

Postpartum family planning: missed opportunities across the continuum of care

K T Navodani¹, P Fonseka², C S Goonewardena³

(Index words: family planning, postpartum, postnatal, Sri Lanka)

Abstract

Introduction Postpartum family planning is defined as the prevention of unintended pregnancies and closely spaced pregnancies during the first 12 months following childbirth.

Objectives To assess the practice of family planning (FP) by postpartum mothers in the Regional Director of Health Services (RDHS) division, Kalutara, Sri Lanka.

Methods A community-based, descriptive, cross sectional study was carried out among mothers, 8 to 12 weeks postpartum, in the RDHS division, Kalutara in 2014. Calculated sample size was 1200 and the participants were recruited using cluster sampling method. They were interviewed at their residence about their practice of FP methods using an interviewer administered questionnaire.

Results The response rate was 93.7% (n=1112) of which 730 (65.6%) were practicing a FP method at 8-12 weeks after delivery. Condoms were the most popular modern FP method (30.4%, n=222) followed by intrauterine device (26.7%, n=195) and depot medroxyprogesterone acetate (DMPA) injections (22.9%, n=167). Approximately 80% had utilized government sector FP services. Women with higher level of education ($p < 0.05$), lower family income ($p < 0.01$), parity more than 3 ($p < 0.001$) and more than three living children ($p < 0.01$) were significantly more likely to use a FP method.

Conclusions Prevalence of postpartum FP is not satisfactory. Therefore, FP services should consider reaching postpartum mothers with unmet needs as a priority and ensure that a wide range of contraceptive options are available to them. Postpartum FP should be considered as a continuum of maternal care.

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¹Senior Registrar in Community Medicine, National Institute of Health Sciences, Kalutara, ²Retired Professor in Community Medicine and ³Senior Lecturer in Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka.

Correspondence: KTN, e-mail: <tharanganaavodani@gmail.com>. Received 9 December 2016 and revised version accepted 14 February 2017

Introduction

Postpartum family planning is defined as the prevention of unintended pregnancies and closely spaced pregnancies through the first 12 months following childbirth [1]. Family planning (FP) allows individuals and couples to determine the desired time duration of spacing or limiting of the family if they have the desired number of children [2]. Closely spaced pregnancies increase risk of adverse outcomes such as preterm births, low birth weight infants and maternal health problems [3]. There is evidence that pregnancy occurring within six months of the last delivery increases risk of induced abortion 7.5 fold [4]. Furthermore, such pregnancies increase risk of maternal and child mortality [3]. Thus short birth spacing and unintended pregnancies can result in adverse health, nutrition, economic and social consequences for women and their families.

Therefore, these women need postpartum FP. It is a major responsibility of the health system to minimize unmet need of postpartum FP. In Sri Lanka, FP is recognised as a responsibility of the government and provision of FP services is coordinated by the Family Health Bureau under the Ministry of Health through the National Family Planning Programme as an integrated component of the Family Health Programme [5]. The goal of the programme is to enable all couples to have the desired number of children, with optimal spacing, whilst preventing unintended pregnancies. It therefore, facilitates families to make informed decisions and offers contraceptives through a cafeteria approach [5]. Counselling and providing FP services is an essential component of the postnatal care package in Sri Lanka [6].

The objective of this study was to assess the practice of FP and to examine socio-demographic and reproductive health characteristics associated with FP use of postpartum mothers in the RDHS Division, Kalutara in Sri Lanka. The paper draws on data collected for the



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investigation of “Quality of domiciliary postnatal care provided by the Public Health Midwives in the RDHS division, Kalutara” in 2014.

Methods

This descriptive cross sectional study was carried out in 2014 in all Medical Officer of Health (MOH) areas in the Kalutara RDHS Division other than two MOH areas (Kalutara and Beruwala) served by the National Institute of Health Sciences. Kalutara district has a population of 1,217,260. It is socio-culturally diverse and includes urban, rural and estate sectors. The population comprises of predominantly Sinhalese (86.7 %) with, 9.2 % of Moors and 3.9 % of Tamils [7].

