Original Research

Contraceptive Use Among Women Of Reproductive Age And The Number Of Ideal Children In West Java

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ABSTRACT
Background: The use of contraceptives for couples of childbearing ages is influential on the birth. More children born means the more spending to support the children, and eventually impacting the health of the children. The perspective on the ideal number of children for parents is influenced by demographic, social and economic conditions. This study examines the extent of the relationship between demographic conditions, contraceptive use, and access to family planning services to the ideal number of children among couples of childbearing age in West Java Province.

Methods: This type of research is analysis of an existing dataset. This study uses the 2017 IDHS data and the sample population is women of reproductive age 15-49 years who are registered in the IDHS in West Java Province. Data processing were conducted on August-November 2020 using chi square data analysis.

Results: The results showed that there was a relationship between the use of contraceptives and the ideal number of children (p-value 0.032). On the other hand, other demographic and social economic variable of the couples of childbearing ages: education (p-value 0.076), knowledge of contraceptive (p-value 0.737), wealth (p-value 0.489) and health information (p-value 0.413) shows no relationship with the ideal number of children.

Conclusion: Among demographic and social economic variable of the couples of childbearing ages, only contraceptive use shows a relationships with ideal number of children. In order to reduce fertility rates, more campaign regarding family planning especially for couples of childbearing ages, religious leaders, the customs and the community leaders are needed.


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INTRODUCTION

According to The Law of Republic of Indonesia No.52 of 2009 on population development and family development, the National Population and Family Planning Board (BKKBN) has the duties in population controlling and the family planning program implementation. One of the BKKBN functions in population controlling is determining the estimation of population control on the national level (Undang-Undang No. 52 Tahun 2009 Tentang Perkembangan Kependudukan Dan Pembangunan Keluarga, 2009). Hence, the provincial and municipals/regency are authorized in preparing the population and family planning parameters and utilizing population projection data for regional development.

One of those planned regional development is population controlling and birth controlling under the Indonesian family planning program. However, the gaps of married age remain in the recent Marriage Law No.16 of 2019 which allows marriage for girls under 19 years (the legal age) under special circumstances, referring to the Marriage Law No.1 of 1974 (Undang Undang Republik Indonesia Nomor 16 Tahun 2019, 2019). In fact, according to data from the Indonesian Demographic and Health Survey (IDHS) in 2017, 10% of female adolescents aged 15-19 have given birth or are pregnant with their first child.

Meanwhile, pregnancy at a late age increases the risk of bleeding, obstructed labor, and congenital defects. In addition, maternal health declines with increasing age, making it very prone to complications during pregnancy and childbirth. The contraceptive prevalence rate (CPR) in Indonesia according to the 2017 IDHS results is 63.4%, this shows an increase of 2.5% compared to 2012 which only reached 61.9%. The CPR target in 2019 is 66% (Oktriyanto et al., 2020). The increase in CPR coverage is inseparable from contraceptives that are easily available at the closest health facility and the existence of a private contraceptive provider, where families are willing to use their own costs to obtain contraceptives.

An adequate understanding of women for contraceptives results in the awareness to regulate births in order to improve the quality of the family by having the ideal number of children which are healthy, prosperous and educated (Elidasari et al., 2016; Megatsari et al., 2018). Furthermore, access to contraception through government and private health providers is now easier as it spreads both in the cities, in rural areas and even in remote areas (Fahmi & Pinem, 2018). The factors that contribute to the birth rate are the use of contraceptives that based on an individual background (length of marriage, education, age, number of children, occupation); family planning program (knowledge of family planning, informed consent and informed choice), environmental factors (information media provider's role, partner's role) and the factors of means (cost, place of service and availability of contraceptives) (Susmini & Ismiati, 2016).

The number of children is closely related to the family planning program because one of its missions is the creation of a family with the ideal number of children, namely two children in one family. Therefore, the population control plays a vital role as the contraceptive methods that were used among couples of childbearing age might vary, and those various contraceptive methods has different effectiveness. For example, the long-term contraceptive method which has a higher level of efficacy compared to short term contraception (Handayani & Najib, 2017). Factors mention above potentially hinders the effort on equalization and welfare improvement of human resources quality in Indonesia, as the development of national health aims to achieve the highest degree of public health by raising awareness, willingness, and the ability to live healthy for all.
Therefore, to accomplish the highest degree of public, the development of health requires an effort of all potentials of the Indonesian, both public and private. With the high birth rate in West Java Province, the goal of health development will be difficult to achieve, as the more children born, the more costs will be spent to support the child (Saraswati et al., 2018; Tyas et al., 2018). Thus, health development will also face problems, such as higher cost in supporting child life.

