

Effectiveness of Family Planning Implementation in Reducing the Frequency of Pregnancy and Birth Rates in Couples of Fertile Age: A Review

Novi Maya Sari^{1,2}, Idris Adewale Ahmed²

¹Midwifery Professional Education Study Program, Faculty of Health Sciences, Baiturrahma University, Indonesia

²School of Nursing and Applied Science, Lincoln University College, Malaysia

***Corresponding Author's E-mail:** novimayasari@jurkeb.unbrah.ac.id

Article received on 29th August 2025.

Revision received on 10th November 2025.

Accepted on 26th November 2025.

Abstract

Family planning is a movement to form a healthy and prosperous family by limiting births. The purpose of this review is to evaluate the effectiveness of the implementation of family planning in reducing pregnancy and birth rates in fertile couples. The method used was searching for several relevant articles through PubMed, ProQuest, Scopus, and Google Scholar, especially the clinical trial studies which published in English and Indonesian and analyzed birth control with the keyword searched using family planning, fertile couples, knowledge, and education from 2019 to 2024. There were 6 articles that revealed that the level of knowledge in family planning among fertile couples is relatively low. Family Planning via counselling has demonstrated a significant effect on increasing the knowledge of fertile couples. The successful implementation of family planning policies cannot be achieved if all contributing factors do not function optimally. Moreover, education and knowledge significantly influence the effective utilization of family planning programs.

Keywords: Family Planning; Fertile Couples; Knowledge; Education.

1.0 Introduction

According to Law Number 52 in the year of 2009 concerning Population Development and Family Development, family planning is a government effort to control the population by reducing the number of births. Reducing fertility rates and managing population growth are the goals of the family planning program. The family planning program is not only measured by increasing contraceptive coverage, but also depends on the services provided to contraceptive users (Ministry of Health of the Republic of Indonesia, 2021).

The increasing rate of population growth in the 21st century is a common problem faced by many countries in the world (UNFPA, 2023). Indonesia is one of the developing countries and ranks fourth in terms of population in the world after China, India, and the United States (World Bank, 2023). The population of Indonesia in 2019 was 268,074,565 people, while in September 2020, the population reached 270.20 million people (Statistics Indonesia, 2020). Judging from the high rate of population growth that is not accompanied by an increase in population quality, the Indonesian government, especially in the health sector, is making efforts to overcome and

control population growth, namely by implementing the Family Planning program (National Population and Family Planning Board, 2021).

Indonesia continues to face challenges related to high population growth and uneven family planning participation across regions. Although the national family planning program has been implemented for decades, the rate of unintended pregnancies and unmet needs for contraception remains significant. According to the Indonesian Demographic and Health Survey IDHS (2022), contraceptive prevalence has stagnated in recent years, and the dominance of short-term methods, particularly injectable contraceptives, indicates limited awareness and access to long-term methods. This situation reflects a gap between policy implementation and its effectiveness in reducing pregnancy and birth rates. Therefore, it is necessary to review existing evidence on the effectiveness of family planning implementation in Indonesia to identify barriers and opportunities for program improvement.

The Family planning program is an effort to regulate births, spacing an ideal age of childbirth, regulate pregnancy, through promotion, protection and assistance in accordance with reproductive rights to create a quality family (WHO, 2022). The purpose of family planning is to improve the welfare of mothers and children and to create small, happy and prosperous families through birth control and control of Indonesia's population growth (Ministry of Health of the Republic of Indonesia, 2022). Therefore, several methods have been established to prevent or delay pregnancy. In addition, other factors cause fertile-age couples to choose not to use contraception, such as planning for children soon, fertility issues (e.g., premenopause and hysterectomy), the desire to have many children, and side effects of the contraception used. Other reasons include lack of knowledge about family planning (tools/methods, sources), the location of service facilities, high costs, and feelings of discomfort (Asif & Pervaiz, 2019).

Measurement of effectiveness uses indicators, namely program targets, program reach, success of program targets, and monitoring of program activities. Program targets are the strategies that have been set according to the expected outcomes. The targets of the family planning program are fertile couples who use modern or traditional contraceptives (Zahari *et al.*, 2020). Information on the implementation of the Family Planning program remains essential in evaluating overall success and strategizing future improvements (National Population and Family Planning Board, 2022). The purpose of this review is to identify and analyse the effectiveness of family planning implementation in reducing pregnancy and birth rates in fertile couples.

