

Effectiveness of Reproductive Health Education on Knowledge, Attitudes, and Intention to Use Hormonal Contraception among Women of Reproductive Age in Makassar City.

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ABSTRACT

This study analyzed the effectiveness of reproductive health education on knowledge, attitudes, and intentions to use hormonal contraception. The research was conducted in the service area of the Kassi-Kassi Community Health Center, Makassar City, from September to December 2025 and involved 54 respondents. A quasi-experimental method with a one-group pretest-posttest design was employed. Participants were selected using a purposive sampling technique based on predefined inclusion criteria. Data were analyzed using SPSS software, and statistical significance was assessed using the chi-square test. The results demonstrated a statistically significant effect of reproductive health education on respondents' knowledge ($p = 0.001$), attitudes ($p = 0.001$), and intentions to use hormonal contraception ($p = 0.001$) after the intervention. Overall, the findings indicate that reproductive health education is effective in increasing knowledge, fostering positive attitudes, and strengthening the intention to use hormonal contraception among women of childbearing age in the Kassi-Kassi Community Health Center service area, Makassar City.

INTRODUCTION

The high prevalence of unmet need represents a critical demographic phenomenon that requires special attention in the future development of family planning programs. Unmet need for family planning among married women is a global issue; however, its prevalence is considerably higher in developing countries than in developed settings (Rahmawati, 2018). It is estimated that approximately 225 million women in developing countries wish to delay or stop childbearing but are not using any form of contraception. This condition is influenced by multiple factors, including limited contraceptive options, fear of side effects, inadequate knowledge, poor quality of health services, and gender-related barriers (Fitriani, 2021).

Insufficient education is frequently identified as a major contributor to low levels of effective contraceptive use, particularly among young women and vulnerable populations. Limited understanding of contraceptive methods not only affects fertility regulation but also has broader implications for maternal and child health outcomes (Rahayu, 2020). One of the

key strategies to increase public awareness and support the objectives of family planning programs is through communication, information, and education (CIE). In principle, CIE serves as a decision-support approach that enables individuals to make informed choices regarding contraceptive use. Through CIE, prospective and current family planning acceptors receive accurate information on contraceptive types, mechanisms, benefits, disadvantages, potential side effects, and follow-up services. This process facilitates informed decision-making and encourages continuity of contraceptive use, while also enabling health workers to address side-effect complaints effectively (Oktaviani, 2022).

Previous studies have shown that fear of side effects remains a major reason for unmet need, even among women who have never experienced adverse effects from hormonal contraception (Yulizawati, 2018). Rahmawati (2020) reported that injectable hormonal contraception was the most commonly used non-long-acting method; however, many users experienced menstrual irregularities, which became the most frequently reported reproductive health complaint. These side effects often led to discontinuation of use and ultimately contributed to unmet need. Other studies have also indicated that both hormonal and non-hormonal contraceptive side effects may influence perceptions regarding the return of fertility, underscoring the importance of providing comprehensive information to ensure efficient and sustained contraceptive use (Ajzen, 2015).

Appropriate contraceptive selection, aligned with the medical indications and conditions of prospective acceptors, is essential to minimize side effects and complications, particularly for hormonal methods, which are more frequently associated with adverse effects than non-hormonal methods. Therefore, the active role of health workers in providing pre-use counseling is crucial to ensure that contraceptive choices are consistent with the health status, reproductive goals, and preferences of family planning acceptors (Sari, 2021). The provision of appropriate educational tools and media has been shown to significantly assist couples of reproductive age in selecting rational contraceptive methods based on maternal age, desired family size, and health condition (Wahyuni, 2023).

Several studies have demonstrated significant improvements in knowledge following contraceptive education. Astri (2025) and Nurhayati et al. (2019) reported notable differences in knowledge levels before and after educational interventions. Similarly, Maria (2024), in a study on the effectiveness of hormonal contraceptive socialization, found that participants not only demonstrated increased knowledge but also reported greater confidence and stronger intentions to use hormonal contraception after counseling (Wulandari, 2022).

Based on this background, the present study aims to examine the effectiveness of reproductive health education in reducing unmet need for hormonal contraception in the working area of the Kassi-Kassi Community Health Center, Makassar City. This study specifically focuses on hormonal contraception, offering a distinct contribution to the literature, as most previous research has emphasized contraceptive education in general or long-acting contraceptive methods. By concentrating on hormonal contraception, this study seeks to address method-specific challenges and provide targeted evidence to inform future family planning interventions.

METHODS

This research method uses a Quasi Experimental design with a pre-posttest approach to determine the differences between before and after. This research will be conducted at the Kassi Kassi Community Health Center, Makassar City with a research implementation schedule of 10 months. The population in this study are all fertile age couples (PUS) who have unmet need for hormonal contraception in the Kassi Kassi Community Health Center Work Area, Makassar City, which is 105 PUS. Determination of the sample size using the Slovin formula $n = N / (1 + (N \times e^2))$ with a margin of error of 10%, resulting in a sample size of 54 respondents. Sampling technique: Purposive sampling based on certain criteria. The variables studied were knowledge, intention and attitude.

