



Effectiveness of Family Planning Counseling on Improving Knowledge among Non-Contraceptive Women in the Working Area of Siatas Barita Community Health Center, North Tapanuli Regency, 2025

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<p>Track Record Article</p> <p>Revised: 12 March 2026 Accepted: 20 June 2026 Published: 26 June 2026</p> <p>How to cite : Hutabarat, N. I., & Nainggolan, D. R. (2026). Effectiveness of Family Planning Counseling in Improving Knowledge among Women Not Using Contraception in the Working Area of Siatas Barita Community Health Center, North Tapanuli Regency 2025. <i>Contagion: Scientific Periodical Journal of Public Health and Coastal Health</i>, 8(2), 361–370.</p>	<p style="text-align: center;">Abstract</p> <p><i>Insufficient understanding and misconceptions about contraceptive techniques can hinder women's ability to make informed reproductive health decisions. This study investigated short-term changes in family planning knowledge following counseling among women not utilizing contraception in the jurisdiction of Siatas Barita Community Health Center, North Tapanuli Regency, Indonesia. A pre-experimental one-group pretest-posttest study was conducted in Pancurnapitu Village from July to December 2025. Fifty-three women aged 20 to 49 years who were not using contraception were recruited through convenience sampling. Family planning knowledge was assessed before counseling and 12 days after the intervention using a structured 10-item true-or-false questionnaire. Scores were categorized as good knowledge (code 1) or poor knowledge (code 2) with lower mean coded score indicating better knowledge. Differences between pre-and post-intervention scores were analyzed using a paired-samples t-test. The mean coded knowledge score decreased from 1.74 ± 0.445 before counseling to 1.40 ± 0.494 after counseling, yielding a mean difference of 0.34 points. The decrease in scores, which signified enhanced knowledge, demonstrated an improvement in family planning knowledge subsequent to counseling ($p < 0.001$). Furthermore, 35 women (66.04%) expressed willingness to use contraception but had not obtained consent or support from husbands or family members. Family planning counseling was associated with improved short-term knowledge in women not using contraception. These findings support the integration of structured, client-centered, and rights-based counseling into primary healthcare services. However, the absence of a control group, reliance on non-probability sampling, and short follow-up period limit causal inference and generalizability. Additional controlled trials with validated instruments, representative samples, and extended follow-up are needed to determine whether improved knowledge translates into informed and sustained contraceptive use.</i></p> <p>Keywords: <i>Contraceptive Counseling, Family Planning, Health Education, Reproductive Health, Women Of Reproductive Age.</i></p>
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INTRODUCTION

Family planning is an initiative that enables individuals and couples to make voluntary, informed decisions regarding the number, timing, and spacing of their children (Mustika et al., 2025). According to Law Number 52 of 2009 of the Republic of Indonesia on Population Development and Family Development, family planning includes efforts to regulate childbirth, determine appropriate birth intervals and maternal age, and manage pregnancy through advocacy, protection, and support consistent with reproductive rights. Effective family planning services can prevent unintended pregnancies, promote optimal birth spacing, reduce pregnancy-related risks, and improve the well-being women, children, and families (Government Regulation of the Republic of Indonesia, 2009).

Family planning is a vital component of maternal and reproductive health initiatives in Indonesia. The national program aims to expand access to quality contraception and reproductive health care, reduce maternal and infant mortality, and promote the development of healthy and prosperous families. However, the mere availability of contraceptive services does not ensure their utilization. Decisions regarding contraceptive are influenced by complex interplay of individual, familial, societal, and healthcare service factors (BKKBN, 2021).

Participation in family planning remains a challenge in North Tapanuli Regency. The 2024 Performance Accountability Report from the Population Control, Family Planning, Women's Empowerment, and Child Protection Office of North Tapanuli Regency reported a contraceptive prevalence rate of 51.27%, below the regional target of 68.96%. The proportion of couples of reproductive age with an unmet need for family planning was 16.45% (BPS Provinsi Sumatera Utara, 2024). These figures indicate that a considerable share of couples of reproductive age have either not accessed or have not been adequately served by existing family planning programs. The situation underscores the need to strengthen family planning information, counseling, and community-based support.

