

# Does Contraception Used Better In Urban Areas?: An Analysis Of The 2017 Idhs (Indonesia Demographic And Health Survey)

\*Agustina Abuk Seran<sup>1</sup>, Agung Dwi Laksono<sup>2</sup>, Anita Dewi Prahastuti Sujoso<sup>3</sup>, Masrurroh<sup>4</sup>, Ilyas Ibrahim<sup>5</sup>, Nurmah Baharia Marasabessy<sup>6</sup>, Nikmatur Roharia<sup>7</sup>, Nasrun Pakaya<sup>8</sup>, Retno Adriyani<sup>9</sup>

<sup>1</sup> Kupang Health Polytechnic, Ministry of Health, Kupang, East Nusa Tenggara, Jl. Piet A. Tallo, Kupang, Indonesia

<sup>2</sup> National Institute of Health Research and Development, Ministry of Health, Jl. Percetakan Negara 29, Indonesia.

<sup>3</sup> Faculty of Public Health University of Jember, Jember, Indonesia.

<sup>4</sup> Faculty of Health Science, Darul Ulum Islamic Boarding School, Jombang, Indonesia.

<sup>5</sup> Faculty of Health Science, Bumi Hijrah Tidore University, Indonesia.

<sup>6</sup> Maluku Health Polytechnic, Ministry of Health, Maluku, Indonesia.

<sup>7</sup> Faculty of Health Science, Muhammadiyah University Jl. Karimata 45 Jember, Indonesia.

<sup>8</sup> Faculty of Sport and Health, Gorontalo State University, Indonesia.

<sup>9</sup> Faculty of Public Health, University of Airlangga, Indonesia.

## \* Corresponding Author

Name: Agustina Abuk Seran

Email: agustinaseran07@gmail.com

## ABSTRACT

Introduction: Residence (urban and rural) has a significant effect on the desire of using contraception. Several other studies have also shown that the area where women live has a significant relationship with a person who has a pregnancy status. This study aimed to explore the contraception used better in urban areas: Analysis of the 2017 IDHS (Indonesia Demographic and Health Survey). Methods: Secondary data analysis in this study was sourced from secondary data of the 2017 IDHS with a cross-sectional approach. The research instrument was a structured questionnaire that had been tested for validity and reliability. Analysis: Data analysis used Logistic Regression for windows. Result: The results of this study indicated that urban women were the largest users of contraception, at about (26197; 63.4%), mostly in the age group of 40-44 with (10073; 24.4%), generally they were workers, about (24344; 59.0%), commonly they graduated from secondary level of education, about (23201; 56.2%), mostly they married/living with a partner (38425; 93.0%), mostly their wealth status were rich, with (12177; 29.5%), and have health insurances (27424; 66.4%), most of them were multipara, about (30545; 74.0%). And the highest result of Logistic Regression was on married/living with a partner (sig.0.000; OR: 32,995); (Lo: 29,247; Up: 37,223), Conclusion: women who were married/living with partner in urban areas used contraception because of socio-demographic factors like socio-psychological factors and factors related to health services, education, income, employment, age, parity, ethnicity, and religion. Recommendations to policymakers in Indonesia have to focus on women who married/living with partners in urban areas that use contraception.

**Keywords:** Women who used contraception, Indonesian Urban, Logistic Regression, Demographic Health Survey

## Correspondence:

Agustina Abuk Seran

Kupang Health Polytechnic, Ministry of Health, Kupang, East Nusa Tenggara, Jl. Piet A. Tallo, Kupang, Indonesia

\*Corresponding author: Agustina Abuk Seran email-address:

agustinaseran07@gmail.com

## INTRODUCTION

The Family Planning Program, which was officially implemented in the early seventies, is an attempt by Indonesian government to cope rapidly growing population. According to the law above, contraception further enhances community participation, which is following the religious, socio-economic, and socio-cultural values that exist in the local community. As time as, according to UU nomor 52 Tahun 2009, Family planning is an effort to regulate childbirth, distance, and ideal age of pregnancy, regulate pregnancy, through promotion, protection, and assistance following reproductive rights to create a quality family<sup>1,2</sup>. Residence (urban and rural) has a significant effect on the desire to use contraception, several other studies have also shown that the area where women live has a significant relationship with a person's pregnancy status<sup>3</sup>. The opportunity to use contraception for women who live in rural areas is lower than in urban areas. It occurs because women who live in urban areas have easier access to get contraceptive information and services<sup>4</sup>. For example, private health clinics, government hospitals, pharmacies,

and drug stores are more widely available in urban areas, thus providing convenience health services and improving contraceptive services for people in those areas. It is different in rural areas, government hospitals and other health facilities are not easy available because of access that make women with low economic status are unable to reach health facilities so that it can affect to the continuity of contraceptive use. Besides that, women with low economic status have limited access in transportation<sup>5</sup>.