Inadequacy in fulfilling the life supporting cost results in the occurrence of morbidity such as infectious disease malnutrition and stunting. To avoid child health and welfare problems, the family planning program implemented by the government aims to reduce the birth rate and the creation of an ideal number of children in one family through contraceptives use. Moreover, contraceptive use is a useful means to delay/prevent unwanted pregnancy. Based on the problems above, researchers examined the relationship between the use of contraceptives in women of childbearing age 15-49 years in West Java Province to the number of ideal children.

**MATERIALS AND METHOD**

This study implemented a cross-sectional design using secondary data of the 2017 Indonesian Demographic and Health Survey (IDHS). Descriptive statistics was used to display characteristics of participants. Categorical data was presented using frequency and percentage. Bivariate analysis using the Chi-Square test was performed to assess the association between dependent variable and each of independent variable. Significant association was determined if p-value <0.05.

The risk factors analyzed in this study were limited to the variables available in the SDKI questionnaire in 2017, which included maternal demographic characteristics (education, employment, income), knowledge of contraceptive methods, and access to information about contraceptive services. The population in this study is all women of childbearing age in West Java Province. The sample was women of reproductive age (15-49 years old) and ever been married who were the participants of IDHS 2017, with as much as 737 women. This research has been approved by ICF International No. 132989.0.000.

**RESULTS**

<table>
<thead>
<tr>
<th>Table 1. Characteristics of Women of Childbearing Age in West Java Province</th>
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<tbody>
<tr>
<td><strong>Characteristics</strong></td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Number of children</strong></td>
</tr>
<tr>
<td>Ideal</td>
</tr>
<tr>
<td>Non-Ideal</td>
</tr>
<tr>
<td><strong>Contraceptive use</strong></td>
</tr>
<tr>
<td>User</td>
</tr>
<tr>
<td>Non-User</td>
</tr>
<tr>
<td><strong>Mother education</strong></td>
</tr>
<tr>
<td>High</td>
</tr>
<tr>
<td>Low</td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
</tr>
<tr>
<td>High</td>
</tr>
<tr>
<td><strong>Wealth index</strong></td>
</tr>
<tr>
<td>High</td>
</tr>
<tr>
<td>Low</td>
</tr>
</tbody>
</table>
Table 1. shows that majority if the women of childbearing age in West Java are having the ideal number of children (75%), are currently using contraception (66.2%) and are in the higher wealth index (71.4%). Almost all the women deemed that health information is accessible (94.6%). However, more than half of the women of reproductive age in West Java are having low education (57.4%).

Table 2. Analysis of Contraceptive Use in Women of Childbearing Age with The Number of Ideal Children in West Java Province

<table>
<thead>
<tr>
<th>Variable</th>
<th>Ideal number of children</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ideal</td>
<td>Non-Ideal</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Contraceptive use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>377</td>
<td>77.3%</td>
</tr>
<tr>
<td>No</td>
<td>176</td>
<td>70.7%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>223</td>
<td>70.9%</td>
</tr>
<tr>
<td>Low</td>
<td>330</td>
<td>78.0%</td>
</tr>
<tr>
<td>Knowledge of contraceptive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>553</td>
<td>75.0%</td>
</tr>
<tr>
<td>Wealth index</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>394</td>
<td>70.9%</td>
</tr>
<tr>
<td>Low</td>
<td>159</td>
<td>75.4%</td>
</tr>
<tr>
<td>Access to information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessible</td>
<td>524</td>
<td>70.9%</td>
</tr>
<tr>
<td>Inaccessible</td>
<td>29</td>
<td>72.5%</td>
</tr>
</tbody>
</table>

The table 2. describes that as many as 377 women of childbearing age in West Java Province using contraceptives are having the ideal number of children and as many as 176 women of childbearing age in West Java Province who do not use contraceptives that have the ideal number of children. Data analysis obtained p-value of 0.032 < 0.05 which means there is a relationship between the use of contraceptives and the number of ideal children in West Java Province. Moreover, the table 2. describes as many as 223 women of childbearing age in West Java Province which are highly educated children who have the ideal number of children and as many as 330 women of childbearing age in West Java province who have low education who have the ideal number of children.

Data analysis obtained p-value 0.076 > 0.05 which means there is no relationship between mother's education and the number of ideal children in West Java Province. In the table 2. describes as many as 394 women of childbearing age in West Java Province of high economic status who have the ideal number of children and as many as 159 women of childbearing age in West Java Province of low economic status who have the ideal number of children. Data analysis obtained p-value 0.489 > 0.05 which means
there is no relationship between economic status and the number of ideal children in West Java Province.

