

Determinants of Modern Contraceptive Use among Young Married Women (Age 15-24) in Indonesia

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Abstract

Younger maternal age increases maternal and neonatal risks, while the use of contraceptives among young married women is noticeably lower compared to older women. Contraceptive use can reduce the risk of reproductive health problems among young women. This study aimed to assess the determinants of modern contraceptive use among young married women aged 15-24 in Indonesia. The study utilized data of the 2019 Indonesian Population, Family Planning and Family Development Program Performance and Accountability Survey. The analysis was restricted to 3,927 young married women who were not pregnant during the survey, as they were likely to report either doing something or not postponing or delaying pregnancy. Logistic regression analyses were performed to predict factors influencing modern contraceptive use among young married women. Findings indicate that all demographic factors (age, residence, and region) and education were associated with modern contraceptive use. The number of living children and desire to have children revealed significant variability in modern contraceptive use among young married women. Other important factors in explaining contraceptive use were family planning program exposure factors such as knowledge of the contraceptive method and discussed family planning with health worker. The study underlines the importance of intervention programs aimed at increasing modern contraceptive information targeting adolescents who are older, reside in urban area, live in islands other than Java-Bali, have higher education; and encouraging provider-clients' family planning interpersonal communication.

Keywords: family planning, Indonesia, modern contraceptive use, young married women.

1. Introduction

The use of contraception is generally recognized as an important key in lessening risks related to pregnancy and childbirth. Family planning through contraceptive use reduces the number of maternal mortality and morbidity because it reduces the chance of pregnancy and related complications, lowers the risk of unsafe abortion, reduces hazards of frailty from high parity and closely spaced pregnancies, and delays the first pregnancy in young women (Ahmed, Li, Liu, & Tsui, 2012).

Several studies show that maternal and neonatal risks increase with younger maternal age. Young women are physically immature due to incomplete pelvic development, which increases the risk of obstetric complications and maternal mortality (Ahmed et al., 2012; The Alan Guttmacher Institute, 2002; UNFPA, 2014). One study from Matlab, Bangladesh, showed that preventing pregnancy at aged less than 20 years, and more than 39 years would decrease maternal mortality by 34% (Fortney, 1987). The risk of maternal mortality is much higher among women who have an unintended pregnancy.

The children from young mothers have higher morbidity and rate (Gubhaju, 2002). Teenage mothers face many challenges and disadvantages such as a high risk of pregnancy with premature or low-birth-weight babies and less likely to receive good prenatal care and skilled medical care at delivery compared with older women. Children born to teenage women are more likely to die than babies born to women aged the 20s and 30s. The infant mortality rate for infants with mothers younger than 20 is about 100 deaths per thousand live births compared with the infant mortality rate of 72-74 deaths per thousand live births with mothers aged 20-29 and 30-39 (The Alan Guttmacher Institute, 2002).

Births to young married women in Indonesia slightly increase in two years period. The age-specific fertility rates

(ASFR) among women age 15-19 increased from 30 births in 2018 to 33 births per 1,000 women in 2019. The ASFRs among women age 20-24 are constant, 123 birth per 1,000 women in both years 2018 and 2019 (Badan Kependudukan dan Keluarga Berencana Nasional & Badan Pusat Statistik, 2019). According to the 2019 Indonesia Population, Family Planning, and Family Development Program Performance and Accountability Survey, Indonesia has experienced a decrease in contraceptive use in five years period. The Contraceptive Prevalence Rate (CPR) among married women age 15-49 is gradually decreasing from 59,5 percent in 2016 to 55,0 percent in 2019, the pattern was similar among young women age 15-24 (Badan Kependudukan dan Keluarga Berencana Nasional & Badan Pusat Statistik, 2019). It is known that contraceptive use among older women is higher than among married adolescents. Young women face some barriers to use modern contraceptives including (1) misconceptions or rumors about the long-term side effects of modern contraception on their health and their future fertility related to their ability to conceive in the future (Hamani et al., 2007; Otoide, Oronsaye, & Okonofua, 2001; Smith & Daley, 2012; Williamson, Parkes, Wight, Petticrew, & Hart, 2009); (2) poor knowledge on benefits and how modern contraceptive method works in preventing pregnancy; (3) failure to consistently and correctly use modern contraception; and (4) lack of access to contraceptive methods and services (Williamson et al., 2009). Some effective interventions need to develop to have successfully overcome these barriers.