RESULTS

Characteristics of Respondents

Table 1. Respondent Characteristics (Age, Education)

Respondent Characteristics	n	%
Age	18-40	41
	41-60	13
	Total	54
Education	Junior high school	4
	Senior high school	38
	Bachelor	12
Total	54	100,0

Source: Primary Data, 2025

The table above shows that the characteristics of respondents based on age: Of the 54 respondents (100%), the largest number were in the 18-40 age range 41 respondents (75.9%), and the smallest number were in the 41-60 age range 13 respondents (24.1%). Respondent characteristics based on education: Of the 54 respondents (100%), the largest number were high school graduates 38 respondents (70.4%), and the smallest number were junior high school graduates 4 respondents (7.4%).

Bivariate Analysis

Table 2 presents the bivariate analysis of knowledge, attitudes, and intentions toward family planning status before and after health education. Prior to the intervention, good knowledge was more prevalent among respondents using contraception (94.4%) than among non-users (61.1%). Following education, good knowledge increased substantially in both groups, reaching 100% among contraceptive users and 94.4% among non-users, with a significant difference between pre- and post-education assessments ($p = 0.001$).

Similarly, positive attitudes toward family planning were more common among contraceptive users before education (72.2%) compared to non-users (38.9%). After the intervention, positive attitudes increased markedly in both groups, accounting for 94.4% of

users and 91.7% of non-users. The change in attitudes before and after education was statistically significant ($p = 0.001$).

Regarding intentions, only 27.8% of contraceptive users reported having intentions toward family planning before education, while all non-users reported no intention. Post-education, intentions increased considerably in both groups, reaching 83.3% among users and 88.9% among non-users, although a small proportion remained doubtful. The bivariate analysis confirmed a significant effect of education on intentions related to family planning status ($p = 0.001$).

Table 2. Bivariate Analysis

Variables		Family planning status				Total	p-Value		
		Using contraception		not using contraception					
		n	%	n	%				
Knowledge	Before Education	Good	17	94,4	22	61,1	39	72,2	
		Low	1	5,6	14	38,9	15	27,8	
	After Education	Good	18	100	34	94,4	52	96,3	
		Low	0	0	2	5,6	2	3,7	
Attitude	Before Education	Positive	13	72,2	14	38,9	27	50,0	
		Negative	5	27,8	22	61,1	27	50,0	
	After Education	Positive	17	94,4	33	91,7	50	92,6	
		Negative	1	5,6	3	8,3	4	7,4	
Intention	Before Education	Yes	5	27,8	0	0	5	9,3	
		No	13	72,2	36	100	49	90,7	
	After Education	Yes	15	83,3	32	88,9	47	87,0	
		No	1	5,6	1	2,8	2	3,7	
		Doubtful	2	11,1	3	8,3	5	9,3	
		Total	18	100	36	100	54	100	

Source: Primary Data (Processed), 2025

DISCUSSION

The findings of this study demonstrate that reproductive health education was effective in improving knowledge, fostering positive attitudes, and increasing intentions to use hormonal contraception among women of childbearing age at the Kassi-Kassi Community Health Center, Makassar City. The reproductive age period represents a critical phase during which the demand for reproductive health information is heightened, thereby enhancing responsiveness to educational interventions. This result is consistent with previous studies by Rahmawati et al. (2018) and Fitriani (2021), which reported that women of childbearing age, particularly those with secondary education, are more receptive to educational interventions related to hormonal contraceptive use.

With regard to knowledge, a significant improvement was observed following the educational intervention. The proportion of respondents with good knowledge increased from 72.2% before education to 96.3% after education. This finding indicates that health education plays a crucial role in strengthening reproductive health literacy, enabling women to better

understand the benefits, mechanisms of action, and safety of hormonal contraception. Similar results were reported by Rahayu (2020), who documented a 30–45% increase in knowledge following family planning counseling, and by Oktaviani et al. (2022), who found that discussion-based educational media significantly improved knowledge among women of childbearing age. Furthermore, Nurhayati et al. (2019) reported that women with higher knowledge levels were up to 2.5 times more likely to use modern contraception, while Wulandari et al. (2022) identified a significant association between adequate family planning knowledge and lower unmet need. Comparable findings were also reported by Wahyuni (2025), indicating that educational interventions using lectures and audiovisual media significantly enhanced respondents' knowledge of unmet need.

Substantial changes were also observed in attitudes toward hormonal contraception. The proportion of respondents with positive attitudes increased from 50.0% before education to 92.6% after the intervention. This improvement may be attributed to increased understanding of contraceptive effectiveness and side effects, which can reduce anxiety and misconceptions commonly present in the community. These findings are supported by studies conducted by Yulizawati (2018) and Rahmawati and Chundrayetti (2020), which demonstrated that education positively influences attitudes toward modern contraceptive use by shaping perceptions and facilitating behavioral acceptance. Other studies similarly reported improvements in attitude scores following educational interventions, indicating that well-structured educational materials effectively enhance both understanding and confidence related to family planning decisions.

