

Determinants of unmet needs for family planning in Indonesia: Secondary data analysis of the 2017 Indonesia Demographic and Health Survey



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ABSTRACT

Background and purpose: Globally, the unmet need for family planning remains high. The proportion of unmet needs for family planning in Indonesia was found to have declined but was still higher than the set target. In the last 5 years there have been significant development in Indonesia including infrastructure, the national health insurance program and the increasing allocation of funds to all villages throughout Indonesia with a possible impact in decreasing the unmet need for family planning. This study aims to determine the factors associated with unmet needs for family planning in Indonesia.

Methods: This study uses secondary data from the 2017 Indonesia Demographic and Health Survey (IDHS) that was carried out in 34 provinces in Indonesia. The number of the analyzed samples was 26,479 of the total 2017 IDHS sample of 35,681 married women/living together with their partner aged between 15-49 years. The dependent variable is the unmet need for family planning, while the independent variables consist of four core variables namely individual, household, community and programmatic variables. Data analysis was performed with a binary logistic regression to obtain the adjusted odd ratio of each factor.

Results: The proportion of unmet needs in this analysis was 14.3% (95%CI: 13.9-14.7%). Factors associated with unmet needs are maternal age 25-34 years (AOR=1.17; 95%CI: 1.01-1.36), 35-44 years (AOR=1.47; 95%CI: 1.24-1.74), ≥45 years (AOR=2.20; 95%CI: 1.81-2.68), age of last child ≥10 years (AOR=1.30; 95%CI: 1.16-1.45), number of living children <2 (AOR=1.66; 95%CI: 1.49-1.85), ideal number of children >2 (AOR=1.34; 95%CI: 1.24-1.44), have >1 son (AOR=1.12; 95%CI: 1.00-1.25), husband not working (AOR=1.89; 95%CI: 1.44-2.48), lack of knowledge about family planning methods (AOR=1.42; 95%CI: 1.24-1.63), not discussing family planning with partners (AOR=1.12; 95%CI: 1.03-1.21), living in urban area (AOR=1.24; 95%CI: 1.14-1.34) and regions with TFR >2.4 (AOR=1.59; 95%CI: 1.43-1.78).

Conclusion: The proportion of unmet needs in Indonesia is still high and the dominant associated factor is the age of the mother ≥45 years. In order to decrease the family planning unmet needs, the intervention programs should be targeted to groups of women who are at risk of experiencing such unmet needs.

Keywords: unmet needs, family planning, determinants, Indonesia

Cite This Article: Sumiati, L.N., Wirawan, D.N., Ani, L.S. 2019. Determinants of unmet needs for family planning in Indonesia: Secondary data analysis of the 2017 Indonesia Demographic and Health Survey. *Public Health and Preventive Medicine Archive* 7(2): 85-94. DOI:10.15562/phpma.v7i2.207

INTRODUCTION

The London Summit on Family Planning in 2012 declared that by 2020 an additional 120 million women in 69 of the world's poorest countries expected to use modern contraception.¹ To achieve this target there should be 75 million new users by mid-2017 but only half of the target was reached, which means that the SDG's target might not be achieved. One of the contributing factors is the unmet need for family planning, especially in developing countries.²

The global proportion of unmet need remains high, with 214 million women of reproductive age in developing countries in 2015 were reported to have lack of access to contraception.³ The United Nations Population Division of the Department of Economic and Social Affairs estimates that 12% of women experience the unmet need.⁴ High levels of unmet need (above 20%) are found in East Africa, Central Africa, West Africa and Melanesia,

Micronesia and Polynesia. Lower unmet need (less than 10%) is found in East Asia, Eastern Europe, North America, North Europe, South America and Western Europe. Unmet need in Southeast Asia was reported at 11.9% in 2017 with proportions in Thailand of 5.7%, Vietnam (6.4%), Cambodia (12.5%), Malaysia (17.6%), Philippines (17.3%), Timor Leste (25.6%) and Indonesia 12.1%.⁴