Much of the research in Indonesia has focused on contraceptive use among women of reproductive age while paying little attention to the reproductive health of young women. Understanding the factors that influence the use of contraceptives among young married women in Indonesia will, therefore, be a critical step in achieving population policy targets. Several factors have been identified to be associated with the use of modern contraceptives, include social, economic, cultural, and religious. Gayatri and Utomo have highlighted that women's age, fertility intention, knowledge of ovulatory cycle, education, women's occupation, place of residence, and region were significant factors associated with contraceptive used among married women of reproductive age in Indonesia (Gayatri & Utomo, 2019). Another study found that predictors of modern contraceptive use among married women were age, residence, number of living children, religion, education, visited by family planning worker, desire for more children, and husband's view on family planning (Rahayu, Utomo, & McDonald, 2009). A study of contraceptive use among the poor in Indonesia found some cultural, attitudinal and knowledge factors have strong associations with contraceptive use (Schoemaker, 2005). Similarly, the study of modern contraceptive use among young married women identified that significant factors associated with the use of modern contraception in Ethiopia were religion, level of education, wealth status, young women's age, family size agreement with husbands, and fertility preference for spacing or limiting births (Worku, Tessema, & Zeleke, 2014). A study in Karachi, Pakistan, presents that there are significant factors associated with young women's likelihood to use contraceptives such as women's education, receiving family planning information through mass media, discussing family planning with a mother-in-law and accepting family planning messages from a health care provider (Fikree, Khan, Kadir, Sajan, & Rahbar, 2001).

Adolescent mothers have a higher risk of maternal morbidity and mortality. Identifying the major factors contributing to modern contraceptive use among adolescent women is needed to improve maternal and child health. Hence, this study analyzed the determinants of modern contraceptive use among young married women in Indonesia.

2. Method

2.1 Data

This study is based on data from the 2019 Indonesia Population, Family Planning, and Family Development Program Performance and Accountability Survey, a survey conducted by the National Population and Family Planning Board and Statistics Indonesia. The survey was designed to provide up-to-date estimates of population, family planning, adolescent reproductive health, and family development indicators at the national and provincial levels. Four questionnaires were used for data collection in the survey: the Household Questionnaire, Family Questionnaire, Woman Questionnaire, and Adolescent Questionnaire. In this study, we used data of young married women aged 15-24 years which were collected using the Woman Questionnaire.

The 2019 Indonesia Population, Family Planning and Family Development Program Performance and Accountability Survey applied probability sampling to provide national and provincial samples of women aged 15-49 years. A two-stage cluster sampling procedure was used in the survey. In the first stage, 1,935 clusters in urban and rural areas were selected from 34 provinces and 514 municipalities with probability proportional to size sampling. In the second stage, 35 households per urban or rural cluster were selected using a systematic random sampling based on the household listing which was collected door-to-door by enumerators.

Interviews with women covered 59,842 of the eligible 59,987 women, yielding a response rate of 99.7%. This

study utilized weighted data to reduce bias due to the probability of selection. Eligible women, who met the inclusion criteria, were enrolled in this study. The inclusion criteria were: (1) young women aged 15-24 years; (2) married women; (3) non-pregnant women at the time of the survey (Fig.1). There were some missing values related to pregnancy status, women with missing values or answered “not sure” were considered not pregnant. Handling the missing values and the “unsure” pregnancy status assumed that the women might not know yet about their pregnancy in the early week of pregnancy. Based on the inclusion criteria, this analysis is limited to the 3,927 (weighted) young married women.

