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A simple way to increase service use: triggers of women's uptake of postpartum services

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Abstract

Objective—To examine the socio-demographic and service-related determinants of utilisation of postpartum services.

Design—Data were used from a single-blind, randomised controlled trial aimed at changing women's knowledge, attitude and behaviour regarding certain postpartum health issues by providing written information via a specially prepared booklet.

Setting—Four private hospitals, two in Beirut and two in the Bekaa region, were selected. All were privately owned and one in Beirut was a teaching hospital.

Sample—All women delivering a live birth in the designated hospitals during a three- to four-month period were recruited into the study. Of the 503 eligible women, 450 agreed to complete the initial questionnaire and 378 completed the postpartum interviews.

Methods—Eight trained female interviewers collected the baseline data. On discharge, interviewers handed each woman a sealed and numbered envelope containing the intervention booklet or the placebo leaflets. Interviewers were blind about the allocation group of women. Interviewers conducted follow up assessment at women's residence 6–20 weeks after delivery.

Main outcome measures—Any postpartum visit with or without a preset appointment.

Results—Multivariable analysis with adjusted ORs show that women given an appointment for their postpartum visit were more likely to having had that visit (OR = 6.8, 95% CI 6.2–7.4). In the absence of such an appointment, university education (OR = 3.6, 95% CI 2.6–4.7), information on maternal health (OR = 4.9, 95% CI 4.0–5.8) and the intervention booklet (OR = 2.9, 95% CI 2.0–3.9) were important determinants of a postpartum visit.

Conclusion—Giving women appointments for postpartum visits, or written or verbal information on maternal health can increase their use of health services.

INTRODUCTION

The traditional six-week postpartum visit is intended to evaluate women's physical and psychological wellbeing and to address their family planning needs. Uptake of this visit by

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Human participant protection

This study was approved by the Institutional Review Board of the American University of Beirut and the ethical committee of the London School of Hygiene and Tropical Medicine. Informed consent was obtained from women participating in the study.

women in different developing countries varies from high levels (88% in Saudi Arabia¹), to very low (6% in Yemen²). The use of health services is known to depend on the physical, economic, and social accessibility of the offered services, as well as on the perceived benefit compared with other opportunity costs. Low attendance of women at the postpartum visit has been attributed to high actual and opportunity costs, insensitive staff, feeling well or perceiving the symptoms as not important enough to warrant a consultation,^{3,4} as well as to prioritising the wellbeing of the infant and lack of community support for health care seeking behaviour in that period.⁵ Other studies indicate the organisation and the delivery of postpartum services as reasons for low utilisation: in particular, the lack of comprehensive maternal services with links between prenatal, delivery and postpartum health care,⁶ and the disregard of women's traditional norms while giving advice on contraception, breastfeeding and child care.⁷

Lebanon lacks an organised health care system and the public health care sector plays a minimal role.⁸ Almost all Lebanese women use prenatal and delivery care services, but most leave the hospital within 24 hours following delivery⁹ and only 39% report a postpartum check up.¹⁰ Moreover, there is no organised system of providing postpartum support through home visits or community programmes.

This study examines the socio-demographic and service-related determinants of having a postpartum check up among a sample women delivering in four selected hospitals in Lebanon.

METHODS

This study uses data from a single-blind, randomised controlled trial aimed at changing women's knowledge, attitude and behaviour regarding certain postpartum health issues by providing written information via a specially prepared booklet. A qualitative study to explore postpartum women's information needs preceded the trial and the findings were used by a multidisciplinary team to produce the information booklet in Arabic. The following themes were covered: correct breastfeeding position; maternal health problems (signs, symptoms and management); importance of the six-week postpartum check up even in the absence of symptoms; father's role in the postpartum period; and family planning methods. The placebo material consisted of two leaflets on home safety.¹¹

Four private hospitals, two in Beirut and two in the Bekaa region, were selected. All were privately owned and one in Beirut was a teaching hospital. These hospitals are located in urban areas but attract women from the suburbs of Beirut and from surrounding villages in the Bekaa. Similar to other facilities in Lebanon, postpartum practices in these hospitals are characterised by a short postpartum hospital stay and an absence of home follow up. All women delivering a live birth in these hospitals between November 6, 2000 and January 7, 2001 in Beirut and between November 20, 2000 and February 28, 2001 in the Bekaa region were eligible to be recruited into the study.

