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Determinant of Unintended Pregnancy in Indonesia

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Abstract

Background: Unintended pregnancy is a global health problem. The number of unintended pregnancies globally is still high, accounting for 1 in 4 pregnancies. In Indonesia, it occupies 15% of total pregnancies. However, studies discussing the determinants of unintended pregnancies in Indonesia were conducted on a small scale.

Methods: This cross-sectional research utilized the data of 15,316 respondents of the 2017 Indonesia Demographic and Health Survey.

Results: The prevalence of unintended pregnancies in women with live births in the last 3–5 years was approximately 16%. The highest risk of unintended pregnancies was recorded for those with the youngest age, living in urban, and were grand multipara and for the couples who did not know each other's preferences.

Conclusions: Strengthening communication, information, and education in family planning programs, particularly for young women and grand multipara and promoting men's involvement can help prevent unintended pregnancies.

Keywords: contraception, family planning, Indonesia, pregnancy

INTRODUCTION

Unintended pregnancy threatens public health stability because it forms a cyclical chain of health problems that become a burden to disease management and society. One of these problems is contributing to maternal death.[1] At least 150,000 unintended pregnancies worldwide ended in the mother's death. Indonesia has the highest maternal mortality rate in Southeast Asia.[2] According to the Indonesian Intercensal Survey in 2015, the maternal mortality rate reached 305 per 100,000 live births, half of which were due to abortion.[3,4] Unintended pregnancies can also trigger pregnancy and childbirth complications, such as preeclampsia, postpartum bleeding, and postpartum preeclampsia,[5] and cause emotional stress that provokes psychiatric disorders in mothers.[6] In addition to the mother, an unintended pregnancy interferes with the mother's relationship with her partner and/or family.[7,8] This condition can lead to illness or death of the fetus/baby, including the risk of premature birth, low birth weight, or stillbirth[9]. Its adverse effects can influence the socioeconomic condition of a country.[10]

A country's socioeconomic development is linked to an uncontrolled boom in population growth. Birth control remains a challenge in Indonesia, with the unintended birth rate persisting at 7% since 2012.[11] Therefore, Indonesia's population ranks the highest among all Southeast Asian countries and is projected to increase up to 16% by 2050 based on the World Population Data Sheet 2021. Worldmeter recorded the total fertility rate (TFR) of Indonesia in 2020 at 2.3%, exceeding the National Medium-Term Development Plan target TFR of 2.26%. The 2017 Indonesia Demographic and Health Survey (IDHS) also mentioned that Indonesia's total wanted fertility Rate is 2,1, which is still below the TFR target of 2.4.

Earlier studies found that some factors are associated with unintended pregnancies, such as the mother's age,[12–16] mother's education,[13] economic level,[13,14,17] type of residence,[13,14] marital status,[13] age at the time of first marriage,[12,14] parity and number of children born alive,[12–14,16,18] autonomy,[19] knowledge of family planning,[12,15] history of contraceptive use,[12,14,20] failure of contraception,[21] and unmet needs.[15] Some works also used the same dataset but built a causal model and did not consider precise analysis.[18–20] Although Jauhari conducted a cross-sectional study similar to the present work, they did not consider weighting so their final result was under or overestimated.[16] Meanwhile, other studies used logistic regression, resulting in an overestimated size, and a different sample.[19,20] To the best of the author's knowledge, research on the determinants of unintended pregnancies in Indonesia is relatively small, with only three studies conducted to date. Andini *et al*.[12] used the data before 2017, Lutfiya *et al*.[14] used married women as subjects, and Fadhilla[13] did not account for confounders in her final analysis. Therefore, the authors wanted to investigate the determinants of unintended pregnancies in Indonesia using samples and different types of analysis from previous studies.

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METHODS

This research was an analytical observational study with a cross-sectional design using secondary data from the 2017 Indonesian Intercensal Survey (IDHS). The National Population and Family Planning Board, the Central Statistics Agency, and the Ministry of Health executed this survey in 34 provinces of Indonesia (Aceh, North Sumatera, West Sumatera, Riau, Jambi, South Sumatera, Bengkulu, Lampung, Bangka Belitung, Riau Islands, Jakarta, West Jawa, Central Jawa, Yogyakarta, East Jawa, Banten, Bali, West Nusa Tenggara, East Nusa Tenggara, West Kalimantan, Central Kalimantan, South Kalimantan, East Kalimantan, North Kalimantan, Southeast Kalimantan, Gorontalo, West Sulawesi, Maluku, North Maluku, West Papua, and Papua). For the sampling frame, the 2017 IDHS used the Master Sample of Census Blocks from the 2010 Population Census containing 1,970 census blocks with 49,250 homes.