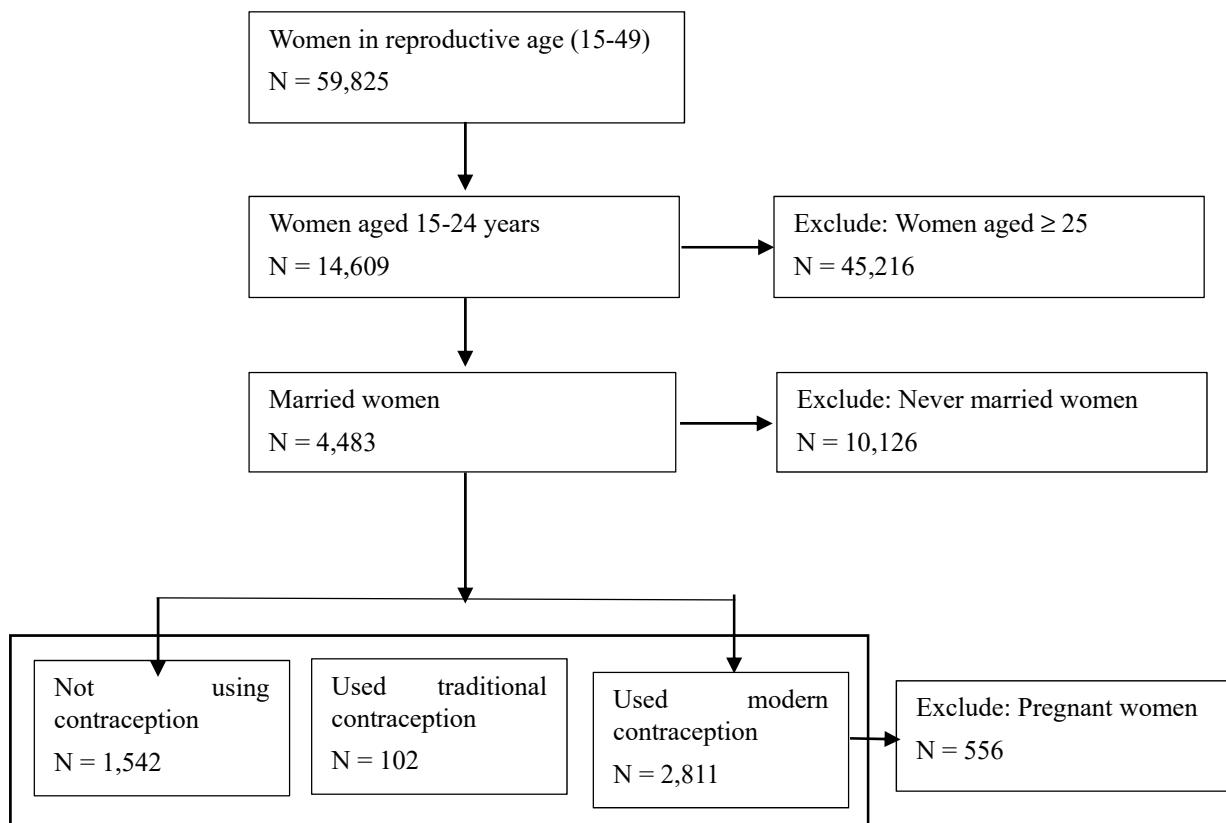


Figure 1. The inclusion criteria for the sample size

2.2 Variables

The outcome variable in this study was contraceptive use, which was obtained from the woman questionnaire. The questionnaire reports contraceptive use among women aged 15-49 through the following question: “Are you or your husband/partner currently using any modern or traditional method to delay or avoid a pregnancy?” Women who answered ‘yes’ were further asked the method of contraceptive they or their partner were using. The option listed included: not using, female sterilization, male sterilization, implants, Intra-Uterine Device (IUD), 1-months injections, 3-months injections, pills, male condom, female condom, emergency contraception, intravaginal/diaphragm, standard days/cycle beads, lactational amenorrhoea method (LAM), periodic abstinence/calendar, and withdrawal. Modern contraceptive use, as the outcome variable in this study, was coded as two variables: ‘*traditional/no method*’, coded as “0”, for women who are not using any contraceptive methods or using traditional methods (such as standard days/cycle beads, periodic abstinence/calendar, and withdrawal) which are less effective in pregnancy prevention (World Health Organization & John Hopkins Bloomberg School of Public Health/Center for Communication Programs, 2018); and ‘*modern methods*’, coded as “1”, for those who reported using a modern contraceptive method (such as female sterilization, male sterilization, implants, Intra-Uterine Device (IUD), 1-months injections, 3-months injections, pills, male condom, female condom, emergency contraception, intravaginal/diaphragm, and LAM).

