

Participation and Contraceptive Use among Women of Childbearing Age in Daerah Istimewa Yogyakarta Province: Further Analysis from IDHS 2017

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Abstract

Participation and selection of contraceptive methods may vary by region. It depends on the conditions of the region and the characteristics of the population in the region. Decision-making regarding participation and selection of contraceptive methods is influenced by various factors. Based on this description, this study aims to determine participation and selection of contraceptive use in Daerah Istimewa Yogyakarta Province based on educational level and number of living children owned by women of childbearing age. This research method uses further analysis of the 2017 Indonesian Health Demographic Survey (IDHS) data for the women of the childbearing age section. The analytical method used is a descriptive analysis by use of cross tabulation with IBM SPSS software. The results of the study indicate that higher education does not necessarily have a high percentage of contraceptive use, however, the variable number of children has an influence on the participation of contraceptives by women of childbearing age. We found that women with ≤ 2 children still want to have more children and tend to use less effective methods (short-term contraceptive method), while women with > 2 children use long-term contraceptive methods as a more effective method because they want to limit the number of children.

Keywords: contraception; level of education; number of children; long-term contraceptive method

Introduction

High population is one of the biggest problems in Indonesia. Indonesia has the fourth largest population in the world and currently still has a fairly high population growth rate (Utami, et al., 2020). Based on the 2020 population census data, the current population of Indonesia is 270,20 million people. This figure increased by 32.56 million people from the 2010 population

census with a population growth rate of 1.25% (Central Bureau of Statistics, 2021). This figure is still quite high, although slower than the population growth rate in 2010, with a population growth rate of 1.49%. The high rate of population growth tends to be caused by the high fertility rate. If it continues, it will lead to various problems, especially if it is not balanced by the availability of resources.

As a result, it is necessary to intervene in fertility to control the population. One of the

programs that can control the population and reduce the birth rate is the Family Planning. Family Planning (FP) is a program designed by National Population and Family Planning Commission. Family planning is a policy from the Indonesian government to control population growth and is considered as an effective program to control population growth. One of the services of the family planning program (FP) is the use of contraceptives (Lestari & Eka, 2021). Contraceptives can be used to control the number of births and spacing between births (Priyatni & Rahayu, 2016). Then, it will help reduce unwanted and unplanned pregnancies among women of childbearing age.

Contraceptive has been known as a factor that influence fertility. Davis & Blake (1956) through their theory explain regarding intermediate variables that directly influence fertility. There are 11 intermediate variables that each of them has negative or positive effect to fertility. Contraceptive use is one of the intermediate variables. Bongaarts (1982) respecified 11 intermediate variables into 7 intermediate variables called proximate variables. One of the proximate variables is contraception. According to Bongaarts (1982), fertility is most sensitive to changes in the proportions married and the prevalence of contraception. As a result, contraception use can be considered as important variable in the analysis of fertility levels and trends. Both intermediate variables and proximate variables are considered as intermediate to social, cultural, economic, and environmental factors that influence fertility. Social, cultural, economic, and environmental factors can be referred to as indirect variables (Bongaarts, 1978). Indirect variables, such as education and income, can influence fertility indirectly through intermediate variables.

Contraceptives can be grouped based on their effectiveness, namely long-term contraceptive method and short-term contraceptive method. Long-term contraceptive method consists of implants,

IUD, and sterilization, meanwhile short-term contraceptive method consists of pill, injection, condoms, et cetera. The current government policy is to encourage the use of long-term contraceptive method. This can be seen from the strategic plan, one of the targets is to an increase in active long-term contraceptive method participants (National Population and Family Planning Commission, 2020). The percentage of active long-term contraceptive method participant is targeted to reach 28.30% by 2024. Long-term contraceptive method has many advantages, so it is more recommended to use. Long-term contraceptive methods are the most effective method to prevent pregnancy. Long-term contraceptive method 99% effective to prevent unwanted pregnancy (Secura & McNicholas, 2013). Long-term contraceptive method also known as the safest, most cost-effective, highest user satisfaction, and user independent method (Adedini, et al., 2019; Bhandari, et al., 2019; Kungu, et al., 2020). Furthermore, long-term contraceptive method can return fertility immediately after removal (Bhandari, et al., 2019; Fitrianiingsih & Melianiani, 2016).

