

**Social Determinants of Health of Child Marriage (Analysis of IFLS 2000, 2007, 2014)**Tri Wahyudi¹✉, Mubasysyir Hasanbasri², Hari Kusnanto², Mohammad Hakimi²¹Dr. Soedarso Hospital Pontianak, Indonesia²Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Indonesia**Article Info***Article History:*

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Abstract

Early marriage is defined as a marriage of women aged <18 years old. The current world prevalence is declining, but when compared with the growth in population, the total number of married children tends to increase. Today, early marriage reaches 41.000 every day, especially in Sub-Saharan Africa and South Asia. This research aims to identify the social determinants of health that encourage early marriage. This research used a quantitative observational analytic study with cross-sectional design. The number of <18 year-old married women were 1.96% (IFLS5), <18 year-old married men were 0.15% (IFLS5). The average age at first birth was 22.96 years old. The economic status of early marriage was mostly in Quintile 1, and the majority of residences were in rural area. The ratio of married women and men aged <18 years old was 11-14: 1. Employment, education, residence and poverty were associated with early marriage and were statistically significant.

Introduction

Early marriage (child marriage) is defined as marriage before the age of 18 years old (UNICEF, 2015). Marriage at early age will have an impact to the women concerned, the child born, and also the community (Parsons, *et al.*, 2015).

Early marriage is a kind of violation of human rights, because child marriage directly affects education, especially women, health, psychological wellbeing, and the health of their children. This also increases the risk of depression, sexually transmitted infections, cervical cancer, malaria, obstetric fistula, and maternal mortality, preterm birth and, subsequently, the death of a newborn or baby (Nour, 2009).

It is estimated that around 14 million women aged 15-19 years old gave birth every year between 1995 and 2000. This figure represents 10% of all deliveries worldwide, as many as 12.8 million occurred in developing countries, the highest is in Sub-Sahara Africa which more than 50% of the women aged <20 years old give birth. Moreover, in Southeast Asia, the highest figure is in Bangladesh, which is 144 per 1000 women, in Nepal around 50% and in Indonesia 30% of women give birth at the age of 15-19 years old (Henry *et al.*, 2015). Research about reproductive health behavior in street children with sexually active in the Semarang city, Central Java, Indonesia concluded that most street children start to know and do free sex at the age of 14-16 years

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old (Setyadani, 2013).

According to the age of labor, in Bangladesh 8-15% of population were aged 15 years old. While, in Cameroon, Liberia, Malawi, Mali, Nigeria are mostly at the age of 18-19 years old (Walker, 2012). The risk of pregnancy problems and childbirth is more common in adolescents than older age, this is related to both physical and psychological maturity, lack of antenatal care and unsafe labor. Health consequences that can occur are preeclampsia, anemia, prolonged labor, vesicovaginal fistula, infection, malaria, prematurity, low birth weight, perinatal death, maternal death, abortion, and HIV infection (Akpan, 2010).

Pregnancy under 16 years of age is associated with increased perinatal mortality rate and more than 18% of preterm birth due to complications of preeclampsia, sexually transmitted diseases, malnutrition and placental abruption (Grady & Bloom, 2004). Some complications found in pregnant adolescents are based on the fact that more than 50% of pregnant adolescents do not receive antenatal care until the second trimester, 10% of pregnant adolescents do not receive antenatal care until the third trimester (Hockaday, *et al.*, 2000).

Based on the results of the 2015 Intercensal Population Survey (SUPAS), the Maternal Mortality Rate (MMR) was 305 maternal deaths per 100.000 live births. Based on the results of the 2012 Indonesian Demographic and Health Survey (IDHS), the Neonatal Mortality Rate (AKN) in 2012 was 19 per 1.000 live births, Infant Mortality Rate (IMR) in 2012 was 32 per 1000 live births. Maternal deaths increased 2-4 times in young woman compared to woman with age over 20 years old. The Central Statistics Agency reported in 2016, about 26.16% of women gave birth to their first child under the age of 20. In other words, more than a quarter of women of childbearing age in Indonesia give birth under the age of 20 years old (Kementrian Kesehatan Republik Indonesia, 2017).