In addition, the study revealed a significant increase in intentions to use hormonal contraception. Prior to education, only 9.3% of respondents expressed an intention to use hormonal contraception, whereas this proportion increased markedly to 87.0% after the intervention. According to the Theory of Planned Behavior (Ajzen, 1991), intention is a key determinant of behavior, suggesting that increased intention may translate into higher contraceptive uptake. This finding is consistent with Sari (2021), who reported an 80% increase in family planning intentions following education, as well as Wahyuni and Rukmana (2023), who found that educational interventions significantly increased contraceptive intentions and contributed to a reduction in unmet need.

Moreover, a clear relationship was observed between attitudes, intentions, and family planning use status. Respondents with positive attitudes and strong intentions were more likely to use contraception than those with negative attitudes or no intention. This finding reinforces the notion that educational interventions influence not only cognitive aspects but also affective components and motivational readiness to adopt health-related behaviors. Previous research has similarly indicated that family planning decisions are shaped by attitudes, family support, and access to accurate information, highlighting education as a key strategy for reducing unmet need (Fadillah, 2021). Other studies have also confirmed that appropriate health education improves knowledge and increases women's interest in using family planning methods (Salaman, 2024).

This study provides consistent evidence that reproductive health education is an effective intervention for reducing unmet need for hormonal contraception in the Kassi-Kassi Community Health Center, Makassar City. Improvements in knowledge, positive shifts in

attitudes, and increased intention to use contraception underscore the importance of information-based education and interactive communication strategies in promoting the adoption of modern contraceptive methods.

CONCLUSIONS

The results of this study indicate that reproductive health education has proven effective in increasing knowledge, forming positive attitudes, and increasing the intention to use hormonal contraception in women of childbearing age in the working area of the Kassi-Kassi Community Health Center, Makassar City.

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REFERENCE

Ajzen, I. (2015). The theory of planned behavior revisited. In F. Kaiser & P. Schultz (Eds.), *The psychology of environmental decisions* (pp. 1-21). Psychology Press.

Fadillah, S. N. (2021). Determinan perilaku penggunaan KB hormonal pada wanita usia subur. *Jurnal Kesehatan Reproduksi Muslimah*, 9(1), 64-72.

Fitriani, R. (2021). Hubungan pendidikan dan usia terhadap pemilihan kontrasepsi pada pasangan usia subur. *Jurnal Bidan Mandiri*, 5(1), 15-22.

Glanz, K., Rimer, B. K., & Viswanath, K. (2015). *Health behavior and health education: Theory, research, and practice* (5th ed.). Jossey-Bass.

Notoatmodjo, S. (2014). *Promosi kesehatan dan perilaku kesehatan*. Rineka Cipta.

Nurhayati, N., Hidayat, H., & Anwar, S. (2019). Hubungan tingkat pengetahuan dengan pemilihan kontrasepsi modern. *Jurnal Public Health*, 13(4), 217-225.

Oktaviani, D., Darmaningrat, E., & Lestari, D. (2022). Edukasi kesehatan reproduksi meningkatkan pengetahuan wanita usia subur tentang kontrasepsi hormonal. *Jurnal Reproduksi Indonesia*, 14(1), 45-54.

Paramita, R. (2023). Sikap dan niat sebagai faktor dominan terhadap pemilihan KB modern. *Jurnal Kebidanan Nusantara*, 8(1), 29-38.

Rahmawati, N., & Aminah, S. (2018). Faktor yang berhubungan dengan penggunaan kontrasepsi hormonal pada wanita usia subur. *Jurnal Kesehatan Reproduksi*, 9(2), 84-92.

Rahmawati, Y., & Chundrayetti, E. (2020). Pengaruh penyuluhan metode kontrasepsi hormonal terhadap sikap dan minat penggunaan KB. *Jurnal Ilmu Kebidanan*, 6(1), 25-34.

Rahayu, S. (2020). Pengaruh penyuluhan kesehatan terhadap pengetahuan dan sikap wanita usia subur tentang KB hormonal. *Jurnal Kesehatan Masyarakat Andalas*, 15(3), 210-218.

Sari, M. (2021). Pengaruh edukasi audiovisual terhadap minat penggunaan KB hormonal pada pasangan usia subur. *Midwifery Journal*, 7(2), 88-96.

Wahyuni, R., & Rukmana, A. (2023). Edukasi metode kontrasepsi hormonal menurunkan unmet need pada ibu usia subur. *Jurnal Kesehatan Prima*, 17(1), 51-60.

Wulandari, D. A., & Harahap, Y. (2022). Pengetahuan dan dukungan keluarga memengaruhi unmet need KB pada wanita usia subur. *Buletin Penelitian Kesehatan*, 50(2), 133-142.

Yulizawati. (2018). Efektivitas penyuluhan KB terhadap peningkatan pengetahuan dan sikap pasangan usia subur. *Jurnal Kebidanan Indonesia*, 12(3), 122-129.