What Factors that Cause the High Numbers of Unwanted Pregnancy in Indonesia?

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ABSTRACT
In the world, more than 120 million couples unmeet the need for contraception in one year. About 80 million of these have had unwanted pregnancies. Some of the impacts caused include abortion, pregnancy complications, and infection. Indonesia is one of the countries with many Unwanted Pregnancy cases that are still stagnant at 15.7% in 2019 with the target of reducing unmet need that has not been achieved. The purpose of this study was to analyze what factors influenced the incidence of Unwanted Pregnancy in Indonesia in the 2019 period. The data used comes from the 2019 Population, Family Planning and Family Development Performance and Accountability Survey Program (SKAP) with 46.220 married women aged between 15-49 years who became the unit of analysis. The data were processed using SPSS 21 using multiple logistic regression test with a significance value <0.05. The study shows several factors behind the occurrence of Unwanted Pregnancy in Indonesia, namely the mother's age at first marriage, mother's education, number of children still alive, place of residence, and decision making in KB. Meanwhile, other factors such as the level of welfare, mother's employment status, and insurance ownership are not factoring that trigger Unwanted Pregnancy in Indonesia. Cross-sectoral cooperation is needed from the Ministry of Religion and the National Population and Family Planning Board in the context of providing family life planning provisions for the future brides in Indonesia, including counseling regarding the need for contraceptives.

INTRODUCTION

Every year more than 120 million couples have unmet need for contraception, 80 million women experience unwanted pregnancies (45 million of which end in abortion), more than half a million women die from complications related to pregnancy, childbirth, and the puerperium. 340 million people get new infections of gonorrhea, syphilis, chlamydia, or trichomonas. Sexual and reproductive diseases mostly affect women and adolescents. This figure is quite high in some developing countries (Glasier *et al.*, 2006). Based on the IDHS (Indonesian Population Demographic Survey), it is known that the fertility rate in Indonesia in 2017 is still at 2.4. This means that an Indonesian woman gives birth to an average of 2-3 children during her life(BKKBN, 2017). Data of Accountability and Performance Survey Program (SKAP) in 2019 showed an increase in the Total Fertility Rate (TFR) in women of fertile age (WUS) 15-49 from 2.38 in 2018 to 2.45 in 2019. The target of the National Medium Term Development Plan (RPJMN) for 2015-2019 to reduce the TFR achievement to 2.28 has not been realized until now (SKAP, 2019). This condition is also exacerbated by the Contraceptive Prevalence Rate (CPR) number that has not yet reached the 2019 RPJMN target of 54.97% from 61.3%. This condition is in line with the increasing number of unmet needs for family planning, namely 12.1%, whereas the target of reducing unmet needs should be 9.1% in 2019.

Unwanted pregnancy, which includes mistimed pregnancy and unwanted pregnancy, is an important problem and needs attention, especially in developing countries. An unintended pregnancy will lead to miscarriage or miscarriage (abortion), low birth weight, and premature birth. This of course also has an impact on increasing the risk of maternal and child mortality. Unwanted pregnancy has serious and detrimental impacts on the health, social, and economic sectors (Marston and Cleland, 2003). Referring to the Sustainable Development Goals (SDGs), health issues are in goal number 3, namely universal health insurance, where the target in 2030 is to reduce maternal mortality to below 70 per 100,000 live births. Based on the 2012 Indonesian Demographics Population Survey (IDHS 2012), the maternal mortality rate (MMR) in Indonesia is 359,000 per live birth and slightly decreased in 2015 to 305,000 per 100 live births (SUPAS 2015). However, MMR in Indonesia is still far from the SDGs target. If we look at the development from 2007, the MMR is still high, based on the 2007 IDHS, the MMR was 228 per live birth, where 11 percent occurred because of unsafe abortion and 7.2 percent were unwanted pregnancies

It is hoped that the use of contraception can prevent unwanted pregnancies and reduce the number of births. Based on the 2019 SKAP data, 16 percent of currently married women aged 15-49 years do not want their last child to be born or do not want pregnancy to occur

(BKKBN, 2019). Along with the unwanted pregnancy, the 2019 SKAP data also shows a decrease in the use of contraceptives, both all family planning (KB) methods and modern family planning methods. Based on the 2018 SKAP the use of all family planning methods was 60.4 percent and decreased to 58.7 percent in the 2019 SKAP. Apart from contraceptive factors, many factors caused unwanted pregnancies.

