

## MONITORING OF CONTRACEPTION PILL CONSUMPTION BASED ON APPLICATION TO IMPROVE CONTRACEPTION SUCCESS IN CONTRACEPTION PILL ACCEPTORS

Ni Ketut Noriani<sup>1</sup>, Ni Kadek Neza Dwiyantri<sup>2\*</sup>, Ni Wayan Sri Rahayuni<sup>3</sup>

ITEKES Bali

Email: nikitutnoriani@gmail.com

### ABSTRAK : PEMANTAUAN KONSUMSI PIL KONTRASEPSI BERDASARKAN PENERAPAN UNTUK MENINGKATKAN KEBERHASILAN KONTRASEPSI PADA PENERIMA PIL KONTRASEPSI

Latar Belakang: Kontrasepsi adalah upaya mencegah kehamilan yang bersifat sementara atau menetap, yang dapat dilakukan tanpa menggunakan alat, secara mekanis, menggunakan alat/ obat, atau dengan operasi. Tujuan dari penggunaan kontrasepsi adalah menghindari atau mencegah terjadinya kehamilan sebagai akibat adanya pertemuan antara sel telur dengan sel sperma. Berdasarkan maksud dan tujuan kontrasepsi, maka yang membutuhkan kontrasepsi adalah pasangan yang aktif melakukan hubungan seks dan kedua-duanya memiliki kesuburan normal namun tidak menghendaki kehamilan. Kontrasepsi terbagi menjadi dua macam yaitu kontrasepsi hormonal dan kontrasepsi nonhormonal (Zettira & Nisa, 2015).

Tujuan: Penelitian ini bertujuan untuk menganalisis dampak penggunaan alat kontrasepsi pil KB terhadap kesehatan wanita.

Metode Metode yang digunakan adalah kuantitatif dengan desain cross sectional, melibatkan 100 subjek penelitian yang terdiri dari wanita yang sedang atau pernah menggunakan pil KB. Pemilihan subjek dilakukan melalui teknik non-probability sampling dengan metode accidental sampling. Hasil penelitian diharapkan memberikan wawasan mengenai efek penggunaan pil KB melalui penggunaan aplikasi KB. Temuan ini diharapkan dapat menjadi dasar bagi pengembangan program kesehatan reproduksi yang lebih baik penelitian ini bertujuan untuk mengevaluasi tingkat pengetahuan, kepuasan, dan kepatuhan pengguna terhadap aplikasi kontrasepsi pil KB. Penelitian ini menggunakan desain cross sectional dengan 100 subjek yang terdiri dari wanita yang sedang atau pernah menggunakan pil KB, penelitian ini menerapkan metode non-probability sampling melalui accidental sampling.

Hasil: Hasil menunjukkan bahwa 60% responden memiliki pengetahuan tinggi, yang berkontribusi pada pengambilan keputusan yang lebih baik.

Kesimpulan: Pendidikan dan penyuluhan yang efektif terbukti penting dalam meningkatkan pengetahuan masyarakat. Tingkat kepuasan pengguna aplikasi juga tinggi, dengan 40% responden sangat puas, sementara 45% merasa puas. Kepuasan ini dapat meningkatkan loyalitas pengguna dan reputasi layanan. Sebanyak 60% responden menggunakan aplikasi setiap hari, menunjukkan bahwa layanan ini menjadi bagian penting dari rutinitas mereka.

Saran: Penelitian ini menekankan perlunya program intervensi untuk kelompok dengan pengetahuan rendah serta strategi untuk meningkatkan pengalaman pengguna bagi mereka yang kurang puas dan jarang menggunakan layanan.

Kata Kunci: Pengetahuan, Kepatuhan, Aplikasi KB pil

### ABSTRACT

Background: Contraception is an effort to prevent pregnancy that is temporary or permanent, which can be done without using tools, mechanically, using tools/drugs, or by surgery. The purpose of using contraception is to avoid or prevent pregnancy as a result of the meeting between the egg cell and the sperm cell. Based on the intent and purpose of contraception, those who need contraception are couples who are sexually active and both have normal fertility but do not want pregnancy. Contraception is divided into two types, namely hormonal contraception and non-hormonal contraception (Zettira & Nisa, 2015).