Active family planning participants in Indonesia in 2017 were 63.22% (Indonesian Ministry of Health, 2018). This percentage can be considered quite high because more than half of women of childbearing age in Indonesia use contraception. However, this is not followed by the high use of long-term contraceptive method even though long-term contraceptive method is the method recommended by the government. Despite of many benefits of long-term contraceptive method, the average percentage of total use of long-term contraceptive method in married women is still very small compared to the use of short-term contraceptive method (Aryati, et al., 2019). This is in accordance with the statement of Suryanti (2019) that most family planning participants on national scale used short-term contraceptive methods in the form of injections 29.0% and pills 12.1%.

Meanwhile, long-term contraceptive methods such as implants are only 4.7%, tubectomy 3.8%, and vasectomy 0.2%.

The decision to use and choose contraception can be determined by various factors. These factors are important because decision making regarding the selection of contraceptives can affect the success rate of using contraceptives in family planning (Rotinsulu, et al., 2021). Those factors are age, knowledge, cost, beauty reasons, side effects, number of children, and potential complications (Herawati, 2014). According to Bhandari, et al (2019) there are more other factors such as age, education of women, education of husband, ethnicity, religion, occupation, number of children, wealth index, and media access. The level of education is considered to affect contraceptives participation, because one of the obstacles to implementing family planning programs is the low level of public understanding (Wulandari, 2008). Someone who is highly educated tends to think rationally and is more receptive to new ideas. It indicates that someone with higher education is more likely to accept family planning programs in order to limit the number of children. According to Biza, et al (2016), women education has a strong influence on awareness towards the use of long-term contraceptive method and enables women to better understand the benefits and the side-effects of long-term contraceptive method. It is also supported by Sumini (2009) in Hamarisa et al (2019), who state that the higher the level of education, the higher the use of contraceptives also.

The number of children that have been born affects women of childbearing age to use contraception in order to limit the number of children. This is because the more often a woman gives birth, the risk of death is higher. In addition, the greater the number of children, the more needs and expenses (Laksmi, 2017). Moreover, currently the quality of children is a concern for some families. As a result, more spending

on education or skills upgrading is required. Eventually, parent's emphasis on the quality of children at the expense of number of children (Easterlin, 1975). In the other word, family that choose to improve children quality will have fewer number of children. Therefore, many couples decide to limit the number of children using contraception. Furthermore, several studies found that number of children living influence the selection of contraceptive use. According to Kungu, et al. (2020) the number of living children has the strongest positive relationship with selection of long-term contraceptive method. The greater the number of children, women more likely to use long-term contraceptive method.

Various studies have been conducted to examine the participation and prevalence of contraceptive use in some region. However, the discussion regarding the selection of contraceptives still needs to be examined further. Moreover, the selection of long-term contraceptive method as a contraceptive choice is still low. In fact, the long-term contraceptive method is more effective and is recommended by the government. The choice of contraceptives is more often dominated by short-term contraceptives method. Participation, choice of contraception and influence of education and number of living children may vary from region to region. It depends on the conditions of the area and the characteristics of its population. Use and selection of contraception in Daerah Istimewa Yogyakarta Province could have different result, as well as difference influence of education level and number of living children owned. Therefore, it is necessary to discuss further regarding use and selection of contraceptive in Daerah Istimewa Yogyakarta Province. Based on this description, this study aims to determine participation and selection of contraceptive use in Daerah Istimewa Yogyakarta Province based on educational level and number of living children owned by women of childbearing age.

