ECRONICON OPEN ACCESS

EC GYNAECOLOGY
Research Article

Immediate Postpartum Family Planning: Analysis of Unmet Needs in a Maternity Hospital in Dakar/Senegal

Khadim Niang[1], Samba Ngom[2], Marème Ndiaye Mady Dia[3] and Papa Ndiaye[4]*

[1]*Santé Publique et Médecine Sociale (SPMS), Université Gaston Berger (UGB), de Saint-Louis, Senegal*

[2]*Professeur d'enseignement Secondaire/Science de Vie et de la Terre, Lycée des Parcellles Assaines, Unité 13, Dakar, Senegal*

[3]*Chef de la Division de la Planification Familiale (PF), Direction de la Santé de la Mère et de l'enfant (DSME), Senegal*

[4]*SPMS, UGB de Saint-Louis, Senegal*

***Corresponding Author**: Papa Ndiaye, SPMS, UGB de Saint-Louis, Senegal.

Received: August 10, 2021; **Published:** September 08, 2021

Abstract

Introduction: In Senegal, as part of the national family planning strategy 2016 - 2020, the family planning division had launched the offer of immediate postpartum family planning (IPPFP) whose unmet needs (UMN) are the subject of this study.

Method: The study took place at the maternity ward of Abass Ndao hospital, the only one to initiate IPPFP at the time of the study (October-December 2019). The sample, which was exhaustive, included all parturient who had given their consent after clear information. The variables included 1 dependent (existence or not of UMN for IPPFP) and 17 independents divided into 3 entities: sociodemographic profile (8), reproductive assessment (5) and IPPFP (4). The data were collected and analyzed in two parts: descriptive and analytical: bivariate (khi^2 and Fisher) and multivariate (logistic regression).

Results: The study involved 151 parturients aged 15 to 45, with an average of 26.15 (± 5,87). The majority of them were educated in French (78.20%), Wolof (30.46%), Senegalese (91.39%), urban (94.70%), Muslim (98.68%), married (92.72%) and monogamous (80.00%). On average, the number of pregnancies was 2.36 (± 1.69), the interbirth space was 4.27 (± 2.54), and the number of living children was 2.09 (± 1.40). Of them, 92.05% had already been sensitized to FP, but 74.83% had never used contraception. In addition, 45.03% had a proposal for an IPPFP, 52.32% expressed the need, but 78.48% had an UMN. The reasons for not meeting needs were dominated by incompatibility with childbirth aftermath (33.87%), lack of a favorable opinion from the partner (32.26%), preference of the nearest health structure (11.29%) and fear of side effects (9.68%). In bi-varied analysis, the UMN for IPPFP had a statistically significant link with only two independent variables: history of contraceptive practice and proposal of IPPFP. At logistic regression, only one of the two variables had a significant influence; UMN for IPPFP were 17.32 times higher among parturients who did not receive an IPPFP proposal.

Conclusion: The immediate postpartum period has been insufficiently exploited in favor of IPPFP which is beneficial to the well-being of the mother and child.

Keywords: *Family Planning (FP); Immediate Postpartum (IPP); Unmet Need (UMN)*

Introduction

Unintended and/or insufficiently spaced pregnancies are a public health problem because of the maternal and neonatal morbidity and mortality associated with them [1]. Their reduction requires, among other strategies, a minimum interval of 2 years between two

live births [2]. However, 61% of women do not use effective contraception in the postpartum period [1]. Thus, in 2015, among 303,000 women who died during or after pregnancy or childbirth worldwide, 99% were recorded in low-income countries [3].

In developing countries, despite the increase in contraceptive use, birth intervals have hardly increased over the past 25 years: 25% of children in second or higher rank are born within two years of birth. Birth of their oldest child, compared to 29% 10 years earlier [4]. In sub-Saharan Africa, the start of a fertility transition is now needed [5,6]. The region accounts for 66% of deaths [3] and remains, on a world scale, the one with the highest fertility, above on average five children per woman [7], with intra and inter country disparities [8].