The explanatory variables were grouped into four major categories: the demographic factors (age, residence, and

region); socio-economic factors (household wealth index, and education); behavioral/attitudinal factors (number of living children and desire to have children); and family planning program exposure (knowledge of contraceptives, and discussed FP with health worker). These factors were hypothesized to affect modern contraceptive use.

2.3 Analysis

STATA 15.1 was employed for data analysis, descriptive statistics performed to identify characteristics of young married women such as socio-economic demographic characteristics, individual behavioral/attitudinal, and exposure to the family planning system. Descriptive analysis was presented as proportions (%) from categorical variables. Secondly, this study carried out bivariate logistic regression to determine the association between each predictor and contraceptive use among young women. Only the significant predictors with probability value less than 5% were included in the multivariate logistic regression to assess the relationship with the outcome by controlling other variables in the model. The outcome variable was categorized into two groups coded as traditional/no method and modern method. This outcome was fitted in multivariate binary logistic models to predict the determinants of modern contraceptive use among young married women. Model I assessed logistics regression and reported the odds ratios (ORs) with a 95% confidence interval (CI). Model II assessed the multivariate logistic regression and reported adjusted OR (aOR) and 95% CI.

2.4 Ethical Consideration

Permission to use the data was obtained from the Research and Development Center of Family Planning and Family Welfare, National Population and Family Planning Board, Indonesia. The original survey obtained ethical clearance from the National Population and Family Planning Board Ethical Review Committee. Since this study was a secondary analysis and the individual consideration such as names and addresses were not included, so the institutional review board approval was not required.

3. Results

3.1 Sample Description

Table 1 presents the description of 3,927 young married women age 15-24 years from Indonesia who participated in the 2019 Indonesia Population, Family Planning and Family Development Program Performance and Accountability Survey. Less than half (42%) of young married women using no method or traditional method while about 58% of the respondents were currently using modern methods. Among the respondents, about eight out of 10 were age 20-24 and most of the women 64% resided in rural areas. The majority (63%) of the women were living in Java-Bali and about a third (30%) of women were from poor household wealth index. Regarding educational status, slightly more than half (56%) of young women had primary or less education, only 5% had continued their education beyond secondary education. A large proportion of young women (98%) had at least two children and most (86%) of respondents desired to have another child in the future. A majority of women had fair knowledge (56%) on modern contraception and discussed (72%) family planning with health workers. The complete characteristics of the respondents are presented in Table 1.

3.2 Modern Contraceptive Use among Young Married Women

Table 1 shows modern contraceptive use by factors categorized as demographic, socio-economic, behavioral/attitudinal, and family program exposure of young married women. The vast majority of modern contraceptive users (88%) and non-users (86%) were women age over 19 years. More than half of modern contraceptive users (66%) and 61% of non-user lived in rural areas. Sixty-six percents of modern contraceptive users were live in Java-Bali, compared with 58% of non-users. Regarding economic status, among married women aged 15-24, 22% of users were from rich economic status, compared with 24% of non-users. Only 4% of modern contraceptive users had continued their education beyond secondary school, whereas 7% of non-users had done so.

Almost half of the young women who did not use modern contraceptive methods (41%) had no children. Conversely, only 4% of the modern contraceptive user had no children. Women who use modern contraceptives showed weaker fertility desires than non-users. Only 10% of non-users did not want more children, compared to 17% of modern contraceptive users. Poor knowledge of contraceptive methods was lower among modern contraceptive users (8%), compared with 16% of the non-users. Interestingly, 79% of non-users have discussed family planning with health workers, compared to 68% of modern contraceptive users.

