

Analysis of Outpatient and Postpartum Family Planning Services in Makassar Teaching Hospitals for Two Years

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Abstract

Objective: To evaluate the distribution and characteristics of the family planning (FP) service acceptors in the outpatient clinics and postpartum wards in the main teaching hospital and its affiliated hospitals in Makassar in a two-year period.

Method: The retrospective descriptive study was conducted using FP service registers and patients' medical records from January 2023 to January 2024. Data included sociodemographic characteristics (age, parity, education, occupation), type of procedure (postpartum vaginal delivery, caesarean section, curettage), and contraceptive method chosen (implant, intrauterine device [IUD], sterilization). All eligible acceptors during the study period were included. The Data were analyzed descriptively and presented as the frequencies and percentages.

Result: The total of 5,684 FP acceptors is recorded. The most commonly used methods are IUD (2,882; 50.7%), implants (2,239; 39.4%), and sterilization (563; 9.9%). The majority of the acceptors are 20-35 years old (4,835; 85.1%) and have the parity two (1,978; 34.8%). The most contraceptive initiation occurs after the vaginal delivery (3,420; 60.2%). The high school graduates represent the largest education group (3,125; 54.9%), and housewives are the most frequent occupational group (3,974; 69.9%).

Conclusion: The postpartum FP services remain the main entry point for the contraceptive use in the teaching and affiliated hospitals. The counseling strengthening, especially during the antenatal and postpartum care, may further improve the uptake of the appropriate contraception in line with the socio-demographic needs.

Key words: Makassar, family planning, postpartum contraception, contraceptive method, outpatient service

Analisis Pelayanan Keluarga Berencana Rawat Jalan dan Pascasalin di Rumah Sakit Pendidikan di Makassar Selama Dua Tahun

Abstrak

Tujuan: Penelitian ini bertujuan mengevaluasi distribusi dan karakteristik akseptor pelayanan keluarga berencana (KB) pada poliklinik rawat jalan dan ruang nifas di rumah sakit pendidikan utama dan rumah sakit jejaring di Makassar selama periode dua tahun.

Metode: Metode yang digunakan dalam penelitian ini adalah deskriptif retrospektif dilakukan dengan menggunakan register pelayanan KB dan rekam medis pasien dari Januari 2023 hingga Januari 2024. Data yang dikaji meliputi karakteristik sosiodemografi (usia, paritas, pendidikan, pekerjaan), jenis tindakan (persalinan pervaginam pascapersalinan, seksio sesarea, kuretase), serta metode kontrasepsi yang dipilih (implan, alat kontrasepsi dalam rahim, sterilisasi). Semua akseptor yang memenuhi kriteria selama periode penelitian diikutsertakan. Data dianalisis secara deskriptif dan disajikan dalam bentuk frekuensi serta persentase.

Hasil: Sebanyak 5.684 akseptor KB tercatat. Metode yang paling banyak digunakan adalah alat kontrasepsi dalam rahim (2.882; 50,7%), implan (2.239; 39,4%), dan sterilisasi (563; 9,9%). Mayoritas akseptor berusia 20-35 tahun (4.835; 85,1%) dan memiliki paritas dua (1.978; 34,8%). Sebagian besar inisiasi kontrasepsi dilakukan setelah persalinan pervaginam (3.420; 60,2%). Lulusan Sekolah Menengah Atas merupakan kelompok pendidikan terbesar (3.125; 54,9%), sedangkan ibu rumah tangga merupakan kelompok pekerjaan terbanyak (3.974; 69,9%).

Kesimpulan: Pelayanan KB pascasalin tetap menjadi pintu masuk utama penggunaan kontrasepsi di rumah sakit pendidikan dan jejaring. Penguatan konseling, terutama pada masa antenatal dan pascasalin, dapat lebih meningkatkan pemilihan kontrasepsi yang tepat sesuai kebutuhan sosiodemografi.

