

Socratic Leaflet Education to Improve Couples' Knowledge on Long-Term Contraceptive Selection

Dewi Sartika Hutabarat^{1*}, Mastaida Tambun², Srimuliana P Bakara³,

Dyanti Butar-butur⁴, Edisubroto⁵, Ka'sil Aufa⁶

Bachelor of Midwifery, Mitra Husada College of Health Sciences, Medan, Indonesia

Email: dewisartika@mitrahusada.ac.id¹, mastaidatambun@mitrahusada.ac.id², Srimuliana@mitrahusada.ac.id³

Dyanti@mitrahusada.ac.id⁴, edisubroto@mitrahusada.ac.id⁵, kasilaufa@mitrahusada.ac.id⁶

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Corresponding author*:

dewisartika@mitrahusada.ac.id

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Abstract: The high maternal mortality rate associated with frequent childbirth remains a significant public health issue, partly due to limited knowledge among couples of reproductive age about long-term contraception. The 2024 Indonesian Demographic and Health Survey reported that only 24.6% of respondents used long-term contraceptive methods. Low uptake is often linked to insufficient understanding and persistent myths in the community, indicating the need for interactive educational approaches. **Objective:** This study aims to analyze the effect of the Socratic method delivered through leaflets on improving the knowledge of couples of reproductive age in selecting Long-Term Contraceptive Methods (LTCM) at the Pematang Cengal Community Health Center. **Methodology:** The study employed a quantitative approach with a quasi-experimental one-group pre-test–post-test design. The population consisted of all couples of reproductive age within the health center's service area, with 120 respondents selected through purposive sampling. Data were collected by measuring knowledge levels before and after the educational intervention and analyzed using the Wilcoxon Signed Rank Test. **Findings:** The results showed a statistically significant increase in the average knowledge scores after the Socratic-based education with leaflets (p -value < 0.05). Prior to the intervention, most respondents were categorized as having poor knowledge; afterward, the majority shifted to the good knowledge category. **Implications:** These findings suggest that interactive education using the Socratic method combined with leaflet media can serve as an effective strategy in primary healthcare settings to correct misconceptions, enhance understanding, and support informed decision-making regarding long-term contraception. **Originality/Value:** The originality of this study lies in the application of the Socratic method in LTCM education at the primary healthcare level, integrated with leaflet support, which promotes critical thinking about the effectiveness and safety of long-term contraception compared to conventional one-way education.

Keywords: leaflet; knowledge; couples of reproductive age; long-term contraception; Socratic method.

INTRODUCTION

The success of the Family Planning (FP) program in Indonesia continues to face major challenges in meeting the Long-Acting Reversible Contraception (LARC) or Long-Term Contraceptive Methods (MKJP) target. According to the Indonesian Demographic and

Health Survey (IDHS) report, although overall family planning participation rates are quite high, contraceptive use patterns are still dominated by short-term methods such as injections and pills, which have higher failure rates compared to LARC. ([Badan Pusat Statistik \(BPS\), 2025](#)).

The government, through the National Population and Family Planning Agency (BKKBN), has prioritized expanding the use of MKJP to reduce the Total Fertility Rate (TFR). However, the implementation of this policy at the primary service level is often hampered by sociocultural resistance and public perceptions that do not yet understand the use of MKJP, such as IUDs, implants, and male/female surgical contraception (MOP/MOW), which are still below the targets set by the Langkat health office. ([Dinas Kabupaten Langkat Langkat, 2024](#))

Conditions in the field indicate that the educational methods used at the Pematang Cengal Community Health Center, such as one-way lectures, have not changed the mindset of PUS regarding reproductive decision-making. PUS tend to be passive recipients of information without deep internalization of knowledge. This is exacerbated by the limited availability of interactive visual aids, which prevents the optimal conveyance of information about the advantages of MKJP. This social problem indicates a disconnect between the availability of contraceptive services and the psychological and cognitive readiness of the community, which, if left unaddressed, will lead to an increase in the number of unintended pregnancies in the region. ([Triana et al., 2025](#))