Eight trained female interviewers collected the data. Women were first contacted in the hospital after their delivery. The study was introduced to the women, and verbal consent for participation was obtained. Women were informed that refusal to participate would not affect the care received. A baseline questionnaire was then filled for consenting women. On discharge, interviewers handed each woman a sealed and numbered envelope containing the intervention booklet or the placebo leaflets. Interviewers were blind about the allocation group of women.

Interviewers conducted follow up assessment at the women's residence 6–20 weeks after delivery. Around 30% of women were followed up at 6–12 weeks, 35% at 12–15 weeks and

another 35% at 16–20 weeks. Women were reminded of the nature of the study and insured the anonymity and confidentiality of the information. They were again given the choice of refusing to answer any specific question or to participate in the study. Attendance at a postpartum check up was assessed by a close-ended question. Women were also asked to report whether they received an appointment for their postpartum check up before discharge from hospital.

Of the 503 eligible women, 53 refused to participate, making the total sample completing the initial questionnaire 450. The total sample with completed postpartum interviews amounted to 378 during the follow up phase (235 in Beirut and 143 in the Bekaa) with 72 losses to follow up (16%) (65 in Beirut and 7 in the Bekaa). The socio-demographic profile of women lost to follow up did not differ from those who were followed up in the postpartum period. The major reason for loss to follow up was the inability to locate women's residence according to addresses and telephone numbers given. This problem arose mainly in Beirut. In the Bekaa towns, it was possible to locate women's residences by asking the general public in nearby locations; this was less successful in Beirut due to the urban structure of the city.

The SPSS software¹² was used to enter and analyse data. All variables used in the analysis were categorical except for age and parity, which were measured as continuous variables and then grouped into meaningful categories. χ^2 statistics with continuity correction were used to compare proportions; when appropriate, Fisher's exact test was used. Multivariate analysis was conducted using logistic regression. All variables used at the univariate analysis were checked for interactions and different regression models were constructed together with a model provided by a stepwise logistic regression, which was finally adopted. Two-sided significance tests were used throughout all analyses. For the purpose of this paper, the achieved sample of 378 women was used in analysis, pooling women allocated to the intervention and placebo groups together.

RESULTS

Seventy percent of women had a postpartum visit (Table 1). Women having a postpartum visit were more likely to have fewer children, a higher educational level, to have a husband with a higher educational level and a professional or managerial type of occupation, to be in paid work and to reside in Beirut compared with women not having a postpartum visit. A significantly higher proportion of women who reported a health problem postpartum, who were given information about serious signs and symptoms, participated in taught classes, obtained information on health problem or who were allocated to the intervention group (thus receiving a booklet with postpartum information) had a postpartum visit. The largest difference in the percent reporting a postpartum visit was seen between those women reporting being given a postpartum appointment before discharge from hospital and those not reporting such an appointment (86% vs 39%).

Table 1 also presents the determinants of having a postpartum visit stratified by being given an appointment for a postpartum visit before discharge from the hospital. Among women who had been given an appointment, those who had fewer children, a higher educational level or did not report a postpartum health problem were significantly more likely to have a postpartum visit. It is worth noting that among women who had a health problem but did not seek care despite having been given an appointment, 71% reported psychosocial postpartum problems. Among women who had not been given an appointment, those with a higher education or with professional or managerial occupation or those residing in Beirut were significantly more likely to have a postpartum visit. Women without an appointment who reported a health problem, or who had been given information on maternal health or any

teaching at hospital, or the intervention booklet were also significantly more likely to have a postpartum visit.

Table 2 shows the adjusted ORs and 95% CIs for the final multivariate model of the determinants of having a postpartum visit according to a forward stepwise logistic regression analysis. Having a university-level education (OR = 2.7, 95% CI 2.1–3.4), being given information on maternal health (OR = 2.2, 95% CI 1.6–2.8), receiving the intervention booklet (OR = 2.8, 95% CI 2.2–3.4) and being given an appointment (OR = 6.8, 95% CI 6.2–7.4) were independently associated with having a postpartum visit. The largest effect was associated with being given an appointment. Table 3 presents multivariate logistic regression analysis model separately for women who had been given an appointment for the postpartum visit and those who were not given such an appointment. Among women who reported being given an appointment, the significant determinant was educational level; women with university education were more likely to have a postpartum visit than women with an intermediate educational level or below (OR = 3.3, 95% CI 2.3–4.2). Among women who reported not being given an appointment for a postpartum visit, having a university education (OR = 3.6, 95% CI 2.6–4.7), obtaining information on maternal health (OR = 4.9, 95% CI 4.0–5.8) and being given the intervention booklet (OR = 2.9, 95% CI 2.0–3.9) were important independent determining factors of having had a postpartum visit.