Kata kunci: Keluarga berencana, kontrasepsi pasca persalinan, Makassar, metode kontrasepsi, pelayanan rawat jalan

Introduction

The family planning (FP) programs are essential preventive strategies to reduce the maternal morbidity and mortality, particularly by preventing the deaths that occur during the pregnancy, childbirth, and the postpartum period up to 42 days after the delivery. As one of the fundamental social programs, FP contributes significantly to the national development by improving the human resource quality, which is the prerequisite for the national progress and independence. The strategic role of FP in Indonesia has been recognized as the key effort in achieving the fourth and fifth targets of the Millennium Development Goals (MDGs) in 2015.¹

Indonesia, as a developing country, continues to encounter some challenges related to the high population number and growth rate. According to the estimation by the Ministry of Health in the Data and Information Center and the Central Bureau of Statistics (BPS), Indonesia's population in 2017 reached 261,890,872 with the annual growth rate of 1.49%, equivalent to around four million people per year. The uncontrolled growth risks triggering the population explosion with the impacts on the multiple sectors, highlighting the urgent need for the effective FP programs.²

To achieve the balanced population growth and improve the family well-being, the Indonesian government enforces the national FP program guided by Law No. 52 Year 2009. The program emphasizes the ideal age of marriage, optimal age for childbirth, desired number of children, appropriate birth spacing, and reproductive health education. Various strategies have been undertaken to optimize FP implementation, including those outlined in the National Medium-Term Development Plan (RPJMN) 2015-2019, which prioritized to increase the use of long-acting reversible contraceptives (LARCs).³

The word “contraception” is derived

from the terms “contra” and “conception” which aims to avoid the pregnancy by preventing the fertilization or implantation. Methods are generally categorized into the permanent and temporary methods. The permanent method comprises the sterilization, and temporary methods include the hormonal or barrier contraception. Broadly, three mechanisms are recognized: preventing the sperm from reaching the ovum (e.g., condoms, diaphragms, spermicides, sterilization), preventing ovulation (e.g., hormonal pills, injections, implants), and preventing implantation (e.g., intrauterine devices [IUD]). While no single method is universally ideal, the use of contraception is far more effective than no method at all. The “ideal” contraceptive is one that is safe, effective, simple, reversible, affordable, accessible, and acceptable across different populations.⁴⁻⁷

The quality FP services are defined not only by the accessibility of the contraceptives but also by the adherence to the clinical standards, ethical codes, and client's satisfaction. Low rates of complication, discontinuation, and failure are considered the markers of the quality services. Data from the Maternal and Child Health Program in 2012 showed that the rates of complication, discontinuation, and failure in the contraceptive use were within the acceptable tolerance limits, namely 2.24%, 2.61%, and 0.06%, respectively. Nevertheless, the challenges remain in improving the service quality, with provider's competence, availability of facilities, contraceptive supplies, service guidelines, and quality assurance systems all playing the critical roles.⁸⁻¹⁰

The FP program targets both the direct beneficiaries, namely couples of reproductive ages, and indirect beneficiaries, such as the program managers and policy makers. The primary objective is to reduce the fertility rate through the sustained contraceptive use

while promoting the high-quality families and social well-being. However, unmet needs remain the pressing concern. The 2012 Indonesian Demographic and Health Survey (IDHS) reported that 11% of married women had unmet FP needs, including 4% wishing to delay the next birth by at least two years and 7% wanting no more children. Among those whose FP needs were met, 27% used the contraception for the birth spacing and 35% for limiting the births.¹¹

The patterns of the contraceptive use vary globally. In the developed countries, the oral contraceptives, male condoms, and coitus interruptus are the most common, while in the developing countries, the female sterilization, IUDs, oral contraceptives, and vasectomy are more prevalent. This highlights the importance of the cultural, social, and policy contexts in shaping the contraceptive choices.¹²

The reliable registration and monitoring systems for the FP services are vital for evaluating the program performance and improving the quality. The service records provide the critical data on the new acceptors, continuation rates, side effects, complications, and client characteristics. Such information guides the improvements in the service delivery and policy development.¹³

In the light of these dynamics, evaluating the outpatients and postpartum FP service delivery remains essential. Understanding the service quality, accessibility, and outcome provides the foundation for improving program performance, and ensuring reproductive health goals is achieved. This study, therefore, analyzes the outpatient and postpartum FP services in selected teaching and affiliated hospitals of the Department of Obstetrics and Gynecology, Hasanuddin University, Makassar, for a two-year period (January 2023 - January 2024).