Woman's decision to use contraception may be influenced by multiple factors, including knowledge, age, education, parity, employment status, reproductive intentions, perceptions of side effects, spousal support, access to healthcare facilities, exposure to contraceptive information, and assistance from healthcare providers (Setiyowati & Ronoatmodjo, 2021; Nuryuliana & Rini, 2026). Limited understanding and misinformation can generate anxiety, uncertainty, or negative perceptions of contraceptive methods. Moreover, the absence of support from husbands or other family members may restrict women's ability to make reproductive health decisions, even when family planning services are physically available (Gayatri, 2025).

Contraceptive methods include hormonal, non-hormonal, short-acting, long-acting reversible, and permanent options. Each method has distinct benefits, limitations, potential side effects, and medical eligibility criteria. Therefore, hormonal contraceptives cannot be universally considered more hazardous, nor can non-hormonal methods be assumed to be inherently safer. The choice of a contraceptive method should be tailored to a woman's health status, reproductive goals, personal preferences, medical suitability, and informed consent. Client-centered counseling is essential to explain available options, correct misconceptions, and support women in selecting an appropriate method without coercion (Mas'udah et al., 2021; Wibisana et al., 2021).

This research was grounded in the PRECEDE component of the PRECEDE–PROCEED framework. The study identified knowledge, age, education, parity, and employment status as predisposing factors. Availability of healthcare facilities and access to contraceptive information were considered enabling factors, while support from spouses and healthcare providers served as reinforcing factors. Among these determinants, knowledge is a modifiable predisposing factor that can be directly improved through educational interventions and family planning counseling (Kim et al., 2022).

Accordingly, this study focused on knowledge as the variable most amenable to change through counseling. The objective was to evaluate the effectiveness of family planning counseling in improving knowledge among women not using contraception within the jurisdiction of Siatas Barita Community Health Center, North Tapanuli Regency, in 2025. The study also described respondent characteristics, including age, education, parity, employment status, spousal support, access to healthcare services, availability of contraceptive information, assistance from healthcare providers, and stated reasons for non-use of contraception.

METHODS

This study employed a quantitative pre-experimental one-group pretest–posttest design to examine short-term changes in family planning knowledge following counseling. It was conducted from July to December 2025 in Pancurnapitu Village, within the working area of Siatas Barita Community Health Center, Siatas Barita District, North Tapanuli Regency, Indonesia. As the study involved only one group, no control group, randomization, matching, or allocation procedure was applied.

The study population comprised women of reproductive age residing in Pancurnapitu Village who were not currently using any contraceptive method. A total of 53 eligible participants were recruited through convenience sampling. Inclusion criteria were: women aged 20–49 years, residing in the study area during the data-collection period, not currently using contraception, able to understand and complete the questionnaire, and voluntarily consenting to participate. Exclusion criteria included pregnancy, plans to become pregnant in the immediate future, or cognitive or communication difficulties that prevented completion of study procedures.

Prior to the intervention, participants completed a pretest approximately 30 minutes before the counseling session. The counseling intervention provided structured information on the objectives of family planning, available contraceptive methods, mechanisms of action, effectiveness, benefits, potential side effects, method eligibility, and the importance of

selecting contraception based on individual health conditions, reproductive intentions, personal preferences, and informed choice. Counseling was delivered through two-way communication, enabling participants to ask questions, express concerns, and clarify misconceptions related to contraceptive use. All participants received standardized counseling content. The posttest was administered 12 days after the intervention using the same questionnaire to assess short-term changes in knowledge.

Family planning knowledge was assessed using a structured questionnaire consisting of 10 dichotomous true-or-false items. Each correct response was assigned a score of 1, and each incorrect response as 0. Item scores were summed to obtain an initial knowledge score. Based on the predetermined classification criteria, participants were categorized as having good or poor knowledge. For statistical analysis, good knowledge was coded as 1 and poor knowledge as 2. Therefore, a lower mean coded score represented a higher level of family planning knowledge. Reported means therefore reflected the average coded knowledge categories rather than the average questionnaire scores.

Data were also collected on age, educational attainment, parity, employment status, husband's support, accessibility of healthcare services, support from healthcare workers, and reported reasons for not using contraception. These variables were analyzed descriptively to characterize the study population and were not examined as independent predictors of knowledge change or contraceptive non-use.

Data processing included editing, coding, data entry, verification, and cleaning. Participant characteristics were summarized using frequencies and percentages, whereas knowledge scores were presented as means and standard deviations. Because pretest and posttest measurements were obtained from the same participants, the observations were treated as paired data. Differences between pre-intervention and post-intervention mean coded knowledge scores were analyzed using a paired-samples t-test. The mean difference was calculated by subtracting the posttest mean from the pretest mean. Statistical significance was determined using a two-sided p-value of < 0.05 . All analyses were performed using SPSS version 26 (IBM Corporation, Armonk, NY, USA).