Based on the Indonesian Demographic and Health Survey (IDHS) in 2012, showed that participants who were active contraception users, Contraceptive Prevalence Rate (CPR) couples of childbearing age reached 61.9%<sup>6</sup>. The results of the 2015 Inter-Census Population Survey (SUPAS), there was a decrease compared to the results of the 2012 IDHS. The prevalence of contraceptive use for all methods of the 2015 SUPAS results was 57.9% and modern contraception was 57.1%. From many active users and many contraceptive methods offered, the method of contraceptive injection is the method that is widely used<sup>7</sup>. Based on the results of the 2012 IDHS, the prevalence of active contraception in Indonesia was 58%

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mostly married women aged 15-49 years use modern methods, and 4% use traditional methods. The injection contraception is the most widely used contraceptive method at 32% and followed by pill respectively at 14%. Then the Intra-Uterine Device (Intrauterine device) was 4%, the contraceptive implant was 3.3%, medically it was Women's Operative Medical female surgery by 3.2%, while for men it was Male Operative Medical (MOP) and the use of condoms is still very low at 3%<sup>8</sup>. Also, the TFR decreased from 2.6 in 2012 to 2.4 in 2017, but there is a striking difference, where the TFR for urban areas is 2.3 while the TFR for rural areas is still 2.6, per woman of childbearing age in Indonesia. A significant increase in contraceptive use, an increase in age at first marriage, as well as several socio-economic and cultural factors affect decreasing fertility in Indonesia. Several other studies in Indonesia also show that residence (urban or rural), education, access to mass media, and visits by officers influence women in choosing contraceptive services. Most urban areas in developing countries are often associated with more educated communities, better access to medical services such as contraception and other social services<sup>9</sup>. Therefore, contraception use rates are usually higher in urban areas than in rural areas. Also, the chances of becoming a contraception user for women living in urban areas are almost one and a half times higher than for women in rural areas<sup>10</sup>. The results of other studies indicate that the chances of productive women who live in urban areas to use contraception are greater than women in the same age group in rural areas<sup>11,12,13,14</sup>. The different descriptions of contraception used between these two regional typologies influenced generally lower birth rates in urban areas. The Performance Monitoring and Accountability 2020 (PMA2020) survey data in 2015 showed an inverse relationship between the total fertility rate (TFR) and the contraceptive prevalence rate (CPR) in rural and urban areas. In general, the survey results showed an increasing rate in using contraception, on the other hand had a decrease in the fertility rate<sup>15,16</sup>.

However, this survey also showed that the TFR rate (2.4%) and the proportion of contraception used for all types of methods (62%) in rural areas are greater than the TFR (2.2%) and the proportion of contraception used (59%) in urban areas. Likewise, the proportion of modern contraception used in rural areas (61.9%) was greater than in urban areas (57.4%). Interestingly, the use of traditional contraception in urban areas (2.2%) is greater than in rural areas (1%)<sup>16</sup>. This indicates a trend that is different from the results of the previous survey, which requires further explanation through secondary data analysis. This analysis is needed to look on overview of contraception used between rural and urban areas, and relation to the characteristics in each region based on the 2020 PMA survey data. Therefore, this article aimed to identify how contraception used in urban areas does

based on Analysis of the 2017 Demographic and Health<sup>15,16</sup> Indonesia.