In the table 2. describes as many as 524 women of childbearing age in West Java Province are having the access to information that has the ideal number of children and as many as 29 women of childbearing age in West Java Province who cannot reach access to information that has the ideal number of children. Data analysis obtained p-value 0.413 > 0.05 which means there is no relationship between access to health information and the number of ideal children in West Java Province.

DISCUSSION

The study shows that 75% of the women of childbearing age in West Java are having the ideal number of children (2 children or less). This result is inline with previous study using Indonesia Demographic and health survey (SDKI) 2012 which shows that around 56.2% of women of reproductive age are having ≤ 2 children (Sary, 2018). Furthermore, the result of this study indicates that the numbers of women wanting two or less children in 2017 have increased compared to 2012.

Contraceptives Use and The Ideal Number of Children in West Java Province

The results of the study obtained p-value 0.032 < 0.05 which means there is a relationship between contraceptive use and the number of ideal children in West Java Province. The study found that the average respondent has an ideal number of children of two, and contraceptive use for birth spacing. This is because the respondents have implemented the family planning program, namely 2 children policy. The result indicates the relationship between contraceptive use and the number of children. there is a relationship between the use of contraceptives and the number of children born.

The result is in line with previous study which states that there is a relationship between the use of contraceptives and the number of children born (Fitri et al., 2016) and the study of Hadiyanto (2017). Who found that in addition to create quality families through promotion and protection of reproductive rights, the family planning program also maintain the implementation of services related to arrangements and support in forming a family through arrangement of the ideal number of children, birth spacing and limiting, as well as an ideal age for childbirth. The number of children is closely related to the family planning program because one of the missions of the family planning program is the creation of an ideal number of children in the family, namely two children in one family.

When the number of children is considered ideal, the women tend to use contraceptive as the women are generally give more awareness that the sex of the child is not as important. The number of children is also closely related to the level of family well-being. In families with high levels of well-being generally put more importance on the quality of children than its quantity (Jelita, 2018). This research is in line with research conducted using 2017 Indonesian Demographic and Health survey (SDKI) which states that the use of contraceptives in couples of childbearing age will affect the ideal number of children, where couples of childbearing age who use contraceptives have the ideal number of children as the results of research that have been done (Herowati & Sugiharto, 2019).

Other study shows that that there is an increase in the percentage of contraceptive user respondents responding to the number of children (13.2% among family with 1-2 children; 23.7% among family with 3-4 children and 66.7% among family with more
than 4 children), so it can be concluded that the more children the respondent has leads to the higher the use of long-term contraceptive methods (Dewiyanti, 2020). The number of children is related with the use of contraceptives because the number of children is one of the factors that determine the couple’s choice to use contraceptives (Jelita, 2018). The number of children alive will provide women with experience and knowledge, thus the women can make the right decisions about which contraceptives to use (Maharani, 2020).

Therefore, having more children results in a greater tendency to stop fertility, hence making women more likely to choose a long-term contraceptive method. Thus, theoretically, contraceptive user who have more that 2 children (multipara) are recommended to use long-term contraceptives (Jelita, 2018). Research by Saraswati et al., (2018) shows a strong relationship between the length of time using contraceptives and the number of children born to women of reproductive age, with women who have used contraception for more than 10 have an average of 2.71 children, compared to 3 children per women who use contraceptives < 10 years, and an average of 3.9 children per woman whose use contraceptive for the shorter time.

To conclude, the length of contraceptive use is also possible to be one of the factors related to the number of children in West Java Province are afraid to use contraceptives and lack of knowledge about the types and benefits of using contraceptives.

Mother's Education and The Ideal Number of Children

The results of the study obtained p-value 0.076 > 0.05 which means there is no relationship between maternal education and the number of ideal children in West Java Province. In West Java Province there are still families of couples of childbearing age (PUS) who have higher education show no significant differences with a lower education regarding to having more than more than two children. The results of this study agree with another study using 2018 DHS also shows that educational factors showed no relationship with the use of hormonal contraception (Herowati & Sugiharto, 2019).

Another study conducted in Calling Village, Natar District, South Lampung Regency also shows that even if there is a very strong relationship between education level and use of contraceptives with the number of children born to women of reproductive age, the study result shows a rather low relationship between education and number of children (Fitri et al., 2016). The result shows a contrary with previous research by Saraswati et al., (2018) which shows that there is a strong relationship between the length of education and the number of children born, with a negative correlation coefficient, which means that the lower the length of education for women leads to the higher the number of children born to women in eligible and fertile age group with an average of 2.43 children per woman who study >10 years compared to an average of 3.86 children per women who study < 10 years.