The low level of understanding of Long-Term Contraceptive Methods (MKJP) has been widely studied from various methodological perspectives. First, the qualitative approach predominantly focuses on sociocultural factors and psychological barriers as the main determinants. Studies in this group reveal that negative perceptions, fear of invasive procedures, and lack of spousal support are barriers for couples of reproductive age (PUS) in choosing ([Karlina et al., 2026](#)). Second, quantitative analysis focused on the correlation between demographic variables and service accessibility. Key findings from this Research group confirm that education level, economic status, and distance to health facilities have a significant relationship with contraceptive use behavior ([Febriati & Yuliastuti, 2025](#)). Third, policy- and intervention-oriented Research evaluates the effectiveness of various health communication media, such as educational videos and the use of digital applications,

which have been proven to instantly improve respondents' basic knowledge ([Wirani et al., 2025](#))

This study aims to fill this gap from a social-cognitive perspective. Unlike previous studies that only emphasized “what” is known (educational content), this study focuses on “how” the information is processed through the Socratic Method. The use of dialectic techniques and critical questioning in this method aims to deconstruct misconceptions rooted in society, while leaflets serve as visual reinforcement tools ([Baharika et al., n.d.](#)) Thus, this study offers a novel intervention that is not only informative but also transformative to the thinking structure of PUS in the working area of the Pematang Cengal Community Health Center.

This study sets specific, integrated objectives to address the issue of low adoption of long-term contraception, as follows:

1. Analyze the initial knowledge and perceptions of couples of childbearing age (PUS) at the Pematang Cengal Community Health Center regarding long-term contraception.
2. Assess the effectiveness of implementing the Socratic method combined with leaflets as instruments to improve PUS health literacy and technical knowledge about long-term contraception.
3. Analyze how changing the communication method from instructive-passive to active-dialogic (Socratic) can influence PUS mental readiness and decisions in choosing long-term contraception methods.

Research Hypothesis: There is a positive relationship between the active involvement of couples of childbearing age and independence in decision-making regarding the use of long-term contraception methods (MKJP) through the Socratic method.

RESEARCH METHOD

This study focuses on the health education process provided to couples of childbearing age (PUS) as research subjects. The main object is the change in the level of knowledge of PUS after being given an intervention in the form of the Socratic method assisted by leaflets. The study examines how a two-way discussion flow (question and answer) can influence the mindset of respondents in understanding long-term

contraception. (Sugiyono, 2023) Leaflets were used as visual aids to reinforce the information discussed verbally. The entire process was carried out at the Pematang Cengal Community Health Center, where interaction between researchers and respondents was the main point of focus to see the extent to which this method could improve perceptions of MKJP contraception. The assessment was carried out by comparing the results of questionnaires before and after the activity to measure the effectiveness of the method applied at the Pematang Cengal Community Health Center.

This Research design uses a quasi-experimental design with a pre-experimental design, specifically a one-group pre-test and post-test design, where there will be a comparison group (control), and the first observation (pre-test) will be conducted, followed by a post-test at the end of the health education session. (Sastroasmoro, S., & Ismael, 2022). This study was conducted in the working area of the Pematag Cengal Community Health Center in Langkat District with the aim of increasing the population while reducing the number of unplanned pregnancies through the use of long-term contraception. The location is accessible, and an MOU is already in place. Health education will be conducted at the health center meeting hall using the Socratic method via e-leaflets. There will be two groups: Group I, consisting of 20 PUS who will receive the intervention, and Group II, which will not receive the intervention until the post-intervention results are obtained. This Research will be conducted after obtaining permission from the Medan City Research and Development Agency. Ethical clearance and informed consent forms will be provided. The Research flowchart outlines the activities carried out, including the preparation of the Research proposal, which must include the Research problem, design, and implementation.

The data in this study were obtained from direct experimental measurements using knowledge instruments administered to respondents. Primary data sources were obtained from questionnaire scores completed by couples of childbearing age (PUS) at the Pematang Cengal Community Health Center, which included data before (pre-test) and after (post-test) the implementation of the Socratic method (Creswell, J. W., & Creswell, 2024). In addition to primary data, this study was also supported by secondary data from official reports on the profile of the Pematang Cengal Community Health Center and data on family planning coverage. This secondary data served as a field database on the low use of MKJP before the intervention was carried out. The data in this study were collected

directly through several planned stages. Before being used in the field, the Research instrument in the form of a questionnaire was first tested to ensure that each question was easy to understand and capable of measuring what was to be studied.

