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Narrative Review

The Effectiveness of the Balanced Counseling Strategy and the Flipchart Counseling Method on the Knowledge Level of Family Planning Acceptors in the Working Area of Puskesmas Guguk Panjang, Bukittinggi City in 2025

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ABSTRACT

Background: The Family Planning (FP) program requires effective counseling to improve childbearing-age women's knowledge in choosing contraceptives. At Guguk Panjang Public Health Center, new FP uptake remains low at 3.68% due to information gaps and client hesitation. This study compares the effectiveness of the balanced counseling strategy (BCS) and flipchart counseling on mothers' knowledge levels in Bukittinggi in 2025.

Methods: This quantitative study applied a quasi-experimental approach with a two-group pretest-posttest design. The population comprised childbearing-age women not currently using contraception. Using purposive sampling, 18 respondents were selected and divided equally into the balanced counseling group (9 respondents) and the flipchart counseling group (9 respondents). Data collected via structured questionnaires were analyzed using the paired sample t-test.

Results: Both methods significantly increased maternal knowledge. The mean knowledge score in the balanced counseling group rose from 32.22 to 89.44 (mean increase: 57.22). In the flipchart group, the score increased from 32.78 to 85.65 (mean increase: 52.87). Statistical analysis confirmed significant pre- and post-education differences in both groups ($p = 0.000$), with the balanced counseling approach yielding a higher knowledge improvement.

Conclusion: The balanced counseling strategy is significantly more effective than flipchart counseling in enhancing FP acceptors' knowledge. Healthcare providers in primary care facilities should prioritize balanced counseling as the main educational strategy.

INTRODUCTION

Population growth is a global demographic issue that directly impacts various sectors of national development and the level of public welfare [1]. Based on the World Population Data Sheet (2023) report, Indonesia ranks fourth in the world with an estimated population reaching 265.2 million people. To control the rate of population growth and improve the quality of family life, the

Government of Indonesia promotes the Family Planning (KB) Program through birth spacing management and the rational use of contraceptives[2]. The success of this program is heavily determined by the understanding and awareness of Couples of Childbearing Age (PUS) in choosing contraceptive methods that suit their reproductive needs [3].

Although access to family planning services continues to be expanded across various basic healthcare facilities, the main challenges faced remain the high dropout rates and low coverage of new family planning participants [3]. This issue is largely driven by the limited knowledge among women of childbearing age regarding the benefits, mechanisms of action, and side effects of each type of contraceptive [4,5]. Furthermore, the widespread of negative myths and misconceptions in society often triggers fear and hesitation among potential acceptors to start family planning. This condition highlights the importance of providing objective education and effective counseling so that the community is able to make independent and conscious decisions (informed choice) [6,8].

In the process of reproductive health communication and education, counseling media plays a key role in facilitating the delivery of information. The government, through the Ministry of Health of the Republic of Indonesia and the BKKBN, has established the Decision-Making Tool (ABPK) based on flipchart media as the standard counseling instrument in primary care facilities [3]. The use of the ABPK flipchart media helps healthcare providers deliver material in a structured and detailed manner, particularly for target audiences with a basic education level [8]. However, counseling sessions utilizing a single flipchart sometimes tend to be one-way communication and deliver too much information at once, resulting in an interactive discussion space that is not yet fully optimal for exploring the specific needs of potential acceptors [9,10].

As an effort to improve the quality of two-way communication, the Balanced Counseling Strategy (BCS) was developed. This method applies an interactive interpersonal communication approach with the assistance of specific tools, such as method choice cards, screening algorithms, and information brochures. Through balanced counseling, the educational process is fairly divided into three stages (screening, choosing, and post-choice), thereby encouraging active client participation in sharing their health conditions. Various research findings demonstrate that a structured approach based on balanced counseling significantly improves knowledge, shapes positive attitudes, and fosters appropriate contraceptive selection [9,12].

Problems related to limited information and hesitation among potential acceptors are also found at the primary healthcare level in the regions. In the working area of the UPT Puskesmas Guguk Panjang, Bukittinggi City in 2025, active family planning participant coverage was recorded at 74.1% (with total acceptors at 76.55%), yet the achievement rate for new family planning participants remained very low at only 3.68%. Based on a preliminary study through interviews with 10 women of childbearing age in the area, 6 of them admitted to not practicing family planning because they felt confused and lacked adequate information to determine a contraceptive method that suited their physical condition. Furthermore, there has been no scientific study conducted at this community health center that directly compares the effectiveness of the balanced counseling strategy against the flipchart counseling method.