The 2017 IDHS has a two-stage sampling design. In the first step, several census blocks were picked systematically with probability to size; in the second stage, 25 ordinary households were selected in each census block. The questionnaire incorporated questions from the Demographic and Health Survey (DSH-7) and the IDHS 2012. Additional information on the sampling strategy and survey methods utilized by the IDHS was provided in the final reports.[22]

The inclusion criteria were respondents with live births in the last 3–5 years. Among the 49,627 female respondents of childbearing age 15–49 years, those who never had sexual intercourse (N = 13,781), used contraception in the last 2 years (N = 8,390), had a previous child before the last 3–5 years (N = 4,723), had miscarriage/abortus and stillbirth (N = 4,137), had fertility issues or menopause (N = 3,231), and had missing data (N = 8) were excluded. A total of 15,357 respondents were eligible. After those with missing data were further excluded (N = 1,683), 13,674 women were included in the final analysis.

The outcome of the study was unintended pregnancy. The independent variable consisted of the mother's age, education level, economic status, type of residence, employment status, marital status, parity, pregnancy and childbirth complications, knowledge of contraception, and fertility preferences. Ages were classified into four (15–19 years old, 20–24 years old, 25–35 years old, and >35 years old). Education level was divided into four levels: no education, primary education (elementary school), secondary education (junior high school–high school), and tertiary education if the respondent graduated from college/university. Employment status was labeled as 0 if the respondent had work and 1 if she was unemployed. Economic level was categorized into five quintiles from poorest to richest. Residence types were urban and rural. Marriage status was labeled as married or living together and unmarried, including those who were divorced, widowed, or lived separately. Parity was classified as 0 for primipara, 1 for multipara (2–4 children), and 2 for grand multipara (≥ 5 children). Pregnancy complications and delivery were described as with or without complications. The fertility preference between spouses could be the same or different (females wanted more children than males, males wanted more children than females, or they did not know each other's preference). Contraceptive knowledge was based on the question of whether the respondents had heard about contraceptive methods and answered spontaneously. These answers were then scored using the receiving operator characteristic (ROC). The cut-off score was determined based on sensitivity and specificity: low level if the cut-off <10, and high level if the cut-off ≥ 10.

Univariate analysis was performed to measure the magnitude of proportions or percentages on each categorical variable with a CI of 95%. Bivariate analysis was conducted using the simple Cox regressing method. A variable would be included in the multivariate analysis if a *p*-value ≤0.25 or considered substantially necessary. The modeling was built using backward elimination process, i.e., each variable was extracted one by one from the model, starting from a variable with a prevalence ratio (PR) close to 1 and a *p*-value >0.05 until the most suitable final model was formed. The fit model was determined from the probability F of the model <0,05, and the Wald test on the respective variable showed a *p*-value <0.05.[23,24] The survey data (Stata 14) were analyzed for weighting because the sampling process used cluster samplings.

The 2017 IDHS was reviewed and approved by the Institutional Review Board of the Inner City Fund. The data were issued on March 26, 2023, after a request was sent via https://dhsprogram.com/data/dataset_admin/login_main.cfm. This study has passed an ethical review by the Research and Community Engagement Ethical Committee, Faculty of Public Health, Universitas Indonesia with the reference number Ket-162/UN2.F10.D11/PPM.00.02/2023.

RESULTS

Characteristics of respondents

Table 1 shows the percentage characteristics of respondents based on demographic, socioeconomic, sociocultural, fertility, and family planning program factors. In terms of demographic factors, most respondents were 25–35 years old (55.8%), with adolescents (15–19 years old) accounting for the lowest percentage of 2.5%. Regarding socioeconomic factors, many respondents had a minimum education in junior high/high school (58.3%). The rate of respondents was high among the unemployed (54.4%) and middle class (20.65%). In sociocultural terms, more respondents lived in rural areas than urban areas (51.5% vs. 48.5%). For fertility factors, almost all respondents were married or living together (96.3%), and only approximately 3.7% were