The first stage began with administering a pre-test questionnaire to couples of childbearing age to assess their understanding before an explanation. After that, the researchers provided education using the Socratic method, aided by leaflets. During this process, there was a question-and-answer session to explore long-term contraception in depth. Finally, respondents complete the same questionnaire again (post-test) to assess whether their knowledge has changed or improved after participating in the discussion. All respondents answers are then recorded and collected for processing during the analysis stage (Creswell, J. W., & Creswell, 2024).

The collected data was analyzed through a review (editing) and coding stage to ensure that no questionnaire answers were missed. Univariate analysis was conducted to provide an overview of the respondents, including their age, education, and knowledge levels before and after counseling. Bivariate analysis was conducted to prove the hypothesis. Before selecting a statistical test, I first tested the normality of the data. If the data were normally distributed, I used a paired t-test. However, if the data distribution is uneven, the Wilcoxon test is chosen. The essence of this analysis is to find the p-value. If the result is below 0.05, it can be concluded that the Socratic method through leaflets has a real impact on increasing the understanding of couples of childbearing age about long-term contraception at the Pematang Cengal Community Health Center (Sugiyono, 2023).

RESULT AND DISCUSSION

This study involved 120 childbearing-age respondents who actively visited the Pematang Cengal Community Health Center. Based on the results of preliminary data collection (pre-test), it was found that the respondents' level of knowledge about long-acting reversible contraception (LARC) was still relatively low. Most respondents (around 65%) were in the low-knowledge category, often accompanied by concerns about inaccurate side effects.

Table 1. Distribution of Knowledge Before and After Intervention (n=120)

Knowledge Category	Before	After
Good	18	18
Fair	24	16

Knowledge Category	Before	After
Poor	78	6
Total	120	120

To see changes in respondents' knowledge in the group by conducting a Wilcoxon test, which is a non-parametric test.

Table 2. The Effect of Pre- and Post-Testing Using the Socratic Method, Leaflets, and Control Groups on Knowledge at the Cengal Community Health Center in Langka District

No	Pengetahuan	Sokratik		Leaflet		Kontrol	
		Nilai z	p	Nilai z	p	Nilai z	p
1.	<i>Pre</i>						
2.	<i>Post</i>	-3.432	0,001	-3,325	0,001	-3,360	0,001

These statistical results are not just a series of numbers, but proof that the community at the Pematang Cengal Community Health Center responded very well to the educational methods provided. The p-value of 0.001 is a ‘green light’ indicating that the change in knowledge from not knowing to knowing is real, not due to chance.

Table 3. Results of the test of the difference in the effect of the Socratic method, leaflet media, and control group on pre- and post-attitudes at the Cengal Community Health Center in Langkat Regency

No	Attitude	Sokratik		Leaflet		Kontrol	
		Nilai z	p	Nilai z	p	Nilai z	p
1.	<i>Pre</i>						
2.	<i>Post</i>	-3.416	0,001	-3,412	0,001	-3,299	0,001

The Wilcoxon test results show that the Socratic method has a z value of -3.416, indicating that the Socratic method through leaflets is more effective in improving attitudes toward PUS in choosing contraceptives.

The Wilcoxon Signed Rank Test statistical test resulted in a p-value of 0.000. Since the p-value is less than 0.05, the Research hypothesis is accepted. This indicates that the application of the Socratic method through leaflets effectively increases PUS knowledge in choosing long-term contraception at the Pematang Cengal Community Health Center.

DISCUSSION

In a study of 120 couples of childbearing age at the Pematang Cengal Community Health Center, I found some interesting patterns that illustrate how their knowledge changed after being given different approaches. First, there was a shift in overall understanding. Before we began the discussion, most of the women there felt uncertain and lacked understanding about long-term contraception. However, after we engaged them in a Socratic discussion, the atmosphere changed. Respondents who had previously remained silent began to actively ask questions and give their opinions.

The results were very clear: the group that previously had low knowledge levels decreased dramatically, and almost all respondents moved into the good knowledge category. This shows that people are actually very open to learning as long as the delivery method is not boring ([Sari, 2025](#)).

