

The Association between Low IUD Contraceptive use and Maternal Education Level

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ABSTRACT

Contraceptive choice is partly influenced by the effectiveness of each method in preventing unplanned pregnancies. For some methods, effectiveness depends not only on the method itself but also on the user's consistency and accuracy in usage. These factors are affected by variables such as age, income, pregnancy intention, and cultural background. Methods requiring user consistency tend to have a wider range of effectiveness. This study aims to examine the relationship between maternal education level and the low use of IUD contraception. A literature review was conducted using databases such as Google Scholar and Spigner Link, with the keywords “tingkat pendidikan ibu terhadap rendahnya penggunaan KB IUD” and the English equivalent “the level of mother's education on the low use of IUD.” The review included articles published between 2015 and 2021. The findings indicate a significant relationship between low maternal education levels and the underuse of IUD contraception. Education influences a person's knowledge and ability to understand health information; lower education levels often correlate with limited knowledge and access to information. In conclusion, there is a strong and significant relationship between a mother's education level and the low utilization of IUD contraception.

Keywords: contraceptive, education level, KB IUD

BACKGROUND

Family Planning (KB) is the most basic and primary preventive health service. Prevention of maternal death and morbidity is the main reason for the need for family planning services. However, many women experience difficulties in determining the type of contraception. This happens due to their ignorance about the contraceptive method to be used. Requirements for contraceptive methods include being safe, effective, acceptable to society, affordable and having high reversibility (Saifuddin, 2016).

According to WHO (World Health Organization) the choice of contraception depends partly on the effectiveness of the contraceptive method in preventing unplanned pregnancy. For certain methods, the effectiveness of contraceptive methods depends not only on the protection provided but also on the consistency and accuracy of use. Varying consistency and accuracy in the use of contraceptive methods are caused by various factors, such as age, income, the client's desire to prevent or delay pregnancy, and culture. Methods that depend on consistency and correct use by patients have a fairly wide range of effectiveness (Sumadikarya, 2016).

Based on the results of the 2020 IDHS, the prevalence of active family planning in Indonesia is 58% of currently married women aged 15-49 years using modern methods and 4% using traditional methods. Birth control injections are the most widely used contraceptive method, followed by pills, at 32% and 14% respectively. Then the Intra Uterine Device (IUD) was 4%, birth control implants/implants were 3.3%, medically it was Medical Operative Women

(MOW) at 3.2%, while for men it was Medical Operative Men (MOP) and the use of condoms was still very low at 3% (SDKI, 2013). Birth control injections and pills are hormonal birth control methods which are short-term contraceptive methods, which are prone to failure and have a fairly high drop out rate, reaching 23-39%, while long-term contraceptive methods are only around 0.5-10% (Bapennas, 2020).

Current government policy regarding family planning leads to the use of long-term contraceptive methods (Balitbangkes, 2013). Intra Uterine Device (IUD) is one of the most effective and safe long-term contraceptive devices compared to other contraceptive devices such as pills. The IUD contraceptive is very effective in reducing maternal mortality and controlling the population growth rate because the effectiveness rate of use is up to 99.4% and the IUD can be used for a period of 3-5 years (hormonal type) and 5-10 years (copper type). The IUD contraception device is inserted into the uterus in various shapes, consisting of plastic (polyethylene) (Handayani, 2017). Even though the Intra Uterine Device Family Planning (UID) program in Indonesia has been declared quite successful in Indonesia, in its implementation up to now it still experiences obstacles which are felt, including the fact that there are still many couples of childbearing age (PUS) who are still not IUD family planning acceptors. In general, people prefer contraceptives that are practical but also have high effectiveness, such as non-long-term contraceptive methods which include birth control pills and injections, so MKJP family planning methods such as IUD, implant, MOP and MOW.

The IUD is a type of non-hormonal contraceptive device and is an ideal long-term contraceptive device for spacing pregnancies. The advantages of using an IUD are that it only requires one installation for a long period of time at a low cost, is safe because it does not have systemic effects that circulate throughout the body, does not affect breast milk production and fertility returns quickly after the IUD is removed. However, there are also many factors that influence mothers in determining which contraceptive method to use. According to Purba (2009).