In Senegal, there are 40 public health stablishment, 102 health centers, 1,415 health posts, and 2,676 health huts [9]. A woman has, on average, 4.6 children at the end of her fertile life. There is a high maternal (236/100,000 live births) and neonatal (28 ‰) mortality [10], linked to pregnancies that are too close together, too numerous, too early and/or too late [11]. Family planning (FP) is, therefore, a high impact practice for improving the health of mothers and children [1,12,13]. With the national FP action plan 2012 - 2015, the prevalence rate fell from 12% to 21.2%. A new objective is set through the National Strategic Framework for FP 2016 - 2020. The FP division then initiated the offer of immediate postpartum family planning (IPPFP), the unmet needs (UMN) of which are the subject of this study.

Framework, Materials and Methods

Framework, period and type of study

Senegal has 15,726,037 inhabitants for 196,712 km^2 subdivided into 14 regions. The region of Dakar, the capital, concentrates more than 23% of the population on less than 0.3% of the territory. One of its hospitals is Abass Ndao, whose maternity unit was the first and the only to initiate immediate postpartum family planning (IPPFP) at the time of the study. The cross-sectional study, with descriptive and analytical aims, took place over three months (October - December 2019).

Sample

The exhaustive sample included all parturients treated for childbirth during the study period. For ethical considerations, an information note has been prepared and read for each parturient. To each woman, explanations were provided on the merits of the survey and its possible contribution to the reduction of UMN for IPPFP in order to reduce maternal and neonatal mortality. Each woman verbally gave her free consent to participate in this study. To ensure confidentiality, the data has been collected anonymously. No individual data (surname, first name, telephone number, etc.) was recorded and the investigation sheets were kept safe by the principal investigator.

Study variables

The variables included 1 dependent (existence or not of UMN for IPPFP) and 17 independent organized into three entities: socio-demographic profile, reproduction assessment, and immediate postpartum family planning (IPPFP). The socio-demographic profile included eight (8) variables: age, education, nationality, residence, religion, ethnicity, marital status, and matrimonial regime. The reproductive health experience included five (5) variables: number of pregnancies, number of children alive, Inter-birth space, awareness of FP, and history of contraceptive use. Immediate postpartum family planning (IPPFP) included four (4) variables: proposal for IPPFP, expression of needs or not, satisfaction or not of the need for IPPFP and, if unmet need (UMN), the reasons of non-satisfaction.

Data entry and analysis

The data, collected day by day, were entered using Epi Info 3.5.1 software, then analyzed with Epi Info Epi7 and Excel, with two parts: a descriptive and an analytical.

For the description, the limits, the median, the mean and the standard deviation have been specified for each quantitative variable; for each qualitative variable, the absolute and relative frequencies of the different modalities were specified.

For the bivariate analysis, looking for associations, a double entry contingency table allowed the dependent variable to be crossed with each independent variable reduced to two modalities. Chi-square and Fisher tests were used according to their application conditions, with a risk of alpha error set at 5%.

The multivariate analysis used a logistic regression where the independent variables related to the UMN at the bivariate stage are introduced together into the model; the odds ratio having the value of 1 for the reference modalities.

Results

In total, the study involved 151 parturients.

Sociodemographic profile

The age, from 15 to 45 years, with an average of 26.15 (± 5.87), was less than 25 years for 35.76% of the parturients. Education was Arabic (3.90%), Koranic (6.40%) or French (78.20%). The level of education was zero (17.22%), elementary (26.49%), average (26.49%), secondary (15.23%) and above (14.57%). Of the 25 uneducated, only 1 (3.85%) was literate. The ethnicity was by order, Wolof (30.46%), Poular (26.49%), Serer (23.18%) and others (19.87%). The parturients were, in majority, Senegalese (91.39%), city dwellers (94.70%), Muslim (98.68%), married (92.72%) and in monogamy (80.00%) (Table 1).