Based on Indonesian Demographic and Health Survey (IDHS), it is evident that the proportion of unmet needs for family planning in Indonesia has decreased from 13.2% in 2003 to 10.6% in 2017.^{5,6} However, this proportion is still high when compared to Thailand and Vietnam, and compared to the target set by the government of 9.91% at the end of the 2015-2019.⁷

Studies on the determinants of unmet needs have been carried out in various countries including Indonesia with inconsistent results. Nazir et al.⁸

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found that factors contributing to this unmet need are maternal age, education, child gender preference, income, occupation, religion, knowledge about contraception, communication with partners, media access and place of residence (rural and urban). While a study in Botswana found no significant association between unmet needs and place of residence, education, wealth index, religion, family planning discussions with partners and exposure to media.⁹

A study in Indonesia using the 2012 IDHS secondary data analysis found that the most dominant factor related to unmet needs is communication with husbands.¹⁰ Currently there is no publication of determinants of unmet needs using IDHS 2017 data. In the past 5 years there have been considerable changes in Indonesia including infrastructure, national health insurance program and the significant increase budget allocated to all villages throughout¹¹⁻¹³ with a possible impact in decreasing the unmet need for family planning. This study aims to determine the factors associated with unmet needs for family planning in Indonesia by analyzing the 2017 IDHS data.

METHODS

This study refers to the framework from Wado¹⁴, Eunice¹⁵ and Wulifan¹⁶. We used secondary data from the 2017 IDHS. The 2017 IDHS data sets were downloaded online through www.sdki.bkkbn.go.id after the registration process and notification to the National Population and Family Planning Board or *Badan Kependudukan dan Keluarga Berencana Nasional (BKKBN)*. The 2017 IDHS survey was conducted on 35,681 women of childbearing age (15-49 years) using a two-stage stratified sampling and through survey at the national level. Detailed information about study design, sample size calculations, survey instruments, data collection and other survey procedures are available in the 2017 IDHS report.⁵

In our analysis, eligible subjects are women aged 15-49 years who married/living together with partner. The total number of analyzed subjects was 26,479. Excluded subjects were menopausal/infertile women and women with no unmet need status namely those who did not use contraception but wanted children within 2 years or women whose pregnancy/birth of their last child was desired.

The dependent variable is unmet need for family planning, while the independent variables consist of four core variables namely individual, household, community and programmatic variables. Individual variables consist of: mother's age, age of the last child, number of living children, number of sons, ideal number of children, mother's

occupation, husband's occupation, mother's education, husband's education and knowledge of family planning. Household variables consist of household wealth index, husband's approval of family planning, discussion of family planning with spouses, and women's autonomy. Community variables consist of region and residence. Programmatic variables consist of exposure to family planning messages through the media, visits by women to health facilities and visits by family planning field workers.

Mother's age is categorized into 15-24, 25-34, 35-44 and ≥ 45 years. The age of the last child is categorized as 0-4, 5-9 and ≥ 10 years. The number of living children is categorized as ≥ 2 and < 2 .

The number of sons is categorized as not having, 1 and > 1 son. The ideal number of children is categorized into ≤ 2 and > 2 . Mother's and husband's work are categorized as employed and unemployed. Mother's and husband's education are categorized as university, graduated from high school, not graduated from high school, graduated from elementary school, not graduated from elementary school and never go to school. Knowledge is measured with 12 questions about contraceptive methods. The score of each question is summed and grouped into 3 categories, namely "good" (score > 75), "fair" (score 50-75) and "poor" (score < 50). The variable of women's autonomy was measured with 3 questions about participation in household decision making and 5 questions about the wife's attitude of domestic/intimate partner violence. Scores are then added up and grouped into three categories, namely "high" (score > 50.0), "moderate" (score 37.5-50.0) and "low" autonomy (score < 37.5). Quintiles of wealth is categorized to be five groups namely "low", "moderate low", "moderate", "moderate high" and "high". Husband's approval of family planning is categorized as "agree" and "disagree". Family planning discussions with partners are categorized as "ever" or "never". Regions are categorized as "Region I" (provinces with TFR ≤ 2.28), "Region II" (TFR 2.29-2.40) and "Region III" (TFR > 2.40). Place of residence is categorized as "rural" and "urban". Exposure of family planning messages through the media, visits of women to health facilities and visits by family planning field workers are categorized as "ever" and "never" exposed.