A study conducted in Nepal showed that there is no single factor that causes the high rate of unwanted pregnancies, many factors contribute to this. The results showed that the factors that were strongly suspected were the age of the woman, the ideal number of children, the age at which the woman was first married, information via radio, religion, and knowledge of family planning methods (Ramesh *et al*, 2009; Zibran and Mohammadnezhad, 2019). In addition, research conducted by Saptarini, I Suparmi (2016) found that education, place of residence, co-living status, parity, pregnancy complications, contraceptive use, and history of the disease are associated with unwanted pregnancy in Indonesia. Another study also found that women who live in urban areas are more likely to experience unexpected pregnancies than women in rural areas (Jaeni, McDonald and Utama 2009; Rahman, 2012).

Unwanted pregnancies can be caused by unhealthy behavior and conditions at the time before or during pregnancy such as rape, lack of knowledge about contraception, too many children, health reasons, fetal defects, young age or not ready to have children, irresponsible partner or relationship with a partner that is not yet great. In addition, the incidence of unwanted pregnancy is closely related to various aspects such as the socio-demographic condition of the family, culture, and beliefs in society. Less successful government programs on reproductive health, such as family planning and adolescent reproductive health programs, are thought to be one of the triggers for unwanted pregnancies. Apart from the failure of birth control, cases of unwanted pregnancy can also be experienced by those who have not used contraception in the last 3 months even though they are sexually active (Kalsum). Factors of education, place of residence, co-living status, parity, pregnancy complications, use of contraception, and history of illness associated with unwanted pregnancy in Indonesia. Mothers with high parity, being or have used contraception, and experiencing pregnancy complications are likely to be unwanted pregnancies. Therefore, screening and counseling during antenatal care, especially for mothers who have a high risk or history of the disease, are needed to prevent pregnancy problems from unwanted pregnancies (Saptarini and Suparmi, 2016). The impact of unwanted pregnancy is that mothers who experience an unwanted pregnancy have a chance not to take care of pregnancy 1.79 compared to the desired pregnancy; have the same chance of not giving exclusive breastfeeding and not giving complete basic immunization. The results of the stratification analysis showed the effect of unwanted pregnancy status on behavior: pregnancy care; exclusive breastfeeding and complete basic immunization are also influenced by economic status. The richer tend to do pregnancy care (Dini *et al*., 2016).

Intervention strategies should aim to reduce unwanted pregnancies by focusing on identifying all factors so that infant and maternal mortality and morbidity, as well as the need for abortion, are reduced and the overall family presence is maintained and enhanced. Increased public knowledge is needed to educate women about family planning as well as about the use of appropriate family planning methods. Better counseling and proper follow-up are needed especially for those women who adopt any method. Improper treatment, incomplete follow-up, and limited choice of methods can cause women to discontinue birth control methods. So that the role of the quality of care that exists in increasing women's ability to achieve what they want (reproductive goals) must be considered. In addition to improving the quality of existing family planning services, it should be followed up by women to assess adherence to methods and address problems associated with any methods (Ali and Ali, 2014). Based on the previous description, the authors examine various factors related to unwanted Pregnancies based on SKAP data available in Indonesia, 2019. The theory used is sourced from the Research to Practice Training Course in Sexual and Reproductive Health Research Department of Reproductive Health and Research World Health Organization, Geneva 2012.

METHOD

This study was cross-sectional and used Population, Family Planning and Family Development Performance and Accountability Survey Program (SKAP) data. Unmarried women and individuals with missing data were excluded from the analysis. This study was limit to those 46.220 currently married women aged 15-49 years at the time of the data collection. Data were analyzed descriptively and using logistic regression for multivariate analysis; p <0.05 indicated statistical significance.