Reproduction assessment

The number of pregnancies, from 1 to 9 with an average of 2.36 (± 1.69), was less than 2 for 44.37% of the parturients. The inter-birth space, from 1 to 13 years with a mean of 4.27 (± 2.54), was less than 2 years for 25.32% of the parturients. The number of children alive, from 1 to 7 with an average of 2.09 (± 1.40), was less than 2 for 49.67% of the parturients. Overall, 92.05% of parturients had been sensitized on FP, but 74.83% had never used contraception (Table 1).

Immediate postpartum family planning (IPPFP)

Among our parturients, 45.03% had a proposal for IPPFP, 52.32% expressed the need to use a method, and 78.48% had an unmet need (Table 1).

Study variables		Modalities	
		Yes	No
Socio-demographic profile of parturients	Age < 25 years	54 (35.76%)	97 (64.24%)
	Senegalese nationality	138 (91.39%)	13 (8.61%)
	Urban residence	143 (94.70%)	8 (5.30%)
	Islam	149 (98.68%)	2 (1.32%)
	Wolof ethnicity	46 (30.46%)	105 (69.54%)
	Instruction	125 (82.78%)	26 (17.22%)
	Marital status = Married	140 (92.72%)	11 (7.28%)
	Matrimonial regime = Monogamous	112 (80.00%)	28 (20.00%)
Reproductive health and family planning assessment	Number of pregnancies < 2	67 (44.37%)	84 (55.63%)
	Number of children alive < 2	75 (49.67%)	76 (50.33%)
	Inter-reproductive space <2 years	20 (25.32%)	59 (74.68%)
	Sensitized on contraception	139 (92.05%)	12 (7.95%)
	History of contraceptive use	38 (25.17%)	113 (74.83%)
Service IPPFP	Proposal for a IPPFP method	68 (45.03%)	83 (54.97%)
	Wish to use a method	79 (52.32%)	72 (47.68%)
	Meeting needs	17 (21.52%)	62 (78.48%)

***Table 1**: Characteristics of parturients.*

The reasons for non-satisfaction of needs were dominated by incompatibility with the continuation of childbirth aftermath (33.87%), the absence of a favorable opinion from the partner (32.26%), the preference of the closest health structure (11.29%) and fear of side effects (9.68%) (Table 2).

Reasons mentioned by the parturients	Frequencies
Incompatibility with layer suites	21 (33.87%)
Lack of favorable opinion from husband/partner	20 (32.26%)
Preference of the nearest health facility	7 (11.29%)
Side effects	6 (9.68%)
Lack of information on the availability of the FP offer	4 (6.45%)
Temporary unavailability of the provider	2 (3.23%)
Financial inaccessibility (too expensive)	1 (1.61%)
Health problems (interviewee)	1 (1.61%)
Total	62 (100%)

***Table 2**: Reasons for not meeting immediate postpartum family planning (IPPFP) needs.*

Factors of unmet need for IPPFP

The unmet need (UMN) for IPPFP had statistically significant link with only two independent variables: history of contraceptive use and IPPFP proposal. For the others (age, education, nationality, marital status and regime, religion, ethnicity, residence, number of pregnancies and living children, Inter-birth space, awareness of FP, IPPFP wish), the link was not statistically significant (Table 3).