Analysis of contraceptive participation in Daerah Istimewa Yogyakarta Province is important since there are women of childbearing age who do not use contraception. As a result, there will be uncontrolled child numbers, unwanted pregnancies, and high-risk pregnancies. According to research conducted by Utami, et al (2020), some people in Yogyakarta City, one of the regions in Daerah Istimewa Yogyakarta Province, still have thought that many children will bring lots of sustenance. In addition, the results of the study also stated that there was still a lack of counseling and delivery of information on family planning programs in the form of home visits. Submission of information that has not been maximized can be one of the factors encountered by women of childbearing age who do not use contraception. Furthermore, the use of long-term contraceptive method in Daerah Istimewa Yogyakarta Province is low. According to research conducted by Witono & Parwodiwiyono (2020), proportion of short-term contraceptive method, such as condoms is 9.7%; injections 41.5; and pills 10%. Meanwhile, proportion of long-term contraceptive method for IUD 25%; tubectomy 5.3%; vasectomy 0.8%; and implants 7.7%. The district of Gunungkidul has the lowest percentage of IUD, tubectomy, and vasectomy than any other districts in Daerah Istimewa Yogyakarta Province. Meanwhile, proportion of injections and pills in Gunungkidul are the highest. Moreover, Susenas 2019 data shows that the use of long-term methods in Daerah Istimewa Yogyakarta Province only reached 42.9% (Witono & Parwodiwiyono, 2020). These results show that the use of long-term contraceptive method is still low in Daerah Istimewa Yogyakarta Province.

Research Methods

The type of data in this study uses secondary data in the form of data from the Indonesian Demographic and Health Survey (IDHS) of Daerah Istimewa Yogyakarta Province in

2017 obtained by the National Population and Family Planning Agency. These data consisting of education levels, the number of children, and data on the use of family planning tools/methods currently among women of childbearing age aged 15-49 years, a total of 652 samples. The dependent variable consists of the participation and selection of contraceptives in women of childbearing age and the independent variable comprises the level of education and the number of children. The analysis method used is descriptive analysis with cross tabulation. Data processing is carried out with IBM SPSS software. Data analysis in the form of technical descriptive analysis is useful for solving existing problems based on data. The results of processing data on contraceptive use are then categorized into long-term contraceptive methods, short-term contraceptive methods, traditional and others. Long-term contraceptive methods consist of IUDs, vasectomy, tubectomy and implants. Short-term contraceptive methods consist of injections, pills, and condoms. Meanwhile, traditionally consists of calendars and disrupted sexual relations.

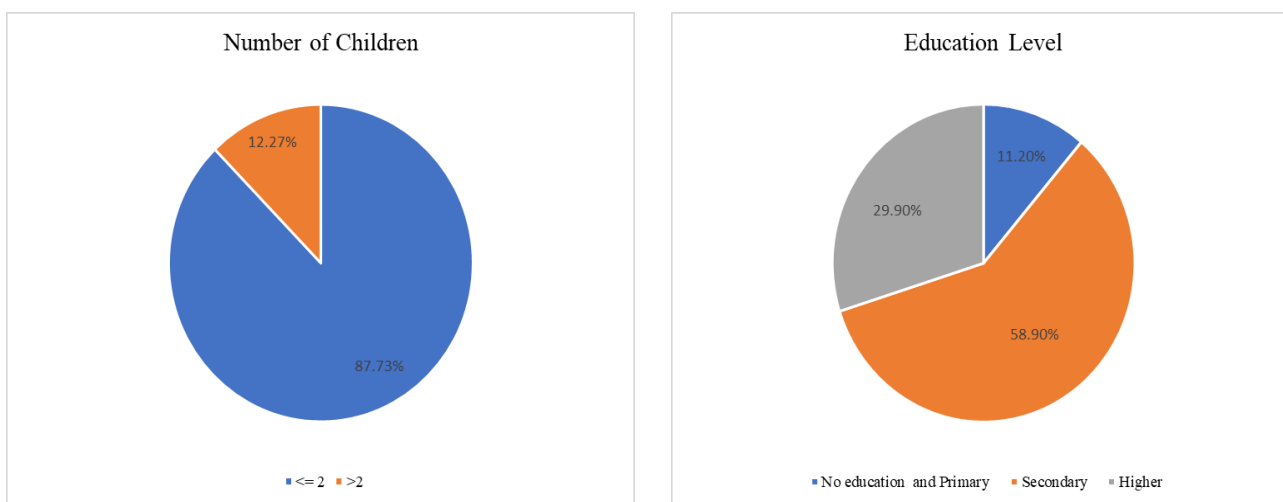
Result and Discussion

Distribution of Women by Number of Children and Education Level

The distribution of women in the Daerah Istimewa Yogyakarta based on the number of children is divided into two, namely women who have two or less children and women who have more than two children. Based on the number of children, women mostly have two or less children. There are 572 women who have two or less than two children or 87.73% of the respondents. Meanwhile, there are 80 women with > 2 children or 12.27% of the respondents. With this data, it can be indicated that women in Daerah Istimewa Yogyakarta Province come from small families with two children or less

