CONTRACEPTIVE USE AMONG MARRIED ADOLESCENT WOMEN IN INDONESIA

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ABSTRACT:

Background: About 13% of adolescent women in Indonesia are in marital union and 10% already have children or pregnancy. The 2012 Indonesia Demographic and Health Survey (IDHS) revealed that maternal mortality rate (MMR) in Indonesia had increased to 359 women/100,000 live births from 228 women/100,000 live births in the previous survey (in 2007 IDHS). Births among adolescents are one of the contributors of maternal mortality. Maternal related risk in pregnancy is higher among adolescents than in adult women. The infant mortality rate (IMR) is also higher among babies whose mothers are less than 20 years old. Thus, contraceptive use among married adolescent women is important for their reproductive health. This study aimed to examine factors associated with modern contraceptive use among married adolescent women in Indonesia.

Methods: This study used secondary data from 2012 Indonesia Demographic and Health Survey (IDHS). The samples for this study were adolescent women aged 15-19 years old who currently married in the survey. Excluded those who were pregnant and infecund, andonly one woman was selected per household randomly, 691 eligible samples were analyzed.

Results: More than half of married adolescent women already had children (64%), from low economic status (58%) and live in rural area (66%). The most popular contraceptive methods were injections and pill. Women's education and their awareness of contraceptive methods are individual factors which have positive associations with contraceptive use among married adolescent women in Indonesia ($p \leq 0.01$ and $p \leq 0.001$), while the highest use among those who were unemployed ($p \leq 0.001$). Have living child is also enabling factors for the use ($p \leq 0.05$). Contraceptive use increased among adolescent women who have a discussion about family planning with husband, relatives, or friends/neighbors, exposed to family planning information in media, obtaining family planning information from community leaders and health workers, have more duration of marriage, have more educated husbands, and have no difficulties with distance to reach health facilities ($p \leq 0.05$). The highest user was among women whose husbands aged 25-34 years old. In the multivariate analysis, women who have one or more living children are more likely to use contraceptive. The higher their husband's education the more likely they use contraception. Women who have more awareness of contraceptive methods and who ever obtained family planning information from personal contact with community leaders and health workers were also more likely to use contraceptive than their counterparts.

Conclusions: To increase contraceptive use among married adolescent women, the study suggest the strategies can focus on women's and their husband's characteristics such as improve their education and knowledge and interventions such as spreading information through community leaders or health workers, mass media, peers and relatives. In addition, providing more health centers in the limited access areas is also needed.

Keywords: Contraceptive, Family Planning, Adolescent, Women, Indonesia

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INTRODUCTION

Currently, Indonesia's population is around 250 million [1, 2] and places Indonesia as the fourth most populous country in the world. The Indonesian population is increasing by 3.3 million people per year [3, 4] with population growth rate 1.49% per year. According to the 2010 population census, adolescents age 15-19 comprises almost one-tenth of the Indonesia's population including about 11 million girls aged 15-19 years. The majority of adolescents are still in school but some are already married. The result of the 2012 Indonesia Demographic and Health Survey (IDHS) found that

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13% of females age 15-19 were ever-married. In addition, 9.5% had already had a child or pregnancy, and the level was lower compared to the finding of 12.3% adolescent pregnancy in 1991. However, this indicator had increased from the previous IDHS of 2007 (8.5%) [5].

Sexual activity among young women aged 15-19 is mostly of the result of early marriage due to traditional norms [6, 7]. Analysis of DHS data in 31 countries conducted by the Population Council in 2009 revealed that the majority of sexually active girls were married. WHO data are that 22% of woman aged 20-24 or about 60 million were married by the age of 18 during the years from 2000 to 2011 worldwide, and 10% of women aged 20-24 also gave birth before that age. Early marriage in Indonesia is common due to cultural tradition and socio-economic problem, although the rate has decreased over time. In Indonesia, 4% of married women aged 20-24 were already married by age 15 and 22 % were already married by age 18 [2].