Bivariate analysis was performed with chi-square test to display data on the characteristics of women of childbearing age with unmet need. The results of the bivariate analysis are used for developing a model of the multivariate analysis. Variables with $p < 0.25$ were included in the multivariate model. Multivariate analysis was performed with a binary logistic regression using the backward method to obtain the adjusted odd ratio of each variable.

This study has been approved by the Ethics Committee of the Faculty of Medicine, Udayana University/Sanglah General Hospital on January 28, 2019.

RESULTS

In our analysis, out of 26,479 women, there are 3,783 women with unmet need for family planning in Indonesia in 2017 with the proportion of 14.3% (95%CI: 13.9-14.7%).

Table 1 presents the characteristics of respondents based on several variables and it shows that most respondents are aged 35-44 years old, have

children aged 0-4 years, have two or more living children, the ideal number of children are two or less, have one son, respondents and husbands are employed, respondents are ungraduated from high school while husbands are graduated from elementary school. Most respondents have sufficient knowledge about contraceptive methods, are in the moderate wealth index, state that their partners do not agree to contraception, have never had discussions about family planning with their partners, have a moderate degree of autonomy, live in rural areas and Region II. More than half of the respondents have been exposed to family planning information media, have visited health facilities

Table 1 Respondent characteristics

Variables	n=26,479	%
Mother's age		
15-24	2,655	10.0
25-34	8,870	33.5
35-44	11,014	41.6
≥45	3,940	14.9
Age of last child		
0-4	12,569	48.5
5-9	6,699	25.9
≥10	6,630	25.6
Number of living children		
≥2	20,009	75.6
<2	6,469	24.4
Number of sons		
None	6,703	25.3
1	11,567	43.7
>1	8,209	31.0
Ideal number of children		
≤2	14,909	56.3
>2	11,570	43.7
Mother's employment		
Employed	16,025	60.5
Unemployed	10,449	39.5
Father's employment		
Employed	26,126	98.9
Unemployed	290	1.1
Mother's education		
University	2,922	11.0
Graduated from high school	6,813	25.7
Ungraduated from high school	7,171	27.1
Graduated from elementary school	6,928	26.2
Ungraduated from elementary school	2,321	8.8
Never go to school	324	1.2

Table 1 *Continue*

Variables	n=26,479	%
Father's education*		
University	2,959	11.2
Graduated from high school	8,125	30.8
Ungraduated from high school	5,922	22.4
Graduated from elementary school	6,600	25.0
Ungraduated from elementary school	2,421	9.2
Never go to school	364	1.4
Knowledge*		
Good (score >75)	4,865	18.4
Fair (score 50-75)	16,992	64.4
Poor (score <50)	4,515	17.1
Wealth quintiles		
Low	4,515	17.1
Moderate low	5,422	20.5
Moderate	5,581	21.1
Moderate high	5,553	21.0
High	5,407	20.4
Husband's permission*		
Agree	289	1.1
Disagree	26,172	98.9
Discussion of family planning with partner*		
Ever	10,361	39.2
Never	16,103	60.8
Mother's autonomy*		
High (score >50.0)	3,493	13.2
Moderate (score 37.5-50.0)	17,961	68.0
Low (score <37.5)	4,962	18.8
Place of residence		
Rural	13,636	51.5
Urban	12,843	48.5
Region		
Region I (TFR ≤2.28)	6,411	24.2
Region II (TFR 2.29-2.40)	13,229	50.0
Region III (TFR >2.40)	6,839	25.8
Media exposure*		
Ever	15,721	59.4
Never	10,739	40.6
Healthcare facility visit*		
Ever	14,787	55.9
Never	11,684	44.1
Visit by family planning cadre		
Ever	987	3.7
Never	25,484	96.3