The dependent variable was unintended pregnancy. Unintended pregnancy was defined and calculated as a pregnancy that is either unwanted or mistimed. A woman who has an unwanted pregnancy which does not want to be pregnant or have any children. A woman who has a mistimed pregnancy does not want to be pregnant at this time but wants the pregnancy later (Santelli *et al*, 2003).

Performance and Accountability Survey Program data includes questions about children born in the preceding five years ago. That question was used to assess the status of Unintended Pregnancies. The woman declares whether the last birth was wanted at that time (planned birth), wanted later (untimely birth), or not wanted at all (unwanted birth). For calculating unintended pregnancies as the binary dependent variables (0 = Not UIP; 1 = UIP). Furthermore, eight independent variables selected were age, age at first marriage, decision maker of using contraceptive, educational attainment, current working, have a health assurance, residence, and the number of living children.

RESULTS

The 2019 Population, Family Planning and Family Development Performance and Accountability Survey Program (SKAP) of National Population and Family Planning Board contained performance monitoring and evaluating data that was undertaken annually. The data was available to be accessed through the National Population and Family Planning Board, Indonesia. The dependent variable of this study was an Unwanted Pregnancy (UP). The categories consisted of 'later' & 'no longer want' (the respondent underwent an unwanted pregnancy). Data of UP was calculated based on the sum between groups of respondents who answered 'later' and 'no longer want'. The results of these calculations were presented in the following table.

Table 1. Linkage of Independent Variables to Unwanted Pregnancy

Independent Variable	Later		No longer want		Total		PR
	∑	%	∑	%	∑	%	
Maternal Age Group							
15-19 years old	539	88,2	72	11,8	611	100,0	Ref
20-24 years old	3512	90,7	360	9,3	3872	100,0	0,833
25-29 years old	6273	88,8	790	11,2	7063	100,0	0,977
30-34 years old	7240	85,2	1256	14,8	8496	100,0	1,026
35-39 years old	7980	83,4	1592	16,6	9572	100,0	0,951
40-44 years old	7319	81,6	1648	18,4	8967	100,0	0,908
45-49 years old	6105	79,9	1533	20,1	7638	100,0	1,022
Age of First Marriage Group							
10-14 years old	1525	79,6	390	20,4	1915	100,0	Ref
15-19 years old	15491	83,3	3098	16,7	18589	100,0	0,882
20-24 years old	15086	84,4	2789	15,6	17875	100,0	0,933
25-29 years old	5357	86,7	823	13,3	6180	100,0	0,850
30-34 years old	1076	91,3	102	8,7	1178	100,0	**0,657
35-39 years old	286	95,3	14	4,7	300	100,0	**0,268
40-44 years old	99	94,3	6	5,7	105	100,0	0,532
45-49 years old	21	87,5	3	12,5	24	100,0	0,807
Maternal Education							
Unschooled	554	86,6	86	13,4	640	100,0	Ref
Elementary	22459	84,1	4259	15,9	26718	100,0	**1,408
High	11599	84,3	2157	15,7	13756	100,0	**1,606
College	4356	85,3	750	14,7	5106	100,0	**1,656
Number of Children Alive							
≤ 2 children	30017	90,0	3317	10,0	33334	100,0	Ref
> 2 children	8951	69,5	3935	30,5	12886	100,0	***3,963
Welfare Level							
Low	9232	84,7	1669	15,3	10901	100,0	Ref
Moderate	18611	84,2	3487	15,8	22098	100,0	0,930
High	11125	84,1	2096	15,9	13221	100,0	**0,890
Maternal Occupation							
Not Working Yet	162	85,3	28	14,7	190	100,0	Ref
Unemployment	25011	83,7	4874	16,3	29885	100,0	1,139
Working	13795	85,4	2349	14,6	16144	100,0	1,055
Insurance Ownership							
No	25540	83,7	4962	16,3	30502	100,0	Ref
Yes	13429	85,4	2289	14,6	15718	100,0	-
Decision Maker in Birth Control Usage							
Wife	11804	82,2	2561	17,8	14365	100,0	Ref
Service Provider	240	76,9	72	23,1	312	100,0	***1,477
Husband	1251	86,7	192	13,3	1443	100,0	***0,631
Wife and Service Provider	930	81,0	218	19,0	1148	100,0	1,008
Wife and Husband	9719	82,5	2059	17,5	11778	100,0	**0,926
Others	38	82,6	8	17,4	46	100,0	1,049
Residence							
Urban	17846	81,4	4075	18,6	21921	100,0	Ref
Rural	21123	86,9	3177	13,1	24300	100,0	***0,607
Total	**38969**	**84,3**	**7252**	**15,7**	**46221**	**100,0**	