The sample size calculation estimated a population proportion of 50% and made an adjustment for the clustering effect. Design effect was calculated considering the rate of homogeneity for socioeconomic variable 0.2 [8]. Accordingly, the required sample size was 1200 after allowing for a non-response rate of 10%.

Cluster sampling technique was used with probability proportionate to size of the population of the MOH area. A Public Health Midwife (PHM) area was defined as a cluster and the size of the cluster was limited to 10 subjects as there was a limited number of postpartum mothers in a given PHM area. The number of clusters selected for this study was 120 which included 40% of the total PHM areas in the RDHS division, Kalutara.

Sample selection was done through PHM’s Monthly Expected Dates of Delivery Register and a list of eligible postpartum mothers was prepared. Data collectors visited relevant postnatal clinics and contacted the selected mothers and checked for their eligibility. Thereafter, the mothers were invited to participate in the study. Data collection was done using an interviewer-administered questionnaire at their residence after obtaining informed written consent. Ethics approval was obtained from the Ethics Review Committee of the Postgraduate Institute of Medicine, University of Colombo.

Data Analysis

Data entry was carried out using Epi Data version 3.1. Data was exported to SPSS and analysis was carried out using SPSS version 19. Descriptive analysis showed frequencies, percentages, ranges, means, and standard deviations (SD). Statistically significant associations were assessed applying Chi-square test.

Results

Demographic, socio-economic and reproductive health characteristics

The study population consisted of 1112 mothers who were 8-12 weeks post-partum. The response rate was

93.7%. Table 1 shows the selected characteristics of the participants. A majority of mothers were in the age group 25-34 years (n=707; 63.6%) with a mean age of 29.4 (SD ± 5.3) years. Majority were Sinhalese (n=1027; 92.4%) and Buddhists (n=998; 89.7%). Almost one third 34.4% (n=382) had an educational qualification up to Advance Level (A/L) or higher while 77 (7%) had only primary education or less. Majority of the mothers were not formally employed (n=839; 75.4%) and 694 (62.4%) were in social classes III (Skilled workers and non-manual workers) and IV (Partly skilled workers). The social class of the women was determined according to social class categorization given by Barker and Hall [17]. More than 99% (n=1104) were currently married.

Three hundred and eighty three (34 %) mothers were primiparous while 896 had one or two children. None had more than four children. Seven hundred and twelve (64.1%) had a normal vaginal delivery.

Table 1. Demographic, socio-economic and reproductive health characteristics of the participants (n=1112)

Characteristics	n (%)
Age in years (range 18-45)	
≤ 19	29 (2.6)
20 – 24	187 (16.8)
25 – 29	339 (30.5)
30 – 34	368 (33.1)
≤ 35	189 (17.0)
Level of education	
No schooling	14 (1.3)
Up to grade 5	63 (5.7)
Grade 6 – Up to Ordinary Level	653 (58.6)
Up to Advance Level	292 (26.3)
Higher education	90 (8.1)
Total monthly family income (Rs.)	
≤ 10,000	89 (8.0)
>10,000 – 15,000	177 (15.9)
>15,000 – 20,000	268 (24.1)
> 20,000	578 (52.0)
Parity	
1	383 (34.4)
2	441 (39.7)
3	216 (19.4)
≤ 4	63 (6.5)
Mode of delivery (last child)	
Normal vaginal delivery	712 (64.1)
Caesarean section	393 (35.3)
Assisted vaginal delivery	7 (0.6)

Access to family planning and method used

Table 2 shows the number and proportion of mothers using a range of contraception and source of FP services. Seven hundred and thirty (65%) mothers used some FP method 8-12 weeks after delivery. Condoms was the most popular method (n=222; 30.4%) followed by intrauterine device (IUD) (n=195; 26.7%) and DMPA injections (n=167; 22.9%). Twelve mothers (1.6%) were practicing natural/ traditional method while none had a partner who had undergone vasectomy. Six mothers (0.8%) were using oral contraceptives.

Approximately, 80% of mothers utilized the public sector FP services while 142 (20%) mothers obtained FP services from the private sector. All the Implanon/ Jadelle and LRT users had obtained the services from the public sector while DMPA injections were obtained from both private and public sectors.