Based on this problem gap, this study aims to analyze and compare the effectiveness of the Balanced Counseling Strategy and the Flipchart Counseling Method on the knowledge level of family planning acceptors in the working area of Puskesmas Guguk Panjang, Bukittinggi City in 2025. The results of a quasi-experiment conducted on 18 respondents of reproductive-aged women, divided into two treatment groups, showed that the balanced counseling group experienced an increase in the mean knowledge score from 32.22 (pretest) to 89.44 (posttest), with a mean increase of 57.22. Meanwhile, the flipchart counseling group increased from 32.78 (pretest) to 85.65 (posttest), with a mean increase of 52.87, where the paired sample t-test confirmed a significant difference in both groups ($p = 0.000$). The findings of this study are expected to provide evidence-based practice references for midwives and healthcare providers at community health centers in determining the most effective and efficient contraceptive counseling strategy.

RESEARCH METHODS

This quantitative study applies a quasi-experimental design with a two-group pretest-

posttest design to analyze and compare the effectiveness of two contraceptive counseling methods (Darmastuti et al., 2021). The research was conducted in the working area of UPT Puskesmas Guguk Panjang, Bukittinggi City, from September to October 2025. The study population consisted of all women of childbearing age (WUS) in the community health center's working area who had never used any contraceptives (potential new acceptors). Sampling was performed using a purposive sampling technique based on inclusion criteria (WUS aged 15–49 years, not currently practicing family planning, capable of cooperative communication, and willing to sign an informed consent) and exclusion criteria (WUS who were severely ill or absent during the posttest). Based on the sample size calculation for a finite population, a total sample of 18 respondents was obtained and divided equally into two treatment groups: 9 respondents in the balanced counseling group and 9 respondents in the flipchart counseling group [3,10].

The dependent variable in this study is the mother's knowledge level regarding contraception, measured using a closed-structured questionnaire instrument consisting of 20 multiple-choice questions. The questionnaire measures domains of understanding concerning the basic concepts of family planning, types of contraception, mechanisms of action, effectiveness, and side effect management [9]. The reliability test of the questionnaire yielded a Cronbach's Alpha value of 0.840, declaring the instrument consistent and reliable for use. The treatment media used consisted of the Balanced Counseling Strategy (BCS) tools (choice cards, screening algorithms, and brochures) for the first group, and the standard Ministry of Health of the Republic of Indonesia and BKKBN Decision-Making Tool (ABPK) family planning flipchart media for the second group [3].

The primary data collection procedure was carried out individually through three activity phases. The initial phase began with the completion of a pretest questionnaire for 10–15 minutes by all respondents in both groups to measure baseline knowledge prior to the intervention. Subsequently, the treatment phase was delivered through a 20–30 minute, individual face-to-face session, where the first group received a guidance session utilizing the Balanced Counseling Strategy, while the second group received education using the ABPK flipchart media. After the counseling session concluded, all respondents were immediately requested to refill the posttest questionnaire with the identical items to assess the immediate change in knowledge scores.

The processing of research data was conducted using IBM SPSS Statistics software, with the statistical significance level set at $\alpha = 0.05$. Univariate data analysis was performed to describe the frequency distribution of respondents' characteristics and to calculate the mean knowledge scores before and after the intervention [4]. Data distribution testing using the Shapiro-Wilk test confirmed that the knowledge score data in both groups were normally distributed ($p > 0.05$). Bivariate analysis to test the effectiveness before and after the intervention within each group was analyzed using the parametric paired sample t-test [9]. Meanwhile, the comparison of the difference in effectiveness regarding score enhancement (mean gain) between the treatment groups was tested using the independent sample t-test. All stages of this research were carried out by upholding research ethics principles, including confidentiality, informed consent, and the protection of respondents' rights.