Table 1. Sample characteristics of young married women 15-24 years in Indonesia (weighted)

Characteristics	Total (n=3,927)	Modern contraceptive utilization	
		Non-users (n=1,644)	Users (n=2,283)
		%	%
Modern Contraceptive use			
Non-users	41.9		
Users	58.1		
Demographic Factors			
Age			
15-19	13.1	14.3	12.3
20-24	86.9	85.7	87.7
Residence			
Urban	36.5	39.4	34.4
Rural	63.5	60.6	65.6
Region			
Java-Bali	62.6	58.0	65.9
Other islands	37.4	42.0	34.1
Socio-economic Factors			
Household Wealth index			
Poor	30.0	29.6	30.3
Middle	47.2	46.8	47.5
Rich	22.8	23.6	22.2
Education			
Primary or less	56.2	50.9	60.0
Secondary	38.6	41.8	36.3
Higher	5.2	7.3	3.7
Behavioral/Attitudinal Factors			
Number of living children			
0	19.3	41.0	3.7
1-2	79.7	58.0	95.3
3+	1.0	1.0	1.0
Desire to have children			
No more children	14.0	9.9	17.0
Wanted more	86.0	90.1	83.0
Family Planning Program Exposure			
Knowledge of contraceptive methods			
Poor	11.2	16.1	7.7
Fair	56.2	54.9	57.1
Good	32.6	29.0	35.2
Discussed FP with a health worker			
No	27.8	21.3	32.5
Yes	72.2	78.7	67.5

3.2 Determinants of Modern Contraceptive Use

Binary logistic regression presented in Table 2 was applied using four models to measure the influence of explanatory variables on modern contraceptive use among young married women. Crude and adjusted ORs were analyzed to determine the strength of the association between the predictors and contraceptive use as the outcome variable. Results show that women aged 20-24 years were less likely ($aOR=0.689$; 95% CI: 0.544-0.872) to use modern contraceptive methods, compared with women aged 15-19 years. Rural women were more likely ($aOR=1.389$, 95% CI: 1.181-1.635) to report use of modern contraceptive methods compared to their urban counterparts. Compared to women residing in Java-Bali, women who lived in other islands were less likely to use modern contraceptives ($aOR=0.581$; 95% CI: 0.496-0.679). Furthermore, women with good knowledge of contraceptive methods ($aOR=1.869$; 95% CI: 1.424-2.452) and those with average/fair knowledge of contraceptive methods ($aOR=1.625$; 95% CI: 1.267-2.085) were more likely to use modern contraceptives than women with poor knowledge on contraceptive methods. However, based on education, women with higher education were less likely ($aOR=0.585$; 95%CI: 0.410-0.835) to use modern contraceptive than uneducated women.

Regarding the number of living children, women who had 1-2 children ($aOR=18.010$; 95% CI: 14.000-23.168) and three or more children ($aOR=11.102$; 95% CI: 5.512-22.361) were more likely to use modern contraceptive methods than nulliparous women. Women who wanted more children were less likely ($aOR=0.773$; 95% CI: 0.626-0.955) to use modern contraceptives than their counterparts who did not want more children. Further, the analysis showed that women who interacted with the health care system (having discussed family planning with a health worker) were 1.3 times ($aOR=1.292$; 95% CI: 1.094-1.525) more likely to use contraceptives as compared with their counterparts. However, the status of household welfare was nonsignificant in influencing modern contraceptive methods.

Table 2. Odd ratio of modern contraceptive use among young married women in Indonesia

Characteristics	OR	95% CI	aOR	95% CI
Demographic Factors				
Age				
15-19	1		1	
20-24	0.838*	(0.696-1.010)	0.689***	(0.544 – 0.872)
Residence				
Urban	1		1	
Rural	1.235***	(1.083-1.409)	1.389***	(1.181-1.635)
Region				
Java-Bali	1		1	
Other islands	0.713***	(0.625-0.812)	0.581***	(0.496-0.679)
Socio-economic Factors				
Household Wealth index				
Poor	1		1	
Middle	0.992	(0.855-1.151)	0.957	(0.799-1.147)
Rich	0.915	(0.767-1.090)	0.889	(0.711-1.111)
Education				
Primary or less	1		1	
Secondary	0.740***	(0.648-0.845)	0.863*	(0.734-1.014)
Higher	0.424***	(0.317-0.568)	0.585***	(0.410-0.835)