than two. However, there is still potential for an increase in the number of children if the use of contraception to prevent unwanted and unplanned pregnancies is neglected. Women with ≤ 2 children can be considered as important target for contraceptive policy. Women with ≤ 2 children should be more

encouraged to use contraception, so they have no more than two children in the future. Moreover, contraception is important to spacing birth. The use of contraception for spacing birth allows for healthier and timely pregnancies.



Source: 2017 IDSH data (processed)

Figure 1. Percentage of women of childbearing age by education level and number of children in Daerah Istimewa Yogyakarta Province.

Based on the level of education, the respondents are classified into the following classes: No Education and Primary, Secondary, and Higher. In Daerah Istimewa Yogyakarta, more than 50% have an education level at the secondary level. Women with no education and primary education level have a frequency of 73 with a percentage of 11.2%. Women with a secondary education level have a frequency of 384 with a percentage of 58.9%, this is the majority of the respondents. Women with a higher education level have a frequency of 195 with a percentage of 29.9%. Based on these data, it can be said that education in Daerah Istimewa Yogyakarta Province, especially for women, is quite good because at least half of women of childbearing age in Daerah Istimewa Yogyakarta Province have completed secondary education. That means, the nine-year compulsory education

policy has mostly been fulfilled. This level of secondary education shows that at least the majority of women in Daerah Istimewa Yogyakarta have better knowledge, access, and ability to receive information. Therefore, it is hoped that women in Daerah Istimewa Yogyakarta Province can also receive better information about contraception. The ability to receive information about contraception allows women to use contraception for spacing births and limit the number of children.

Participation of Contraceptive Devices based on Education Level

One of the things related to family planning awareness in the community is education. According to Act of the Republic of Indonesia No. 20/2003 on the National Education System, education levels are stages of

education that are determined based on the level of development of students, goals to be achieved, and abilities developed. Educational level or level of education will affect a person's knowledge, so it is assumed that people with higher education will have extensive knowledge and can make the right decisions. This includes the selection of contraceptives, which relate to planning the number of family members and the reproductive health of the acceptors (Putri et al., 2019).

Based on the data, it was found that 317 women of childbearing age in Daerah Istimewa Yogyakarta Province did not use contraception and 335 women of childbearing age did use contraception. A total of 187 women of childbearing age who do not use contraception have never got married and the rest have got married or live together. Meanwhile, women of childbearing age who use contraception have all got married or lived together.

Table 1. Percentage of Participation in Contraceptive Use by Education Level

	No Education and Primary		Secondary		Higher	
	f	%	f	%	f	%
Without contraceptive	23	31.51	169	44.01	125	64.10
With contraceptive	50	68.49	215	55.99	70	35.90
Total	73	100.00	384	100.00	195	100.00

Source: 2017 IDHS data (processed)

The data show that women with no education and primary education tend to use contraception, while most of women with higher education at childbearing age tend to not use contraception. There are 68.49% of women without education and primary education at childbearing age in Daerah Istimewa Yogyakarta Province use contraception. Likewise, as many as 55.99% of women of childbearing age with secondary education also use contraception. Only 35.90% of women of childbearing age with higher education use contraception. Based on these data, there is a pattern that in Daerah Istimewa Yogyakarta Province, women of childbearing age who do not have education and primary or secondary education tend to use contraception more. Meanwhile, women with higher education are more likely do not use contraception.