Length of education is one of the non-demographic factors that affect fertility because it relates to the knowledge of couples of reproductive age about the benefits and objectives of family planning programs. Thus, the length of study is by means related to birth planning that reduce fertility rates and improve the quality of the population. Women with a higher education are expected to perceive a small-family objectives and supporting the goals and benefits of family planning programs. With the understanding of the family planning program that is to achieve a small family with better quality of
children, women of childbearing age are willing to carry out family planning programs (Ariesthi et al., 2020).

Education also affects the knowledge of the right age to plan a pregnancy. A low level of education or length of education allows a woman of reproductive age to marry at an early age. This will increase the chances of births in one family and become the reason of the increasing birth among teenage girls (Zakaria, 2020). An increase in the level of education will results in a low birth rate because education will affect the negative perception of the child's value and will suppress the presence of large families. Parents wants of their children qualification in the hope of continuity of the ideals of the family in the future, children contribution for society and the country, hence, education related to acceptance in terms of the selection of the types of contraceptives that will indirectly affect the continuity of their use (Ariesthi et al., 2020).

Educational factor plays a vital role in decision making and receiving information. Education is one of the factors that determine a person's knowledge and perception of the importance of a thing, including the importance of participation in family planning program. The capability of reading and writing facilitates the dissemination of information about contraceptives, and also form the basic understanding of the various ways of limiting birth and whether the contraceptive works, what are the advantages of each contraceptive methods and its limitation (Ariesthi et al., 2020).

Female education will affect the age of getting married, hence, females with higher education tend to marry at an older age, thus leads to a lower fertility. Moreover, Women with a higher education tend to have lower fertility rates because they generally use contraceptives. Research in Indonesia shows that highly educated and middle-educated women have fewer children than elementary school educated (Zakaria, 2020).

In addition, low-educated women and women in higher education are also showing a different point of view of child’s value. Women with higher education are more likely to plan for fewer children. By planning the number of fewer children, it will be easier to improve the quality of the child itself so that the care and fulfillment of rights such as nutrition and proper education will be more easily fulfilled (Sari & Yulnefia, 2019).

Contraceptive Knowledge and the Ideal Number of Children

The results of the study obtained p-value 0.737 > 0.05 which means there is no relationship between knowledge of contraceptives and the number of ideal children in West Java Province. Based on the existing data, it is known that there are still many families of couples of childbearing age who have more than two children despite the encouraged birth control program which is one of the government's efforts to overcome the population problem. A study by Dewiyanti (2020) indicates that knowledge of using contraceptives is not always related to the number of children born, it can be seen in the results of the study that respondents who have good knowledge of having children are not ideal and vice versa respondents who have low knowledge but have the ideal number of children.

Knowledge of contraceptives is essential for the wisdom of lowering fertility rates both through delays in mating age and family planning. The decrease in fertility rate will indirectly affect the amount and quality of human resources (Maharani, 2020). Knowledge is the result of 'knowing' after a person performs sensing of a particular object. Knowledge is a very important factor in shaping a person's actions because
behaviors based on knowledge will take longer than behaviors that are not based on knowledge.

However, the formation of health behaviors in contraceptive use is not only influenced by predisposing factors such as knowledge, but also be followed by enabling factors or possible factors such as the availability of infrastructure or health facilities for the community such as officers and health facilities. To behave healthy the community needs advice and supporting infrastructure, as well as reinforcing factors or driving factors such as community leaders, religions, customs, husbands and friends (Maharani, 2020). According to researchers, contraceptive use with the aim of having an ideal child is not only influenced by knowledge factors alone, but also difficulty in choosing contraceptive methods. Difficulty in choosing contraceptives is not only caused by the limited options, but also the disadvantages that women might face including the women’s health status, the side effects of contraceptive methods, consequences for unwanted pregnancy, husband support, religious norms regarding the use of contraceptives and cultural norms regarding the ability to have children.

**Economic Status and the Ideal Number of Children**

The results of the study obtained p-value 0.489 > 0.05 which means there is no relationship between economic status and the number of ideal children in West Java Province. However, the families with a high economic status (higher incomes) in this study tended to have fewer children than families with lower economic status incomes. A big increase in spending will reduce the demand for child, because each child's requires cost, and, therefore each child are directly related to expenses. Another study conducted by Setiawati and Nurhayati (2020) shows that families with high economic status usually prefer quality over the number of children.