Participation was voluntary, and written informed consent was obtained from all participants prior to data collection. Participants were informed about the study objectives, procedures, confidentiality safeguards, and their right to withdraw at any time without consequences.

RESULT

A total of 53 women who were not using contraception were included in the study and in the pretest–posttest analysis. Respondents were recruited from Pancurnapitu Village, within the working area of Siatas Barita Community Health Center, North Tapanuli Regency.

Table 1 presents the sociodemographic, reproductive, and family planning-related characteristics of the respondents. More than half were aged 20–35 years (52.83%). Most had completed secondary education (64.15%), had one to three children (64.15%), and were employed (67.92%). More than half reported receiving support from their husbands (58.49%). The majority had easy access to healthcare services (83.02%) and reported receiving support from healthcare workers (79.25%).

Regarding the reported reasons for not using contraception, 18 respondents (33.96%) stated that they did not wish to become family planning acceptors. In contrast, 35 respondents (66.04%) indicated that they were willing to use contraception but had not received approval or support from their husbands or families.

Table 1. Characteristics of women not using contraception (n = 53)

Characteristics	n	%
Age		
20–35 years	28	52.83
36–49 years	25	47.17
Education		
Primary education	14	26.42
Secondary education	34	64.14
Higher education	5	9.43
Parity		
No previous childbirth	12	22.64
One to three childbirth	34	64.15
More than three childbirths	7	13.21
Employment status		
Employed	36	67.92
Unemployed	17	32.08
Husband's support		
Received support	31	58.49
Did not receive support	22	41.51
Accessibility of healthcare services		
Easily accessible	44	83.02
Difficult to access	9	16.98
Support from healthcare workers		
Received support	42	79.25
Did not receive support	11	20.75
Reported reason for not using contraception		
Did not want to become a family planning acceptor	18	33.96
Willing to use contraception but did not receive husband or family support	35	66.04

Changes in Family Planning Knowledge after Counseling

Family planning knowledge was measured before counseling and 12 days after the intervention. Because the pretest and posttest scores were obtained from the same respondents, they were compared using a paired-samples t-test.

The analysis revealed a statistically significant improvement in knowledge scores following, with a mean difference of 0.340 and a p-value of < 0.001 . Based on the direction of the scores, respondents demonstrated higher knowledge levels after receiving counseling.

Table 2. Comparison of family planning knowledge before and after counseling

Intervention	n	Mean \pm SD	Mean difference	p value
Pretest knowledge	53	1.74 \pm 0.445	0.34	<0.001
posttest knowledge		1.40 \pm 0.494		

Respondents had a mean family planning knowledge score of 1.74 ± 0.445 before counseling and 1.40 ± 0.494 after counseling. The mean reduction of 0.34 points was statistically significant ($p < 0.001$). Because lower scores indicated better knowledge, this reduction suggests that family planning counseling was associated with improved knowledge among respondents.

DISCUSSION

The Efficacy of Maternal Knowledge Counseling on Non-Participation in Family Planning Acceptance

This study demonstrates a statistically significant difference in family planning knowledge scores before and after counseling among women not using contraception. The post-intervention assessment, conducted 12 days after counseling, showed a significant increase in knowledge scores ($P < 0.001$). These findings indicate that family planning counseling is associated with short-term improvements in respondents' knowledge.

Family planning counseling has the potential to enhance women's knowledge through the delivery of systematic, structured, and easily understandable information on the objectives of the program, available contraceptive methods, their benefits, effectiveness, and possible side effects. Accurate information is essential, as misunderstandings, myths, and concerns about side effects often hinder women from considering family planning services. Client-centered counseling also provides participants with opportunities to ask questions, clarify misconceptions, and evaluate contraceptive options based on their health conditions, personal preferences, and reproductive goals.

The results of this study are consistent with Madiuw et al., (2022), who found that knowledge is modifiable predisposing factor in the formation of health behavior. Educational interventions can enhance individual understanding and support readiness to make accurate

health decisions based on adequate information (Ulle et al., 2017). However, increased in knowledge does not always directly translate into contraceptive use. The decision to adopt contraception may be influenced by various additional factors, including personal preferences, fertility intentions, family relationships, socio-cultural values, previous experiences with contraception, perceptions of side effects, and the availability and quality of healthcare services (Syahidah & Budyanra, 2021; Setiyowati & Ronoatmodjo, 2021).