Objective: This study aims to analyze the impact of the use of birth control pills on women's health.

Method The method used is quantitative with a cross-sectional design, involving 100 research subjects consisting of women who are or have used birth control pills. Subject selection was carried out through a non-probability sampling technique with an accidental sampling method. The results of the study are expected to provide insight into the effects of using birth control pills through the use of the KB application. These findings are

expected to be the basis for the development of better reproductive health programs. This study aims to evaluate the level of knowledge, satisfaction, and compliance of users with the birth control pill contraceptive application. This study uses a cross-sectional design with 100 subjects consisting of women who are or have used birth control pills, this study applies a non-probability sampling method through accidental sampling.

Results: The results show that 60% of respondents have high knowledge, which contributes to better decision making.

Conclusion: Effective education and counseling have proven important in increasing public knowledge. The level of satisfaction of the application users is also high, with 40% of respondents very satisfied, while 45% are satisfied. This satisfaction can increase user loyalty and service reputation. As many as 60% of respondents use the application every day, indicating that this service is an important part of their routine.

Suggestion: This study emphasizes the need for intervention programs for groups with low knowledge as well as strategies to improve user experience for those who are less satisfied and rarely use the service.

Keywords: Knowledge, Compliance, Birth control pill application

## INTRODUCTION

Population growth in Indonesia, which is increasing by around 4.5 million people every year, is a very worrying problem for the government because the government must work harder to suppress the population growth rate to improve people's welfare (Setiawati, Handayani and Kuswardinah, 2017). This growth rate is influenced by 3 main factors, namely births, deaths and population migration. To suppress the population growth rate through the birth factor, the Indonesian government has implemented the National Family Planning (KB) program.

Contraception is an effort to prevent pregnancy that is temporary or permanent, which can be done without using tools, mechanically, using tools/drugs, or by surgery. The purpose of using contraception is to avoid or prevent pregnancy as a result of the meeting between egg cells and sperm cells. Based on the intent and purpose of contraception, those who need contraception are couples who are sexually active and both have normal fertility but do not want pregnancy. Contraception is divided into two types, namely hormonal contraception and non-hormonal contraception (Zettira & Nisa, 2015).

The hormonal contraceptive method is the method most in demand by the public. This method is considered as one of the methods with a high level of effectiveness. Although the level of effectiveness is high, in its implementation the hormonal contraceptive method experiences many obstacles, both due to the lack of knowledge of acceptors about contraception or the side effects caused by the contraception (Widiastuti et al., 2019). Birth control pills are known to be more widely used by family planning because they are the most effective, safe, reversible and easy to use (Farida, 2017). The success of birth control pills requires

high discipline or compliance to always take birth control pills according to the existing schedule. If you are not disciplined in using birth control pills, it is feared that pregnancy will occur, where birth control pills must be taken every day and if you forget, it will increase the failure rate (Ermawati, 2013). The non-compliance of birth control pill acceptors in taking pills every day can result in failure to occur unplanned pregnancies. This is not because of the low knowledge of acceptors but the need for reminders in the form of using applications. This can affect compliance, one of which is by using the Google Calendar application. (Ermawati, 2013).

Family planning report from the Klungkung Regency Health Office, in 2020 the target of Fertile Age Couples (PUS) was 163,694 targets. The number of acceptors using MKJP was 35,178 (47.8%), the most dominant being the Intrauterine Device (IUD) KB as many as 27,515 (78.21%), for those using Non MKJP as many as 38,363 (52.16%) and the most dominant was injection 25,731 (67%), it can be seen that the use of Non MKJP is still the highest from MKJP (Klungkung Regency Health Office, 2020).