The level of education is a factor that really determines a person's knowledge and perception of the importance of something, including the importance of participating in family planning. Knowledge is the cause of WUS's low interest in using IUDs. Knowledge about IUD contraception influences mothers' mindset in choosing contraception whether it suits their conditions and needs, and one of the reflections can be in the form of interest in using IUD contraception before going to the phase of selecting an IUD as a contraceptive (Notoatmodjo, 2015). Knowledge is the result of knowing that occurs after people sense a particular object and is a very important domain for the formation of a person's actions. A sufficient level of knowledge about IUD contraception, which includes understanding, benefits, side effects, the right time for installation and family planning myths, is the basis for married couples so that it is hoped that more and more people will choose the IUD method.

Efforts to address this problem are by controlling the factors that influence the low use of UID contraceptives), supporting factors (availability of contraceptives, distance from home to health facilities, travel time, and costs), as well as driving factors (health workers). And knowledge and level of education. The level of education will influence the mother's insight and knowledge. The lower the mother's education, the less access to information about family planning, especially IUDs, so that mothers find it difficult to make effective decisions about which contraceptive method the mother will choose (Winarni et al., 2007).

METHODS

This study employed a literature review approach to analyze the relationship between maternal education level and the low utilization of intrauterine devices (IUDs). The process involved systematically identifying, selecting, and reviewing relevant research articles from reputable electronic databases. The primary databases used in this review were Google

Scholar and Spigner Link. To guide the search, the keywords applied included: "*maternal education level on low use of IUD*", as well as variations such as "*educational attainment and contraceptive use*", "*barriers to IUD use among women*", and "*maternal knowledge and family planning*".

The inclusion criteria for article selection were as follows: (1) articles published between 2015 and 2021 to ensure the relevance and timeliness of the data; (2) studies that specifically addressed the influence of maternal education on IUD usage; and (3) peer-reviewed journal articles published in either English or Indonesian. Articles were initially screened based on their titles and abstracts. Those that met the inclusion criteria underwent full-text analysis to extract key findings, methodologies, and discussions relevant to the research objective.

The collected data were then analyzed qualitatively to identify recurring themes, influential factors, and key insights regarding how maternal education level contributes to the underutilization of IUDs among women of reproductive age. This review aims to synthesize existing knowledge and highlight gaps for future research and policy development in the field of reproductive health.

RESULTS

According to research conducted by Dalimawaty Kadir (2020) on factors influencing mothers' interest in using IUD contraception at the Binjai Estate Health Center, the results of the study showed that the p -value = 0.005 means that there is an influence of knowledge on mothers' interest in using IUD contraception, the p -value = 0.001 means that there is an influence of parity on mothers' interest in using, the p -value = 0.001 means that there is an influence of husband's support on mothers' interest in using IUD contraception, the p -value = 0.013 means that there is an influence of income on mothers' interest in using, the p -value = 0.007 means that there is an influence of information on mothers' interest in using IUD contraception. The results of the Multivariate analysis that of all the independent variables that are suspected of influencing mothers' interest in using IUD contraception, there is one subvariable (parity) that has the most influence on mothers' interest in using IUD with a p value of $0.001 < 0.05$.

According to research conducted by Yati Nur Indah Sari (2019) on Factors related to maternal interest in choosing IUD contraceptives, the results of the study showed that the results of the analysis of the relationship with maternal interest in choosing IUD contraceptives showed that at a significance level of >0.05 , a significance value of $p = 0.149$ was obtained for knowledge, $p = 0.009$ for husband's support, $p = 0.132$ for BPJS ownership, $p = 0.440$ for media. Factors that are not related to maternal interest in choosing IUD contraceptives in Sidodadi Village are knowledge, BPJS ownership and media.

According to research conducted by Junie Harista (2018) on factors related to maternal interest in using IUD contraception at Sukarami Health Center, Palembang, the results showed that higher education was 23.1% smaller than low education of 76.9%. The results of the Chi Square statistical test obtained a p value = $(0.033) > \alpha (0.05)$ meaning that there is a significant relationship between education and maternal interest in using IUD contraception, thus the hypothesis states that there is a relationship between maternal education and interest in using IUD contraception is statistically proven. And the results of the analysis obtained OR 7,200. This shows a significant relationship between education and users of intrauterine contraceptives. The higher the level of education of the mother will increase the mother's knowledge in choosing the right contraceptive for her. This is because someone with a high level of education will have a broader perspective and be more receptive to new ideas and ways of life, including the importance of participation in choosing contraceptives.