2.0 Methodology

This systematic review is in accordance with the PRISMA guidelines, conducted by reviewing online articles from the PubMed, Proquest, Scopus, Science Direct, and Google Scholar databases. The articles were published from 2019 to 2024 with the keywords "family planning, fertile couples, knowledge, education".

3.0 Results

The search and selection process began with the identification of 220 records from the database (120) and register (100). After removing 46 records due to duplication, incompatibility with automated tools, incomplete information, irrelevant, inappropriate and other technical issues such as inaccessible files and formatting errors, 174 records remained to be screened. Of these, 100 reports were sought, but 30 could not be obtained. Next, 70 reports were assessed for eligibility, and 70 were reviewed for content. A total of 30 reports were excluded because they contained only theory, 21 because the data were irrelevant, and 19 because the time period was

inappropriate. Finally, only 6 studies met the criteria and were included in the final review (Figure 1).

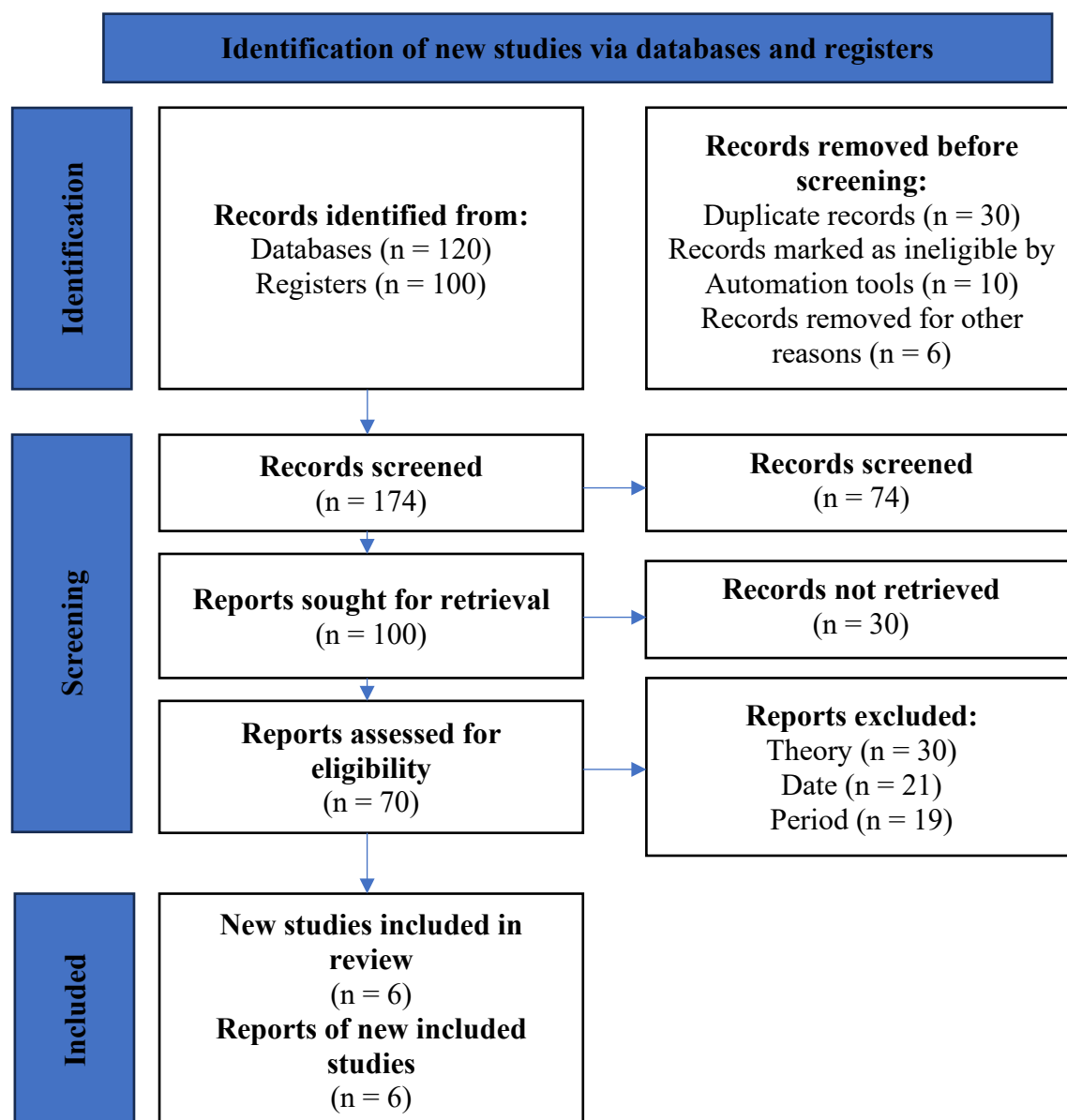


Figure 1: Flow diagram of study screening

The results were obtained from various sources and narrowed down to six main articles summarized in Table 1.