Method

This study employed the retrospective

descriptive design using the secondary data obtained from the FP service registers and patients' medical records. The study was conducted for a two-year period from January 2023 to January 2024 in the main teaching hospital of Hasanuddin University, Dr. Wahidin Sudirohusodo Hospital, and its affiliated network hospitals in Makassar. These facilities represented the referral centers for the obstetrics and gynecology residency training and provided the integrated outpatient and postpartum FP services.

The inclusive criteria consisted of the reproductive aged-women (15-49 years old) who received the FP services during the study period. This included both new and sustainable acceptors who visited the outpatient FP clinics or initiated the contraception in the postpartum ward prior to the hospital discharge. The records were excluded if the essential demographic or contraceptive method data were incomplete, or if the counseling was provided without the initiation of the contraceptive method.

The primary variables collected included the types of contraceptive methods (implant, IUD, classified as immediate postpartum, early postpartum, late postpartum, intra-operative, interval, or post-abortion, and permanent methods/sterilization). The sociodemographic data included the age, parity, education level, and occupation. The service characteristics included the initiation timing and the type of procedure associated with the FP uses (postpartum vaginal delivery, caesarean section, or curettage).

The data were extracted systematically using the standardized form to ensure the consistency across the hospitals. The compiled dataset was checked for the completeness and accuracy prior to the analysis. The descriptive statistical method was applied, with the frequencies and percentages used to summarize the categorical variables. The distribution of the contraceptive methods was analyzed across the sociodemographic and

clinical categories. The data were processed and analyzed using IBM SPSS Statistics Version 30.0.0.0 (IBM Corp., Armonk, NY, USA).

This study fulfilled the ethical requirements for the human research and was approved by the Research Ethics Committee of the Faculty of Medicine, Hasanuddin University, with the ethical clearance recommendation letter from the Health Research Ethics Committee (KEPK) of RSPTN UH-RSWS.

Result

A total of 5684 FP acceptors are recorded from outpatient FP clinics and postpartum wards across the main teaching hospital and affiliated hospitals in Makassar during the study period of January 2023 to January 2024. Among these, IUDs are the most widely used method (2,882; 50.7%), followed by implants (2,239; 39.4%) and sterilization (563; 9.9%) as shown in Figure 1.

The distribution by the hospitals (Table 1) indicates that the highest number of the FP acceptors is recorded in RSIA Sitti Khadijah I with 1,510 acceptors (26.6%), followed by RSUD Syekh Yusuf Gowa with 1,236 acceptors (21.8%), RSKDIA Sitti Fatimah with 1,089 acceptors (19.2%), and RSUD

La Palaloi with 933 acceptors (16.4%). The lower contributions are observed in RSUD Labuang Baji (186 acceptors; 3.3%), fetal-maternal services (152; 2.7%), RSUP Dr. Wahidin Sudirohusodo (149; 2.6%), RS Pelamonia (147; 2.6%), RS Ibnu Sina (108; 1.9%), RS Faisal (72; 1.3%), RS Unhas (56; 1.0%), and RS Akademis (46; 0.8%). Within RSIA Sitti Khadijah I, the most frequently used method is IUD, with 821 acceptors (54.4%).

The distribution by ages and parities (Table 2) denotes that the majority of the acceptors are 20-35 years old (4835; 85.1%), followed by the women over 35 years (834; 14.7%) and the adolescents under 20 years (15; 0.3%). Among the 20-35 age group, the most common contraceptive method is IUD, with 2543 acceptors (52.6%). Based on the parities, the largest proportion of the acceptors has the parity 2 (1,978; 34.8%), followed by the parity 1 (1489; 26.2%), the parity 3 (1437; 25.3%), and the parity ≥ 4 (780; 13.7%). Within the parity 2 group, IUD use predominates with 1,140 acceptors (57.6%).