Behavioral/Attitudinal Factors				
Number of living children				
0	1		1	
1-2	18.321***	(14.420-23.276)	18.010***	(14.000-23.168)
3+	10.821***	(5.540-21.137)	11.102***	(5.512-22.361)
Desire to have children				
No more children	1		1	
Wanted more	0.534***	(0.439-0.649)	0.773**	(0.626-0.955)
Family Planning Program Exposure				
Knowledge of contraceptive methods				
Poor	1		1	
Fair	2.178***	(1.767-2.684)	1.625***	(1.267-2.085)
Good	2.538***	(2.033-3.169)	1.869***	(1.424-2.452)
Discussed FP with a health worker				
No	1		1	
Yes	1.772***	(1.530-2.052)	1.292***	(1.094-1.525)

Note. *: significant at $\alpha = 0.10$; **: significant at $\alpha = 0.05$; ***: significant at $\alpha = 0.01$.

4. Discussion

This cross-sectional study examined the predictor effects of four categories of factors (demographic factors, socio-economic factors, behavioral factors, and family planning program exposure) on modern contraceptive use among young married women in Indonesia. There are 58.1% of young married women aged 15-24 years who use modern contraceptives. Young women more often choose to use a contraceptive method for spacing rather than for limiting. In this study, only 14% of young married women reported that they did not want any more children. This is underscored by the fact that among those who use modern contraceptives, injectables (monthly, 3-monthly) and oral contraceptives were the predominantly used method among young married women. To avoid had pregnancies too close together, it is needed to improve long-acting contraceptive use among young married women. Moreover, long-acting reversible contraception methods include IUDs and subdermal implants are the most effective reversible and have additional advantages of being long-lasting, convenient, well like by the user, and cost-effective (Stoddard, McNicholas, & Peipert, 2011). Expanding the eligibility of family planning services to young women may help expand access to IUD or other effective contraceptives (Wilson, Samandari, Koo, & Tucker, 2011).

Overall, the findings of this study are somewhat in line with some literature on contraceptive use among women. Similar to these studies, the analysis found that several demographic, socio-economic, behavioral/attitudinal, and family program exposure factors are associated with modern contraceptive use among young married women. One exception in this analysis that there is not a significant association between modern contraceptive use and household wealth index. The present study demonstrated that women aged 20-24 are less likely to use modern contraceptives. This could be partly explained by the fact that younger (adolescents) have awareness of the increased risk in younger maternal age. Often, young women stated a desire to avoid pregnancy since they may have to end or delay their education and they may be too young to look after the baby, (Islam, 2018). Improving contraceptive use among young married women is crucial because youth fertility is high and the needs for delaying the first pregnancy and spacing pregnancy are important (Daniel, Masilamani, & Rahman, 2008). This result contradicts with studies in Ghana, Malawi, and Ethiopia which older women are more likely to practice contraceptive use than younger women because they are more mature, have better knowledge on family planning, obtain a better education, have an occupation, and more likely to be married (Mandiwa, Namondwe, Makwinja, & Zamawe, 2018; Nyarko, 2015; Worku et al., 2014).

Higher use of modern contraceptives found in rural over urban areas is consistent with the findings of a study in Indonesia, that women who live in rural areas tend to use modern contraceptive methods compared with those in urban areas (Gayatri & Utomo, 2019). However, other studies conducted in Bangladesh and Ethiopia highlighted

that urban women had higher use of modern contraceptive prevalence rates than rural women (Islam, 2018; Lakew, Reda, Tamene, Benedict, & Deribe, 2013). Our finding is also not consistent with a study from Malawi that women in rural areas are less likely to use contraceptives due to limited availability and access to family planning services (Mandiwa et al., 2018).