Therefore, it can be concluded that higher education does not necessarily have a high percentage of contraceptive use. This is contrary to what was stated by Lestari

et al. (2015); the higher the education, the easier it is for them to receive information, and in the end, the more knowledge they have. Likewise, with Tirtarahardja (2005) in Pasang (2020), women with higher education tend to limit the number of births compared to those who are uneducated or less educated. This means that there are other factors besides education that affect the use of contraception. As stated by Putri et al (2019), these other factors are maternal age, occupation, number of children, knowledge, mother's attitude, husband's support, and family planning services. In addition, another factor is the lack of socialization related to contraception in educational facilities can result in a lack of understanding related to the use and selection of contraceptives more easily and safely (Saragih et al., 2018). This means, a highly educated person does not necessarily have high knowledge as well because education is not only formal but also non-formal. It is also applied for

contraceptive knowledge. Higher education does not necessarily have higher knowledge about contraceptive use. Likewise, with Budiman & Riyanto (2013) in Grestasari et al. (2014), a person with a low education does not guarantee his knowledge or low information.

Participation in Contraceptive Use by Number of Children

Based on the table of the use of contraceptives by the number of children, the number of women of childbearing age with ≤ 2 children who do not use and use contraceptives tend to be almost balanced, while women with > 2 children tend to use contraception. Based on Table 2, 17.5% of women of childbearing age with > 2 children do not use contraception and 82.5% of them use contraception. Meanwhile, 52.97% of women with ≤ 2 children in the city do not use contraception and 47.03% of them use contraception. There is no significant difference between women with ≤ 2 children who do not use and those who do use contraceptives. This is because some women with ≤ 2 children still want to have more children and some of them limit the number of children. In contrast, women with > 2 children tend to use contraception to limit the number of children. According to Amran and Damayanti (2018), women of childbearing age with a greater number of children have a desire to

limit the number of children. This shows that participation in the use of contraceptives is influenced by the number of children a family wants. According to Uljanah (2016), women do not use contraceptives because they still want to have a certain number of children.

In general, women of childbearing age with > 2 children tend to be older, so they use contraception to avoid a risky pregnancy. According to Huda et al. (2016), women aged over 35 years require contraception to prevent high-risk pregnancies due to repeated pregnancies. The use of contraception aims to prevent the results of unwanted pregnancies, such as excessive number of children. Contraceptives in this scenario are used to limit the number of children. However, there are still women of childbearing age with > 2 children who do not use contraception, i.e., 17.5%. This is influenced by the idea that women who are getting old tend to no longer have the potential to have children and do not need to use contraception. According to Listyaningsih et al. (2016), women of childbearing age who are still menstruating still have a chance to get pregnant. This shows that women of childbearing age with >2 children do not use contraceptives and want to limit the number of children, they need to use contraceptives to avoid unwanted and high-risk pregnancies. In addition, it is necessary to increase awareness of women of childbearing age regarding the importance of using contraceptives.

Table 2. Percentage of Participation in Contraceptive Use by Number of Children

	≤ 2		>2	
	F	%	F	%
Without Contraceptive	303	52.97	14	17.5
With Contraceptive	269	47.03	66	82.5
Total	572	100.00	80	100.00

Source: 2017 IDSH Data (processed)

While women of childbearing age with >2 children generally use contraception to limit the number of children, the contraceptives used by women of childbearing age with ≤ 2 children aim to delay pregnancy. This indicates that the participation rate in the use of contraceptives in the data above is also influenced by the purpose of women of childbearing age in using contraception. In addition, the purpose of using this contraceptive will also affect the selection of contraceptives method, both long-term contraceptive method and short-term contraceptive method. In this case, the number of children has an influence on participation in the use of contraceptives. Other factors such as husband's support, income, employment, and so on also affect the number of children which indirectly also affects participation in the use of contraceptives.

Based on the family planning program, the number of children is limited to two children. According to Act of the Republic of Indonesia No. 52/2009, family planning is an effort to regulate the birth of children, the ideal distance and age to give birth, regulate pregnancy, through promotion, protection, and assistance in accordance with reproductive rights to create a quality family. In addition, the family planning program also aims to reduce maternal mortality. Based on Table 2, most of the women of childbearing age only use contraceptives if they have >2 children. This shows that there are still many women of childbearing age who have a number of children who are not in accordance with the family planning program. Based on this, it is necessary to make efforts from various parties to encourage the limitation of the number of children as many as 2 children.

Selection of Contraceptive Use

In general, the percentage of contraceptive use in Daerah Istimewa Yogyakarta Province for each method is not much different.