### METHODS

This study used secondary data of the 2017 IDHS. The population in this study was women (15-49 years old) in Indonesia, involving samples of 86,149 women of childbearing age. The sampling technique in this study was stratified cluster-random sampling. The use of contraception is that women of childbearing age that used a method/contraception tool to delay, regulate distance, or stop a pregnancy. In this study, focus on the use of contraceptives which was including modern and traditional family planning, including the use of the intrauterine device, implant, and female surgery methods, as well as the discontinuation of used. Modern contraception and traditional family planning are including the use of intrauterine device, implant, and female surgery methods, and discontinuation. The IDHS is a part of Demographic Health Survey (DHS) designed to collect data on fertility, family planning, maternal and child health. The 2017 IDHS was implemented jointly with Central of Statistics, the National Population and Family Planning Agency, and the Ministry of Health. The survey used a structured questionnaire. The questionnaire has been tested for the validity and reliability of the instrument. The variables of this study were age, education, marital status, wealth status, health insurance and parity. The age group was categorized into seven groups, with the youngest age group (15-19 years) and the last education from women of childbearing age had when the survey was conducted. Marital status is categorized into 2 groups, namely married/living with a partner and widowed/divorced. Wealth status consisted of the poorest, poorer, middle, richer, and richest. Health insurance consisted of an insurance participant and not an insurance participant. As the reference is not being an insurance participant. Parity is divided into 3, namely primiparous (having children <2 people), multiparous (having children 2-3 people), and grand multiparous (having children > 3 people) with the primiparous group being the reference. This study used bivariate analysis with Chi-Square test to determine whether the use of contraception in urban and rural areas by women of childbearing age which was significantly different or not. The variables analyzed were contraception used, age, education, marital status, wealth status, health insurance, and parity. While the Binary Logistic Regression analysis aimed to identify the factors that are significantly involved in contraception used by rural women. All used IBM SPSS 22.0 windows software.

### RESULTS

Table 1. Descriptive Statistics of Contraception Used in Indonesia (n = 86,149)

CHARACTERISTICS	TYPE OF PLACE		P
	Urban	ALL	
<b>Contraception used</b>			0.000 ***
No (ref.)	15099 (36.6%)	32682 (37.9%)	
Yes	26197 (63.4%)	53467 (62.1%)	
<b>Age group</b>			0.000 ***
15-19 (ref.)	178 (0.4%)	434 (0.5%)	
20-24	1369 (3.3%)	3341 (3.9%)	
25-29	3814 (9.2%)	8380 (9.7%)	
30-34	6801 (16.5%)	14431 (16.8%)	
35-39	9611 (23.3%)	19367 (22.5%)	

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40-44	10073 (24.4%)	20475 (23.8%)	
45-49	9450 (22.9%)	19721 (22.9%)	
<b>Work status</b>			0.000 ***
No ( ref.)	16952 (41.0%)	34362 (39.9%)	
Yes	24344 (59.0%)	51787 (60.1%)	
<b>Education</b>			0.000 ***
No education (ref.)	575 (1.4%)	2900 (3.4%)	
Primary	11225 (27.2%)	32640 (37.9%)	
Secondary	23201 (56.2%)	41195 (47.8%)	
Higher	6295 (15.2%)	9414 (10.9 %)	
<b>Marital status</b>			0.000 ***
Married/living with partner	38425 (93.0%)	80732 (93.7%)	
Widowed/divorced (ref.)	2871 (7.0%)	5417 (6.3%)	
<b>Wealth status</b>			0.000 ***
Poorest (ref.)	3909 (9.5%)	23946 (27.8%)	
Poorer	6492 (15.7%)	16825 (19.5%)	
Middle	8471 (20.5%)	15558 (18.1%)	
Richer	10247 (24.8%)	15151 (17.6%)	
Richest	12177 (29, 5%)	14669 (17.0%)	
<b>Health Insurance</b>			0.000 ***
No (ref.)	13872 (33.6%)	31211 (36.2%)	
Yes	27424 (66.4%)	54938 (63.8%)	
<b>Parity</b>			0.000 ***
Primiparous (ref.)	4469 (10.8%)	8613 (10.0%)	
Multiparous	30545 (74.0%)	59352 (68.9%)	
Grand Multiparous	6282 (15.2%)	18184 (21.1%)	

Note: \* p <0.05; \*\* p <0.01; \*\*\*p <0.001.

Table 1 showed that women who were not using contraception about (15099; 36.6%), and who used contraception (26197; 63.4%). Age group range, 15-19 years old (178; 0.4%), 20-24 years old (1369; 3.3%), 25-29 years old (3814; 9.2%), 30-34 years old (6801; 16.5%), 35 -39 years old (9611; 23.3%), 40-44 years old (10073; 24.4%), 45-49 years old (9450; 22.9%). Based on their work status; not employed (16952; 41.0%), employed ( 24344; 59.0%). Based on their education; No education (575; 1.4%), Primary school (11225; 27.2%), Secondary school (23201; 56.2%), Higher (6295; 15.2%).