The WHO Commission for Social Determinants of Health defines Social Determinant of Health as “a condition in which a person is born, grows, lives, works and grows old”; these conditions or circumstances are shaped by family and communities and are

influenced by the distribution of money, power and resources throughout the world, both national and local level, and are influenced by policy choices at each of these levels (Marmot & Wilkinson, 2000).

There are 4 main causes of early marriage, namely (1). Poverty, for many poor families, marrying their daughters at an early age is basically an economic strategy for survival; that means one person is reduced in feeding, clothing and education. In Asia and Africa, the importance of financial transactions at the time of marriage also tends to encourage families to marry off their daughters early, (2). Low levels of education, low level of education or not attending school are highly correlated with early marriage. Conversely, a higher level of education protects girls from the possibility of early marriage, (3). Insecurity in the context of war and conflict, and lastly (4). Tradition and Religion (Malhotra, 2010).

Some other causes of early marriage are problems with gender, virginity and worry about sexual activity before marriage (Bennett, 2014), (Mahato, 2016), marriage transactions and poverty (Mahato, 2016), and early marriage accompanied by dropping out of school is related to poverty in later life (Dahl, 2010), (Hockaday, *et al.*, 2000).

Methods

This research used a quantitative observational analytic study with cross-sectional design. We aimed to analyze the factors / determinants of early marriage by using secondary data from The Indonesia Family Life Survey (IFLS), a research institution that provides data on individuals and families regarding fertility, health, education, migration and employment. The dependent variable in this study was early marriage, and the independent variables were education, work, and residence. The data was collected from three IFLS periods, year 2000, 2007 and 2014. IFLS had been conducted 5 times, IFLS1 in 1993, IFLS2 in 1997, IFLS3 in 2000, IFLS4 in 2007 and the last IFLS5 in 2014.

We analyzed the data using Stata software program. We analyzed univariate data with frequency distribution, bivariate data with Pearson Chi-square and multivariate data with logistic regression.

Result and Discussion

Table 1 describes the general sample proportion according to the IFLS per year it conducted. Based on the age limit of early marriage, the number of married women aged <18 years was 2.65% (IFLS3), 2.38% (IFLS4), and 1.96% (IFLS5), this figure is very small when referring to the Susenas results 2008-2012 and the 2010 Population Census which 25% of women aged 20-24 years old who were married, they married before the age of 18 years old.

From the table above, it was found that men aged <18 years who married were far smaller than women, only 0.23% (IFLS3), 0.16% (IFLS4) and 0.15% (IFLS5). If calculated the ratio of married women and men, it was found 11-14: 1 ratio. Based on the average age

of childbirth, the trend seems to increase. In IFLS3, first age of childbirth was 18.52 years, following in IFLS4 was 20.29 years and in IFLS5 was 22.96 years.

Table 2 describes the proportion of women who marry early based on variables of age, education, activities, economic status, and place of residence. The highest age of marriage was 17 years old and the percentage increases from IFLS3 to IFLS 5, the proportion of elementary school was highest in IFLS 3 and 4, meanwhile in IFLS5 the highest proportion education level was junior high school. Moreover, most of women were housewives in all IFLS periods. Then, based on economic status, mostly in Quintile 1, and mostly they lived in rural areas.

Table 1. Characteristics of Population Aged <18 Years Old

Variables	IFLS	2000	IFLS	2007	IFLS	2014
	n	%	n	%	n	%
Age group <18						
Men	8430	50.13	6699	50.08	7747	50.92
Women	8386	49.87	6677	49.92	7466	49.08
Total	16816	100.00	13376	100.00	15213	100.00
Marital status of women aged <18						
Unmarried	8146	97.35	6518	97.62	7320	98.04
Married	222	2.65	159	2.38	146	1.96
Total	8368	100.00	6677	100.00	7466	100.00
Male marital status aged <18						
Unmarried	8411	99.77	6688	99.84	7735	99.85
Married	19	0.23	11	0.16	12	0.15
Total	8430	100.00	6699	100.00	7747	100.00
Age at marriage						
<14	4		2		1	
14	12		2		1	
15	15		15		22	
16	58		38		26	
17	133		102		96	
The average age of first birth (years)						
	18.52		20.29		22.96	

Table 2. Proportion of Married Women Aged <18 Years Based on Variables of Age, Education, Activity, Economic Status, and Place of Residence.