TABLE 1. Characteristics of respondents

Variable	Unweighted		Weighted	95% CI	
	N	%	%	Lower Limit	Upper Limit
Age (years)					
15–19	413	2.70	2.49	2.19	2.84
20–24	2,409	15.73	16. 53	15.76	17.32
25–35	8,569	55.95	55.76	54.78	56.73
≥ 36	3,925	25.63	25.23	24.34	26.14
Education level					
No education	203	1.33	1.00	0.77	1.29
Primary education	3,846	25.11	26.00	24.77	27.27
Secondary education	8,612	56.23	58.31	57.01	59.60
Tertiary education (university)	2,655	17.33	14.69	13.81	15.61
Employment status					
Unemployed	8,034	52.49	54.37	53.21	55.51
Employed	7,271	47.51	45.63	44.49	46.79
missing	11	0.07			
Economic status					
Poorest	4,060	26.51	19.78	18.63	20.99
Poorer	3,023	19.74	20.17	19.21	21.16
Middle	2,886	18.84	20.65	19.71	21.63
Rich	2,757	18.00	20.50	19.53	21.50
Richest	2,590	16.91	18.90	17.71	20.15
Residence type					
Urban	7,553	49.31	48.51	47.38	49.65
Rural	7,763	50.69	51.49	50.35	52.62
Marriage status					
Unmarried	724	4.73	3.68	3.35	4.03
Married	14,592	95.27	96.32	95.97	96.65
Parity					
Primipara	4,745	30.98	33.36	32.44	34.29
Multipara	9,392	61.32	61.28	60.34	62.21
Grand multipara	1,179	7.70	5.36	4.93	5.83
Complication of pregnancy					
Without complication	12,338	82.62	82.20	81.39	82.99
With complication	2,596	17.38	17.79	17.01	18.61
missing	382	2.49			
Complication of delivery					
Without complication	14,315	94.32	94.12	93.58	94.62
With complication	711	4.68	4.99	4.55	5.47
Unknown	151	0.99	0.89	0.69	1.14
missing	139	0.91			
Fertility preference					
Same preference	8,972	63.16	64.95	63.87	66.01
Different preference	3,890	27.38	26,81	25.86	27.79
Do not know each other	1,344	9.46	8.24	7.63	8.89
missing	1,110	7.25			
Contraceptive knowledge					
Low knowledge	5,506	35.95	33.39	32.15	34.66
High knowledge	9,810	64.05	66.61	65.34	67.85

unmarried. The highest parity ratio was among those with two to four children (61.3%), with the second percentage recorded for primipara women (33.4%). Most respondents have no pregnancy (82.2%) or childbirth complications (94.1%). Furthermore, most subjects were married couples with similar fertility preferences (64.9%), and only a few had unknown partner preferences (8.2%). In the family planning programs, more respondents had high contraceptive knowledge (66.6%) than those with low knowledge (33.4%).

Association between several risk factors and unintended pregnancy

In terms of demographic factors, the prevalence of unintended pregnancies was 1.8 times higher (crude PR (cPR) 1.83; 95% CI 1.67–2.0) among women over the age

of 35 years compared with those aged 25–35 years. With regard to socioeconomic factors, the poorest and middle class were 0.8 times more likely to have unintended pregnancies than the richest respondents (cPR 0.83; CI 0.72–0.95 and cPR 0.86; CI 0.75–0.99). Education level and employment status had no statistically significant relationship with unintended pregnancies. In terms of fertility factors, unmarried respondents were 1.4 times more likely (cPR 1.44; 95% CI 1.21–1.73) to have unintended pregnancies compared with the married ones. The risk of unintended pregnancy in grand multipara and multipara women was eight times (cPR 7.8; 95% CI 6.48–9.28) and four times (cPR 4.1; 95% CI 3.64–4.75) higher than that in primipara, respectively. Unintended pregnancies were 1.1 times more likely if they had pregnancy complications (cPR 1.13; 95% CI 1.01–1.27) but were not statistically significantly related to childbirth complications. Most unintended pregnancies happened when the spouses did not know each other's fertility preferences (cPR 1.27 95% CI 1.08–1.49) or when both preferences differed (cPR 1,20, 95% CI 1.09–1.33) compared with the couples having the same preferences. With regard to family planning programs, the respondents who had low contraceptive knowledge were 0.8 times more likely (cPR 0.81; 95% CI 0.73–0.89) to have unintended pregnancies compared with those who had great contraceptive knowledge. Table 2 presents that only the economic status had a *p*-value >0.25. Nevertheless, we decided to include all variables in the multivariate analysis because the financial status would substantially affect the pregnancy status.