Based on their marital status; Married/living with partner (38425; 93.0%), Widowed/divorced (2871; 7.0%). Based on their wealth status; Poorest (3909; 9.5%), Poorer (6492; 15.7%), Middle (8471; 20.5%), Richer (10247; 24.8%), Richest (12177; 29.5%). Based on health insurance; without health insurance (13872; 33.6%), with health insurance (27424; 66.4%). Based on their parity status; Primiparous (4469; 10.8%), Multiparous 30545 (74.0%), Grand multiparous (6282; 15.2%).

Table 2. Binary Logistic Regression of The Contraception Used in Urban Indonesia ( n = 86.149)

DETERMINANTS	CONTRACEPTION USED			
	Sig.	OR	Lower Bound	Upper Bound
Type of place: Urban	0.507	0.988	0.955	1.023
Age group: 20-24	0.010 *	0.741	0.591	0.929
Age group: 25-29	0.000 ***	0.468	0.375	0.583
Age group: 30-34	0.000 ***	0.426	0.342	0.532
Age group: 35-39	0.000 ***	0.440	0.352	0.549
Age group: 40-44	0.000 ***	0.355	0.284	0.443
Age group: 45-49	0.000 ***	0.169	0.136	0.212
Work status: Employed	0.000 ***	1,195	1,158	1,233
Education: Primary	0.000 ***	2,107	1,936	2,294
Education: Secondary	0,000 ***	2,172	1,992	2,369
Education: Higher	0,000 ***	1,966	1,780	2,171
Marital status: Married/living with partner	0,000 ***	32,995	29,247	37,223
Wealth status: Poorer	0,000 ***	1,343	1,284	1,405
Wealth status: Middle	0.000 ***	1,435	1,367	1,506
Wealth status: Richer	0,000 ***	1,438	1,366	1,514
Wealth status: Richest	0,000 ***	1,487	1,405	1,574
Health insurance: Yes	0.003 **	1,049	1,016	1,083
Parity: Multiparous	0,000 ***	3,117	2,946	3,297
Parity: Grand multiparous	***0,000	2,246	2,101	2,402

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Note: \* p <0.05; \*\* p <0.01; \*\*\*p <0.001.

The Contraception Used in Urban Indonesia at Table 2. The age range showed the Age group: 20-24 (sig. 0.010; OR: 0.741); (Lo: 0.591; Up: 0.929). Age group: 25-29 (sig. 0.000; OR: 0.468); (Lo: 0.375; Up: 0.583). Age group: 30-34 (sig.0.000; OR: 0.426); (Lo: 0.342; Up: 0.532). Age group: 35-39 (sig.0.000; OR: 0.440); (Lo: 0.352; Up: 0.549). Age group: 40-44 (sig.0.000; OR: 0.355); (Lo: 0.284; Up: 0.443). Age group: 45-49 (sig.0.000; OR: 0.169); (Lo: 0.136; Up: 0.212). Work status: Employed (sig.0.000; OR: 0.195); (Lo: 1.158; Up: 1.233). Education: Primary Education (sig.0.000; OR: 2.107); (Lo: 1.936; Up: 2.294). Education: Secondary Education (sig.0.000; OR: 2.172); (Lo: 1.992; Up: 2.369). Education: Higher (sig.0.000; OR: 1.966); (Lo: 1.780; Up: 2.171). Marital status: Married/living with partner (sig.0.000; OR: 32,995); (Lo: 29,247; Up: 37,223). Wealth status: Poorer (sig.0.000; OR: 1.343); (Lo: 1.284; Up: 1.405). Wealth status: Middle (sig.0.000; OR: 1.435); (Lo: 1.367; Up: 1.506). Wealth status: Richer (sig.0.000; OR: 1.438); (Lo: 1.366; Up: 1.514). Wealth status: Richest (sig.0.000; OR: 1.487); (Lo: 1.405; Up: 1.574). Health insurance: Yes (sig. 000; OR: 3.117); (Lo: 2,946; Up: 3,297). Parity: Multiparous. Parity: Grand multiparous (sig.0.000; OR: 2.246); (Lo: 2.101; Up: 2.402).