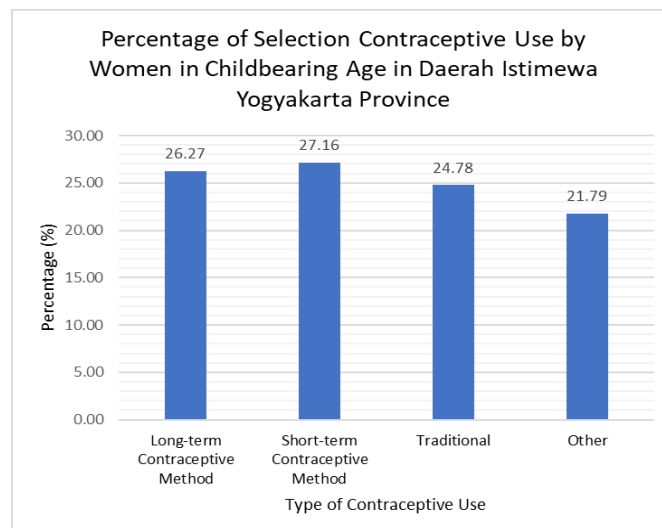
Based on Figure 2, short-term contraceptive method is a contraceptive method with the highest percentage of use, as many as 27.16%. Meanwhile, the long-term contraceptive method is still below the short-term contraceptive method. This indicates that women of childbearing age in Daerah Istimewa Yogyakarta Province are still more interested in using short-term contraceptive method than long-term contraceptive method. In fact, short-term contraceptive method is less effective to prevent unintended pregnancy than long-term contraceptive method. Short-term contraceptive method is more likely to use inconsistently and incorrectly. Nearly half case of unintended pregnancy is caused by inconsistent and incorrect use of contraception (Secura & McNicholas, 2013). Long-term contraceptive method, such as IUD and implant, eliminates those risks because it does not require user action after insertion (Bhandari, et al., 2019). Besides that, short-term contraceptive users are more likely to drop out or discontinue using contraceptive. The possibility of family planning drop out for short-term contraceptive use is 20% - 40% (Mufdlilah & Aryekti, 2018). The higher number of short-term contraceptive method users in Daerah Istimewa Yogyakarta Province could potentially increase the contraceptive dropout rate and reduce the number of active family planning participants. Uncontrolled contraceptive dropout rates can eventually lead to the failure of fertility control programs.

In addition, based on the data, the percentage of using traditional methods is 24.78%. This value is almost the same as long-term contraceptive method and short-term contraceptive method, which means that there are still many women who choose not to install contraception and prevent pregnancy naturally without any intervention. However, this traditional way of preventing pregnancy is not completely effective, considering that there will be many unavoidable possibilities. As a result, there is

a high risk of an unplanned pregnancy. The number of women of childbearing age that use the traditional method means that many Women of childbearing age are at high risk of having an unplanned pregnancy.

Accessibility can be one of the considerations in choosing contraceptives. Accessibility refers to the ease with which women of childbearing age obtains services. Limited contraceptives and trained health workers are barriers to access long-term contraceptive method (Tibaijuka, et al., 2017). This is supported by the statement of Indonesian Ministry of Health (2018) that the low use of long-term contraceptive method in Indonesia can be caused by the limited number of trained health workers and infrastructure. Based on research by Kungu, et al. (2020) long-term contraceptive methods are more likely found in urban due to better access and exposure to long-term contraceptive method. On the other hand, the availability of long-term contraceptives method services in rural areas is less. Long-term contraceptive methods rely on trained personnel for insertions and removals,

while the availability of trained personnel in rural areas might be more limited. This is in accordance with research conducted by Bachtiar (2016) in the districts of Sleman and Bantul, Daerah Istimewa Yogyakarta Province. Urban areas have more places of service so that couples have more choices to determine where to get contraceptives. The results of Bachtiar's study also showed that short-term contraceptive method had a high percentage in rural areas, while long-term contraceptive method found only implants (13.5%) and tubectomy (2.7%). In urban areas, found all types of short-term contraceptive method and long-term contraceptive method, except vasectomy. Cost is also one of the considerations for using a long-term contraceptive method. According to Damayanti's research (2013) in Septalia (2016), family planning acceptors tend to think that long-term contraceptive method is expensive and short-term contraceptive method is inexpensive. They prefer to use short-term contraceptive method or even traditional method that cost lower.