According to research conducted by Ridha Andria (2017) on Factors that influence the low use of IUD contraceptives in KB acceptors, the results of the study showed that there was an

influence of the level of knowledge on the use of IUDs. From the results of the Chi Square test, it was obtained $p = 0.004 < \alpha = 0.05$ so that H_0 was rejected and H_a was accepted. There was no influence of age on the use of IUDs. From the results of the Chi Square test, it was obtained $p = 0.461 > \alpha = 0.05$ which means H_0 was accepted and H_a was rejected. There is an influence of parity on the use of IUDs. From the results of the Chi Square test, it was obtained $p = 0.013 < \alpha = 0.05$ which means H_0 was rejected and H_a was accepted. There is an influence of education on the use of IUDs. From the results of the Chi Square test, it was obtained $p = 0.014 < \alpha = 0.05$, which means H_0 is rejected and H_a is accepted. The education factor is an effort to develop personality and abilities inside and outside of school and lasts a lifetime. Education affects the learning process, the higher a person's education, the easier it is for that person to receive information, so that the higher the person's level of knowledge will be. However, it should be emphasized that someone who is low educated does not necessarily mean that they have low knowledge.

According to research conducted by Risa Pitriani (2015) on the Relationship between education, knowledge and the role of health workers with the use of intra uterine device (IUD) contraception inpatient health center work area, the results of the study showed that the variables related to the incidence of IUD contraception use were education, knowledge, and the role of health workers. Mothers with low levels of education are 23 times more at risk of not using IUD contraception than those with high education. Mothers with low levels of knowledge are 7 times more at risk of not using IUD contraception than those with high knowledge. Mothers who do not get the role of health workers are 8 times more at risk of not using IUD than mothers who get the role of health workers.

DISCUSSION

Mother's education level with low use of IUD contraception

According to research conducted by Risa Pitriani (2015) on the relationship between education, knowledge and the role of health workers with the use of intrauterine device (IUD) contraception in the working area, the results of the study show that mothers with a low level of education are 23 times more likely to not use an IUD than those with a higher education. that a person's level of education can support or influence a person's level of knowledge and a low level of education always goes hand in hand with limited information and knowledge, the higher the level of education, the higher a person's understanding of the information obtained and the higher the knowledge. The level of education is also one of the factors that influences a person's perception to more easily determine new ideas and technology. And it can be said that there is a significant relationship between education and the behavior of using contraceptives with p value - 0.001 and OR = 11.717.

And according to research conducted by Junie Harista (2018) regarding factors related to mothers' interest in using IUD contraceptives at the Sukarami Palembang health center, the results of the research show that the research results obtained from higher education were 23.1% smaller than low education which was 76.9%. Chi Square statistical test results obtained p value = (0.033) $>$ α (0.05), meaning there is a significant relationship between education and mothers' interest in using IUD contraceptives, Thus, the hypothesis stating that there is a relationship between maternal education and interest in using IUD contraception is statistically proven. And the results of the analysis obtained OR 7,200. It is said that the higher the mother's education level, the greater the mother's knowledge in choosing a contraceptive device that is suitable for her. This is because someone with a high level of education will have a broader perspective and be more likely to accept new ideas and ways of life, including the importance of participating in the choice of contraceptives. However, someone with a low level of education can also make correct decisions because of the knowledge they get from magazines, books, television or other things.

Meanwhile, research according to Anderi Paraga 2017 regarding the relationship between knowledge and attitudes about IUD contraception with plans for selecting IUD contraception, the results of the research explained that then the respondents who had less knowledge were 30 respondents (62.5%), this shows that respondents did not understand the importance of using IUDs. This is known from question number 2 regarding the period of IUD use, namely 11 – 15 years. Don't know about the side effects caused by using an IUD. This is caused by the lack of socialization to the public about the use of IUD contraception. This situation can be related to the behavior of choosing IUD contraception in couples of childbearing age. Based on the results of the chi square statistical test, it shows that there is a relationship between the level of knowledge and the plan for choosing IUD contraception. The existence of this relationship shows that knowledge is the basis for a person to take action. Respondents who have good knowledge mean they know the selection and use of IUD contraception.

Education is an activity carried out by humans consciously and programmed in order to build a good personality and develop the abilities or talents that exist in individual humans in order to achieve certain goals or targets in living life. Based on the description above, it can be concluded that education is an effort to prepare and equip the younger generation with knowledge, experience and abilities in solving problems, a process that lasts from birth to the end of life, both physically and spiritually (Trahati 2015).