As shown in Table 3, the initial model was named Model I and built by excluding the employment status, economic status, knowledge of contraception, pregnancy, and birth complications one by one in a row. Table 3 shows that the determinants of unintended pregnancies are age, educational level, type of residence, parity, and fertility preferences. After controlling for the confounder, the highest risk of unintended pregnancy was for the women at the age of 15–19 years (adjusted PR/aPR 4,27, 95% CI 3.13–5.82; $p < 0.001$), followed by those 20–24 years of age (aPR 1.78, 95% CI 1.52–2.08; $p < 0.001$), compared with the references. In terms of socioeconomic factors, the lowly educated respondents had a 0.7 times higher risk of unintended pregnancy than those with higher education (aPR 0.77, 95% CI 0.70–0.84; $p < 0.001$). With regard to socioeconomic factors, the respondents who lived in urban areas have a 1.2 times greater risk than those who lived in rural areas (aPR 1.23, 95% CI 1.12–1.35, $p < 0.001$). In terms of fertility, the risk of unintended pregnancy was 12 times (aPR 11.7, 95% CI 9.51–15.10; $p < 0.001$) in grand multipara and six times (aPR 6.15, 95% CI 5.09–7.42); $p < 0.001$) in multipara compared with that in primipara. The risk of unintended pregnancy was aPR 1.19 (95% CI 1.02–1.41; $p < 0.05$) when the couple did not know each other's preferences and 1.14 (95% CI 1.07–1.33; $p = 0.002$) when the couple had different preferences compared with the reference.

TABLE 2. Association between several risk factors and unintended pregnancies

Variable	Pregnancy Status		cPR	95% CI	*p*
	Unintended	Intended			
	N (%)	N (%)			
Age (years)					
15–19	66 (17.29)	316 (82.71)	1.24	0.96–1.61	0.102
20–24	266 (10.51)	2,265 (89.49)	0.75	0.65–0.88	<0.001*
25–35	1,190 (13.94)	7,349 (86.06)		1.00	
≥36	987 (25.54)	2,877 (74.46)	1.83	1.67–2.01	<0.001*
Education level					
No education	21 (14.01)	132 (85.99)	0.80	0.50–1.29	0.369
Primary	642 (16.11)	3,341 (83.89)	0.93	0.81–1.06	0.251
Secondary	1,454 (16.28)	7,477 (83.72)	0.93	0.81–1.06	0.255
Tertiary (university)	392 (17.41)	1,858 (82.59)	1.00		
Employment status					
Unemployed	1,324 (15.91)	6,996 (84.09)	0.94	0.86–1.02	0.153
Employed	1,182 (16.93)	5,802 (83.07)		1.00	
Economic status					
Poorest	449 (14.81)	2,581 (85.19)	0.83	0.72–0.95	0.008*
Poorer	529 (17.14)	2,559 (82.86)	0.96	0.83–1.10	0.527
Middle	489 (15.46)	2,674 (84.54)	0.86	0.75–0.99	0.039*
Richer	523 (16.65)	2,617 (83.35)	0.93	0.82–1.06	0.267
Richest	519 (17.92)	2,376 (82.08)		1.00	
Residence type					
Urban	1,381 (18.58)	6,049 (81.42)	1.29	1.19–1.42	<0.001*
Rural	1,128 (14.31)	6,758 (85.69)	1.00		

TABLE 2. *Continue*

Variable	Pregnancy Status		cPR	95% CI	*p*
	Unintended	Unintended			
	N (%)	N (%)			
Marriage status					
Unmarried	113 (23.28)	341 (76.72)	1.44	1.21–1.73	<0.001*
Married	2,396 (16.12)	12,466 (83.88)		1.00	
Parity					
Primipara	259 (5.07)	4,851 (94.93)		1.00	
Multipara	1927 (20.54)	7,458 (79.46)	4.05	3.64–4.75	<0.001*
Grand multipara	323 (39.27)	499 (60.73)	7.75	6.48–9.28	<0.001*
Complication of pregnancy					
Without complication	1954 (15.8)	10,402 (84.2)		1.00	
With complication	479 (17.9)	2,196 (82.1)	1.13	1.01–1.27	0.036*
Complication of delivery					
Without complication	2,304 (16.20)	11,946 (83.8)		1.00	
With complication	147 (19.50)	608 (80.50)	1.20	0.99–1.46	0.064
Unknown	24 (4.7)	111 (82.20)	1.09	0.65–1.85	0.724
Fertility preference					
Same preference	1,303 (14.04)	7,974 (85.96)		1.00	
Different preference	688 (16.89)	3,202 (83.11)	1.20	1.09–1.33	<0.001*
Unknown	209 (17.79)	967 (82.21)	1.27	1.08–1.49	0.004*
Contraceptive knowledge					
Low knowledge	723 (14.13)	4,392 (85.87)	0.81	0.73–0.89	<0.001*
High knowledge	1,786 (17.51)	8,415 (82.49)		1.00	