RESULTS

1. Univariate Analysis

Univariate analysis was used to describe the mean knowledge scores of family planning acceptors before (pretest) and after (posttest) the intervention in the Balanced Counseling Strategy group and the Flipchart Counseling method group. A summary of the respondents' knowledge score distribution is presented in Table 1 below:

Table 1. Distribution of Mothers' Mean Knowledge Scores Before and After Intervention across Treatment Groups

Intervention Group	Measurement	Mean	Standard Deviation (SD)	Mean Gain
Balanced Counseling Strategy (BCS)	*Pretest*	32,22	18,39	57,22
	Posttest	89,44	4,64	
Flipchart Counseling	*Pretest*	32,78	21.84	52,87

Method (ABPK)			
	Posttest	85,65	11,99

Based on Table 1, it is shown that in the Balanced Counseling Strategy group, the mothers' mean knowledge score prior to the intervention (pretest) was 32.22 (SD = 18.39). Following the balanced counseling intervention, the mothers' mean knowledge score increased significantly to 89.44 (SD = 4.64), with a mean gain of 57.22.

Meanwhile, in the Flipchart Counseling Method group, the mothers' mean knowledge score prior to the intervention (pretest) was 32.78 (SD = 21.84). After receiving the ABPK flipchart media education, the mothers' mean knowledge score increased to 85.65 (SD = 11.99), with a mean gain of 52.87.

2. Bivariate Analysis

Bivariate analysis was performed to test the significance of the difference in knowledge scores before and after the intervention within each treatment group using the parametric paired sample t-test (as the data were normally distributed based on the Shapiro-Wilk test). The results of the bivariate analysis are presented in Table 2 below:

Table 2. Statistical Test Results of the Mean Knowledge Score Differences Before and After Intervention

Treatment Group	Measurement	Mean	SD	Mean Gain	*p-value*	Remarks
Balanced Counseling Strategy	*Pretest*	32,22	18,39	57,22	0,000	Significant (p < 0,05)
	Post test	89,44	4,64			
Flipchart Counseling Method	*Pretest*	32,78	21,84	52,87	0,000	Significant (p < 0,05)
	Post test	85,65	11,99			

Based on Table 2, the paired sample *t*-test results for the Balanced Counseling Strategy group yielded a *p*-value of 0.000 ($p < 0.05$). This indicates that the implementation of the Balanced Counseling Strategy is significantly effective in improving the knowledge level of family planning acceptors. In the Flipchart Counseling Method group, the statistical test also obtained a *p*-value of 0.000 ($p < 0.05$), proving that the Flipchart Counseling Method is also significantly effective in increasing the mothers' knowledge.

Although both methods were statistically proven to be effective, the Balanced Counseling Strategy group resulted in a higher final mean knowledge score (posttest) of 89.44 and a larger mean gain of 57.22 compared to the Flipchart Counseling Method group, which achieved a posttest score of 85.65 and a mean gain of 52.87. Consequently, the Balanced Counseling Strategy is proven to be more effective than the Flipchart Counseling Method in improving the knowledge level of family planning acceptors in the working area of Puskesmas Guguk Panjang, Bukittinggi City in 2025.

DISCUSSION

The Effect of the Balanced Counseling Strategy on the Knowledge Level of Family Planning Acceptors

The results of this study demonstrate that the implementation of the Balanced Counseling Strategy (BCS) significantly improves mothers' understanding and knowledge regarding contraception. The substantial increase in the mean knowledge score, rising from 32.22 to 89.44, indicates that this interactive treatment media is capable of optimally transferring health information. Balanced counseling systematically divides the interaction process into three distinct stages (initial screening, method selection, and the provision of post-choice information) with the assistance of choice cards and screening algorithms [9].

This structure facilitates respondents in absorbing crucial information without being hindered by the complexity of medical terminology. Clients are encouraged to actively participate in sharing their physical conditions, ensuring that the education received is genuinely relevant to their personal needs. This finding aligns with previous research confirming that the implementation of a balanced counseling strategy is proven to significantly improve potential acceptors' retention and understanding regarding family planning method choices [9,11].