Note: * significant 0.1 | ** significant 0.05 | *** significant 0.01

Table 1 shows that the higher the age group of the mother, the higher the chances of having an unwanted pregnancy. This shows that the number of mothers in the eligible couples (PUS) who answered when they wanted to have children in the 45-49 year group were 6,105 people (79.9). This is lower when compared to the 15-19 age group of mothers who answered 539 people (88.2). The highest percentage of mothers in eligible couples (PUS) who answered that they wanted a pregnancy was in the categories of the age group 20-24 years, 15-19 years and 25-29 years.

The results of descriptive calculations on the variable age at first marriage show that the lower the mother's age at first marriage, the higher the likelihood of experiencing an unwanted pregnancy. The first married age group of 10-14 years has a percentage rate in the category of when the pregnancy wants to have children of 79.6 percent (1525 people). The percentage increases according to the age group at first marriage. This was evidenced in the first married age group of 40-44 years whose pregnancies wanted to have children by 95.3 percent (286 people).

The variable of maternal education shows that the lower the level of education of the mother, the lower the possibility of the mother having an unwanted pregnancy. This is shown in table 1 that there are 554 mothers who did not want children during pregnancy (86.6). This is higher when compared to mothers whose basic education is 84.1 percent, secondary education is 84.3 percent and tertiary education is 85.3 percent.

Fertile Age Couples who have more than 2 children have a high chance of experiencing unwanted pregnancy. This is evidenced in table 1, couples of reproductive ages who have children more than 2 and answered that at the time of pregnancy they wanted to have children, there were 69.5 percent or 8951 people. This figure is lower when compared to couples of childbearing ages who have children ≤ 2 and want to have children during pregnancy by 90 percent (30017 people).

The results of descriptive calculations on the welfare variable of eligible couples (PUS) show that there is no difference between welfare groups. Table 1 shows that the number of respondents who had a low level of welfare at the time of pregnancy wanted children as many as 9232 people (84.7). Then, at the middle welfare level there were 18611 people (84.2) and the high welfare level were 11125 people (84.1).

The wife's working status also has a descriptive result that is not much different from the welfare level of the fertile age couples. This is shown in table 1 that as many as 162 people (85.3) with the status of mothers who have not worked and want to have children during pregnancy. Then there were 25011 mothers who did not work (83.7) and mothers who worked as many as 5268 people (82.8).

Other results on the variable of insurance ownership also have the same descriptive results as the variables of the welfare level of couples of reproductive age and maternal occupation. Table 1 shows that there were 25540 mothers who did not have insurance and wanted to have children during pregnancy (83.7). Then the mothers who had insurance and wanted to have children during pregnancy were 13429 people (85.4).

In the decision-making variable for family planning, it is found that if the decision to choose a contraceptive device is from the mother or from the mother and the service provider, it will give a higher possibility of experiencing an unwanted pregnancy. This is shown in table 1 that as many as 82.2 percent or 11084 wives chose their own contraception and wanted to have children during pregnancy. Also, in the choice of contraceptives from mothers and service providers, 81 percent or 930 wives answered that they wanted to have children during pregnancy. This figure is lower when compared to the choice of a husband of 86.7 percent, service providers of 76.9 percent or joint decisions of wife and husband of 82.5 percent.