The results of a preliminary study conducted at the Klungkung I Health Center still found acceptors who often forget to take the Pill regularly every day.

## RESEARCH METHODS

This study uses a quantitative method. This study is a cross-sectional study conducted on 100 research subjects consisting of women who are currently or have used birth control pills. Determination of research subjects using non-probability sampling techniques with accidental sampling methods.

## RESEARCH RESULTS

General Characteristics of Research Subjects, Respondents in this study were women of childbearing age as acceptors of birth control pills,

who lived in the working area of the Klungkung 1 health center. The characteristics of respondents are described based on age, education and occupation which are presented in table form.

**Table 1**  
**Characteristics of respondents**

Characteristics	Frequency (person)	Proportion (%)
Age		
< 20 year	1	(1%)
20–29 year	18	(18%)
30–39 year	43	(43%)
40–49 year	28	(28%)
50–59 year	9	(9%)
>59 year	1	(1%)
Education		
Dud not from elementry school	2	(2%)
Elementry School	21	(21%)
Junior High School	24	(24%)
Senior High School	47	(47%)
University	6	(6%)
Occupation		
Housewife	76	(76%)
PNS	8	(8%)
Private	10	(10%)
Self-employed	6	(6%)

Source: Research Data

From the respondent characteristics data, 100 samples of mothers were obtained who were or had used birth control pills for contraception at the Klungkung 1 Health Center. Based on Table 5.1, it can be seen that the age of mothers who mostly use birth control pills is 30-39 years old. At that age, married couples plan a program to stop the desire to have more children. This is understandable because women aged 35 years and over have a greater risk of death due to pregnancy and childbirth (Sibuea et al., 2013). Based on Table 5.1, the average respondent who uses birth control pills is a high school graduate, which is 47 respondents. However, the mother's high education does not correlate with the level of knowledge regarding the use of birth control pills (Infodatin, 2014). Based on the data, 76 respondents are housewives and the rest work as private employees, self-employed.

Based on 2, this table illustrates the distribution of respondents' knowledge levels in the high, medium, and low categories. There are 60 respondents (60%) who have a high level of knowledge. This shows that the majority of respondents have a good understanding of the topic being studied. Meanwhile, 30 respondents (30%) are in the medium knowledge level category. This

indicates that they have sufficient knowledge, but may still need improvement to reach a higher level, and those with low knowledge are only 10 respondents (10%) who are included in the low category. This shows that a few respondents have inadequate knowledge of the topic.

**Table 2**  
**Categories of respondents based on level of knowledge**

Knowledge level category	Frequency (person)	Proportion (%)
High	60	60 %
Medium	30	30 %
Low	10	10 %

Table 3 illustrates the distribution of respondents' satisfaction levels towards a service or product in the categories of very satisfied, satisfied, and less satisfied. Respondents in the very satisfied category were 40 respondents (40%) who stated that they were very satisfied. This shows that a large group of respondents felt very positive about their experience. While satisfied, 45 respondents

(45%) were in the satisfied category. This means that the majority of respondents felt satisfied, although not as strong as the very satisfied category, and only 15 respondents (15%) who were less satisfied stated that they were less satisfied. This shows that a small number of respondents felt not completely satisfied with the service or product received. Overall, these results show that the majority of respondents (85%) felt satisfied or very satisfied, indicating a good level of satisfaction among users.

**Table 3**  
**Distribution of the level of satisfaction of users of the Pill Birth Control Application**

Knowledge level category	Frequency (person)	Proportion (%)
Very Satisfied	40	40 %
Satisfied	45	45 %
Not satisfied	15	15 %

**Tabel 4**  
**Frequency distribution of application usage**

Usage level categories	Frequency (person)	Proportion (%)
Every day	60	60 %
A few times a week	30	30 %
Rarely	10	10 %

Table 4 shows the frequency and percentage of use of a service or product by respondents in three categories: every day, several times a week, and rarely. Respondents who use the application every day, 60 respondents (60%) use the service or product every day. This shows that the majority of respondents make this service or product a routine part of their activities. The use of the application several times a week, there are 30 respondents (30%) who use this service or product several times a week. This shows that they interact quite often, although not every day. Rare use is only 10 respondents (10%) who use this service or product rarely. This percentage shows that a small number of respondents do not rely on this service or product in their daily activities.