Independent variables		Unmet needs in FP		Total	p value
		Yes	No		
Age	< 25 years	22 (88.00%)	3 (12.00%)	25	0,161
	≥ 25 years	40 (74.07%)	14 (25.93%)	54	
Zero education level	Yes	10 (76.92%)	3 (23.08%)	13	0,881
	No	52 (78.79%)	14 (21.21%)	66	
Type d'instruction	Others	7 (87.50%)	1 (12.50%)	8	0,520
	French	45 (77.60%)	13 (22.40%)	58	
Nationality	Others	3 (100.00%)	0 (0.00%)	3	0,355
	Senegalese	59 (77.60%)	17 (22.40%)	76	
Religion	Others	1 (100.00%)	0 (0.00%)	1	0,598
	Islam	61 (78.21%)	17 (21.79%)	78	
Ethnic group	Others	40 (81.63%)	9 (18.37%)	49	0,384
	Wolof	22 (73.33%)	8 (26.67%)	30	
Résidence	Rural	2 (100.00%)	0 (0.00%)	2	0,453
	Urban	60 (77.92%)	17 (22.08%)	77	
Statut matrimonial	Single	2 (66.67%)	1 (33.33%)	3	0,612
	Married	60 (78.95%)	16 (21.05%)	76	
Matrimonial regime	Monogamy	50 (79.37%)	13 (20.63%)	63	0,844
	Polygamy	10 (76.92%)	3 (23.08%)	13	

Number of pregnancies	Less than 2	23 (85.19%)	4 (14.81%)	27	0,296
	At least 2	39 (75.00%)	13 (25.00%)	52	
Inter-reproductive space	< 2 Years	27 (87.10%)	4 (12.90%)	31	0,134
	≥ 2 Years	35 (72.92%)	13 (27.08%)	48	
Number of living children	Less than 2	29 (87.88%)	4 (12.12%)	33	0,085
	At least 2	33 (71.74%)	13 (28.26%)	46	
Heard about FP	No	2 (100.00%)	0 (0.00%)	2	0,453
	Yes	60 (77.92%)	17 (22.08%)	77	
History of Contraceptive Use	No	44 (86.27%)	7 (13.73%)	51	0,023
	Yes	18 (64.29%)	10 (35.71%)	28	
Wish IPPFP	No	0 (0.00%)	0 (0.00%)	0	Indéfini
	Yes	62 (78.50%)	17 (21.50%)	79	
IPPFP proposal	No	35 (97.20%)	1 (2.80%)	36	0,0002
	Yes	27 (62.80%)	16 (37.20%)	43	

***Table 3**: Factors of unmet need for immediate postpartum family planning (IPPFP).*

Causal relationships/logistic regression of unmet need (UMN) for IPPFP

Only one of the two crossed variables had a significant influence. UMN for IPPFP was 17.32 times more frequent among parturients who did not receive a IPPFP offer than those who did (Table 4).

Unmet need for immediate postpartum family planning		**Model 2**		
		OR	**IC à 95%**	**p value**
History of Contraceptive Use	No	2.73	[0.81-9.18]	0.105
	Yes	1		
Family Planing proposal	No	18.32	[2.26-148.55]	0,0065
	Yes	1		

***Table 4:** Simple logistic regression of Unmet need (UMN) for immediate postpartum family planning (IPPFP)-Contraceptive practice.*

Discussion

Limits of the study

The immediate postpartum period, which follows the birth of the newborn and delivery, is variable in duration, from 1 to 2 hours, reaching 6 to 12 hours, or even covering 48 hours [2,14]. For us, this was the period when the parturient is still in the maternity ward. The advantage is that the woman, not pregnant and without returning from childbirth aftermath, can be strongly motivated to start contraception.

The short duration (3 months) limited the number of parturients (151), but the day-to-day data collection provided information that allowed good analysis of unmet needs (UMN).

Unmet need for immediate postpartum family planning

Unmet need (UMN) had a far greater proportion for our parturients (78.48%) than for women at the national level. From 2012 to 2017, the total demand for FP increased from 47% to 50%; the prevalence of modern contraception has increased from 16% to 26%; and UMN declined from 29% to 22% [10]. The reasons, dominated by the hospital site of our study, can also be socio-demographic.

Sociodemographic profile and UMN for IPPFP

The average age of our parturients (26.15 years) is acceptable in Senegal where the median age at first union is 20.2 years [10]. Unwanted births move from less than 1% for mothers under 20 to 27% for those aged 45 - 49 [10]. With age, the magnitude of UMN for spacing decreases, inversely to that of limitation [13].