*statistically significant

TABLE 3. Multivariate analysis

Variable	Model I**	Model II***	Model III****	Model IV*****	Model V******	Model VI*******	Model VII********
	PR	PR	PR	PR	PR	PR	PR
Age (years)							
15–19	4.09*	4.09*	4.15*	4.19*	4.12*	4.10*	4.27*
20–24	1.84*	1.84*	1.85*	1.87*	1.85*	1.84*	1.78*
25–35				*reference*			
≥ 36	1.27*	1.27*	1.26*	1.26*	1.26*	1.25*	1.26*
Education level							
Low education	0.76*	0.77*	0.76*	0.78*	0.76*	0.76*	0.77*
High education				*reference*			
Employment status							
Unemployed	1.02						
Employed				*reference*			
Economic status							
Lower-class	1.08	1.08	1.08				
Upper-class				*reference*			
Type of residence							
Urban	1.23*	1.23*	1.23*	1.20*	1.22*	1.22*	
Rural							
Marriage status							
Unmarried	1.21	1.21					
Married				*reference*			
Parity							
Primipara							
Multipara	6.32*	6.33*	6.34*	6.36*	6.38*	6.46*	
Grand multipara	12.24*	12.29*	12.32*	12.52*	12.45*	12.59*	
Complication of pregnancy							
Without complication	*reference*						
With complication	1.12	1.12	1.11	1.12	1.12	1.13	

TABLE 3. *Continue*

Variable	Model I**	Model II***	Model III****	Model IV*****	Model V******	Model VI*******	Model VII********
	PR	PR	PR	PR	PR	PR	PR
Complication of delivery							
Without complication	*reference*						
With complication	1.20	1.21	1.21	1.21	1.21		
Unknown	0.88	0.88	0.88	0.88	0.88		
Fertility preferences							
Same preference							
Different preference	1.15*	1.15*	1.14*	1.15*	1.15*	1.14*	
Do not know each other	1.22*	1.21*	1.22*	1.22*	1.21*	1.19*	
Contraceptive knowledge							
Low knowledge	0.89	0.90	0.89	0.91			
High knowledge	*reference*						

*Statistically significant
**initial model
***without employment status
****without employment and marriage status
*****without employment, marriage, and economic status
******without employment, marriage, and economic status, as well as contraceptive knowledge
*******without employment, marriage, economic status, contraceptive knowledge, and pregnancy complications
********without employment, marriage, economic status, contraceptive knowledge, pregnancy, and birth complications

DISCUSSION

The proportion of unintended pregnancies in this research was approximately 16%, which is higher than that in the 2018 Performance and Program Accountability Survey (SKAP) and 2018 Basic Health Research (Riskesdas). This finding may be influenced by the sample difference. In this study, the highest risk of unintended pregnancy was recorded for the youngest age group due to the growing number of sexually active teenagers. According to a previous research, 74% of teenagers have been sexually active since the age of 14 years, and 73% of teenage girls claim to have multiple partners.[25] However, increased sexual activity is often not accompanied by a good knowledge of reproduction. Moreover, teachers and parents are often uncomfortable talking about sexuality, so teenagers feel embarrassed, mainly for asking questions about contraception. Therefore, misperceptions arise about the use of contraception among teenagers. Rutgers[10,26] revealed that not up to 50% of Indonesian adolescent respondents have a good understanding of sexuality and contraception, which is consistent with the findings of Sarder *et al*. and Oulman *et al*.[10,27] All these reasons, coupled with the lack of legality for marriage, lead to unintended pregnancy.[28]