Table 1

Effectiveness of Family Planning Implementation in Reducing the Frequency of Pregnancy and Birth Rates in Couples of Fertile Age: A Review

| Reference | Country | Study | Results |
|--------------------------------|--------------------|--|---|
| (Fauser, <i>et al.</i> , 2024) | Multicountry study | Narrative review | Major advances in fertility treatments have dramatically increased the chances of starting a family since the 1990s. Although up to 10% of all children are born as a result of fertility treatments in some wealthy countries, there is wide variation in access to care. |
| (Finlay, 2024) | Multicountry study | Narrative review | The desired outcomes (fertility or contraceptive use) vary. The contexts in which program evaluations have occurred vary. To truly understand the impact of family planning programs and policies on contraceptive transition, reconciliation of these factors is necessary. |
| (Maria <i>et al.</i> , 2019) | Indonesia | Quantitative with a cross-sectional design | The results of the study showed that knowledge (p-value = 0.09) and the role of health workers (p-value = 0.001) were related to the use of long-acting contraceptive methods, while attitudes (p-value = 0.765) and husband's support (p-value = 0.131) were not related to long-acting contraceptive methods. |
| (Saputri <i>et al.</i> , 2022) | Indonesia | Quantitative with a cross-sectional design | The results of the bivariate analysis showed that age had an effect on unmet need for |

| | | | |
|--------------------------------|-----------|--|---|
| (Sitorus, 2019) | Indonesia | Quantitative with a cross-sectional design | family planning (p-value = 0.000). The variables of marital status, family income, area of residence, and knowledge did not have an effect on unmet need for family planning. The dominant factor influencing unmet need for family planning was age (p-value = 0.000; OR = 6.397). Based on the multivariate analysis of the determinants of unmet need, three dominant factors were obtained, namely knowledge, wife's occupation and previous family planning participation. |
| (Yulizar <i>et al.</i> , 2022) | Indonesia | Quantitative with a cross-sectional design | The results of the study showed that the age variable had a p-value = 0.009 ($p < \alpha$); OR 1.358, parity had a p-value = 0.001; OR 2.910, knowledge had a p-value of 0.005; OR 2.476, attitude had a p-value of 0.001; OR 2.286, husband's support had a p-value = 0.030; OR 2.452, and the role of health workers had a p-value of 0.023; OR 2.932. |

4.0 Discussion

A total of 6 studies were included and analyzed. The six studies discussed the relationship between the implementation of family planning in reducing the frequency of pregnancy and the birth rates of offspring from fertile couples. Fertile couples who have previously used contraceptives and experienced problems such as side effects that were not directly handled and supervised by officers, had results to trauma in using the contraceptives. Examination of the physical condition of fertile couples before using contraceptives and counseling by medical personnel are important as a basis for determining the use of contraception. The experience of side effects has an impact on the acceptance and attitude of the couple in determining family planning participation; some of them feel afraid of the procedure and its outcome, so they decided not to participate in any family planning programmes (Rohayati *et al.*, 2021).

Rohayati *et al.* (2021) stated that a program can run well if it is in accordance with the needs of the community. In other words, this family planning program can run according to its main objective, namely reducing the birth rate and population growth rate if it is necessary for the local community (Rohayati *et al.*, 2021). In Pakistan, marital status is not only defined as a