The distribution by the procedure types (Table 3) demonstrates that the majority of the FP acceptors are recruited in the context of the vaginal deliveries (postpartum normal delivery, 3420, 60.2%). These are followed

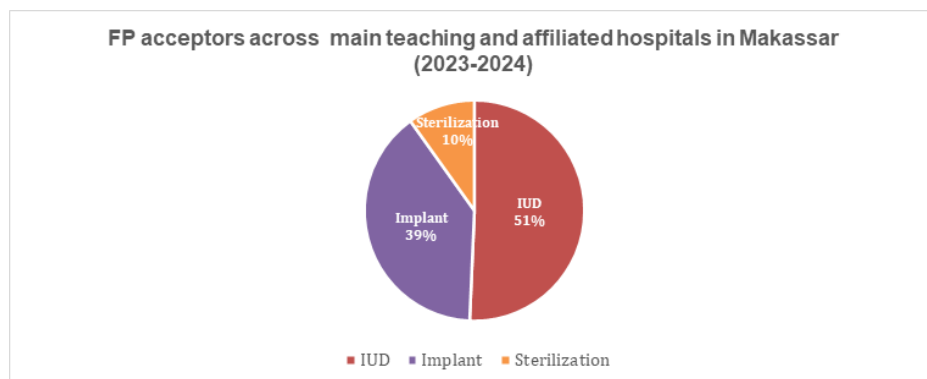


Figure 1 FP acceptors across the main teaching hospital and affiliated hospitals in Makassar (January 2023 - January 2024)

Table 1 Distribution of Family Planning Acceptors by Contraceptive Method across Teaching and Affiliated Hospitals in Makassar (January 2023 - January 2024)

Hospitals	Implants	IUD's					Sterilization	Total
		<10 min	<48 h	>48 h	Intra-op	Interval	Post-abortion	
Akademis	11	15	8	0	5	0	0	46
Faisal	32	17	6	0	12	0	0	72
Ibnu Sina	29	26	7	1	33	0	2	108
La Palaloi	411	215	112	0	142	0	8	933
Labuang Baji	56	36	15	0	57	0	1	186
Pelamonia	40	45	13	0	34	0	0	147
Sitti Fatimah	524	180	123	0	194	0	3	1089
Khadijah	519	271	156	0	378	0	16	1510
Syekh Yusuf	580	209	97	0	246	0	7	1236
Unhas	13	11	6	0	19	0	2	56
Wahidin	16	15	11	0	51	0	3	149
Fetomaternal	8	5	0	0	69	0	0	152
Total	2239	1045	554	1	1240	0	42	5684

Table 2 Distribution of Family Planning Acceptors by Age and Parity

Variables	Implants	IUD's					Sterilization	Total
		<10 min	<48 h	>48 h	Intra-op	Interval		
Age Groups								
<20 years	5	5	1	0	4	0	0	15
20-35 years	1965	830	560	0	1113	0	40	4835
>35 years	113	189	79	0	161	0	21	834
Parities								
1	884	177	105	0	321	0	0	1489
2	826	361	219	0	531	0	29	1978
3	280	317	241	0	260	0	12	1437
≥4	93	169	74	0	165	0	20	780
Total	2083	1024	640	0	1278	0	61	5684

Table 3 Distribution of Family Planning Acceptors by Procedure Type

Procedure Types	Implants	IUD's					Sterilization	Total
		<10 min	<48 h	>48 h	Intra-op	Interval		
Vaginal deliveries	1790	1044	586	0	0	0	0	3420
Caesarean sections	227	1	4	0	1278	0	598	2108
Curettages	25	20	50	0	0	0	61	156
Total	2042	1065	640	0	1278	0	598	5684