The risk of maternal death is two times higher in woman age 15-19 years old than for those who are in their 20's and there are 70,000 adolescents deaths per year due to pregnancy and childbirth complications worldwide [8, 9]. In Indonesia, the proportion of maternal mortality among women less than 20 years old caused by Hypertension During Pregnancy (HDP) was higher (38.6%) than among 20-35 year-old women (29.5%) [10]. Not only is the mother adversely affected, but adolescent pregnancy also disadvantages the child. Stillbirth and infant death during the first month is 50-100% higher among newborns of adolescent mothers. Other complications of adolescent pregnancy include low birth weight, foetal distress, premature birth, birth asphyxia and miscarriage [11, 12]. The chance of child mortality increases if the woman conceives again in the first year [2].

Reproductive health among adolescent is the priority of Cairo's Program of Actions. After ICPD 1994, Government of Indonesia commits to increase reproductive health and also commits to Millennium Development Goals (MDGs). It is assumed that the MDGs family planning and fertility targets for Indonesia will not be achieved by 2015. Currently, the Indonesian Total Fertility Rate (TFR) has stagnant at 2.6, while the target is 2.1 by 2015. The Contraceptive Prevalence Rate (CPR) target is 65% and unmet need is 5%. But, the results of 2012 IDHS found that the achievements for these indicators were 62% and 11% respectively. In the age group 15-19, the CPR was 47.6 % or lower about 10% than the average.

The family planning program in Indonesia is widely accepted. However, some married girls are disadvantaged by the pressure to get pregnant and have no option to use contraception to delay pregnancy. Lack of contraceptive knowledge and gender imbalance in the Moslem society are among the burdens. The availability, accessibility, acceptability and quality of health services including contraceptive services for married adolescent women are very important for them. Although the Contraceptive Prevalence Rate (CPR) of adolescents in Indonesia is relatively high compared to other developing countries [13]. But considering their maternal related risk and the number of married adolescent women in Indonesia (around one million), this age group should be a priority. In the meantime adolescent reproductive health programs only focus on unmarried youth. Married adolescents are often overlooked. Furthermore, the majorities of contraceptive studies in Indonesia address all women in reproductive age but which specifically address married adolescent are limited. Considering the important priority program to adolescent women, the goal of this study is to identify factors associated with contraceptive use among married adolescent women in Indonesia.

Based on the WHO review, social cognitive theory is suited for intervention programs with adolescents [14]. People's behavior is influenced by personal factors such as self-efficacy, cognitive factors, knowledge, observational learning, attitudes and outcome expectations, and is also shaped by social modeling, media intervention and verbal persuasion from the environment. The use of contraceptive methods to prevent or to space pregnancy among married female adolescents is the behavior of interest in this study. Both individual and enabling factors in the environment are hypothesized associated with contraceptive use among married adolescent women in Indonesia.

METHODS

This study used secondary data from 2012 Indonesia Demographic and Health Survey (IDHS). The 2012 IDHS is the seventh survey conducted in Indonesia under the DHS program. The survey was designed to provide data on fertility (TFR, ASFR), family planning (CPR, unmet need), maternal and child health such as utilization of antenatal and postnatal care, breastfeeding, adult mortality (including maternal mortality), and awareness of HIV/AIDS and STDs. The sampling method used in 2012 IDHS was three stages stratified sampling. All eligible women in the selected households in each selected Primary Sampling Unit (PSU) were interviewed. Data used in this study were collected

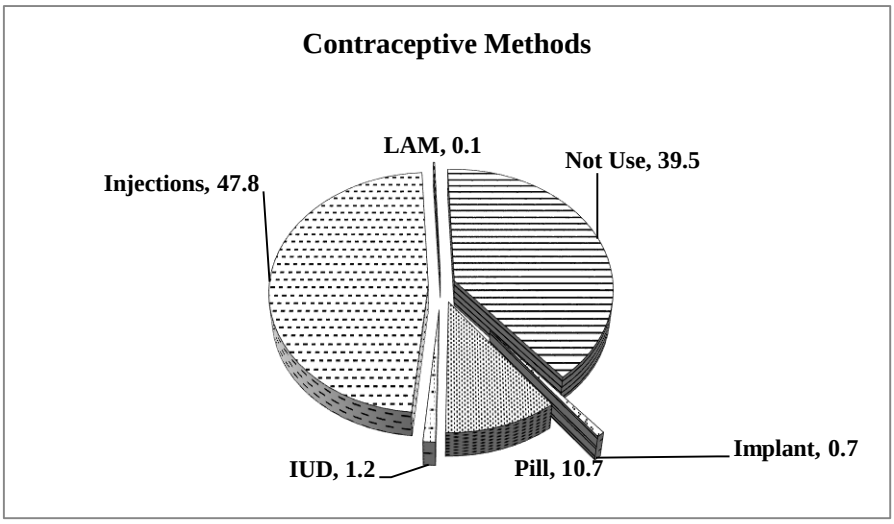

Figure 1 Contraceptive use among married adolescent women in Indonesia, 2012 IDHS