DISCUSSION

This study examined the determinants of using postpartum health services. Overall, 70% had a postpartum visit. Among those women who were given an appointment, 86% attended whereas only 39% among who did not receive an appointment did so. In multivariate analyses, being given an appointment for a postpartum check up before discharge from the hospital was the most important independent determinant of uptake of postpartum care (OR = 6.8), but having a university education (OR = 2.8), receiving information on maternal health problems at the hospital (OR = 2.2) or receiving a booklet with postpartum information (OR = 2.8) were also significant independent determinants.

Univariate analyses revealed numerous socio-demographic and care-related variables to be associated with the postpartum visit (Table 1). Unlike other studies,¹³ age was not associated with uptake of the postpartum visit, but lower parity was. This may be because first-time mothers are more anxious to get health care, or because they have fewer time-demands from older children. Other studies report multiparity^{13,14} as a predictor for not attending prenatal care and for not keeping a postpartum appointment and identify different maternity care needs of primigravida and multigravida.¹⁵ Higher parity women generally have lower socio-economic status, and in the case of Lebanon, are more likely to reside in the Bekaa than in Beirut, both associated with lower use of postpartum care. Residing in Beirut is associated with more use,¹⁰ either because of greater access, or potentially because behavioural norms in Beirut include a more medicalised approach to childbirth.¹⁶ Better use of prenatal and delivery care services is seen in women residing in urban Tunisia and Morocco.¹³

Other variables associated in univariate analyses with increased use of postpartum care include higher education (for the woman or her husband), paid employment for the woman or professional or managerial occupation for the husband. Education and employment are thought to empower women to overcome barriers to use, either via better information or improved income. These determinants are seen with postpartum use, and services such as prenatal care in settings as diverse as Saudi Arabia,¹ Karachi, Pakistan,¹⁷ Tunisia and Morocco,¹³ Turkey,¹⁸ and a review of studies in the UK.¹⁹ Other factors not measured in

our study have been shown to determine the use of postpartum services, namely, maternal age at marriage²⁰ and use of prenatal care services.²¹

Having a health problem also increased the likelihood of having a postpartum visit, possibly because curative care is more likely to be accessed than preventive care. This difference was dramatic among women not given an appointment for a postpartum visit; the attendance rate among those with a health problem was 70% compared with 11.8% among those without a problem. The finding among women given an appointment, that 82.5% with a health problem used compared with 95.7% with no health problem, was more difficult to explain as the direction is opposite to the one expected, whereby those with a problem are less likely to have a visit. This may be due to chance or the nature of women's reported postpartum health problems; as our data showed the majority of these women were reporting psychological problems, which may have made it difficult for them to attend. Supportive observations were found in rural Egypt where more than half of women with postpartum bleeding sought care, however, none of those reporting symptoms of depression did so,⁴ and in India only 27% of women reporting depression sought treatment.²²

Finally, receiving information on maternal health increased the likelihood of having a postpartum visit. We know little about verbal information women receive from hospital sources, but the intervention booklet promoted the general value of a postpartum check up and highlighted maternal health problems that merit a medical consultation. Although the literature provides little evidence on the effect of providing information,^{23,24} there are definitely a number of information content and channel factors specific to the local context that warrant further research.

We find it interesting that women who reported having had a postpartum visit differed substantially according to whether or not they had been given an appointment for that visit before being discharged from the hospital. In the absence of organised maternity services throughout the country, giving appointments for the six-week postpartum check up is left entirely to private care providers. The behaviour of providers in turn would generally reflect their work place routines. The level of giving appointments varied considerably by the hospital the women were recruited from. Therefore, it was important to look into the characteristics of women reporting to have had a postpartum visit separately for those who had received an appointment and those who have not. Table 1 shows that for women given an appointment, uptake of care was almost uniformly high, with little difference by the empowerment variables (paid work, husband's occupation, education, etc.) that normally increase uptake. By contrast, when women were not given an appointment, those variables normally associated with empowerment made more difference, as shown in the multivariate analyses. This very encouraging result suggests that the simple health service intervention of an appointment can overcome many of the barriers faced by less educated, poorer women and result in a high level of use.

