth at intervals of < 24 months after their first birth ($OR = 1.202$, $CI = 1.086-1.330$). Women who had child marriages are also more likely to use modern contraception than women who had adult marriages ($uOR = 1.429$, $CI = 1.327-1.539$), this remained true after being controlled by covariate variables ($aOR = 1.163$, $CI = 1.075-1.256$). The total number of children born to women who engage in child marriage tends to be 1.2 times higher (≥ 3 children) ($aOR = 1.217$, $CI = 1.133-1.307$) compared to women who engage in adult marriage. The data is controlled by the variables age, area of residence and education of the respondent.

Tabel 3. Association between Child Marriage and Fertility Outcomes

Variable	Unadjusted OR	95%CI	Adjusted OR	95%CI
Early Fertility				
Yes	0,445	0,414-0,478*	0,466	0,435-0,500*
No	1		1	
Repeat Childbirth				
< 24 months	1,202	1,086-1,330*	1,202	1,086-1,330*
≥ 24 months	1		1	
Modern Contraceptive				
Yes	1,429	1,327-1,539*	1,163	1,075-1,256*
No	1		1	
Total Fertility				
≥ 3 children	1,281	1,198-1,370*	1,217	1,133-1,307*
< 3 children	1		1	

* $p < 0,001$

Association between Child Marriage and Early Fertility

The results show that women who had child marriage tend to experience a reduced risk of giving birth in the first year of marriage (early fertility). These findings are in line with research conducted in 34 Sub-Saharan African countries in 2019 [18] and research in 6 countries in South Asia in 2018 [19]. This reduced risk of giving birth in the first year of marriage can be attributed to the physical and biological immaturity of the woman at the time of marriage [20], [21]. This physical and biological immaturity has adverse effects on health such as increasing possible complications during pregnancy and childbirth. Child marriage is associated with an increased incidence of poor health in both the mother and the child born [21], [22].

Based on 2017 IDHS data, 7 percent of women aged 15-19 years have given birth (5 percent) and are pregnant with their first child (2 percent) [23]. Pregnant teenagers are very susceptible to anemia because pregnant women need double iron intake for both themselves and the fetus [24]. Another thing that may happen is that there is nutritional competition between the mother and the fetus which makes it often difficult for pregnant women to gain weight [7]. The incidence of anemia is associated with maternal and infant mortality and morbidity, including the risk of miscarriage, stillbirth, prematurity and low birth weight [24].

Association between Child Marriage and Repeat Childbirth

The results of the study showed that women who had child marriages were 1,202 times more likely to have repeated births with an interval of <24 months for the birth of their second child compared to women who had adult marriages after being controlled by demographic characteristic variables. In line with this, Raj et al. states that women who engage in child marriage in India are 3 times more likely to have repeated childbirth after being controlled for the variable duration of marriage [25]. The ideal distance recommended by WHO and BKKBN for the birth of a second child is 33 months (2-3 years) to reduce possible health risks.

Association Relationship between Child Marriage and Contraceptive Use

Women who had child marriage are 1.163 times more likely to use modern contraception compared to women who had adult marriage. This increase in the use of modern contraception can be associated with achieving the desired number of children [18], [20], so that women and their families choose to use modern contraception to prevent subsequent pregnancies. This is proven by the high fertility of women who engage in child marriage. These findings are in line with other research on the same topic [18]–[20].

If we look at Indonesia's Total Fertility Rate (TFR) from 1971 to 2020 (5.61-2.18), it can be said that the Family Planning Program in Indonesia has been running well [26]. Research conducted by Dewi in Indonesia found that expanding television exposure to villages could reduce fertility by 6 percent in 1994-2009, in other words television exposure was related to greater use of modern contraception [27]. With high public exposure to television programs, information related to family planning programs and child marriage will be easier to reach. So that it can foster a preference for people to have smaller family sizes [28].

Association between Child Marriage and Total Fertility

Women who marry at a young age tend to have greater total fertility than women who marry at an older age. This can happen because women who marry at a younger age have a longer life span to have children [22]. From the results, a significant relationship was found between child marriage and total female fertility. Where women who engage in child marriage are 1.217 times more likely to have ≥ 3 children compared to women who engage in adult marriage after being controlled by demographic characteristic variables. These results are in line with research conducted by Kamal & Ulas in 5 countries in South Asia which states that women who engage in child marriage are 2.27 times more at risk of having high fertility compared to women who engage in adult marriage [19]. Research in Uganda also found that child marriage can increase the number of children (10 percent to 19 percent) a woman may have in her lifetime [29].

Based on data from Statistics Indonesia (BPS) in 2017, the total birth rate (TFR) for women in Indonesia was 2,4 children per woman. This means that on average Indonesian women give birth to 2,4 children during their lifetime. When compared based on area of residence, the total fertility rate in rural areas (2,6 children) is 13 percent higher than in urban areas (2,3 children) [30]. On the other hand, child marriage also indirectly influences the rate of population increase. If child marriage is abolished, population growth will be slower and the burden that must be borne will be reduced [22].

CONCLUSION

Child marriage has a significant positive relationship with repeated childbirth, use of modern contraception, and total fertility, and has a significant negative relationship with early fertility. Support regarding policies from various parties is needed to stop child marriage, especially increasing teenagers' knowledge regarding the negative impacts of child marriage both in terms of health and social aspects. It is hoped that policies regarding marriage dispensations will be further tightened so that they comply with the revised marriage law. In addition, the use of modern contraception can help reduce the negative impacts of child marriage, such as miscarriage. Women who engage in child marriage should be advised to use long-term modern contraception to avoid unwanted pregnancies and to provide sufficient space between two pregnancies and repeated childbirth.

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