Senegalese nationality was less frequent among our parturients (91.3%) than in the total population (98%) [1], undoubtedly because of the study site (hospital) which is in an urban area.

The residence, urban for the majority of our parturients (94.70%), can be explained by the study setting. The proportion of women currently in union with UMN is higher in rural areas (26%) than in urban areas (16%) [10] where husbands are more favorable to FP [15].

The Muslim religion is slightly more frequent for our parturients (98.68%) than for the national population (94.80%) [10]. She doesn't seem to influence FP like ethnicity.

The ethnic group is dominated, in our study, by the same groups (Wolof, Poular and Sérère), as at the national level: Wolof (43.3%), Poular (27.5%) and Sérère (12.6%) [10].

Lack of education fuels prejudices and misconceptions about FP. Unmet need is higher among uneducated married women (24%) than among those with middle/high school or higher (20%) [10].

Singles, a minority for our parturients (7.28%), seem more affected. Among unmarried and sexually active women, the proportion with UMN is higher (38%) [10]. The monogamous diet (80.00% of brides), with the absence of competition between co-wives, must be more favorable to IPPFP, for better reproductive health.

Reproductive health and UMN for IPPFP

The number of pregnancies is often superimposed on the number of children.

The average number of children per woman varies from 3.4 in urban areas to 5.9 in rural areas [10] where less attention is paid to the inter-birth space.

The Inter-birth space, ideally at least two years, allows biological recovery to the woman who is then better prepared for a new pregnancy, justifying awareness.

Awareness of FP in Senegal is through radio and television for 51% of women aged 15 to 49, of whom 96% said they knew at least one method [10].

A history of contraceptive use is found in 20% of Senegalese women aged 15 - 49, the majority of whom (19%) use a modern method [10]. There is a need to raise the contraceptive prevalence rate through counseling.

Counseling on FP should be given at every opportunity: Prenatal follow-up, delivery, postnatal care, vaccination and growth monitoring [1]. It is a high-impact practice that helps educate the parturient about the health benefits of preventing unintended pregnancies and birth spacing, as well as contraceptive options [1,16].

In developing nations, a hospital based counselling to space out between pregnancies (of at least 2 years) face to limited staff and health care workers, so Non-government organizations (NGO) can play a vital role to reach out to people for his awareness.

The full satisfaction of UMN in modern contraception would lead to an annual reduction in maternal deaths estimated at 76,000 per year [17]; which justifies the FP service offer.

Offer of FP and UMN for IPPFP services

The IPPFP proposal proved to be the only factor favorable to meeting needs. It increased the proportion of women leaving maternity with modern contraception in Afghanistan (4% to 51%), Honduras (9% to 46%), Indonesia (9% to 41%), and Niger (0 % to 31%) [1]. It depends on political choices according to Akoto and Kadem [6] and must remain accessible.

Geographical accessibility presupposes services close to places of residence. However, the coverage ratios to the population are still below the standards defined by the health map, regardless of the quality.

The good quality of services has encouraged women's use of FP in Bangladesh [19], the Philippines [19], Senegal [20], Tanzania [21] and Tunisia [22]. On the other hand, the poor quality induced, in 15 countries, 1 year after the start of the use of a method, 7 to 27% of abandonments according to Blanc [23]. It is important to rebalance strategies, hitherto focused in particular on public supply and product availability, to the detriment of the private sector and Community supply [8].

Conclusion

The immediate postpartum period has been insufficiently exploited for parturients who need to be better educated about the many benefits of IPPFP. It is important to strengthen the performance of maternity hospitals with enough qualified staff to reduce the unmet need for IPPFP, for the benefit of the well-being of mothers and children.

Bibliography

1. High Impact Practices (HIPs). Immediate postpartum family planning: A key component of childbirth care. Washington, DC: USAID (2017).