Table 3 presents the association between the FP methods used and selected characteristics of the participants. Postpartum mothers, with higher level of education ($p<0.05$), lower family income ($p<0.01$), parity more than 3 ($p<0.001$) and number of living children more than 3 ($p<0.01$) were significantly more likely to use a FP method. Age, social class and mode of delivery were not statistically significantly associated with the use of a FP method by postpartum mothers.

Reasons for not practicing a FP method

Three hundred and eighty two (34.4%) postpartum mothers did not use a FP method. Table 4 shows the reasons for not practicing a FP method. One hundred and eleven (29.2%) stated that they were hoping to use FP in future and 94 (24.7%) stated that the perceived low risk of conceiving as the reason for not using FP.

Table 2. Source of obtaining family planning services by postpartum mothers

FP method	Total		Public (n=576, 80.2%)		Private (n=142, 19.8%)	
	No.	%	No.	%	No.	%
IUD (loop)	195	26.7	188	96.4	7	3.6
DMPA injection	167	22.9	89	53.3	78	46.7
Condoms	222	30.4	171	77.0	51	23.0
Implanon/ Jadelle	32	4.4	32	100.0	0	0.0
LRT	96	13.2	96	100.0	0	0.0
Oral contraceptive pills	6	0.8	0	0.0	6	100.0
Total	718	98.4				

12 (1.6%) mothers were practicing natural/ traditional method
Factors associated with the use of a FP method

Table 3. Association between practice of FP method and selected characteristics of postpartum mothers

Variable	Use FP method Yes (n=730)		No (n=382)		Total (n=1112)		Significance
	No	%	No	%	No	%	
Age in years							
< 30	365	65.8	190	34.2	555	100.0	$\chi^2 = 0.01, df=1$ $p=0.93$
≥30	365	65.5	192	34.5	557	100.0	
Level of education							
≤ Grade 9	148	59.4	101	40.6	249	100.0	$\chi^2 = 5.49, df=1$ $p=0.02$
> Grade 9	582	67.4	281	32.6	863	100.0	
Total monthly family income (Rs.)							
< 20,000.00	373	69.9	161	30.1	534	100.0	$\chi^2 = 8.05, df=1$ $p=0.004$
≥ 20,000	357	61.8	221	38.2	578	100.0	
Parity							
1 - 2	511	62.0	313	38.0	824	100.0	$\chi^2 = 18.62, df=1$ $p<0.001$
≥3	219	76.0	69	24.0	288	100.0	
No. of children							
1 - 2	572	63.8	324	36.2	896	100.0	$\chi^2 = 6.69, df=1$ $p=0.009$
≥3	158	73.1	58	26.9	216	100.0	
Mode of delivery							
NVD + AVD	469	65.2	250	34.8	719	100.0	$\chi^2 = 0.16, df=1$ $p=0.69$
Caesarean section	261	66.4	132	33.6	393	100.0	

χ^2 = Chi square value, df= Degree of freedom
Reasons for not practicing a FP method

Table 4. Reasons for not practicing a FP method (n=382)

Reason	n	%
Hoping to practice in future	111	29.1
Perceived less risk in conceiving	94	24.7
Afraid of using FP	56	14.6
Lack of time to think about FP	41	10.7
Lack of knowledge on FP methods	29	7.6
Not necessary as not yet sexually active	23	6.0
Husband abroad	21	5.5
Opposition from husband	4	1.0
Difficulty in obtaining services	3	0.8

Discussion

Use of a contraceptive method by postpartum mothers at 8-12 weeks was 65.6 % in the RDHS division, Kalutara. The optimal contraceptive use among these women should be around 100%, given that women may resume sexual activity in this period and will not want to become pregnant again soon after child birth.

The time of return to fertility after childbirth is variable and unpredictable and women can get pregnant before the return of menstruation. Women can conceive six weeks after child birth, even though lactational amenorrhoea may be protective [2].