Source: 2017 IDHS data (processed)

Figure 2. Percentage of Selection in Contraceptive Devices of Women of Childbearing Age in Daerah Istimewa Yogyakarta.

Based on Table 3, The use of long-term contraceptive method is still low in no education and primary education women. Women of childbearing age with no education and primary education tend to be more interested in using traditional or other methods. It indicates that high rate of contraceptive use among no education and primary education women (Table 1) is not followed by high use in long-term contraceptive method. Research conducted by Adedini, et al. (2019) showed almost the same results, that is the use of long-term contraceptive method was incredibly low among women with no education and primary education. According to Biza, et al. (2017), less educated women have less access to health information and have no ability to have quality health care services. Therefore, women with no education and primary education tend to use traditional method than modern method because traditional method is easier and does not require much health care service. Besides that, less educated women are more difficult to be exposed information and have less capability to understand about contraceptive information (Tibaijuka, et al., 2017). As a result, less educated women are more difficult to accept

long-term contraceptive method and short-term contraceptive method as a method to prevent pregnancy. Meanwhile, in secondary education the use of long-term contraceptive method can be considered as the highest method chosen. Although, the proportion of long-term contraceptive method is almost the same as short-term contraceptive method.

The results obtained in higher education are quite different, the use of long-term contraceptive method is still low. The use of long-term contraceptive method in higher education women is even lower than long-term contraceptive method and traditional method. This indicate that the high level of women of childbearing age education is not always followed by the high use of long-term contraceptive method. Women with higher education do not necessarily always choose long-term contraceptive method as a means of contraception. This result is contrary the research conducted by Tibaijuka, et al. (2017) which showed the proportion of using long-term contraceptive methods increased along with the level of education. Likewise with the research of Fitriainingsih and Melaniani (2016) which found that women with higher education mostly used long-term contraceptive methods.

Table 3. Selection of Contraceptive Use by Education Level of Women of Childbearing Age in Daerah Istimewa Yogyakarta Province

	No Education and Primary		Secondary		Higher		Total
	f	%	f	%	f	%	
Long-term contraceptive method	8	16.00	61	28.37	19	27.14	88
Short-term contraceptive method	7	14.00	59	27.44	25	35.71	91
Traditional	13	26.00	46	21.40	24	34.29	83
Other	22	44.00	49	22.79	2	2.86	73
Total	50	100.00	215	100.00	70	100.00	335

Source: IDHS 2017 Data (Processed)

Mahmudah (2015) stated that education would influence women's decision to choose contraceptive method. Women with higher education could think more rationally to choose effective contraceptive method to limit the number of children or birth spacing. However, in this case women with higher education tend to not choose long-term contraceptive method. It indicates that there are other reasons and considerations for choosing contraceptive method among women in higher education. In addition, women with higher education do not necessarily have adequate knowledge of the contraceptive choices, especially long-term contraceptive method. Some women may not know the advantages of long-term contraceptive method, resulting in low use of long-term contraceptive method (Indonesian Ministry of Health, 2018). According to the Department of Women's Empowerment, Child Protection and Population Control Daerah Istimewa Yogyakarta Province (2018), the low use of long-term of contraceptive method in Daerah Istimewa Yogyakarta Province can be caused by misunderstandings or misconceptions about long-term of contraceptive method. For example, there is a misconception that all long-term contraceptive method causes side effect of permanent infertility (Anguzu, et al., 2014). It causes a person to feel doubtful and afraid of using long-term contraceptive method regardless of their education level.

Based on Table 4, the way the women use contraceptives is affected by the number of living children owned. The results obtained showed that women with children ≤ 2 mostly use short-term contraceptive method. The use of long-term contraceptive method even lower than short-term contraceptive method and traditional method. Meanwhile, women with >2 children tend to use long-term contraceptive method more. As much as 37.88% women with >2 children choose long-term contraceptive method. Tibaijuka, et al (2017) and Kungu, et al (2020) also found

that women with >2 children mostly use long-term contraceptive method. Women with greater number of children are more likely to use long-term contraceptive method (Kungu, et al., 2020; Adedini, et al., 2019).