The Effect of the Flipchart Counseling Method on the Knowledge Level of Family Planning Acceptors

This study also demonstrates that providing counseling utilizing the Decision-Making Tool (ABPK) flipchart media is effective in improving the knowledge level of family planning acceptors, as indicated by the increase in the mean score from 32.78 to 85.65. The use of the flipchart, which features image-based illustrations and concise text, assists midwives in systematically explaining the mechanism of action, effectiveness rates, and side effect management of contraception. The graphic visualizations on this counseling instrument are proven to significantly aid the target audience—who possess varying educational backgrounds—in visualising crucial health information [8].

The ABPK developed by the Ministry of Health of the Republic of Indonesia in collaboration with the BKKBN serves as a standard guideline that guarantees the objectivity of information within primary healthcare services [3]. The findings of this study support previous scientific research concluding that the utilization of visual educational media based on flipcharts is capable of delivering a positive impact on improving public knowledge regarding family planning services [5,8].

Comparative Effectiveness Between the Balanced Counseling Strategy and the Flipchart Method

Although both counseling methods were statistically proven to enhance respondents' knowledge ($p = 0.000$), the comparative analysis demonstrates that the Balanced Counseling Strategy group achieved a higher mean knowledge score enhancement (mean gain) of 57.22 compared to the Flipchart group, which scored 52.87. The primary advantage of the balanced counseling strategy lies in its client-centered, two-way communication pattern. Through the utilization of method choice cards and individualized visual aids, balanced counseling creates a welcoming and interactive discussion atmosphere, thereby allowing respondents greater freedom to ask questions and express their concerns [9].

Conversely, the utilization of a single flipchart media sometimes tends to be dominated by one-way explanations from the counselor (one-way communication), resulting in an interactive discussion dynamic that is not yet as balanced as that of the balanced counseling strategy [10]. Therefore, the Balanced Counseling Strategy is highly recommended for implementation by healthcare providers at community health centers as an efficient and effective counseling tool to assist potential acceptors in making conscious and appropriate family planning decisions (informed choice).

CONCLUSION

Based on the results of the data analysis and discussion regarding the effectiveness of the Balanced Counseling Strategy and the Flipchart Counseling Method on the knowledge level of family planning acceptors in the working area of Puskesmas Guguk Panjang, Bukittinggi City in 2025, it can be concluded that both counseling methods are proven to be significantly effective in improving respondents' knowledge. The provision of education using the Balanced Counseling Strategy (BCS) yielded a highly significant increase in the mean knowledge score from 32.22 (pretest) to 89.44 (posttest), with a mean gain of 57.22. Meanwhile, the utilization of the Decision-Making Tool (ABPK) flipchart media was also proven effective in increasing the mean knowledge score from 32.78 (pretest) to 85.65 (posttest), with a mean gain of 52.87, where the paired sample *t*-test for both groups confirmed a significance value of $p = 0.000$. Although both treatment instruments are statistically proven to be effective, the Balanced Counseling Strategy demonstrated superior effectiveness compared to the Flipchart Method in enhancing the knowledge level of family planning acceptors. This advantage is indicated by the higher final mean score (posttest) and the larger mean gain achieved by the balanced counseling group, which is driven by a more interactive and structured two-way communication pattern tailored to the individual needs of potential acceptors.

RECOMMENDATIONS

The implications of these research findings generate several key recommendations for enhancing the quality of reproductive health services at the primary care level. For midwives and healthcare providers at Puskesmas Guguk Panjang, it is recommended to optimize the

Balanced Counseling Strategy as the primary counseling approach in daily family planning services, thereby facilitating open, two-way communication that empowers potential acceptors to make conscious and independent decisions (*informed choice*). From a managerial perspective, the leadership of UPT Puskesmas Guguk Panjang is expected to ensure the availability of balanced counseling toolkits in every family planning service room and to organize refresher courses on interactive counseling techniques for midwives and field workers. Furthermore, for future researchers, it is suggested to expand the scope of research variables by measuring behavioral attitudes and contraceptive continuity rates, as well as employing a true experimental design with a larger sample size to strengthen the generalizability of the research findings.

Author Contribution Statement

UE conceptualized the journal article, directed the statistical analysis, and drafted the final manuscript. OM conducted field data collection, implemented the research intervention, and prepared the initial report draft. NSR guided the research methodology design and critically reviewed the manuscript. IAR contributed to data processing and the enrichment of the scientific discussion. FAP performed the final review of the manuscript and approved the final version for publication.

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