*The amount is smaller than 26,479 because there is missing data

Table 2 Proportion of unmet need for family planning by socio-demographic and other variables

Variables	Unmet need n (%)	Met need n (%)	p
Mother's age			
15–24	372 (14.0)	2,283 (86.0)	<0.01
25–34	1,050 (11.8)	7,821 (88.2)	
35–44	1,521 (13.8)	9,492 (86.2)	
≥45	840 (21.3)	3,099 (78.7)	
Age of last child			
0–4	1,609 (12.8)	10,960 (87.2)	<0.01
5–9	775 (11.6)	5,925 (88.4)	
≥10	1,239 (18.7)	5,391 (81.3)	
Number of living children			
≥2	2,757 (13.8)	17,253 (86.2)	<0.01
<2	1,027 (15.9)	5,443 (84.1)	
Number of sons			
None	976 (14.6)	5,727 (85.4)	<0.01
1	1,558 (13.5)	10,009 (86.5)	
>1	1,250 (15.2)	6,960 (84.8)	
Ideal number of children			
≤2	1,867 (12.5)	13,042 (87.5)	<0.01
>2	1,916 (16.6)	9,654 (83.4)	
Mother's employment			
Employed	2,286 (14.3)	13,739 (85.7)	0.90
Unemployed	1,497 (14.3)	8,952 (85.7)	
Father's employment			
Employed	3,651 (14.0)	22,474 (86.0)	<0.01
Unemployed	86 (29.7)	204 (70.3)	
Mother's education			
University	429 (14.7)	2,493 (85.3)	<0.01
Graduated from high school	1,002 (14.7)	5,811 (85.3)	
Ungraduated from high school	972 (13.6)	6,199 (86.4)	
Graduated from elementary school	924 (13.3)	6,004 (86.7)	
Ungraduated from elementary school	376 (16.2)	1,945 (83.8)	
Never go to school	80 (24.6)	245 (75.4)	
Father's education			
University	444 (15.0)	2,515 (85.0)	<0.01
Graduated from high school	1,185 (14.6)	6,940 (85.4)	
Ungraduated from high school	823 (13.9)	5,099 (86.1)	
Graduated from elementary school	872 (13.2)	5,729 (86.8)	
Ungraduated from elementary school	348 (14.4)	2,073 (85.6)	
Never go to school	82 (22.5)	282 (77.5)	
Knowledge			
Good (score >75)	656 (13.5)	4,209 (86.5)	<0.01
Fair (score 50-75)	2,313 (13.6)	14,679 (86.4)	
Poor (score <50)	797 (17.7)	3,718 (82.3)	

Table 2 *Continue*

Variables	Unmet need n (%)	Met need n (%)	p
Wealth quintiles			
Low	693 (15.3)	3,822 (84.7)	<0.01
Moderate low	722 (13.3)	4,700 (86.7)	
Moderate	739 (13.2)	4,842 (86.8)	
Moderate high	771 (13.9)	4,782 (86.1)	
High	858 (15.9)	4,549 (84.1)	
Husband's permission			
Agree	38 (13.1)	251 (86.9)	0.64
Disagree	3,744 (14.3)	22,428 (85.7)	
Discussion of family planning with partner			
Ever	1,337 (12.9)	9,024 (87.1)	<0.01
Never	2,446 (15.2)	13,657 (84.8)	
Mother's autonomy			
High (score >50)	502 (14.4)	2,991 (85.6)	0.02
Moderate (score 37.5-50)	2,502 (13.9)	15,459 (86.1)	
Low (score <37.50)	767 (15.5)	4,195 (84.5)	
Place of residence			
Rural	1,824 (13.4)	11,812 (86.6)	<0.01
Urban	1,959 (15.3)	10,883 (84.7)	
Region			
Region I (TFR ≤2.28)	766 (11.9)	5,645 (88.1)	<0.01
Region II (TFR 2.29-2.40)	1,862 (14.1)	11,367 (85.9)	
Region III (TFR >2.40)	1,156 (16.9)	5,684 (83.1)	
Media exposure			
Ever	2,125 (13.5)	13,595 (86.5)	<0.01
Never	1,657 (15.4)	9,082 (84.6)	
Healthcare facility visit			
Ever	2,034 (13.8)	12,754 (86.2)	<0.01
Never	1,749 (15.0)	9,935 (85.0)	
Visit by family planning field workers			
Ever	128 (13.0)	859 (87.0)	0.25
Never	3,654 (14.3)	21,830 (85.7)	