2. College of Midwives of Manitoba (CMM). "Standard for postpartum care of mother and infant". Postpartum Care of Mother and Infant, 1st Revision (2004).

3. Alkema L., *et al*. "National, regional and global rates and trends in contraceptive prevalence and unmet family planning need from 1990 to 2015: A systematic and comprehensive review". *The Lancet* 381.9878 (2013): 1642-1652.

4. Rutstein SO. "Trends in Birth Spacing". DHS Comparative Reports 2011; # 28, Calverton, Maryland, USA: ICF Macro (2020): 47.

5. Vimard P., *et al*. "The start of the fertility transition in sub-Saharan Africa, Reproductive Health, Fertility and Development Series". Research Papers n° 2, Laboratoire Population-Environnement-Développement, Marseille (2002): 29.

6. Akoto EM and Kandem H. "Comparative study of the determinants of modern contraceptive practice in Africa, in Gendreau F". Demographic transitions in southern countries, Editions Estem (2001): 270-385.

7. Kent MM. "Africa Population Data Sheet. Population Reference Bureau and African Population and Health Research Center" (2008): 11.

8. Senegal / Ministry of Health and Social Action / Department of Reproductive Health and Child Survival (DSRSE). National Strategic Framework for Family Planning 2016-2020". (2016): 89.

9. Senegal / Ministry of Health and Social Action (MSAS). National Health and Social Development Plan (PNDSS) 2019-2028 (2019): 104.

10. Senegal / National Agency for Statistics and Demography (ANSD) and ICF. Continuing Demographic and Health Survey (DHS) 2017. The DHS Program, ICF, Rockville, Maryland, USA (2018): 463.

11. Guèye AS., *et al*. "Fertility, maternal mortality and child survival in the health district of Kolda (Senegal)". *Dakar Medical* 49.2 (2004): 86-90.

12. PSI and USAID. "Enabling the Healthy Spacing and Limiting of Pregnancies: Programmatic Approaches to Expand Postpartum IUD Access, Washington DC, Technical brief (2015): 15.

13. Sanni A. "Levels and Trends of Unmet Family Planning Needs: Explanatory Factors and Changes Over Time". *African Population Studies* 25.2 (2011): 381-401.

14. Romano M., *et al*. "Postpartum period: three distinct but continuous phases". *Journal of Prenatal Medicine* 4.2 (2010): 22-25.

15. Ndiaye P., *et al*. "Determinants of contraceptive practice among married women, in the health district of dahra, Senegal". *Journal of Gynecology and Women's Health* 10.2 (2018): 2.

16. Ndiaye P., *et al*. "Family planning among women with millet hair in Dakar (Senegal)". *Tropical Medicine* 68.2 (2008): 1-2.

17. Darroch JE., *et al*. "Overview: Investing in Contraception and Maternal and Newborn Health, 2017". New York: Guttmacher Institute (2020).

18. Koenig M., *et al*. "The influence of quality of care upon contraceptive use in rural Bangladesh". *Studies in Family Planning* 28.4 (1997): 278-289.

19. RamaRao S., *et al*. "The link between quality of care and contraceptive use". *International Family Planning Perspectives* 29.2 (2003): 76-83.

20. Sanogo D., *et al*. "Improving quality of care and use of contraceptives in Senegal". *African Journal of Reproductive Health* 7.2 (2003): 57-73.

21. Arends-Kuenning M and Kessy FL. "The impact of demand factors, quality of care and access to facilities on contraceptive use in Tanzania". *Journal of Biosocial Science* 39.1 (2007): 126.

22. Cochrane SH and Guilkey DK. "The effects of fertility intentions an access to services on contraceptive use in Tunisia". *Economic Development and Cultural Change* 43.4 (1995): 779-804.

23. White AK., *et al*. "Contraceptive monitoring continuation: links to fertility outcomes and quality of care". *Studies in Family Planning* 3.2 (2002): 127-140.

Volume 10 Issue 10 October 2021