Geographical variability is one of the predictors associated with the use of contraception. The findings show that women from Java-Bali had higher odds of using modern contraceptives compared to other islands. Similar to another study in Indonesia shown that young married women in the Java-Bali region were almost twice probable to utilize modern contraceptives compared to other islands in Indonesia (Gayatri & Utomo, 2019). Java is Indonesia's center of politics and the economy, more than half of the nation's population lives in Java. As a consequence, Java is the most developed island of Indonesia, in terms of soft/hard infrastructure development, industrialization, education, and so forth (Indonesia Investments, 2019). The economic contribution analysis states that Java compared with other major islands has the most contribution with a 57.96% average contribution (Julio, Marwoto, & Manulang, 2019). As the most developed island access and quality to family planning are easier than in other islands. A study of modern contraceptive use among married women focusing on spatial distribution showed that low contraceptive use could be contributed by relative underdevelopment and low urbanization (Lakew et al., 2013). Women in other islands might face difficulties in getting access and information to family planning.

Education was a substantial predictor in describing modern contraceptive use among young women. Generally, previous studies showed that an increase in educational level was significantly associated with high contraceptive use due to women's exposure to reproductive health information, access to services, and women's empowerment to make appropriate decisions (Asiimwe, Ndugga, Mushomi, & Menyenye Ntozi, 2014; Worku et al., 2014). This study, however, found the contrary, the use of modern contraceptive methods declined as the education level increased. The 2017 Indonesia DHS report similar finding, the peak use of modern methods is among married women with completed primary education (64%) and only 46% the prevalence of modern contraceptive use among those with more than secondary (National Population and Family Planning Board, Statistics Indonesia, Ministry of Health, & ICF, 2018). This is likely to be attributed to the fact that increasing educational levels contributed to higher use of traditional contraceptive methods. The same survey reported that 2% of married women with no education use traditional methods compared with 12% of women with more than secondary education (National Population and Family Planning Board et al., 2018). A study in traditional contraceptive methods of Filipino women implied that more educated women were more likely to use rhythm compared with modern contraceptive methods (Marquez, Kabamalan, & Laguna, 2017). Perhaps, another research would be needed for developing a relationship about cause-and-effect between the possible influencing factors and contraceptive use among women, comparing women who used modern methods with traditional methods. Another reason for the low prevalence of contraceptive use among women with high education was found in a current study in Kerala India, that stated that women with high education tend to get married late and most are trying to conceive, and thus contraceptive use is low among older (adolescents) (Vinoda Thulaseedharan, 2018).

The findings reaffirm the over-arching importance of the number of living children influenced by contraceptive use. The number of living children has the strongest influence on the use of contraceptives. It is found from the current study that women who had one or two living children and three or higher living children had a higher likelihood to use modern contraceptives compared to those women at parity zero. Studies conducted in Nepal (Kafle, 2018), Jordan (Almalik, Mosleh, & Almasarweh, 2018), and Ghana (Appiah, Seidu, Ahinkorah, Baatiema, & Ameyaw, 2020) are in line with this finding.

This study revealed that young married women who did not want another child were more likely to use modern contraceptives compared to young women who desire another child. The finding is similar to previous research carried out in Bangladesh. (Islam, 2018). Several reasons for this perhaps financial and practical circumstances, a desire for career development, or participation in the labor market.

The results agree with a previous study on the relationship between women's contraceptive use and their knowledge of family planning methods. A study in Pakistan shows that women who are using contraception are more likely to receive family planning messages that is widespread delivered through mass media campaign than are those who are not using contraception (Fikree et al., 2001). Knowledge of family planning is the mediate factor when women want to decide the appropriate modern contraceptive to use (Fikree et al., 2001). Good knowledge of family planning methods may reduce the misconceptions around modern contraceptives related to side effects, safety, effectiveness, and the impact on future fertility.

As expected, young married women who discussed family planning with health workers are more probable to use modern contraceptive methods as opposed to those who do not discuss family planning with health workers.