from Woman's Questionnaire which based on DHS standard VI questionnaire which adapted for used in Indonesia. 45,607 women aged 15-49 were successfully interviewed for this survey [5].

Included in the sample for this study are individual married women aged 15-19. Women who had never had sex, who were currently pregnant at the time of survey and who said they were infecund, were excluded from the sample. If in one household there were more than one woman then only one woman was randomly selected for the analysis. The number of eligible weighted sample for this study was 691 women. For analytical statistics, bivariate analysis used chi-square test and binary logistic regression was conducted in the multivariate analysis.

The dependent variable measured as dichotomous variable, whether married adolescent women currently use modern contraceptive methods or not. Those who were currently using coded as 1 and those who were not using coded as 0. The independent variables are categorized as individual and enabling factors. Women's age, women's education, awareness of contraceptive methods, working status and wealth status are categorized as individual factors. Among enabling factors, there are interpersonal factors such as discussion about family planning with husband, relatives and friend or neighbor, exposure to media and obtained information from personal contact with community leaders or health workers. The media consist of TV, radio, magazines/newspaper. To know whether respondents had contact with community leaders and health workers , they were asked whether they obtained family planning information from field workers, religious leaders, village leaders, teachers, women's group, doctors, nurses, midwives or pharmacist in the last six month of the survey. The sociocultural characteristics included husband's age, husband's education, number of living children, duration of marriage and problem of access to health care and among physical environment factors, place of resident and problem of distance were included.

RESULTS

Of 691 weighted samples, more than half (60%) of respondents use modern contraceptive methods. The types of methods used consist of five types, which are pill, injections, IUD and implant and Lactational Amenorrhea (LAM.).The use of condom and permanent methods were not recognized among women in this age group. The most popular method was injections (47.8%), followed by pill (10.7%). The use of long term methods also exist among married adolescent women even though only 2 percent cumulative (IUD=1.2% and implant 0.7%) while LAM only used by 0.1% women, Figure 1.

Table 1 presents the distribution of married adolescent women in this study. One of three married adolescent women was less than 18 years old. Two-third of them had some secondary or had finished secondary school (69%). More than a half were unemployed (59%) and lives in low economic households (58%). It is noteworthy that more than ninety percent were aware of more than two types of contraceptive methods. However, less than a third discussed with husband, relatives or friends/ neighbors about family planning (21%, 30%, 31% respectively). Almost a half got exposure of FP information in media (47%) but only 32% who got information from personal contact with community leaders or health workers. Among husbands of these

Table 1 Percent distribution of married adolescent women in Indonesia by selected characteristics, 2012 IDHS

Characteristics	% (N=691)	Characteristics	% (N=691)
Individual factors			
Women's age		**Wealth status**	
15-17 years old	29.0	Low	58.4
18-19 years old	71.0	Middle	18.6
Women's education		High	23.0
No education	2.1	**Awareness of contraceptive methods**	
Primary	30.1	Low (0-1 method)	5.9
Secondary or higher	67.8	Fair (2-4 methods)	36.8
Occupation		Good (≥ 5 methods)	57.3
Not working	58.5		
Agricultural	12.4		
Non agricultural	29.1		
Enabling factors			
Discussed FP with husband		**Husband's education**	
Yes	21.0	No education	2.1
No	79.0	Primary	37.5
Discussed FP with relatives		Secondary or higher	60.4
Yes	29.8	**Living children**	
No	70.2	No children	36.5
Discussed FP with friend/neighbor		1 child	61.6
Yes	30.9	2 or more children	1.9
No	69.1	**Duration of Marriage**	
Exposure to FP program in media		0-2 years	82.5
Yes	47.0	≥ 3 years	17.5
No	53.0	**Problem of access to health care**	
Obtain FP information from community leaders or health workers		Yes	42.1
		No	57.9
Yes	32.1	**Place of residence**	
No	67.9	Rural	66.1
Husband's age		Urban	33.9
≤ 25 years old	53.5	**Problem of distance**	
25-34 years old	42.5	Yes	14.4
≥ 35 years old	4.0	No	85.6