Table 4 Distribution of Family Planning Acceptors by Education Level

Education Levels	Implants	IUD's					Sterilization	Total	
		<10 min	<48 h	>48 h	Intra-op	Interval			Post-abortion
Primary schools	146	138	28	0	43	0	0	47	402
Junior high schools	343	141	84	0	260	0	9	76	913
Senior high schools	1233	468	391	0	718	0	22	293	3125
Diploma	111	98	34	0	75	0	1	37	356
Bachelor's (S1)	250	179	101	0	182	0	29	144	885
Master's (S2)	0	0	1	0	0	0	0	1	2
Doctoral (S3)	0	0	1	0	0	0	0	0	1
Total	2083	1024	640	0	1278	0	61	598	5684

Table 5 Distribution of Family Planning Acceptors by Occupation

Occupations	Implants	IUD					Sterilization	Total
		<10 min	<48 h	>48 h	Intra-op	Interval	Post-abortion	
Housewives	1503	675	464	0	930	0	31	3974
Civil servants	215	141	64	0	91	0	13	628
Teachers	2	18	0	0	0	0	0	24
Private employees	198	108	66	0	103	0	0	561
Entrepreneurs	164	77	46	0	154	0	17	489
Lecturers	1	5	0	0	0	0	0	8
Total	2083	1024	640	0	1278	0	61	5684

by the caesarean sections (2108; 37.1%) and curettage procedures (156; 2.7%). In the vaginal delivery group, the implants are the most common method, used by 1790 acceptors (52.3%).

The distribution by the education levels (Table 5) reveals that the most FP acceptors are high school graduates (3125; 55.0%), followed by the junior high school (913; 16.1%), bachelor's degree (885; 15.6%), primary school (402; 7.1%), and diploma holders (356; 6.3%). The small proportion has the master degree (2; 0.04%) and doctoral degree (1; 0.02%). Within the high school group, IUD is again the predominant method, with 1599 acceptors (51.2%).

The distribution by the occupations (Table 4) shows that the majority of the FP acceptors are the housewives (3974; 69.9%). The other occupational categories include the civil servants (626; 11.0%), private employees (561; 9.9%), entrepreneurs (489; 8.6%), teachers (24; 0.4%), and lecturers (8; 0.1%). Among the housewives, IUD is the most widely used method, with 2,100 acceptors (52.8%).

Discussion

The IUD's, as the part of the long-acting reversible contraceptive (LARC) category, remain one of the preferred FP methods for the women seeking the effective and reversible options, particularly for those aiming to space the pregnancies. The high uptake of IUDs across the parity groups demonstrates their acceptance as the reliable method being suitable for the postpartum and interval use.¹⁴ In contrast, Hardiani et al. (2024) report the lower LARC utilization rate of 28% among the fertile-aged couples in rural Jambi, with the implants being the predominant method, suggesting that the socio-economic and accessible factors play the major role in shaping the contraceptive preferences.¹⁵ population control is crucial

for achieving sustainable development goals. This study emphasizes the role of Long-Acting Reversible Contraception (LARC

In terms of procedure type, the majority of the FP acceptors are recruited in the context of the vaginal deliveries, with 3,420 postpartum women (60.2%) initiating the contraception. This finding highlights the increasing awareness among the women and healthcare providers of the importance of spacing the pregnancies immediately after the childbirth to reduce the maternal and neonatal risks. Early initiation of the contraception in the postpartum period is consistent with WHO recommendations, which emphasize timely counseling and provision of the contraception before the hospital discharge.

When comparing the hospitals, RSIA Sitti Khadijah I, RSKDIA Sitti Fatimah, and RSUD Syekh Yusuf Gowa are the three leading centers contributing the highest numbers of the FP acceptors. Conversely, the Akademis Hospital records the lowest number of the acceptors. This discrepancy may be attributed to the national health insurance (BPJS) regulations, which require most FP services to be delivered in the primary health care providers (primary health care, private midwives, family doctors, or clinics partnered with BPJS). As the result, the hospitals typically provide the FP services only in the specific contexts, such as the postpartum or intra-operative procedures. Moreover, the government-supported programs, such as the provision of free contraceptives by the National Population and Family Planning Board (BKKBN), facilitate the access and affordability, thereby encouraging the uptake in the community-based settings.