Health workers continue to be critical in encouraging contraceptive use by delivering family planning messages that help couples make informed choices that lead to contraceptive compliance. One study suggested that a discussion about contraceptive with a health worker was 1.21 times more likely to have used contraceptive methods than those who did not (Ankomah, Oladosu, & Anyanti, 2011). Discussing concern for young women's wellbeing and the benefits of delaying and spacing pregnancy through family planning programs will contribute to decision making and find opportunities for a better future (Daniel et al., 2008). One thing to be considered regarding the discussion between the health workers and women during the contact is the quality of communication and information given, concerning a high percentage of non-users have discussed family planning with health workers, yet knowledge on contraception is still relatively low. The quality of health workers' and clients' interactions in family planning services, together with other contextual factors, is associated with correct utilization and continuation of modern contraceptive methods, also with the attainment of other goals of health care (Elaine & Cynthia, 2000). Among adolescents, the quality of communication such as the availability of accurate family planning information from health workers can improve the use of modern contraceptives (Mandiwa et al., 2018). However, inadequate levels of information are still found among primary providers in the clinic, commercial-center, and community-center (Bruce, 1990). Furthermore, the quality of communication depends not only on the exchange of accurate and complete information, but also on the adequacy of health workers technical skill, a process that creates an atmosphere of trust and allows sharing (Elaine & Cynthia, 2000; Farrokh-Eslamlou, Aghlmand, Eslami, & Homer, 2014; The ACQUIRE Project, 2008).

In this study, the wealth index was not significantly associated with modern contraceptive use contrary to what would be expected. This finding is similar to other studies (Appiah et al., 2020; Asiimwe et al., 2014). However, studies in Nepal (Kafle, 2018) and Ethiopia (Worku et al., 2014) found that young women's wealth status was significantly associated with their use of contraception.

There are some effective interventions to increase modern contraceptive use among young women. First, improve access to contraception is important by ensuring access and availability of various modern contraceptive methods and supporting the counseling process to have contraceptive services that meet the reproductive needs of all couples particularly among young women. Meeting the unmet need for modern contraception among young women can reduce unintended pregnancy and prevent unsafe abortion that causes maternal morbidity and mortality (Darroch, Woog, Bankole, & Ashford, 2016). Second, strategy should be focused on the delivery of comprehensive and accurate information about contraceptive use. It is crucial to minimize the knowledge gap and misconception about modern contraceptive methods including the side effects. Young married women need to receive accurate information regarding the source of modern contraceptive methods (where they can get the family planning services), the benefits of using contraception, the side effect/health concerns of contraception and how to handle it, and also proper and confidential counseling which they can discuss their reproductive needs. Third, comprehensive reproductive health can be inserted into a national curriculum-based educational program to equip young people with positive knowledge, skills, and attitude on sexual and reproductive health. Moreover, spreading the reproductive health information through various activities such as seminars, mass media, social media, and television talk shows will improve reproductive health knowledge among young married women.

We acknowledge that this study has some strengths. The survey is a nationally representative, so the findings of this study can be generalized to young married women in Indonesia. Also, the sample size is relatively large and the response rate of the survey is high (99.7%) which implies research in robust statistics. Despite these strengths, this study has some limitations. First, because of the cross-sectional nature, this study can not analyze the cause and effect between the predictors and modern contraceptive use. Second, the data based on women's self-reporting that is subject to recall bias. In addition, because Indonesia has a multicultural society, further study is needed to study the cultural values including the roles of extended families that may influence modern family planning needs among young married women.

5. Conclusion

Thus, the study concludes that age, residence, region, education, number of living children, desire to have children, knowledge of contraceptive methods, and discussed family planning with health workers were significantly associated with young married women contraceptive use in Indonesia. Therefore, young married women need support to initiate and use modern contraceptives, which will require approaches from competent and trained health workers and providers to reduce cultural beliefs and lack of knowledge barriers to access family planning services. Program interventions, for example, increasing access to reproductive health information and services, particularly family planning, and encouraging provider-clients' interpersonal communication/counseling, are needed for some categories of the population, including urban, older (adolescents), live in islands other than

Java-Bali, higher education and more than one child young married women. Also, improving training for health workers to increase their technical skills will support comprehensive and correct information delivered for young married women.

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Competing Interests

The authors declare that they have no conflicts of interest.

Consents for Publication

This article contains no personal data in any form.

Author's Contribution

Conceptualization: Sari Kistiana

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Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

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