## DISCUSSION

The data provided shows the distribution of respondents' knowledge levels which are divided into three categories: high, medium, and low. Good knowledge is important in the context of decision-making and active participation in society. High level of knowledge (60%, 60 respondents) A high level of

knowledge among respondents indicates that they are able to make good decisions. According to Prasetyo and Amini (2020), individuals with good knowledge tend to be more active in social participation and informed decision-making. This shows the importance of effective education and counseling to improve community knowledge with the category. medium (30%, 30 respondents) Respondents in this category have the potential to develop. Suhartini (2021) found that a participatory learning approach can improve individual understanding, especially in the context of adult education. Relevant training programs can help this group to further improve their knowledge. While with the low category (10%, 10 respondents) Although the percentage is small, individuals with low knowledge need attention. Sari and Nugroho (2022) showed that low knowledge can hinder active participation in society. Therefore, an intervention program designed to increase knowledge and confidence is needed for this group

Satisfaction level of using the KB Pill application. Very Satisfied (40%, 40 respondents) A high level of satisfaction reflects that the service meets or exceeds customer expectations. Putra and Rahayu (2019) explained that high customer satisfaction can increase loyalty and positive recommendations. Respondents who are very satisfied can be effective brand ambassadors, improving the reputation of the service. Satisfied (45%, 45 respondents) This group indicated that the service met most of their expectations. According to Rohman and Sari (2021), it is important to understand the factors that influence satisfaction so that services can be further improved. Feedback from this group can help formulate more effective improvement strategies. Less Satisfied (15%, 15 respondents) It is important to pay attention to the less satisfied group, as they can provide valuable insights. Husni and Fadhila (2020) showed that negative customer experiences can have a major impact on brand reputation. Identifying the reasons for dissatisfaction will help in designing interventions to improve customer experience. Level of compliance of users of the KB Pill application service

Respondents who use the application service every day (60%, 60 respondents): The high level of use indicates that this service is an important part of the respondents' daily routine. Widiastuti and Purnamasari (2021), found that relevant and useful services can meet basic needs, explaining this routine use. several times a week (30%, 30 respondents): Less intensive use indicates that the service is still considered useful. According

to Diana and Yulianti (2020), the frequency of use can be influenced by the user's perception of the ease and benefits of the service. Therefore, it is important to improve the understanding and accessibility of services for this group. rarely (10%, 10 respondents): Only a few respondents rarely use the service. Fadillah and Amiruddin (2021) noted that it is important to understand the behavior of customers who rarely use the service in order to design an effective marketing strategy. By knowing their needs and expectations, service providers can develop a more appropriate approach to increase engagement

## CONCLUSION

Improving Education and Training Programs To improve the knowledge of respondents who are moderate and low, it is recommended to develop more interactive and contextual education and training programs, according to the needs of the community. Participatory learning methods can increase engagement and understanding. Service Evaluation It is important to conduct regular evaluations of the services offered to identify aspects that need to be improved. Feedback from respondents who are less satisfied should be prioritized so that services can be adjusted to customer expectations. Appropriate Marketing Strategy To increase the frequency of use among respondents who rarely use the service, a more focused and targeted marketing strategy needs to be implemented. Counseling on the benefits and ease of access to the service can increase their engagement. Monitoring and Further Research It is recommended to conduct further research to monitor changes in the level of knowledge, satisfaction, and use of the service after the implementation of these suggestions. This will help in assessing the effectiveness of the interventions carried out and provide valuable information for future improvements.