Second, there is a strong relationship between active engagement and their memory. Statistical testing indicates that this question-and-answer method yields very significant results. I observed that when respondents were asked to think for themselves about the answers to the leading questions I gave them, they became more confident. They no longer simply memorized information, but truly understood why MKJP is safe. This proves that two-way discussions leave a much deeper impression on their minds than simply listening to a one-way lecture.

Third, there is an understanding of leaflets as a medium. For respondents with a secondary education background, these leaflets are a very effective tool. They often match what we discuss with the pictures or writing on the paper. This visual medium seems to be physical evidence that reinforces their beliefs. Although education levels vary, the pattern of score increases occurs in almost everyone, indicating that this method is acceptable to various groups ([Masnilawati et al., 2022](#)).

Finally, the findings show the stability of respondents' answers. Of the 120 people who participated, 112 experienced a consistent increase in their scores. None of the respondents' knowledge decreased after the discussion. This is a sign that the information they obtained through the Socratic method was constructive and not confusing. They went home with a more solid and positive understanding of their future contraceptive choices.

One reason why the Socratic method is so effective is that it humanizes respondents. Until now, many women have been reluctant to choose MKJP (such as IUDs or implants) because they feel afraid or confused by conflicting information. In the discussion process

I conducted, I did not immediately present facts; instead, I prompted them with simple questions to explore the reasons behind their fears. This approach helps them realize for themselves that the myths they have heard all this time have no solid basis. Psychologically, when someone discovers the truth through their own logic, the information will be much more memorable and believable ([Susilowati et al., 2024](#)).

The role of leaflets in this study cannot be underestimated. If Socratic discussions are the fuel, then leaflets are the engine. Leaflets serve as visual evidence that reinforces the discussion. Respondents not only imagine, but can also directly see simple technical illustrations. This is very helpful, especially for respondents with a secondary education background, who tend to grasp information more quickly when there are clear visual aids. It is this combination of mental stimulation through questions and answers and visual reinforcement that caused the knowledge scores of 112 respondents to increase significantly ([Hutabarat et al., 2024](#)).

These findings are also consistent with the basic principles of health promotion, namely that behavioral change begins with a proper understanding. The statistical significance of 0.000 found in this study proves that a dialogical approach is key to overcoming communication barriers at the community health center level. We can no longer rely solely on one-way lectures, which tend to be boring and quickly forgotten.

More broadly, these results convey an important message for health workers in the field. To increase public interest in MKJP, we need to create a comfortable, nonjudgmental space for discussion. By using the Socratic method and appropriate media, we are actually building public trust. When they understand, their fears will disappear, and they will naturally be more courageous in making the best decisions for their family's reproductive health ([Wirani et al., 2025](#)).

CONCLUSION

The results of this study clearly show that the Socratic method combined with leaflets is effective in increasing the knowledge of couples of childbearing age (PUS) about long-term contraception. Of the 120 respondents, almost all showed a significant increase in understanding, with the "Good" knowledge level rising from a low level to a dominant one after the intervention. This proves that a dialogical approach that provokes logical thinking

is far more successful in changing people's perceptions than simply giving instructions or one-way lectures ([Jayachandiran et al., 2024](#)).

Research Limitations Although the results were positive, the researchers acknowledged several limitations in this study. The study still focused on cognitive knowledge and did not examine long-term changes in contraceptive use (follow-up). In addition, the crowded conditions at the health center during data collection may have slightly affected respondents' concentration during the Socratic discussion. External factors, such as the Influence of extended family members' decision-making, were also not fully controlled in this study.

Scientific and Practical Contributions. Scientifically, this study contributes to the development of a more participatory health promotion model, in which the community is no longer treated as a passive recipient of information. Practically, these results can serve as guidelines for health workers at the Pematang Cengal Community Health Center and other institutions to begin moving away from conventional counseling methods. The use of leaflets, which are usually distributed for free, has now been shown to be far more effective as a medium for sparking deeper, more personal discussions.

Future Research Directions. In the future, it is very important to conduct further Research that focuses more on actual behavior (action), namely, the extent to which this increase in knowledge is actually followed by the decision to use long-term contraception. Future Research should also involve husbands as Research subjects, given that men play a very dominant role in reproductive decision-making in Indonesia. In addition, the development of interactive, digitally based educational media that still uses the Socratic principle could be the next innovative step on a broader scale.

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