Parents who emphasize on the quality of the child will then sacrifice the desired number of children. With high income, parents will provide education and skills (music courses, english lessons, etc.) to the child as best as possible, compared to the parent of the low income. So, the couples with a higher economic status will have fewer children than the lower-income spouses, but spend more money on children compared to the lower economic status (Setiawati & Nurhayati, 2020).

Demographic transition theory has a main rationale that is widely known, namely along with the development of socioeconomic sector, fertility is defined as an economic rather than biological process. In terms of economy, children can be considered as consumed goods that provide satisfaction. Economically the number of children is influenced by family income, the cost of having children, as well as preference. Various methods of fertility control such as delays in marriage, scheduled intercourse and contraception use can be used by the married couples during their productive age, assuming that the number of children will add the economic burden, and therefore inhibits the level of social and material family welfare (Utomo & Aziz, 2020).

Consumer behavior theory explains that everyone (in this case parents) has limited resources and each parent will try their best to get satisfaction by choosing between various goods. Their choices are influenced by the price of goods and their income. By increasing their income, parents want their children to have a higher education, so that they focused more on 'the quality of the child than the quantity of children'. Other approaches that are in line with the situation in developing countries is that children are deemed as an investment goods or as economic assets. These benefits will be seen if the child works without wages to help parents in the rice fields or in family-owned
companies. Also, the parents benefited if the children spent some of his income for parents or help the parents' finances at dusk (Herawati et al., 2018).

**Access to Health Information and The Ideal Number of Children**

The results of the study obtained p-value 0.413 > 0.05 which means there is no relationship between access to health information and the number of ideal children in West Java Province. Among the families who have received visits and counseling from family planning officers (PLKB, Pos KB / Sub Pos KB / Kader KB, and health workers), the number of children desired tends to be fewer than among the families who never get visits from the family planning officers. The role of family planning officers in providing motivation and socialization to the community regarding the norms of happy and prosperous small families (NKKBS) is one of the spearheads of the success or failure of population and family planning (KKB) programs in the community.

Moreover, the information relates to women's participation in family planning program as in contraceptive use among women of childbearing age increases as the women in the family receive information. Couples who have listened to information about various birth control and the benefits of the contraception are more likely to participate in contraceptive use compared to women who never get information about contraception. Therefore, the health officials should improve counseling in providing information about the right target of contraceptive use which is to couples of childbearing age (Kursani & Salmi, 2017).

The distance and the availability of adequate facilities also contributes to make it easier for people to check their health so that it is easier to be treated if any emergency occurs. Therefore, puskesmas (community health center) plays a vital role in improving the quality of the community in the health sectors. The reaching distance to the location of puskesmas is one of the important things that need to be considered to improve health services. Thus, adequate puskesmas does not only mean the number of services provided, but also considers the level of accessibility (Wardani et al., 2019).

Counseling provides information to prospective family planning participants (contraceptive users) about the advantages and disadvantages of the contraception, so that the candidate and contraceptive user participant are well prepared in determining their choice. The information received during counseling also concludes about the type of contraceptive that corresponds to the condition of prospective contraceptive users (Raidanti, 2018). Achieving success in the implementation of the Family Planning Program is very dependent on the government's commitment, the quality of adequate human resources, especially family planning field officer (PKB/ PLKB), the participation of community leaders and the targeted married couples. The role of husband and wife in efforts to control the population is through decision making to have children and how many children they want (Wardani et al., 2019).

In addition to the important role in supporting decision making, the role of husbands in providing information is also very influential for the wives. Spouse's supporting roles are taken into many forms such as participating in consultations with the health workers before contraceptives installation, reminding the wife of the schedule of taking the oral contraception or reminding wives of the schedule for contraceptive control. Husband can also reminds the wife of things that should not be done when using contraceptives and so on, and that roles will greatly help the spouse to realize that reproductive health matters to both spouses, and, are not only the women’s affairs. The
husband's other role is to facilitates in terms of giving all the wife’s needs regarding to her reproductive health problems.

This can be seen when the husband provides time to accompany the wife during contraceptives installment and contraceptive controls where the husband is willing to provide special costs to install contraceptives, and help the wife determine the appropriate place of service or health workers (Hinda, 2016; Raidanti, 2018).

CONCLUSION
Analysis of the results of this study illustrates that there is a significant relationship between the use of contraceptives at childbearing age and the number of ideal children in Java Province Barat. Further research should be directed to the health of child at birth because now the National Population and Family Planning Board (BKKBN) focused on the number of born children, as well as the child health.

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