Couples of reproductive ages who live in urban areas have a higher rate of unwanted pregnancies when compared to couples of reproductive ages who live in rural areas. Table 1 shows that as many as 81.4 percent or 17846 couples of childbearing age who live in urban areas answered that they wanted to have children during pregnancy. This figure is lower when compared to couples of childbearing ages who live in rural areas, amounting to 86.9 percent or 21123 people.

DISCUSSION

The results of the study showed that the higher the age of the mother, the lower the incidence of unwanted pregnancy. Age is related to internal factors that exist in a person related to body physiological functions and organ structure (Lontaan, Kusmiyati and Dompas, 2014). Different physiological functions and hormonal systems will influence the determination of the children's planning in couples. Unwanted pregnancy in Indonesia is mostly found in the 45-49 age group. This group is relatively old and does not plan to use contraceptives even though they do not plan to have children, as a result unwanted pregnancy occurs. Supporting research in Ethiopia stated that women under 20 years have twice the risk of experiencing unwanted pregnancies (Feyisso *et al.*, 2017). This condition is related to the low level of information regarding the provision of access to contraceptive services. Mothers who are too young or old are classified as high risk for pregnancy and childbirth, thus most of them are not ready to undergo pregnancy (Palamuleni Martin E. and Adebowale, 2014). However, mothers with mature age group under 35 years are paying attention about the risk of adverse events thus they are more careful when deciding to use contraceptives.

Mother's age at first marriage is a predictor of unwanted pregnancy cases in Indonesia. The higher the age of marriage for the first time of a woman, it will reduce the risk of unwanted pregnancy. Unwanted pregnancy cases are more common in women who marry at a younger age. The analysis of the study showed that women who are married in the age range of 10 to 14 years have a 3.73 times risk of experiencing adverse events than women who are married in the age range of 35 to 39 years. The age at first marriage affects unwanted pregnancies in women of childbearing age. The age at first marriage indicates the start of conception (Junaedi and Sutiawan, 2013). The younger the age at first marriage, the longer the chances of getting pregnant and giving birth. This will increase the likelihood that many children will be born and increase the risk of unwanted pregnancy. Conversely, the increasing age of marriage will reduce the risk of unwanted pregnancy (Ali, 2014).

Education is one of the determinants of unwanted pregnancy in Indonesia. Women who have secondary education are at risk of experiencing unwanted pregnancy by 1,719 times than those who do not go to school. A similar study results from secondary data analysis of previous researchers using Basic Health Research 2013 stated that education is a determinant of unwanted pregnancy in Indonesia. Education is related to the ability to capture information related to the benefits of small families (Saptarini and Suparmi, 2016).

The number of children alive is a strong predictor of unwanted pregnancy. Currently, married women who have more than two children have 3.963 times the risk of experiencing unwanted pregnancy compared to women with children less than or equal to two. This means that the risk of a woman having more than two children increases four times for unwanted pregnancy. Women who have more than two living children tend not to want more children thus when pregnancy occurs, they are classified as unwanted pregnancy (Ali, Ali and Khuwaja, 2016). The same conclusion from Basic Health Research 2013 stated that the chance of unwanted pregnancy increases along with the number of children born. The main reason is the impact of contraceptive failure and unfulfilled access to contraception (Anggraini *et al.*, 2018). These findings are consistent with research conducted in Africa. The prevalence of unwanted pregnancy in the region of Malawi, Africa is quite high at 43%. The data were analysed based on the 2010 African

Demographic and Health Survey report on 2,144 pregnant women as the object of analysis. A number of related determinants include the age of the respondent, fertility preferences, and the number of children ever born. Researchers suggest reinforcing family planning services to reduce the incidence of unwanted pregnancy and focus on fertile age couples (PUS) in villages with large numbers of living children (Palamuleni Martin E. and Adebowale, 2014). Fertility preferences will affect pregnancy status. Women who do not want to add more children are more likely to experience unwanted pregnancy than those who still want children later. The majority of women in Indonesia realize the importance of regulating the number of children but still think repeatedly about using contraceptives (Perwiraningtyas and Prasetiyo, 2016). It is necessary to increase knowledge regarding the types of contraceptives and ease of access, especially for women who do not plan to have more children. Women who have a good level of knowledge about the types of contraceptives will be more concerned about their own health and have consideration in planning the number of children. Women with a high level of contraceptive knowledge will consider the benefits and have more motivation to use family planning thus they can prevent unwanted pregnancies (Adebowale and Palamuleni, 2014).