The characteristics of the respondents, including age, education, parity, employment status, spousal support, accessibility of healthcare services, and support from healthcare personnel are presented descriptively to illustrate the study population. Most respondents were aged 20–35 years, had completed secondary education, had one to three children, and were employed. In addition, the majority reported having easy access to healthcare services and receiving support from healthcare workers.

Thirty-one respondents reported receiving general support from their husbands, while 35 respondents indicated that they were willing to use contraception but had not yet obtained approval or support from their husbands or family members. This difference suggests that general spousal support from does not necessarily equate to specific approval for contraceptive use. Emotional, informational, instrumental, and esteem support may carry different meanings compared to explicit approval of a chosen contraceptive method.

By providing family planning care thru Health Counseling, WUS receives information and training. This helps spread the health message. Information will be transferred from the officer to WUS thru KIE. It starts with an explanation of the various types of contraceptive methods and their benefits, side effects, and drawbacks. This counseling technique allows for two-way communication, enabling the necessary changes in knowledge. Women of reproductive age who know more about contraceptive methods may find it easier to choose the type of method that suits the required phase, whether it is delaying pregnancy or spacing pregnancies. By gaining a better understanding of the importance of choosing the right type of contraception according to the phase, they will be more capable of making better choices. Therefore, there will be an increased desire to consult about the selection of contraceptive methods (Sitopu et al., 2021).

Although many mothers (couples of childbearing age) do not fully understand the importance of following family planning programs and choosing long-term contraceptive methods, understanding and knowledge about this issue are very important. The family planning program is expected to improve the health and well-being of families, especially the health of mothers and children. Additionally, the family planning program can also regulate

the number of births, or the number of children, and the spacing of births, which can impact the health of mothers and children, as well as the well-being of families. With a small family, mothers can focus more on raising and nurturing their children as well as maintaining their own health. Thus, it is hoped that the use of contraceptives, in addition to serving as a contraceptive tool, will also help women of reproductive age lead a more comfortable sexual life. Thus, the goals of the family planning program will be achieved (Kursani et al., 2023; Harahap et al., 2025).

The generalization of the research results is also limited because the selection of respondents used accidental sampling, which is a non-probability sampling technique, and the research was conducted in only one village. In addition, this study only measures short-term changes in knowledge and has not evaluated long-term knowledge retention, attitude changes, intention to use contraception, actual contraceptive use, or the sustainability of contraceptive method use. Socioeconomic status was also not measured, so it could not be considered in the analysis as one of the factors that might influence access to information and family planning services.

Despite these limitations, the results of this study indicate that structured family planning counseling can be used as one of the health education strategies to improve short-term knowledge among women who do not use contraception. Community health centers need to provide sustainable family planning counseling that is client-centered, based on reproductive rights, and respects the principle of informed choice. Involvement of husbands and family members can also be considered if it aligns with the needs and receives the consent of the woman concerned. Subsequent research is recommended to use a design that involves a control group, validated instruments, relevant confounding variables, and outcomes that not only measure knowledge but also attitudes, decision-making, and actual contraceptive use.

CONCLUSION

Women not utilizing contraceptives exhibited increased family planning knowledge following counseling compared to the first evaluation. These findings offer initial evidence that organized family planning counseling may enhance women's comprehension of contraceptive techniques and reproductive health decision-making in the near run.

The respondents' age, education, parity, employment position, spousal support, accessibility of healthcare services, and assistance from healthcare professionals were examined solely as descriptive features. Consequently, these variables cannot be regarded as drivers of contraceptive non-use according to the current findings. Furthermore, due to the

study's utilization of a one-group pretest–posttest design lacking randomization or a control group, the noted enhancement cannot be exclusively ascribed to the counseling session.

Community health centers could enhance family planning services by implementing structured, client-centered, and rights-based counseling that delivers correct information, rectifies misconceptions, and facilitates informed contraceptive choices. The participation of husbands and family members may occur with the woman's consent, without infringing upon her reproductive autonomy. Subsequent research should utilize controlled designs, validated measuring tools, extended follow-up durations, and multivariable analyses to ascertain if enhanced understanding results in informed contraceptive adoption and continued usage.

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