legally valid marriage (customary, religious, state, and so on), but also as those who live together and are considered husband and wife by the local community (Asif & Pervaiz, 2019). In line with this, Rahmayanti *et al.* (2022) highlighted that attitude is also a factor that can influence community participation in the family planning program. In addition, community participation in the implementation of the family planning program can be influenced by certain socio-cultural conditions (Anitasari & Sarmin, 2021). Community participation in the family planning program is also influenced by the local culture or customs (Mawarni, 2021; Gaffar & Abao, 2021). Beyond cultural influences, the level of individual knowledge also serves as a crucial determinant of participation in family planning programs. Improved knowledge enables mothers to better understand and select contraceptive methods that are appropriate to their physical condition (Saputri *et al.*, 2021). For example, dominant interpersonal communication channels within the Baduy community have been shown to influence the adoption of family planning contraceptives (Sihabudin *et al.*, 2018). This is in line with the research of Rofikoh *et al.* (2019) in Simpar Village, Batang Regency, Central Java. The most widely used type of hormonal contraception is injections. According to respondents, injection contraception is a safe and very effective contraceptive because it does not need to be used every day like pills (Rofikoh *et al.*, 2019). Wijayanti *et al.* (2018) in their research in Semanu District, D.I Yogyakarta reported that the use of injectable contraception was the most widely used contraception with 57% usage among other contraceptives, while others contribute to 17% from pills, 20% from Intrauterine Device (IUD) and 6% from implants. However, the pattern of contraceptive use has changed from previous methods, primarily due to users' experiences of side effects from earlier contraceptive methods being experiencing side effects on the use of previous contraception so that after being replaced, pill contraception became the most widely used with a total of 34.13% among other contraception, namely injections 31.71%, IUD 23.39% and implants 14.63%. The factor of side effect experience has a result of $p = 0.000$ (Wijayanti *et al.*, 2018). This statement indicates that the success of family planning programs depends on their alignment with community needs and sociocultural contexts. Knowledge level and perceived safety also influence contraceptive choice. When users experience side effects, they tend to switch to methods perceived as easier to manage, such as oral pills. The significant relationship ($p = 0.000$) reported by Wijayanti *et al.* (2018) confirms that both sociocultural factors and user experiences are key determinants of contraceptive use patterns among women of reproductive age.

Conclusion

The government policy, namely the family planning program, is an effort to regulate births, spacing an ideal age for giving birth, and regulate pregnancies, through promotion, protection and assistance in accordance with reproductive rights to create quality families. The successful implementation of family planning policies cannot be achieved if all contributing factors do not function optimally. Moreover, education and knowledge significantly influence the effective utilization of family planning programs.

Suggestion

Support from Family Planning service officers is needed to provide correct information about the Family Planning program. Information can be provided directly, for example, when mothers visit hospitals, health centers, or integrated health posts, or indirectly through mass media that are easily accessible to fertile couples.