women, 60% had some secondary school or higher. Moreover, more than a half women have husbands aged less than 25 years old and only 4% have husbands aged more than 35 years old. 64% of married adolescent women already have minimum one child, 1.9% has two or three children and the majorities were newlywed couples less than 3 years (83%). In addition, two-third married adolescent women live in rural area (66%) and less than a half (42%) had problems to access health care although 14% said they have problem with distance to health care facilities.

Bivariate analysis

Current contraceptive use was higher among married adolescent women in older age group of 18-19 years compared to age group of 15-17 years (63% vs. 55%). The proportion of contraceptive users increased among women with higher educational attainment (20% among women who have no education to 62% among women with secondary or higher education, $p \leq 0.05$). Married adolescent women who were unemployed have the highest contraceptives use compared to those who have job. Moreover, women who worked in agricultural sector have the lowest use (44%) compared to women who works in non-agricultural sectors (55%). The proportion of users among middle economic households was also higher than two other categories. Contraceptive use was in line with level of awareness of contraceptive methods. It means that the more methods known by married adolescent women, the more likely they are to use contraception. In summary among individual factors, women's education, occupation and awareness of contraceptive methods are statistically associated with contraceptive use among married adolescent women in Indonesia.

Among enabling factors, have a discussion about family planning with husband, relatives and friends/neighbors, exposure to FP information in media, obtained FP information from personal

Table 2 Bivariate analysis of contraceptive use among married adolescent women in Indonesia, 2012 IDHS

Characteristics	% use (N=691)	Chi-square	*p-value*
Individual factors			
Women's age			
15-17 years old	55.1	3.386	0.066
18-19 years old	62.7		
Women's education **			
No education	20.0	10.610	0.005
Primary	59.7		
Secondary or higher	62.1		
Occupation ***			
Not work	66.3	17.176	0.000
Agricultural	44.0		
Non agricultural	55.9		
Wealth status			
Low	60.2	0.890	0.641
Middle	63.8		
High	58.4		
Awareness of contraceptive methods***			
Low (0-1 method)	20.0	35.934	0.000
Fair (2-4 methods)	56.9		
Good (≥ 5 methods)	66.9		
Enabling factors			
Discussed FP with husband**			
Yes	72.7	11.352	0.001
No	57.3		
Discussed FP with relatives *			
Yes	67.4	5.852	0.016
No	57.6		
Discussed FP with friends/neighbors***			
Yes	70.3	12.484	0.000
No	56.1		
Exposure to FP program in media **			
Yes	65.8	7.319	0.007
No	55.7		
Obtain FP information from community leaders and health workers ***			
Yes	73.2	22.136	0.000
No	54.5		
Husband's age *			
≤ 25 years old	57.9	7.063	0.029
25-34 years old	65.3		
≥ 35 years old	43.7		
Husband's education**			
No education	18.5	11.16	0.002
Primary	60.2		
Secondary or higher	62.1		
Number of living children ***			
No child	27.6	180.169	0.000
1 child	79.7		
2 or more children	69.3		
Duration of marriage**			
0-2 years	57.9	8.911	0.003
≥ 3 years	72.5		
Problem of access to health care			
Yes	57.7	1.598	0.206
No	62.5		

Table 2 Bivariate analysis of contraceptive use among married adolescent women in Indonesia, 2012 IDHS (Conts.)

Characteristics	% use (N=691)	Chi-square	*p-value*
Place of residence			
Rural	59.2	0.907	0.341
Urban	63.0		
Problem of distance**			
Yes	46.2	9.985	0.002
No	62.9		

* p<0.05, ** p <0.01, *** p<0.001

contact with community leaders and health workers, husband's age, duration of marriage and problem of distance are associated with contraceptive use among married adolescent women in Indonesia. The proportion of married adolescent women who use contraceptive methods increase among those who discussed about family planning with husband (p≤0.01), relatives (p≤0.05), and friends/neighbors (p≤0.001). Those who got exposure to media and obtained family planning information from community leaders or health workers were also more likely to use contraception than their counterparts.