Table 3 *Adjusted odds ratio of several variables associated with unmet needs*

Variables	AOR	95%CI	p
Mother's age			
15–24	Ref		
25–34	1.17	1.01–1.36	0.04
35–44	1.47	1.24–1.74	<0.01
≥45	2.20	1.81–2.68	<0.01

Table 3 *Continue*

Variables	AOR	95%CI	p
Age of last child			
0-4	Ref		
5-9	0.86	0.78-0.95	<0.01
≥10	1.30	1.16-1.45	<0.01
Number of living children			
≥2	Ref		
<2	1.66	1.49-1.85	<0.01
Number of sons			
None	Ref		
1	0.99	0.90-1.09	0.86
>1	1.12	1.00-1.25	0.05
Ideal number of children			
≤2	Ref		
>2	1.34	1.24-1.44	<0.01
Father's employment			
Employed	Ref		
Unemployed	1.89	1.44-2.48	<0.01
Knowledge			
Good (score >75)	Ref		
Fair (score 50-75)	1.09	0.98-1.20	0.12
Poor (score <50)	1.42	1.24-1.63	<0.01
Discussion of family planning with partner			
Ever	Ref		
Never	1.12	1.03-1.21	<0.01
Place of residence			
Rural	Ref		
Urban	1.24	1.14-1.34	<0.01
Region			
Region I (TFR ≤2.28)	Ref		
Region II (TFR 2.29-2.40)	1.26	1.14-1.38	<0.01
Region III (TFR >2.40)	1.59	1.43-1.78	<0.01

and the majority said they had never been visited by family planning field workers.

Table 2 presents a cross tabulation between unmet need with several variables. It shows that the age of the mother, the age of the last child, the number of living children, having a son, the ideal number of children, husband's employment, education level of mothers and husbands, knowledge about family planning, wealth index, family planning discussions with spouse, level of autonomy, residence, region, media exposure and visits to health facilities were significantly associated with unmet needs ($p \leq 0.05$).

Table 3 presents the results of multivariate analysis with logistic regression backward method. It appears

that factors increasing the possibility of unmet need are the age of the mother 35-44 years (AOR=1.47; 95%CI: 1.24-1.74) and ≥45 years (AOR=2.20; 95%CI: 1.81-2.68), last child being aged ≥10 years (AOR=1.30; 95%CI: 1.16-1.45), number of living children <2 (AOR=1.66; 95%CI: 1.49-1.85), ideal number of children >2 (AOR=1.34; 95%CI: 1.24-1.44), unemployed husband (AOR=1.89; 95%CI: 1.44-2.48), lack of knowledge about family planning methods (AOR=1.42; 95%CI: 1.24-1.63), living in urban areas (AOR=1.24; 95%CI: 1.14-1.34) and region with TFR 2.29-2.4 (AOR=1.26; 95%CI: 1.14-1.38) and TFR >2.4 (AOR=1.59; 95%CI: 1.43-1.78).

Other variables that were more likely to increase unmet need but with a smaller AOR were maternal

age 25-34 years (AOR=1.17; 95%CI: 1.01-1.36), having >1 son (AOR=1.12; 95%CI: 1.00-1.25) and not having family planning discussions with partners in the last 6 months (AOR=1.12; 95%CI: 1.03-1.21). While the age of the last child 5-9 years were less likely to have unmet needs for family planning (AOR=0.86; 95%CI: 0.78-0.95).