The major limitation of the study is that data on both the determinants (e.g. of whether women were given information on maternal health at the hospital) and the outcome (uptake of the postpartum visit) come primarily from women's reports and are not independently verified. It is possible that women perceived having a postpartum visit as a desirable practice, and may have over-reported use. Moreover, some of the associations may stem from differential over-reporting by subgroups of women. For example, women receiving the intervention booklet may have been more sensitised to the importance of postpartum care and so may have been more likely to report a visit that did not take place. Another concern with relying on reporting is women's possible misinterpretation of the question on receiving an appointment, whereby women who sought an appointment and went for a visit reported being given an appointment before discharge. We do not think these are the main reasons for

the associations seen, but cannot rule them out without further research using better outcome measures, or indeed, even a randomised controlled trial looking at giving women appointments. Another probable limitation of the study is the long follow up period, however, proportion of women reporting receiving appointments and uptake of postpartum services did not differ at various follow up periods.

In conclusion, contact between the health services and the mother and newborn is deemed desirable at some point irrespective of the debate on the content and timing of services.^{25–30} Our study suggests that giving women an appointment where there is low uptake of postpartum visits is a simple intervention that significantly increase uptake. Moreover, information booklet or verbal communication also appears to increase uptake of postpartum care. It is anticipated that these will be relatively low-cost interventions to implement. In a setting where the public health care sector plays a minimal role, the challenge remains in finding ways of instating such a practice as a standard applied in all private facilities. In the longer term, characteristics that empower women, such as having more education, paid work and higher income also increase service use and have the added advantage of being associated with better health and survival for both women and their newborns.

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References

1. Baldo MH, Al-Mazrou YY, Aziz KMS, Farag MK, Al-Shehri SN. Coverage and quality of natal and postnatal care: women's perceptions, Saudi Arabia. *J Trop Pediatr*. 1995; 41(Suppl 1):30–36. [PubMed: 8568948]
2. Demographic, Maternal & Child Health Survey 1991/92. Yemen: Central Statistical Organization, 1994.
3. Goodburn EA, Gazi R, Chowdhury M. Beliefs and practices regarding delivery and postpartum maternal morbidity in rural Bangladesh. *Stud Fam Plann*. 1995; 26(1):22–32. [PubMed: 7785065]
4. El-Mouelhy M, El-Helw M, Younis N, Khattab H, Zurayk H. Women's understanding of pregnancy-related morbidity in rural Egypt. *Reprod Health Matters*. 1994; 4:27–34.
5. Turan JM, Say L. Community-based antenatal education in Istanbul, Turkey: effects on health behaviours. *Health Policy Plann*. 2003; 18(4):391–398.
6. Bulut A, Turan JM. Postpartum family planning and health needs of women of low income in Istanbul. *Stud Fam Plann*. 1995; 26(2):88–100. [PubMed: 7618198]
7. Winikoff B, Mensch B. Rethinking postpartum family planning. *Stud Fam Plann*. 1991; 22(5):294–307. [PubMed: 1759275]
8. Van Lerberghe W, Ammar W, El-Rashidi R, Sales S, Mechbal A. Reform follows failure. I: Unregulated private care in Lebanon. *Health Policy Plann*. 1997; 12:296–311.
9. Khayat R, Campbell OMR. Hospital practices in maternity wards in Lebanon. *Health Policy Plann*. 2000; 15:270–278.
10. Ministry of Public Health, Republic of Lebanon. PAPCHILD: Important Results and Recommendations, 2000.
11. Ministry of Public Health, Republic of Lebanon and UNICEF-Lebanon. Safer Home Environment for Children (2 leaflets), 2000.
12. SPSS for Windows. Release 10.0.5. Illinois: SPSS, 1999.
13. Obermeyer CM. Culture, maternal health care, and women's status: a comparison of Morocco and Tunisia. *Stud Fam Plann*. 1993; 24(6):354–365. [PubMed: 8153966]