Focusing on husband's characteristics, the highest proportion of contraceptive users was among married adolescent women whose husbands aged 25-34 years while the lowest use was among those who have husbands aged 35 years or more that have a very large age gap. The use also increased among women whose husbands had higher educational level. Married adolescent women who had children were more than 2 times more likely to use contraception, and those who had been married more than 3 years were also more likely to use contraception. Contraceptive use was lower among married adolescent women who live in rural area and had faced some problem such as to get money, husband's permission or merely a problem of distance to go to health care facilities. However place of residence and problem of access to healthcare were not statistically associated with contraceptive use among married adolescent women in Indonesia. The result of bivariate analysis presented in Table 2.

Multivariate analysis

To determine factors affecting contraceptive use among married adolescent women in Indonesia, Binary logistic analysis conducted in this study. Table 3 presents the result of multivariate analysis. Overall this model can explain 27% of variation in the contraceptive use among married adolescent women and this model significant at 0.001 level.

Controlling to other variables, women's individual characteristics which are women's age, women's education, occupation and wealth status were not statistically significant affecting contraceptive use among married adolescent women. Only awareness of contraceptive methods was statistically significant at p<0.05. Married adolescent women who have more awareness of modern contraceptive methods were more likely to use contraception. Women who were aware of two or more methods were 3.5 times as likely to use contraception as those who had less awareness. Nevertheless, women who aware of more than five methods the likelihood to use contraception was slightly decreased. The odds were 3 times as likely to use contraception as those who did not know any or only knew one method.

Furthermore, focusing on interpersonal factors, discussed about family planning with husband, relatives and friends/neighbors were not statistically significant affecting contraceptive use among married adolescent women after all variables were controlled. Women who obtained family planning information from personal contact with community leaders and health workers were 1.9 times as likely to use contraception as those who never obtained family planning information from them in the last six months (p≤0.001). Those who already have one child were 10 times as likely as those who have no children to use contraceptive methods (p≤0.001) and those who have two or more children were seven times as likely to use contraception as those who have no children. Husband's education was also significantly associated with contraceptive use among married adolescent women in this study (p<0.01). However, exposure to family planning information from media, husband's age, duration of marriage and problem of access to get health care, place of residence and problem of distance were not significantly affecting contraceptive use after all variables controlled.

DISCUSSION

In summary, both individual and enabling factors are associated with contraceptive use among married adolescent women in Indonesia although

Table 3 Binary logistic regression result of contraceptive use among married adolescent women in Indonesia, 2012 IDHS

Independent variable	b	Odds Ratio	Robust SE
Individual factors			
Women's age (ref: 15-17 years old)			
18-19 years old	-0.16	0.85	0.27
Women's education (ref : no education)			
Primary	-0.54	0.58	0.41
Secondary or higher	-0.47	0.62	0.43
Occupation (ref: not working)			
Agricultural	-0.73	0.48	0.18
Non agricultural	-0.01	0.99	0.32
Wealth Status (ref: low)			
Middle	-0.16	0.85	0.31
High	0.08	1.09	0.41
Awareness of contraceptive methods (Ref: 0/1methods)			
2-4 methods	1.25*	3.50	1.87
5 or more methods	1.12*	3.07	1.64
Enabling factors			
Discussed about FP with husband	0.54	1.71	0.72
Discussed about FP with relatives	0.32	1.37	0.44
Discussed about FP with friend or neighbour	0.44	1.55	0.47
Exposed to FP information in media	0.24	1.28	0.36
Obtain FP information from personal contact with community leaders and health workers	0.64*	1.91	0.56
Husband's Age (ref: less than 25)			
25-34 years old	0.04	1.04	0.28
≥ 35 years old	-1.04	0.35	0.20
Husband's Education (ref : no education)			
Primary	1.45*	4.25	2.90
Secondary or higher	1.52*	4.56	3.10
Number of living children (ref: no children)			
1 child	2.35***	10.46	2.95
2 or more children	1.87**	6.50	4.57
Duration of marriage ≥ 3 year	0.51	1.67	0.55
Have problem of access to health care (ref:no)	0.11	1.12	0.34
Living in urban	-0.17	0.85	0.25
Have problem of distance (ref:no)	-0.38	0.68	0.27
Constant	-3.31	0.04	0.03
No of observation (weighted)	691		
Model Chi-square	139.19		
Pseudo R square	26.89		
Sig	0.001		