The high number of acceptors in RSIA Sitti Khadijah I can be described by the institutional policy of ensuring the postpartum counseling prior to the discharge. The counseling is provided not only during the antenatal visits but also during labors and in the postpartum period, strengthening

the women's knowledge and confidence in choosing the appropriate method. This structured counseling strategy aligns with the global best practices, in which the integration of the FP counseling into the antenatal, intrapartum, and postpartum cares has been shown to improve the contraceptive acceptance and continuation.

The sociodemographic characteristics further establish the contraceptive patterns. The majority of the acceptors are 20-35 years old (85.1%), reflecting the reproductive stage which is most associated with the FP demand. Being consistent with the national survey findings, the education level does not appear to significantly influence the contraceptive uptake, for example, the contraceptive use among the women with the secondary education is comparable with those among the women with no formal education in the analyses of IDHS data.¹⁶ This suggests that the contraceptive choice is more closely related to the reproductive stage and parity than the formal education level. Nevertheless, the higher education may enhance the method awareness and informed decision-making. Further, the spousal dynamics significantly form the contraceptive choice. The recent meta-analysis indicates that the women who receive the husband support are over twelve times more likely to choose the IUD compared with those without such support, underscoring the need for the couple-based counseling to strengthen the FP uptake in Indonesia.¹⁷

The parity also influences the FP acceptance, with the women of the parity two representing the largest group (34.8%). This likely reflects the desire to space the births by three to five years, allowing for the maternal recovery and focuses the child development. In line with the reproductive health principles, the parity strongly influences the demand for the contraception, whether to delay the further pregnancies or to limit the childbearing altogether. The occupation

analysis reveals that the most acceptors are the housewives (69.9%), indicating that the FP services have successfully reached the women outside the formal workforce. This also demonstrates the improved awareness among the women in the traditional household roles, often encountering the barriers in accessing the health services. The expanded dissemination of FP information through the community health workers and cadres has likely contributed to this outcome.

These findings are consistent with the global evidence on the protective role of the family planning in the maternal health outcomes. The recent meta-analysis demonstrates that the contraceptive use is associated with the reductions in the maternal mortality and complications of pregnancy, including a 30% lower risk of high-risk pregnancies and births among contraceptive users compared to non-users. Furthermore, the analysis found that contraceptive use may lower the risk of preeclampsia and improve postpartum glucose tolerance, particularly with low-androgen formulations, underscoring the broader health benefits of effective FP utilization.¹⁸ Taken together, our results highlight that beyond influencing fertility preferences by parity and occupation, FP services contribute directly to safeguarding maternal health and reducing adverse outcomes. This strengthens the rationale for expanding FP counseling and accessibility, particularly in postpartum and outpatient settings, to achieve both demographic and maternal health goals.

This study is limited by its retrospective design, which depends on the secondary data that may be incomplete or inconsistently recorded. Additionally, as the analysis is confined to teaching and affiliated hospitals for a two-year period, the findings may not fully represent the broader family planning trends in the other healthcare settings.

Conclusion

Taken together, these findings underline the importance of integrating the FP services into the maternal health care, strengthening the counseling strategies, and ensuring the accessibility across the sociodemographic groups. The strengthened counseling during the antenatal, intrapartum, and postpartum care, delivered in accessible language with engaging methods such as visual aids or the WHO Medical Eligibility Criteria wheel, may further improve the uptake and continuation. Moreover, the continuous training of the community health workers and cadres should be prioritized to reinforce the FP promotion. The improved digitalization of the registries and public access to the FP information, such as through the hotlines or online platforms, could also enhance the program monitoring and accountability. Finally, the closer coordination with the FP field workers (PLKB) to ensure the sustained availability of the contraceptives, including the pills and condoms, remains essential. Expanding the role of cadres and PLKB in the safe distribution, under the supervision of the healthcare providers, may help address the barriers to access and support the long-term success of Indonesia's FP program.

Conflict of Interest

The authors declare no conflict of interest.

Advice and Thanks

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