Education level is a variable that can be modified. However, when this variable was controlled in the multivariate analysis, the results contradicted the studies in Kenya, which stated that high levels of education are a protection against unintended pregnancies.[29] This finding is linked to the pattern of contraceptive use in Indonesia, where highly educated people prefer to use traditional contraceptive methods.[30] Conversely, highly educated women prefer small families and focus on their careers or education, so they avoid pregnancy.[13] Education level also affects women's autonomy in determining their reproductive rights.[31] When a pregnancy occurs, they tend to maintain it until birth because they feel financially ready to care for the child.[32] The higher the education level, the higher the economic status.[11] By contrast, those with low education are likely to end their pregnancies with illegal abortion. A study from 36 countries with low- and middle-income showed that the higher the level of education, the lower the prevalence of termination of pregnancy.[33]

Women living in urban are more likely to experience unintended pregnancies than those in rural[34] because urban residents are focused on career development and economic activity, so they do not expect pregnancy.[35] They are also likely to use traditional contraceptives[30], thus increasing the likelihood of unintended pregnancy caused by the lower effectiveness of these methods than modern contraception.[36] Owing to ethnic and cultural influence, rural life in Indonesia is appreciative of pregnancy and prefers to have a large number of children, especially when having more than one boy[37], as supported by similar studies in other countries.[38–40] The boys are judged to be an investment in improving the degrees and economy of the family.[41,42]

The type of residence is also related to the socioeconomic level. In general, urban areas are identical to high socioeconomic levels. However, research in Kenya suggested that urban people living in slums may be affected by poverty with insufficient education. Both of these factors, combined with risky sexual behavior,

indicate poor health status.[29,43,44] Indonesia is also not exempted from this phenomenon due to its currently high rate of urbanization. The massive increase in urban population is not accompanied by economic improvement, leading to a rise in depleted areas that initially ranged from 8% in 2017 to almost double by 2020.[45,46] The quantity and quality of healthcare facilities in slum areas are no better than those in the countryside.[45,46] The health disadvantages experienced by poor urban may precede to pregnancy and childbirth complications that lead to unintended pregnancies. Limited access to healthcare also serves as a barrier to access to contraceptive information and family services.[47,48] Another factor is the connection of the type of residence to the marriage. Although the number of child marriages has increased in the last 10 years since 2018, a 6% decrease in child marriage (before the age of 18) has been recorded in rural areas compared with that in urban areas.[28] Mobile family planning services could be an option for the prevention of unintended pregnancies in urban slums.[49]

The highest chance of having an unintended pregnancy rose from eight times in the bivariate analysis to 12 times in the multivariate analysis, similar to previous studies.[49,50] The reason is that the feeling of having enough children and the rarity of sexual intercourse make women feel they have no need for counseling or contraceptives.[50] Another factor is the number of children, causing mothers to arrange extra time so their visits to health facilities are often delayed or neglected.[49] The risk of unintended pregnancies at high parity is increasing with the poor communication about family planning between spouses.[51] The likelihood of unintended pregnancies demonstrates this increase with the parity, accompanied by unequal fertility preferences and not knowing each other's partner's fertility preferences. Couples who do not know each other's preferences are most likely to have an unintended pregnancy with a 1.2 times higher risk than if they had the same preferences.[50,52,53] Communication is essential in the determination of family size. In Indonesia and most developing countries, the husband or the male is the ultimate decision-maker in the family.[54] Family size planning should be communicated from the beginning of marriage, integrated into preconception services, and carried out in pairs.[55,56] In previous studies, the risk of unintended pregnancy was significant when the number of children wanted by the wife differed from that of the husband, indicating that the empowerment level of the woman influences their fertility preferences.[43] An empowered woman will have fewer children than a helpless one. If a husband wants more children with his wife, then the husband will encourage his wife not to use or refuse contraception and then induce pregnancy.[43]

CONCLUSIONS

This study has shown the persisting problem of unintended pregnancy among Indonesian women based on IDHS data. Women's age, parity, fertility preference, and type of residence were found as the significant predictors of unintended pregnancy in Indonesia. The crucial findings highlighted the need for policies and strategies to prevent unintended pregnancy by strengthening family planning programs, especially among young women and grand multipara with five or more children. Further study is needed to investigate the influence of unintended pregnancy on maternal and child health in Indonesia. Difference in fertility preferences must be addressed by improving the information, education, and communication of family planning, individually and in couples. Encouraging male involvement in family planning is also recommended to increase the acceptability and uptake of contraception, thereby preventing unintended pregnancy.

CONFLICT OF INTEREST

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