## SUGGESTIONS

Women of Childbearing Age, For women of childbearing age to always be compliant in consuming birth control pills every day to prevent unwanted pregnancies

Health workers, Improvement of Education and Training Programs Develop more interactive and community-based education programs to improve the knowledge of medium and low respondent groups. The use of active learning methods, such as group discussions and case studies, can improve understanding. Periodic Service Evaluation Conduct regular evaluations of the services provided to identify areas that need

improvement. Using surveys and interviews to obtain feedback from respondents who feel dissatisfied is essential so that service providers can make appropriate improvements. Focused Marketing Implement a more focused marketing strategy to increase the frequency of service use among respondents who rarely use it. Inform about the benefits of the service through social media, marketing campaigns, and outreach activities in the community.

Loyalty Program Development, Create a loyalty program to increase the engagement of satisfied customers, so that they can become brand ambassadors and recommend the service to others. This can include discounts, rewards, or special access to additional services.

## REFERENCES

- Afandi, Muhamad, et al. (2013) Learning Models and Methods in Semarang Schools UNISSULA Press
- Afriyani, D., & Nurcahyani, D. (2021). Utilization of Digital Applications in Supporting Family Planning Programs in the Technology Era. *Journal of Public Health*, 9(2), 134–142. <https://doi.org/10.15294/jkm.v9i2.34121>
- Ardiansyah, M., & Sari, M. (2020). Duration of Use of Combination Birth Control Pills and Changes in Body Weight in Acceptors. *Journal of Health Education*, 8(1), 90–98.
- Central Statistics Agency, 2013. Indonesian Population Projection 2010-2035. Jakarta: Central Statistics Agency. pp. 23-25.
- BKKBN. (2020). Annual Report of Family Planning Program and Utilization of Information Technology. National Population and Family Planning Agency.
- BKKBN. (2020). Annual Report of Family Planning Program and Utilization of Information Technology. Jakarta: National Population and Family Planning Agency.
- Bali Provincial Health Office. (2021). Bali Provincial Health Profile 2020. Bali Provincial Health Office, 2013–2015
- Diana, R. & Yulianti, S. (2020). "User Perception of Public Services." *Journal of Public Administration*, 7(3), 34-45
- Ermawati, I, 2013. Relationship Between Compliance Level and Success of Birth Control Pill Acceptors. *Journal of Science Med*: 5 (2), pp 47-51
- Fauziah, N., & Hidayat, A. (2022). Effectiveness of Using Reproductive Health Applications to Improve Knowledge of Birth Control Pill Acceptors. *Journal of Nursing Science*, 10(1), 55–62.
- Family Planning: A Global Handbook for Providers (Updated 2018 Edition). World Health