DISCUSSION

The proportion of unmet needs in Indonesia in our analysis was 14.3% (95%CI: 13.9-14.7%). This figure is higher than the 2017 IDHS report of 10.6%.⁵ This is because in our analysis, menopausal or infertile women and women with no unmet need status were excluded, so that the number of denominators is smaller than the 2017 IDHS report.

The most dominant factor associated with unmet needs for family planning is the age of the mother. Mothers with older age are more likely to experience unmet needs and the highest probability is at the age of 45 years and over. This is likely because respondents felt they could not get pregnant (perception of infecundity) so they did not need to use contraception. In another study, a similar phenomenon was reported that the high unmet needs in women over 40 years is possible because of perceptions of infertility.⁸ In other studies in Ethiopia it was also found that maternal age is related to unmet need where the likelihood of experiencing unmet need is highest in maternal age group of 35-39 years (AOR=2.7; 95%CI: 1.1-6.5).¹⁷

We found that unemployed husband was also a dominant factor which might be associated with the age of the mother, the age of the last child and the place of residence of the respondent. In the bivariate analysis it was found that husbands who did not work mostly had wives aged 45 years and over, children aged 10 years or more and lived in urban areas. It is possible that the husband who does not work is of later age, working in the formal sector and in a state of retirement (not working). A similar finding was reported in India¹⁸ while in Egypt¹⁹ it was reported to the contrary where no association was found between the husband's work status and unmet need.

Another factor associated with unmet need is the number of living children (less than two) and the ideal number of children is more than two. This might be due to the fertility preferences in this group have not been reached where they still want children so they do not use contraception. This group needs more attention because they do not use contraception, fecundity is still high and the possibility of pregnancy is higher but they still want to postpone their pregnancy so that the likelihood of unwanted pregnancy in this group is greater. It was

reported that in 2000 the termination of pregnancy in Indonesia by 66% was carried out by married women and 46% in the age group 20-29 years.²⁰ The ideal number of children and the number of living children was also found to be related to unmet need in Burkina Faso²¹, Kenya²² and Egypt.¹⁹ Studies in Burkina Faso and Kenya found that the dominant factor related to unmet need was to have 5 or more living children.^{21,22} A study in Egypt found that unmet need was more prevalent in women who had an ideal child perception of more than three.¹⁹

In our study we found that women with less knowledge about family planning methods were more likely to have unmet needs. This was also reported in India.²³ A qualitative study in Kenya found that the reason women did not use contraceptive was due to lack of knowledge about family planning.²⁴

Women who live in urban areas and regions with a TFR of more than 2.4 children were more likely to have unmet need. Similar findings were reported in previous studies in Indonesia^{10,25} and Nigeria.²⁶

Having more than one son and never having family planning discussions with a partner are found statistically associated with unmet need but not programmatically significant because the lower value of the confidence interval is close to one. A study in Haryana, India found more unmet needs occurred in those who had more girls.²³ Women who have never discussed family planning with his partner also found to increase the possibility of unmet need. This is in line with studies in Bangladesh²⁷ and Cameroon.²⁸

In our study, factors which found not associated with unmet need were maternal occupation, maternal education, husband's education, wealth quintiles, women autonomy, visits to health facilities, media exposure and visits by family planning field workers. Various results were found in Burkina Faso²¹, Kenya²² and Nigeria²⁹. A study in Burkina Faso²¹ reported that husbands with secondary or higher education levels and working mothers were more likely to have unmet need but media exposure was found not associated with unmet need. Different results were reported in Kenya,²² where the higher levels of maternal education and exposure to media reduced the experience of unmet needs. Wealth quintiles was not found to be significantly associated with unmet need. This finding is similar with studies in Egypt¹⁹ and India²³ which found that there was no association between socioeconomic levels and unmet need. In our study, women autonomy was neither associated with unmet need. A study in Bangladesh shows a different result that women who participate in domestic decision making can reduce unmet need. The higher the autonomy of

a woman, she will want a smaller family size and can negotiate decisions on fertility and family planning.³⁰ A study in Nigeria²⁹ reported visits by family planning field workers reduced the experience of unmet needs while visits to health facilities in the last 12 months were found to be not associated with unmet needs.