A study done in Sri Lanka in 2010 found that unmet need in FP accounted for 73% of unsafe abortions. The main reason for not using FP was that they were still nursing an infant (n= 665; 31.6%) [9]. The study also reported that ensuring access to FP alone may result in a significant reduction in the number of unsafe abortions. Another study done in 2000 reported that the most frequent reason (28.8%) for requesting an abortion was the youngest child was 'too young' [10]. The experts in maternal care highlight these findings as missed opportunities across the continuum of maternal care to prevent abortions through improving postpartum FP as these women were in contact with health providers during pre-pregnancy, antenatal, intra-natal and postnatal periods [11]. Mothers who continue their pregnancy with a very young baby may face many problems which affect the quality of life of mother, baby and the whole family due to short birth spacing [4]. Therefore, the delivery of high-quality FP services to every woman is essential to ensure identifying and comprehensively fulfilling their FP needs [12].

A study carried out to assess knowledge of PHM on post-natal care reveals that knowledge on postpartum FP was poor [13]. This is of major concern as the PHM is the key player in counseling and referring mothers for FP. Therefore, capacity building of service providers through in-service training is an essential aspect in improving postpartum FP.

Present study reveals that a majority of mothers (80.2%) obtained FP services from the public sector and about 20% obtained services from the private sector.

Most popular FP method was use of male condoms (30%). When correctly used male condoms can prevent pregnancy with 98% reliability [14]. Royal College of Obstetricians and Gynaecologists in the United Kingdom categorized male condoms as a less effective method of postpartum FP because of high user failure rates of above 12% [2]. Other popular FP methods were IUD (26.7%) and DMPA injection (22.9%). The Family Health Bureau had stated that DMPA injection was the most widely accepted method of the National Family Planning Program until 2011 and there was a dramatic drop in the use of DMPA injection among new acceptors in 2012 [5]. The reason for this reduction in DMPA injection may be due to the limited availability of DMPA at the government FP clinics. Even with the limited availability of DMPA, it was still popular and nearly half obtained DMPA from the private sector. Implanon/ Jadelle were not popular among postpartum mothers according to the current study.

Reasons given for not using FP were 'hoping to use FP in the future', 'less perceived risk in conceiving', 'afraid of using FP' and 'lack of time' indicate that 95% should be using FP.

World Health Organization (WHO) has emphasised that we must not miss any opportunities to encourage postpartum FP across the continuum of care [1]. As these mothers are in contact with health personnel throughout the pre-pregnancy, antenatal and postnatal periods, there are multiple opportunities for counseling them on postpartum FP. The main objective of the PHM's postnatal home visit around 42 days of delivery is referral of mothers for FP services [6]. But in 2013 only 76.6% of mothers had a postnatal home visit [5]. A study reported that inability to make an informed decision on their desired family size is a risk factor for unsafe abortions (adjusted OR=2.2; 95% CI=1.4-3.5). The authors concluded that this may indicate the unmet need for contraception among women who have no definitive plans on family formation [15]. Therefore, service providers must use all opportunities to counsel mothers to help them decide on their family size, during pre-pregnancy, pregnancy and postpartum periods to avoid any missed opportunities for postpartum FP [3]. Regular evaluation of quality of postpartum FP services by the divisional and district managers using quality indicators will be useful in monitoring the quality of service provided.

A randomized control study in Rwanda showed that an intervention which included FP education for postpartum mothers, screening, and services through child immunization contacts was successful [12]. These strategies are recommended by the WHO and can be used in Sri Lanka. As almost all the postpartum mothers attend an immunization clinic eight weeks after the delivery,

unmet needs for postpartum FP can be assessed and appropriate services can be offered.

WHO has defined the elements of quality of care in FP as choice of a wide range of contraceptive methods; evidence-based information on the effectiveness, risks and benefits of different methods; technically competent, trained health workers; provider-user relationships based on respect for informed choice, privacy and confidentiality; and the appropriate constellation of services need to be considered in provision of postpartum FP [16]. Using multiple strategies, FP services should prioritize reaching postpartum mothers which is the group of women with the greatest unmet need for FP ensuring a broad range of contraceptive options available to them.