- Organization. Retrieved from <https://www.who.int/reproductivehealth/publications/fp-global-handbook/en/>
- Husni, M. & Fadhila, R. (2020). "The Effect of Negative Experiences on Brand Reputation." *Journal of Management and Entrepreneurship*, 8(2), 89-98
- Handayani, S. D. (2010) *Textbook of Family Planning Services*. Yogyakarta: Pustaka Rihama. Ministry of Health of the Republic of Indonesia. (2021). *Guidelines for Pill Contraceptive Services in Primary Health Care*. Jakarta: Ministry of Health of the Republic of Indonesia.
- Retanti, D. A., Rakhmawati, P., Ningsih, F. H., Aliyah, Z. S., Nurcholida, R. D., Khoir, A. Z., Pujiastuti, D., Ardita, M. A., Nisa, S. K., & Ilmiah, L. Q. (2020). Relationship between Knowledge Level and Successful Use of Birth Control Pills. *Journal of Community Pharmacy*, 6(1), 23–30. <https://doi.org/10.20473/jfk.v6i1.21825> e-journal.unair.ac.id
- Ruliani, R., Jupriyono, J., & Toyibah, A. (2017). Duration of Use of Combination Pills and Changes in Acceptor Body Weight. *Journal of Health Education*, 6(1), 27–30. [https://doi.org/10.31290/jpk.v\(6\)i\(1\)y\(2017\).page:27-30](https://doi.org/10.31290/jpk.v(6)i(1)y(2017).page:27-30) ojs.poltekkes-malang.ac.id
- Lestari, W. D., & Rahmawati, A. (2023). The Effect of Using the "Halo KB" Mobile Application on Compliance with Birth Control Pill Use among Adolescents. *Journal of Health Technology*, 5(1), 25–33. <https://doi.org/10.31294/jtk.v5i1.12234>
- Nasution, R. F., & Syafitri, D. (2021). The Relationship between the Use of Combination Birth Control Pills and the Incidence of Hypertension. *Journal of Nursing*, 9(3), 210–218.
- Putra, A. & Rahayu, S. (2019). "Customer Satisfaction in Public Services." *Journal of Service Management*, 3(1), 67-75
- Putri, L. A., & Handayani, E. (2019). The Relationship between Compliance of Birth Control Pill Acceptors and Contraceptive Failure. *Sai Betik Nursing Scientific Journal*, 12(2), 120–127.
- Rohman, A. & Sari, D. (2021). "Factors Affecting Customer Satisfaction." *Journal of Economics and Business*, 10(2), 110-119
- Suhartini, N. (2021). "Participatory Approach in Adult Learning." *Journal of Education and Learning*, 8(2), 112-120
- Sari, R. & Nugroho, A. (2022). "The Impact of Knowledge on Community Participation." *Journal of Social Sciences and Humanities*, 6(3), 231-240
- Setiawan, R., & Wulandari, E. (2020). The Use of Digital Media in Family Planning Education: A Case Study of Android Applications for KB Acceptors. *Indonesian Journal of Health Promotion*, 15(1), 50–58.
- Suryani, I., Crhistinawati, A., & Diani, I. (2020). The Relationship between the Use of Hormonal Contraceptive Pills and the Incidence of Anemia in PMB BD W Sumedang Regency. *Masada Healthy Journal*, 17(2), 154–159. <https://doi.org/10.38037/jsm.v17i2.428> ejurnal.stikesdmb.ac.id
- Septya, P. D., Aditya, M., & Adriani, H. G. (2021). Monitoring the Use of Oral Contraceptive Pills with Hypertension Incidence: Literature Review. *Sainsbertek Scientific Journal of Science & Technology*, 1(2), 93–100. <https://doi.org/10.33479/sb.v1i2.93> sainsbertek.machung.ac.id
- Tatali, C. S., Kundre, R., & Bataha, Y. (2016). The Relationship between the Use of Combination Contraceptive Pills and Hypertension in Contraceptive Pill Acceptors at the Enemawira Health Center, Sangihe Regency. *Nursing Journal*, 4(1), 1–8. <https://doi.org/10.35790/jkp.v4i1.118>
- Widiastuti, D. & Purnamasari, R. (2021). "Basic Needs and Use of Services." *Journal of Public Health*, 15(4), 201-209
- World Health Organization. (2015). "Family planning/contraception." Retrieved from WHO website. Prasetyo, R. & Amini, T. (2020). "The Influence of Knowledge and Attitudes on Community Participation in Empowerment Programs." *Journal of Community Empowerment*, 4(1), 45-58
- WHO. (2019). *Family Planning: A Global Handbook for Providers (Updated 2018 Edition)*. World Health Organization. Retrieved from <https://www.who.int/reproductivehealth/publications/fp-global-handbook/en/>
- Yustiani, Laenggeng AH, Paudi RI. The Relationship between Housewife Education Level and Perception of Contraceptive Use in Tondo Village, Mantikulore District, Palu City. *eJipbiol*. 2013;2:30–5
- Yenie, H. (2017). The Relationship between Compliance of Family Planning Pill Acceptors and Contraceptive Pill Failure in South Lampung Regency. *Sai Betik Nursing Scientific Journal*, 12(2), 120–127. <https://doi.org/10.26630/jkep.v12i2.600>