### DISCUSSION

Based on the results of the study, it was confirmed by the results of the factors that the influence of contraception used in urban areas was socio-demographic factors, socio-psychological factors, and factors related to health services. The socio-demographic factors that influence are education, income, occupation, age, parity, ethnicity, and religion. The use of contraception is higher in women aged 20-30 years with more than 2 children. Family planning acceptance is higher for those who have well standard of living<sup>17,18</sup>. Other studies showed that factors in urban mothers that influence the use of intrauterine device contraceptive methods are the relationship between ages, parity, maternal perceptions of contraceptive demand/reasons, intra-uterine device contraceptive methods, and husband support with the use of intrauterine device contraceptive methods. The factor that most influences the use of the intra-uterine device contraceptive method is the mother's perception of the intra-uterine device contraceptive method, especially in the mother's perception that the intra-uterine device contraceptive method interferes with daily activities. Mothers who were over 35 years old and having more than 2 children were more likely to choose Intrauterine devices<sup>19,20</sup>. Age is one of the factors that determine a person's behavior in determining contraception used, the older a person is, the choice of contraception will be a contraception that has higher effectiveness, namely the long-term contraceptive method<sup>21</sup>.

Results from a multinomial logistic regression of the relative risk of being "in need" relative to "no need", and "in need" relative to "method switch", illuminated several interesting patterns. As seen in table 5, the relative risk of discontinuation for married women was 75% more likely to result in a status of "no need" for contraception versus "in need" compared to unmarried women. Being age 35-39 years had a similar effect, whereas parity of one or more and residence in urban area was associated with a lower likelihood of being "no need" versus "in need". Compared to the daily pill, discontinuations of injectable,

implants, or other modern methods were less likely to result in "no need" than "in need". Likewise, compared to pharmacies as a method source for the discontinued method, discontinuations of methods obtained from public, private, or other sources are less likely to result in "no need" compared to "in need"<sup>22,23</sup>. It is strengthened by other research that said factors related to the use of hormonal contraceptives in urban areas showed that statistical significance is the current age of the mother, age at first birth, number of living children, family income, cost of contraception, and husband's support<sup>24</sup>. Another study said the wife's age, the number of children and level of education influenced the choice of contraception used by women and it is known that the wife's age is the most influential factor<sup>25</sup>. Meanwhile, other research showed that knowledge, education, and availability of contraception are related to the use of contraception in women. Knowledge due to a large amount of information obtained by acceptors both from health workers and from the media makes the acceptors' knowledge better<sup>26</sup>. Education is related to the use of contraception in urban women because the low education of women makes contraception less attractive, this has an impact on the number of children born with close delivery distances. The factor of contraception availability also affects women to use contraception. Contraception that is fully and easily available can increase the choice of contraception<sup>27</sup>. However, this knowledge can cause stress in urban women to choose contraception, stress is a condition of women's reactions both physically and emotionally (mentally/psychologically) when there is a change in the environment<sup>28,29,30,31,32,33</sup>. Other studies have shown that age, husband's support, side effects, and information on contraceptive officers are related to the choice of hormonal contraception in urban areas. The choice of hormonal contraception by urban women is worried that their body condition tends to increase in body weight which can interfere with their self-esteem, namely low self-esteem which is an emotional condition and self-assessment that is negative or lower than other people<sup>34,35,36</sup>.

Health Insurance in this research is the most important part of urban society in the choice of contraception used, a factor that influences health behavior patterns consisting of individual health choices and the use of health services. These interrelated variables will in turn have an impact on health status, which is described, among others, by the level of morbidity and mortality. Utilization of health services, namely environmental factors that seen the relationship between the health service system and the external environment, and population characteristics which include supporting characteristics factor, enabling factors, and needs factors.<sup>37,38,39</sup>

Based on these data, it was found following other studies that there were many acceptors who choose certain method based on information that they got from other acceptors who have respective experiences. Some health workers do not provide counseling and information, so that clients' lack of knowledge in choosing the type of contraception. However, the community tolerates contraceptive services even though contraceptive services do not fully give quality service as requirements. Good information from officers can helps clients choosing and determining the contraceptive method that will be used. Good information will provide client satisfaction



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which will make client is using contraception longer and thus helps contraceptive success.

### CONCLUSIONS

Factors that influence the use of contraception in urban areas were socio-demographic factors, socio-psychological factors, and factors related to health services, education, income, employment, age, parity, ethnicity, and religion. The use of contraception was higher on women aged 20-30 years with more than 2 children who live in urban areas.

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Adaptability

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