The results showed that low welfare was 1.12 times more prone to experiencing unwanted pregnancy compared to those with high welfare. Respondent groups with welfare levels between low, medium, and high have the same tendency to have children at that time. However, this result is different from Lamina's research in 2015, which showed that women who are classified as having a middle to lower class economy tend to be more prone to experiencing adverse events than women who live well with guaranteed levels of welfare (Lamina, 2015). There is even a study that may fit conditions in Indonesia (especially in urban areas), where women with a higher wealth index are more having experiences of unwanted pregnancies and terminating after adjusting for other covariates. Remarkably, women who had unwanted pregnancies are 1.47 times more likely to experience pregnancies that ended compared to those who did not have unwanted pregnancies (Yaya et al., 2018). This is probably due to the busyness of couples of childbearing ages in the high welfare group. Hence, they do not have time to do family planning. Besides that, there is an assumption that due to the high welfare, there is no need to regulate the number of children because they are able to meet their needs.

The results showed that maternal occupation had no relationship with the incidence of unwanted pregnancy in Indonesia. This is different from other studies which showed that maternal occupation has a relationship with unwanted pregnancy (Saeedi et al., 2013). Women who have planning pregnancy tend to be younger, more educated, and have occupation. This is because they tend to get more social support and are more satisfied in married life than women who are not (Yanikkerem et al., 2013). However, in this study, whether women have a job or not, they have the same chance of having an unwanted pregnancy.

The results showed that insurance ownership has no relationship with the incidence of unwanted pregnancy in Indonesia. This result is also in accordance with the results of previous studies which showed that there is no relationship between health insurance ownership and the use of traditional contraceptives in Yogyakarta City

(Chotimah and Putri Utami, 2019). Since the existence of BPJS, almost all Indonesian citizens have health insurance. BPJS as the JKN organizer guarantees family planning services including counselling, basic contraception, MOW, MOP, including family planning complications, which in its implementation is conducted in collaboration with institutions in charge of family planning. The financing of contraceptive services for BPJS participants carried out at health facilities in collaboration with BPJS health will be borne by the government (Oktriyanto, 2016). Therefore, the results of this study indicate that women who have insurance or not have no effect on unwanted pregnancies. Both of them can consider determining the type of contraception used to manage pregnancy.

The results of this study indicate that family planning decision making is associated with the incidence of unwanted pregnancy. The family planning decision making by the wife was 1.585 risky compared to the husband who chose it and 1.079 was risky compared to the joint decision. Married woman who live in urban areas are at risk for experiencing unwanted pregnancy 1.65 than who live in rural areas

CONCLUSION

The percentage of unwanted pregnancy among currently married women in Indonesia is 15,7 %. The determining factors for the incidence of unwanted pregnancy in Indonesia consist of age at first marriage, mother's education, number of children still alive, place of residence, and decision making in a family's planning. The factor that has the greatest influence among the independent variables in the study is the number of living children owned by the respondent. The chances of married women with more than two children are four times more likely to experience unwanted pregnancy compared to those who have children who are still alive less than two. Cross-sector integration is needed from the Ministry of Religion with the Indonesian National Population and Family Planning Board to provide guidance to prospective brides regarding family planning, especially with regard to pregnancy and the number of children, provision of related materials on gender equality in addition, the role of family planning field officers is also optimized to provide counselling about safe contraceptives. Access to information regarding family planning has been intensified, especially for fertile aged couples (PUS) with high parity characteristics, young people who live in urban areas.

CONFLICT OF INTEREST
There is no conflict of interest

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