Variables	IFLS 2000	IFLS 2007	IFLS 2014
	%	%	%
Age at marriage			
<14	1.79	1.83	0.66
14	5.38	1.22	0.66
15	6.73	9.15	13.91
16	26.46	25.00	19.21
17	59.64	62.80	65.56
Education			
Elementary school	56.50	51.22	18.54
Junior high school	35.87	41.46	53.64
Senior high school	7.63	7.32	27.81
Activities			
Work	18.39	19.51	15.89
Housewife	73.99	73.78	78.81
Unemployment	7.62	6.71	5.3
Economic status (Quintile)			
1	26.01	25.61	25.17
2	22.42	21.34	21.19
3	21.52	22.56	19.21
4	14.80	14.63	19.87
5	15.25	15.85	14.57
Residence			
Urban	23.77	24.39	33.77
Rural	76.23	75.61	66.23

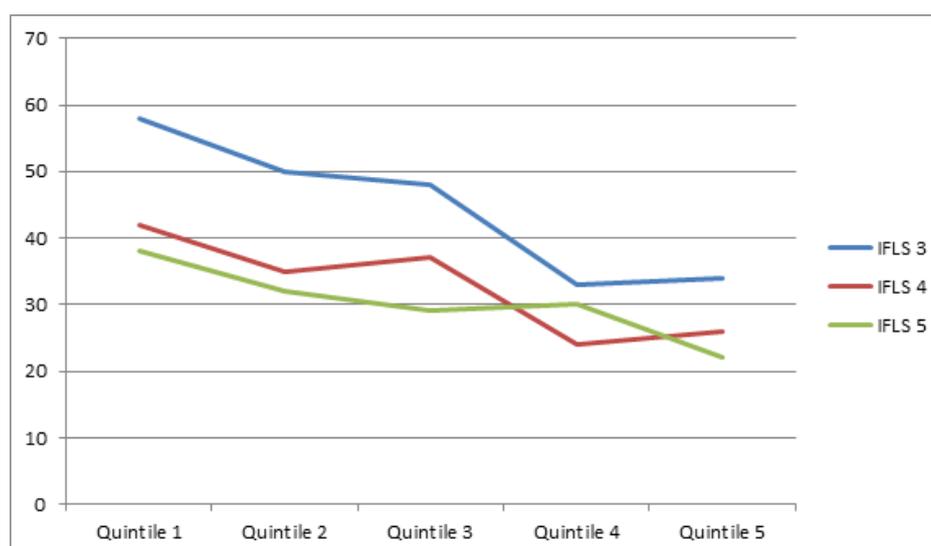


Figure 1 . Number of Child Marriage Based on Quintile

In Figure 1 above, it is clear that the number of women who are <18 years had been pregnant is associated with quintile family expenses. In the three periods of IFLS there was a decrease in the number of pregnant women aged <18 years, however the pattern of occurrence in the three surveys was the same, most of women <18 years who were pregnant were in Quintile 1, but less in Quintile 4 and 5. In conclusion, poverty was still one of the reasons for early marriage.

Based on the table above, housewives, junior and senior high school education and places to live in rural areas were associated with early marital status. Housewives were likely to be married 2 times more than non-housewives and it was statistically significant. The probability of junior and senior high school education to early marriage was 1.2 to 1.3 times higher than those with elementary school education and it was statistically significant. This is not in accordance with other studies which stated that the lower education will be the higher of early marriage age. In this study, groups living in rural areas were less likely to had early marriages than urban areas. To ensure these results can be validated, the same research with more respondents and different research methods is essentially necessary.