Effectiveness of the method can be a reason for women with >2 children choosing long-term contraceptives. There is a tendency among couples who have many children to choose contraceptives with higher effectiveness. In this case, long-term contraceptive method is the most effective contraceptive method to prevent pregnancy compared to other methods. This is in accordance with the statement of Prawirohardjo (2009) in Dewiyanti (2020) that long-term contraceptive method has a relatively lower failure rate than short-term contraceptive method. This is supported by Secura & McNicholas (2013) who stated that long-contraceptive method was 99% effective in preventing unintended pregnancy. Moreover, long-term contraceptive method can prevent pregnancy for longer period. According to Bhandari, et al (2019), implant can prevent unplanned pregnancy at least for three years after insertions and for 12 years after IUD insertions. Therefore, long-term contraceptive method is suitable to limit number of children for women with >2 children. Meanwhile, couples with a small number of children tend to choose contraceptive method with lower effectiveness (Dewiyanti, 2020). This is because couples with few children might want to space the pregnancies and still consider having more children. Some of women with ≤ 2 children who want to have more children might avoid using contraception with longer period of use. Therefore, women with ≤ 2 children tend to use short-term contraceptive method or traditional method. Furthermore, women tend to choose short-term contraceptive method because it is easier to discontinue. Women can stop using short-term contraception without medical assistance (Tibaijuka, et al., 2017).

Table 4. Selection of Contraceptive Use by Number of Children Women of Childbearing Age in Daerah Istimewa Yogyakarta Province

	<= 2		>2		Total
	f	%	f	%	
Long-term contraceptive method	63	23.42	25	37.88	88
Short-term contraceptive method	75	27.88	16	24.24	91
Traditional	70	26.02	13	19.70	83
Other	61	22.68	12	18.18	73
Total	269	100.00	66	100.00	335

Source: IDHS 2017 Data (Processed)

A woman will have experience and knowledge of contraception based on the number of children owned (Fienalia, 2012). According to Notoatmodjo (2010) in Fitrianiingsih and Melaniani (2016), primiparous mothers have less experience for choosing contraceptive method than multiparous mothers. Multiparous mother found it easier to choose contraception because of previous experience. Lack of knowledge and experience makes it difficult for women with less children to choose contraception, especially to choose more effective method. It could be a reason the women with ≤ 2 children tend to choose short-term contraceptive method or traditional method than long-term contraceptive method.

Conclusions

Based on the results of data processing with the study area of Daerah Istimewa Yogyakarta Province, it can be concluded that having a higher education level does not necessarily have a high percentage of contraceptive use, so there are other factors besides education that affect contraceptive use. The variable number of children based on the results of data processing has an influence on participation in the use of contraceptives by women of childbearing age. Women with

≤ 2 children tend to not use contraception because of several factors, one of which is that they still want to add a certain number of children, while women with > 2 children tend to use contraception because they already have enough children and wish to limit the number of children.

The percentage of use of contraceptives; long-term contraceptive method, short-term contraceptive method, and traditional, is still balanced and evenly distributed. Nevertheless, short-term contraceptive method still the highest method chosen. The use of long-term contraceptive method is still low for the no education and primary education level, while the use of long-term contraceptive method for secondary education is high and for higher education is low. This indicates that education does not significantly affect the level of use of long-term contraceptive method. More women of childbearing age with the number of children > 2 tend to use contraceptives compared to women of childbearing age with the number of children ≤ 2 . This is because women with ≤ 2 children still want to have more children so they do not use long-term contraceptive method while women of childbearing age with the number of children > 2 using long-term contraceptive method because they want to limit the number of children.

It is hoped that the government or related parties will conduct counselling to increase awareness of women of childbearing age regarding the importance of using contraceptives, especially women with ≤ 2 children whose participation in the use of contraceptives is still low. Such counselling can also prevent unwanted pregnancies. It is also necessary to emphasize the use of long-term contraceptive method as a more effective method. Also, it is necessary to conduct knowledge related to the use of contraceptives, especially long-term contraceptive method.

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