* p<0.05, ** p <0.01, *** p<0.001

this statement is limited to variables that were found to be statistically significant in this study. Number of living children is the strongest predictors of contraceptive use among married adolescent women. Moreover, this present study underlines the important of awareness about contraceptive methods and the role of community leaders and health workers on delivering the family planning messages. Husband's education also significantly affecting contraceptive use among married adolescent women in Indonesia. Other variables which are significantly associated with contraceptive use among married adolescent women in the bivariate analysis were no longer significant after all variable controlled such as women's education, occupation, discuss about family planning with husband, relatives and friends/neighbors, exposure to media, husband's age, duration of marriage and have problem to go to health facilities because of distance.

People are considered to have awareness of contraception if they can recognize the type of contraceptive methods. Although more than ninety percent of women in Indonesia can recognize minimum one type of modern methods, but they are not deeply know and understand how contraception works and what the side effects are. Narzary, in his study among married adolescent women in India, also found that knowledge of contraceptive methods

has a significant positive effect on contraceptive use [15]. Higher awareness of types of contraception gives women more choice to choose contraception suit with them.

Husband's education is related to decision making regarding the use of contraceptive methods. In Vietnam, a study revealed that husband's education level was a stronger predictor of contraceptive use than women's education level [16]. Husband's education is related to their knowledge of contraceptives methods. Number of living children was also proved as predictors of contraceptives use in many countries [17-19]. Due to sociocultural perceptions, newlywed will be expected to have a baby as soon as possible and this happen to all women regardless their age. The use of contraception will be more considered after they have first child. This finding suggests to provide information of maternal related risk and to increase the promotion of delaying pregnancy until reach 20 years old among married adolescent women who haven't had a child yet. The similar condition also occurs in Bangladesh and Pakistan which also has Moslem as majorities [18, 20]. In both countries the use of contraception more considered among women who already have children. Husband also has more roles in the decision making about family planning [20].

Person-to-person communication among family planning workers including field workers and cadres of village volunteers is very effective in disseminating family planning messages, especially in areas with lower access to media [21]. Field workers have a very important role in Indonesia to deliver information and education about family planning. Field workers visit each family and give information about contraceptives, sexual and reproductive health, recruit new acceptors, distribute condoms and pills, and facilitate access to services, especially for poor families [22]. Now, the coordination of the National Population and Family Planning Board (NPFPB/BKKBN) and field workers faces some challenges of the bureaucracy. After decentralization, the number of field workers declined significantly as many moved to non-family planning jobs in local government institutions for their career [23]. The role of religious leaders, village leaders, teachers are also undeniable. In the Moslem society, the acceptance of family planning program also depends on the community leaders. Midwives in rural areas have additional duties to increase access and utilization of family planning services and broaden the mix of contraceptives available to improve choices [24]. Doctors and nurses and pharmacists also play a role in giving information and services of family planning in health facilities.

RECOMMENDATIONS

This study findings suggest that the best strategy to increase contraceptive use among married adolescent women in Indonesia is delivering family planning program through community leaders or health workers. The information of family planning, contraception, maternal health, reproductive health, etc. can be included with married adolescent women as the counseling target. More attention can be given to women who are married less than 3 years and who haven't had a child to promote delaying pregnancy until minimum aged of mother 20 years. Women who has larger age gap with their wive also in need to get information and counseling about family planning. More information can also be delivered through media, women's relatives or their peers. The roles of field workers also need to be revived especially advocacy to local government to give more attention to field workers in their area including the number and resources. Enabling larger access to education is one of the ways to improve knowledge for both the women and their husbands. The increase of education will give more opportunity to find a job. Training of health workers needed to refresh information and family planning technology. To increase accesibility, provide more health center is needed in the area with limited access to health care facilities.

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