There were several limitations in our study. We recruited only mothers who could communicate in Sinhala language, were registered by the PHM during the antenatal period and were residing in the same PHM area after delivery. We also did not have data on the timing (immediate or interval) of postpartum IUD. However, this provides the first hand evidence of postpartum FP use amongst women in Sri Lanka.

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Conflicts of interest

There are no conflicts of interest.

References

- World Health Organization. *Programming Strategies for Postpartum Family Planning*. WHO, Geneva, Switzerland, 2013. http://www.who.int/reproductivehealth/publications/family_planning/ppfp_strategies/en/ (accessed on Oct 13, 2016).
- Royal College of Obstetricians and Gynaecologists. *Best practice in postpartum family planning*, Best Practice Paper No. 1, London NW1 4RG 2015. <https://www.glowm.com/pdf/best-practice-paper-1-postpartum-family-planning.pdf> (accessed on Oct 18, 2016).
- World Health Organization. *Family planning/Contraception*. Fact sheet N°351. On line available at, <http://www.who.int/mediacentre/factsheets/fs351/en/> (accessed on Oct 20, 2016).
- Statement for Collective Action for Postpartum Family Planning. <http://www.mchip.net/sites/default/files/PPFP%20Statement%20for%20Action.pdf> (accessed on Oct 12, 2016).
- Family Health Bureau. *Annual Report on family health Sri Lanka*: Ministry of Health, Sri Lanka, 2013.
- Family Health Bureau. *Maternal Care Package; A guide to field healthcare workers*: Ministry of Health, Sri Lanka, 2011.
- Department of Census and Statistics. *Sri Lanka Demographic and Health Survey, 2007*. Ministry of Finance and Planning, Sri Lanka, 2008.
- Bennette S, Woods T, Liyanage, WM, Smith, DL. *A simplified general method for cluster sample surveys of health in developing countries*. *WHO Statistics, Quarterly* 1991; **44**: 98-106.
- Thalagala N. Unsafe abortions in Sri Lanka – facts and risk profile. *Journal of the Community Physicians of Sri Lanka* 2010; **15**: 1-12.
- Rajapaksa LC, De Silva I. *A Profile of Women Seeking Abortion*. A publication of the Department of Community of Medicine, University of Colombo, Sri Lanka, 2000.
- Senanayake H. Induced abortion in Sri Lanka: The high abortion rate in Sri Lanka represents a series of missed opportunities. *Ceylon Med J* 2004; **49**: 1-4.
- FHI 360. *Postpartum Family Planning, New Research Findings and programme implications*. Research Triangle Park, NC 27709 USA. 2012. <https://www.fhi360.org/sites/default/files/media/documents/Postpartum%20Family%20Planning.pdf> (accessed on Sep 12, 2016).
- Navodani KAT, Fonseka P, Goonewardena CSE. *Quality of domiciliary postnatal care provided by the Public Health Midwives and quality of life of postpartum mothers in the RDHS division, Kalutara*. MD Thesis. Post Graduate Institute of Medicine, University of Colombo, Sri Lanka, 2015.
- Sexual Health and Family Planning Australia; *Contraception: An Australian clinical practice handbook*. 3rd ed. 2013. <http://contraceptionhandbook.org.au/kelibresources.health.wa.gov.au/acknowledgements-foreword/> (accessed on Sep 10, 2016).
- Arambepola C, Rajapaksa LC, Attygalle D, Moonasinghe L. Relationship of family formation characteristics with unsafe abortion: is it confounded by women's socio-economic status? A case-control study from Sri Lanka. *Reprod Health*, (2016) **13**:75 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4912832/> (accessed on Jan 28, 2017).
- World Health Organization. *Ensuring human rights in the provision of contraceptive information and services: guidance and recommendations*. WHO, Geneva, Switzerland, 2014. [who.int/iris/bitstream/10665/102539/1/9789241506748_eng.pdf](http://www.who.int/iris/bitstream/10665/102539/1/9789241506748_eng.pdf) (accessed on Jan 28, 2017).
- Barker DJP, Hall AJ. *Practical epidemiology*. 4th edition. Edinburgh: Churchill Livingstone; 1991.