The limitation of the study is the use of secondary data where data analysis can only be done on the available variables. In addition, cross-sectional studies that analyze the association between socio-demographic factors and unmet need are not able to get the direct cause of unmet need,³¹ so we need other studies such as prospective cohort and qualitative studies to get a more explicit explanation of the occurrence of unmet need.

CONCLUSION

The proportion of unmet need for family planning in Indonesia has decreased compared to previous years but is still slightly higher than the target set by the Indonesian government. Some factors that have a stronger association with unmet need are mothers aged 35-44 years and 45 years and above, the last child aged 10 years and over, children who are still living (less than two), the ideal number of children more than two, unemployed husband, poor knowledge of family planning methods, living in cities and those in regions with a TFR of 2.29 or more. Education about family planning to reduce unmet need should be focused on the above groups, especially those related to maternal age. In addition, qualitative and prospective cohort studies are needed to explore factors related to unmet need.

ACKNOWLEDGMENTS

Thanks to the National Population and Family Planning Board for the access to the data provided to enable a secondary data analysis on the 2017 IDHS report.

REFERENCES

- United Nations Foundation. Family Planning 2020: Family planning's return on investment. Washington DC; Available from: <https://www.familyplanning2020.org>
- FIGO. The global unmet need for modern contraceptives. International Federation of Gynecology and Obstetrics. 2018 [cited 2019 Jun 18]. Available from: <https://www.igo.org/news/global-unmet-need-modern-contraceptives-0016065>
- WHO. Family planning/contraception. WHO. 2018 [cited 2019 Jun 16]. Available from: <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>
- United Nations. World family planning 2017-Highlights. New York; 2017.
- Indonesia Statistics Beureau, National Population and Family Planning Board, Ministry of Health, USAID. Survei Demografi dan Kesehatan Indonesia 2017 [The 2017 Indonesia Demographic and Health Survey]. Jakarta: Indonesia Statistics Beureau; 2018.
- Indonesia Statistics Beureau, National Population and Family Planning Board, Ministry of Health, USAID. Survei Demografi dan Kesehatan Indonesia 2012 [The 2012 Indonesia Demographic and Health Survey]. Jakarta: Indonesia Statistics Beureau; 2013. pp. 94-96.
- National Population and Family Planning Board. Rencana Strategis Badan Kependudukan dan Keluarga Berencana Nasional Tahun 2015-2019 [The 2015-2019 Strategic Plan of the National Population and Family Planning Board]. Jakarta: National Population and Family Planning Board; 2015. p. 30.
- Nazir S, Mittal A, Anand BK, Goel RKD, Singh J, Rashid A. Determinants of unmet need for family planning in a developing country: An observational cross sectional study. *National Journal of Community Medicine*. 2015;6(1):86-91.
- Letamo G, Navaneetham K. Levels, trends and reasons for unmet need for family planning among married women in Botswana: A cross-sectional study. *BMJ Open*. 2015 [cited 2018 Sep 7];5:1-11.
- Sari RA. Determinan unmet need pelayanan keluarga berencana di Indonesia: Analisis data SDKI 2012 (Determinants of unmet need for family planning services in Indonesia: The 2012 IDHS data analysis). Universitas Gadjah Mada; 2014.
- Ministry of Law and Human Rights. Peraturan Presiden Republik Indonesia Nomor 12 Tahun 2013 tentang Jaminan Kesehatan [The Republic of Indonesia President Act No. 12, 2013 on Health Insurance]. Jakarta: Ministry of Law and Human Rights; 2013.
- National Development Planning Board. Evaluasi paruh waktu RPJMN 2015-2019 (Midterm evaluation of the 2015-2019 National Development Plan). Jakarta; 2017.
- Ministry of Finance. Buku pintar dana desa [Smart book of village fund]. Jakarta: Ministry of Finance; 2017.
- Wado YD. Women's autonomy and reproductive health-care-seeking behavior in Ethiopia. Calverton, Maryland, USA: ICF International; 2013.
- Eunice S. The Concept, correlates and consequences of unmet need for contraception in Zambia. Johannesburg, South Africa: University of The Witwatersrand; 2015.
- Wulifan JK. Assessing unmet need for family planning and contraceptive use among women of reproductive age in Rural Burkina Faso. Ruprecht-Karls-Universitat; 2016.
- Gebre G, Birhan N, Gebreslasie K. Prevalence and factors associated with unmet need for family planning among the currently married reproductive age women in Shire-Enda-Slassie, Northern West of Tigray, Ethiopia 2015: A community based cross-sectional study. *Pan African Medical Journal*. 2016;23(195):1-9.
- Vohra R, Vohra A, Sharma S, Rathore MS, Sharma BN. Determinants of the unmet need for family planning among women of Jaipur, Rajasthan. *International Journal of Advanced Medical and Health Research*. 2014;1(1):20-25.
- El-masry R, Essam N, Ghoneim M. Unmet need for family planning among women in Rural Egypt. *International Journal of Community Medicine and Public Health*. 2018;5(4):1252-61.
- Sedgh G, Ball H. Abortion in Indonesia. Guttmacher Institute. 2008;(2):1-6.
- Adebowale SA, Palamuleni ME. Determinants of unmet need for modern contraception and reasons for non-use among married women in rural areas of Burkina Faso. *African Population Studies*. 2014;28(1):499-514.
- Nyauchi B, Omedi G. Determinants of unmet need for family planning among women in rural Kenya. *African Population Studies*. 2014;28:999-1008.