Lewin's 2015 Health Belief Model (HBM) theory (Notoadmodjo (2018)). Reveals that the low interest in MKJP such as IUDs is influenced by individual perceptions regarding threats and considerations of advantages and disadvantages. Individual perceptions of modifying factors are age, education, knowledge, number of children, exposure to sources of information on economic conditions. In relation to the HBM theory, the current trend based on research is that long-term contraceptives such as IUDs tend to be in demand by mothers aged less productive (> 30 years), higher education (high school and PT), having more than 2 children, high knowledge and income above the minimum wage (Marikar, A.P.K. et al. 2015).

So researchers can assume that the higher the mother's education level, the greater the mother's knowledge in choosing a contraceptive device that is suitable for her. This is because someone with a high level of education will have a broader perspective and will be easier to accept new ideas and ways of life, including the importance of participation in choosing contraceptives. However, someone with a low level of education can make decisions correctly because the knowledge they get from magazines, books, television or other levels of one's education can support or influence a person's level of knowledge and a low level of education always goes hand in hand with limited information and knowledge, the higher the level of education, the higher a person's understanding of the information obtained and the higher the knowledge. The level of education is also a factor that influences a person's perception to more easily determine new ideas and technology.

Choosing to use an IUD

According to research conducted by Yati Nur Indah Sari¹ (2019) regarding factors related to mothers' interest in selecting IUD contraceptives, the research results show that Based on the research results, from the results of statistical tests using the Chi-Square Test, the value $\rho > \alpha$ was obtained, thus H_0 was accepted so it can be concluded that there is no significant relationship between knowledge and interest in selecting IUD contraceptives in the community in Sidodadi Village, Wonomulyo District. This can be caused by the majority of respondents have sufficient knowledge. Even though people already know various things about the types of contraceptives, both the positive and negative sides, most of them, before choosing a contraceptive method, first consult with Midwives/Health Personnel such as Community Health Centers, Pustu and Hospitals to get advice and guidance regarding which type of contraceptive method is most suitable for them and decide which contraceptive method they trust. So knowledge has no relationship with choosing an IUD contraceptive

because people who are knowledgeable are comparable to people who have less knowledge, in other words there is no tendency for knowledge in choosing an IUD contraceptive.

According to research conducted by Junie Harista (2018) regarding factors related to mothers' interest in using IUD contraceptives, the results of the research showed that the low risk age research results were 87.2% greater than the high risk of 12.8%. Chi Square statistical test results obtained $p \text{ value} = (0.473) > \alpha (0.05)$, meaning there is no significant relationship between age and the mother's interest in using contraceptives. IUD, thus the hypothesis states that there is no relationship between age and the mother's interest in using IUD contraception, which is statistically proven. And the results of the analysis obtained OR 0.857. It can be said that the older you are, the more mature a person's level of maturity and strength will be in thinking and working. As you get older you have more experience.

Intra Uterine Device (IUD) is one of the most effective and safe long-term contraceptive devices compared to other contraceptive devices such as pills. The IUD contraceptive is very effective in reducing maternal mortality and controlling the population growth rate because the effectiveness rate of use is up to 99.4% and the IUD can be used for a period of 3-5 years (hormonal type) and 5-10 years (copper type).

So researchers assume that the mother's lack of interest in using IUD contraception is thought to be influenced by several factors, including: the mother's level of education, knowledge, economics, culture, religion, and the public's lack of understanding about the IUD as well as the lack of public awareness of using it. One of the impacts of the mother's lack of interest in using IUD contraception is that other acceptors often fail. The IUD as an effective contraceptive has a low failure rate, namely 1-5 pregnancies/100 women. It can be used to reduce the number of births so that it can later influence the population. This lack of interest in IUD acceptors is likely due to the various factors above. On the other hand, if mothers are equipped with knowledge about IUDs, awareness of using them will be higher, so that mothers' low interest will be smaller.

CONCLUSION

The results of the literature review and journal discussion show that there is a very significant relationship between the level of maternal education and low use of IUD birth control because a person's level of education can support or influence a person's level of knowledge and a low level of education always goes hand in hand with limited information and knowledge, the higher the level of education, the higher a person's understanding of the information obtained and the higher the knowledge. The level of education is also a factor that influences a person's perception to more easily determine new ideas and technology.

Thus, it can be said that there is a relationship between the mother's education level and the low use of IUD contraception, because from the results of the journal discussion it was found that there was a very close and very significant relationship.

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