References

- Anitasari, D., & Sarmin. (2021). Socio-cultural factors influencing women's participation in the family planning program. *Jurnal Ilmiah Kebidanan*, 12(2), 89–95. <https://doi.org/10.33560/jik.v12i2.789>
- Asif, M. F., & Pervaiz, Z. (2019). Socio-demographic determinants of unmet need for family planning among married women in Pakistan. *BMC Public Health*, 19, 1226. <https://doi.org/10.1186/s12889-019-7487-5>
- Central Statistics Agency. (2020). *Indonesian population and growth rate*. Statistics Indonesia (Central Statistics Agency). Retrieved March 12, 2025, from <https://www.bps.go.id>
- Fausser, B. C. J. M., *et al.* (2024). Declining global fertility rates and the implications for family planning and family building: An IFFS consensus document based on a narrative review of the literature. *Human Reproduction Update*, 30(2), 153–173. <https://doi.org/10.1093/humupd/dmad028>
- Finlay, J. E. (2024). A narrative review of the impact of public family planning policies and programs on the contraceptive transition in low- and middle-income countries. *Population and Development Review*, 50(S2), 649–674. <https://doi.org/10.1111/padr.12693>
- Gaffar, A., & Abao, M. (2021). Cultural determinants of contraceptive use among women in rural communities. *Indonesian Journal of Health Promotion*, 13(1), 45–53. <https://doi.org/10.14710/jpkm.v13i1.30561>
- Indonesia Demographic and Health Survey 2022 (2022) – Final report. *Jakarta, Indonesia*.
- Maria, *et al.* (2019). Relationship between the knowledge level of family planning acceptors and the role of health workers with interest in using long-term contraception methods (LMP). *Jurnal Kesehatan Masyarakat*, 15(2), 123–130. <https://doi.org/10.20473/jkm.v15i2.107>
- Mawarni. (2021). The role of culture in community participation in family planning. *Jurnal Promkes*, 9(2), 135–142. <https://doi.org/10.20473/jpk.V9.I2.2021.135-142>
- Ministry of Health of the Republic of Indonesia. (2021). *Indonesia Health Profile 2020*. Ministry of Health of the Republic of Indonesia. Retrieved March 12, 2025, from https://kemkes.go.id/id/profil-kesehatan-indonesia-2020?utm_source=chatgpt.com
- Ministry of Health of the Republic of Indonesia. (2022). *Report on reproductive health program*. Jakarta: Ministry of Health of the Republic of Indonesia. <https://kemkes.go.id/id/home>
- National Population and Family Planning Board. (2021). *Report on the implementation of the Bangga Kencana Program*. Retrieved March 12, 2025, from <https://www.bkkbn.go.id/>
- National Population and Family Planning Board. (2022). *Indonesian family profile 2022*. Retrieved March 12, 2025, from <https://www.bkkbn.go.id/storage/app/media/uploaded-files/profil-keluarga-2022.pdf>
- Rahmayanti, D. M., Yulianti, E., & Sukoco, R. (2022). Community attitudes toward the family planning program and influencing factors. *Jurnal Kesehatan Reproduksi*, 13(1), 22–29. <https://doi.org/10.32722/jkr.v13i1.1023>
- Rofikoh, N., Setyawan, A., & Handayani, S. (2019). Influence of knowledge and contraceptive side effects on contraceptive choices. *Jurnal Kesehatan Masyarakat (Undip)*, 7(4), 515–521. <https://doi.org/10.14710/jkm.v7i4.24759>
- Rohayati, S., Supianto, A. A., & Marlina, R. (2021). Analysis of the effectiveness of the family planning program in reducing birth rates. *Jurnal Kebijakan Kesehatan Indonesia*, 10(2), 150–158. <https://doi.org/10.7454/jkki.v10i2.1274>

- Saputri, E., Winarni, L., & Nuryanti, Nugraha, R. D. G. (2022). The factors affecting the unmet need of family planning in Banten Province year 2019. *Jurnal Kesehatan Masyarakat (KEMAS)*, 17(3), 362–370. <https://doi.org/10.15294/kemas.v17i3.27218>
- Saputri, N. E., Lestari, P., & Rahmadani, E. (2021). Mother's knowledge of contraception and its relationship with contraceptive method selection. *Jurnal Ilmu Kesehatan*, 9(1), 31–38. <https://doi.org/10.33024/jikk.v9i1.3962>
- Sihabudin, A., Ma'mun, A., & Nugraha, H. (2018). Interpersonal communication and family planning adoption among the Baduy community. *Jurnal Komunikasi Ikatan Sarjana Komunikasi Indonesia*, 3(1), 1–14. <https://doi.org/10.25008/jkiski.v3i1.130>
- Sitorus, A. (2019). Actors of knowledge and attitude of unmet need for family planning in South Tapanuli District and Asahan District. *Jurnal Bidan Komunitas*, 2(2), 65–75. <https://doi.org/10.33085/jbk.v2i2.4313>
- United Nations Population Fund. (2023). *World population dashboard*. UNFPA. Retrieved March 12, 2025, from <https://www.unfpa.org/data/world-population-dashboard>
- Wijayanti, L., Rahayu, A. N., & Pradnyawati, A. (2018). Analysis of factors related to the choice of contraceptive methods among women of childbearing age. *Jurnal Gizi dan Kesehatan*, 6(1), 14–21. <https://doi.org/10.14710/jgk.v6i1.23333>
- World Bank. (2023). *Population, total – Indonesia*. In *World Development Indicators*. Retrieved March 12, 2025, from <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=ID>
- World Health Organization. (2022). *Family planning and contraception*. Retrieved March 12, 2025, from <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>
- Yulizar, Y., Hariani, D., & Fahmi, M. (2022). Analysis of factors influencing couples of reproductive age participation in long-term contraception methods (LMP) in Langsa Timur District. *Jurnal Kebidanan dan Kesehatan Tradisional*, 7(1), 45–52. <https://doi.org/10.31004/prepotif.v6i1.2736>
- Zahari, R. K., Utomo, B., & Asriana, A. (2020). Community participation in family planning programs. *BMC Health Services Research*, 20, 567. <https://doi.org/10.1186/s12913-020-05467-4>