23. Singh S, Kalhan M, Malik JS, Jangra A, Sharma N, Singh S. Assessment of unmet need for family planning and its determinants in a rural block of Haryana. *International Journal of Community Medicine and Public Health*. 2018;5(5):1968–1973.
24. Coleman M, Alonso A. A qualitative study exploring how family planning beliefs and attitudes contribute to family planning behavior in rural, Southeastern Kenya: Application of The Social Ecological Model. *World Medical and Health Policy*. 2016;8(4):364–381.
25. Aisyah. Perbandingan kejadian unmet need keluarga berencana antara daerah perkotaan dan perdesaan di wilayah Indonesia (Tesis) [Comparison of unmet need for family planning between urban and rural areas in Indonesia (Thesis)]. Universitas Indonesia; 2014.
26. Bamgboye EA, Ajayi I. Changing patterns of unmet needs for family planning among women of reproductive age in Nigeria. *African Journal of Reproductive Health* (Special Edition). 2016;20(3):127–135.
27. Islam R, Islam AZ, Rahman M. Unmet need for family planning: Experience from urban and rural areas in Bangladesh. *Public Health Research*. 2013;3(3):37–42.
28. Edietah EE, Njotang PN, Ajong AB, Essi MJ, Yakum MN, Mbu ER. Contraceptive use and determinants of unmet need for family planning: A cross sectional survey in the North West Region, Cameroon. *BMC Women's Health*. 2018;18(171):1–8.
29. Oginni AB, Aloysius B, Adebajo S. Trend and determinants of unmet need for family planning services among currently married women and sexually active unmarried women aged 15-49 in Nigeria (2003-2013). *African Population Studies*. 2015;29(1):1483–1500.
30. Uddin J. Gendered power dynamics and unmet need for family planning among married women in Bangladesh (Thesis). Iowa State University; 2014.
31. Machiyama K, Casterline JB, Mumah JN, Huda FA, Obare F, Odwe G, et al. Reasons for unmet need for family planning, with attention to the measurement of fertility preferences: Protocol for a multi-site cohort study. *Reproductive Health*. 2017;14(1):23.



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