Adolescent reproductive health is affected by pregnancy, abortion, sexually transmitted diseases, sexual violence and by systems that limit access to clinical information and services (Handayani, 2019). Reproductive health is also influenced by nutrition, psychological health,

economic and gender inequality which make it difficult for young women to avoid forced sexual relations or commercial sex (UNFPA, 2012). In various countries such as India, marriage practices that are 'regulated' by parents for girls under the age of 14 are still not uncommon. Sexual intercourse occurs in girls aged 9-12 because many adult men seek young girls as sexual partners to protect themselves against the transmission of sexually transmitted diseases (STDs) / Human Immunodeficiency Virus (HIV) (UNFPA, 2012).

The level of low education or not attending school is highly correlated with early marriage. Conversely, a higher level of education protects girls from the possibility of early marriage (Jain & Kurz, 2007). In many countries, education priorities are given to boys. Women are directed to become a wife, mother and housewife. Insufficient attention is given to a girl to go to school and get a job. If you want to go to school, you usually experience difficulties in getting a quality school and lack of ability to pay for school fees. This is encouraging to marry off their daughter to marry young (Jain & Kurz, 2007). In addition to poverty, early marriage is influenced by the need to strengthen social ties, and the belief that marital ties can provide protection for himself and his parents (Nour, 2009). Research in Ardi village, India (rural) found high prevalence rates of early marriage at 71.5%, far higher than the national average of 47% (Pandya & Bhandari, 2015). Education, shelter (rural) and religion are the main factors for early marriage, which means that

Table 3. Multivariable Analysis of Activity, Education, Place of Residence and Economic Status

Variables	OR	z	P>(z)	95% CI	
Activities					
Student	-5.89346	-7.89	0.01	-7.357918	-4.429002
Housewife	2.065236	7.20	0.01	1.503127	2.627345
Unemployment	-1.391794	-3.04	0.02	-2.28946	-0.4941274
Education					
Junior high school	1.164659	3.89	0.01	2.004878	6.195884
Senior high school	1.29647	3.75	0.01	1.69461	6.120099
Residence					
Rural	0.8057549	3.27	0.01	1.356683	3.448988

sociodemographic factors directly or indirectly affect early marriage in Bangladesh (Sarkar, 2009).

The proportion of women who marry early was mostly in Quintile 1 which means that early marriage was more common in the poor population, or the poverty factor was still a factor that drives early marriage. For many poor families, marrying their daughters at an early age is basically an economic strategy for survival; that means one person is reduced in feeding, clothing and education. This result is consistent with research conducted in Indramayu, West Java, Indonesia, that early marriage was caused by a relatively low father's education and supported by poor family economic status (Muharry, et al., 2018).

In Asia and Africa, the importance of financial transactions at the time of marriage also tends to encourage families to marry off their daughters early (Malhotra, 2010). The link between poverty and early marriage is very close, in wealth rich countries where girls have equal access to education and training, as well as other employment opportunities, early marriage is rare (Oyortey & Pobi, 2010).

The majority of women who do not have formal education marry under the age of 20 years, and the age of marriage will increase with higher levels of education (Adebowale, *et al.*, 2012). A research in Bangladesh provides empirical evidence that marriage institutions in developing countries reduce the opportunity for education for adolescent women (Field & Ambrus, 2008). The factors that lead to early marriage in this study are in accordance with the results of many studies that have been carried out, namely the level of education of women, differences in age between husband and wife, regional, and urban or rural dwellings (Kaptanoglu & Ergocmen, 2014).

Conclusions

Education, employment and place of residence are factors related to early marriage, and are statistically significant in multivariable analysis with logistic regression. The ratio of women and men who are married at the age of <18 years is 11-14: 1, and the average age of women giving birth the first time tends to increase.

Based on the table of the proportion

of early married women based on Quintile 1 economic status, the poverty factor is still a factor that encourages families or parents to marry off their female children.

Efforts to prevent or reduce early marriage include at the policy level, the government must make early marriage a priority policy so that adverse impacts on maternal and reproductive health can be reduced. Policies must look at the role of the ministry of education, empowering women, religion and the economy as stakeholders of upstream programs, then, there must be a curriculum change that provides comprehensive reproductive health lessons, more than just explaining biological phenomena but must arrive at social conditions that encourage early marriage.

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