14. Hulsey TM, Laken M, Miller V, Ager J. The influence of attitudes about unintended pregnancy on use of prenatal and postpartum care. *J Perinat*. 2000; 20(8 Pt 1):513–519.
15. Tinson J. Is there a 'typical' consumer of obstetric services? *J R Soc Health*. 2000; 120(3):158–163. [PubMed: 11077803]
16. Kabakian-Khasholian T, Campbell O, Shediak-Rizkallah M, Ghorayeb F. Women's experiences with maternity care: satisfaction or passivity? *Soc Sci Med*. 2000; 51:103–113. [PubMed: 10817473]
17. Nisar N, White F. Factors affecting utilization of antenatal care among reproductive age group women (15–49 years) in an urban squatter settlement of Karachi. *J Pak Med Assoc*. 2003; 53(2): 47–53. [PubMed: 12705483]
18. Celik Y. The socio-economic determinants of alternative sources of antenatal care in Turkey. *Int J Health Plann Manage*. 2000; 15:221–235. [PubMed: 11184655]
19. Rowe RE, Garcia J. Social class, ethnicity and attendance for antenatal care in the United Kingdom: a systematic review. *J Public Health Med*. 2003; 25(2):113–119. [PubMed: 12848399]
20. Chakraborty N, Islam MA, Chowdhury RI, Bari W. Utilisation of postnatal care in Bangladesh: evidence from a longitudinal study. *Health Soc Care Community*. 2002; 10(6):492–502. [PubMed: 12485137]
21. Lu MC, Prentice J. The postpartum visit: risk factors for nonuse and association with breast-feeding. *Am J Obstet Gynecol*. 2002; 187:1329–1336. [PubMed: 12439527]
22. Bhatia JC. Levels and determinants of maternal morbidity: results from a community-based study in southern India. *Int J Gynecol Obstet*. 1995; 50(2):S153 – S163.
23. Ransjo-Arvidson AB, Chintu K, Ng'andu N, et al. Maternal and infant health problems after normal childbirth: a randomised controlled study in Zambia. *J Epidemiol Community Health*. 1998; 52:385–391. [PubMed: 9764260]
24. Belizan JM, Barros F, Langer A, Farnot U, Victoria C, Villar J. Impact of health education during pregnancy on behavior and utilization of health resources. Latin American Network for Perinatal and Reproductive Research. *Am J Obstet Gynecol*. 1995; 173(3 Pt 1):894–899. [PubMed: 7573265]
25. Bell R. Reduced schedule of antenatal visits. Postnatal care also requires evaluation. *BMJ*. 1996; 313(7050):168. [PubMed: 8688788]
26. Cooke M, Barclay L. Are we providing adequate postnatal services? *Aust N Z J Public Health*. 1999; 23(2):210–212. [PubMed: 10330742]
27. Noble T. The routine six week postnatal vaginal examination. *BMJ*. 1993; 307:698. [PubMed: 8401090]
28. Sharif K, Clarke P, Whittle MJ. Routine six week postnatal vaginal examination: to do or not to do? *J Obstet Gynecol*. 1993; 13:251–252.
29. MacArthur C. What does postnatal care do for women's health? *Lancet*. 1999; 353:343–344. [PubMed: 9950436]
30. Sharif K, Jordan J. The 6-week postnatal visit: are we doing it right? *Br J Hosp Med*. 1995; 54(1): 7–10. [PubMed: 7551482]

Table 1

Determinants of having a postpartum visit by reporting to be given an appointment for that visit ($N = 378$). Any inconsistency in totals is due to missing information.

Determinants	Having a postpartum visit					
	<i>n</i> (%)	<i>P</i>	Given an appointment		Not given an appointment	
			<i>n</i> (%)	<i>P</i>	<i>n</i> (%)	<i>P</i>
Total having a postpartum visit	265 (70.1)		240 (64.9)		130 (35.1)	
Age of the woman (years)						
24	69 (72.6)	0.85	59 (89.4)	0.86	8 (29.6)	0.61
25–29	83 (69.2)		65 (84.4)		15 (37.5)	
30–34	70 (68.0)		50 (86.2)		19 (44.2)	
35	43 (72.9)		33 (86.8)		9 (45.0)	
Total no. of children						
1	119 (77.3)	0.04	97 (92.4)	0.02	20 (42.6)	0.71
2	70 (66.0)		52 (86.7)		14 (34.1)	
3	76 (64.4)		58 (77.3)		17 (40.5)	
Educational level of women						
Illiterate/Elementary/Intermediate	76 (54.7)	0.00	63 (78.8)	0.05	11 (19.3)	0.00
Secondary	76 (74.5)		65 (87.8)		10 (37.0)	
University	112 (83.0)		78 (91.8)		30 (66.7)	
Educational level of husband						
Illiterate/Elementary/Intermediate	81 (61.4)	0.00	65 (82.3)	0.15	14 (27.5)	0.00
Secondary	69 (67.0)		59 (85.5)		9 (28.1)	
University	113 (82.5)		82 (92.1)		27 (61.4)	
Occupational type of husband						
Professional	77 (81.1)	0.03	59 (92.2)	0.77	17 (56.7)	0.02
Managerial	38 (77.6)		28 (84.8)		8 (61.5)	
Owner of small shops	23 (69.7)		15 (83.3)		8 (53.3)	
Teaching	4 (66.7)		3 (100.0)		1 (33.3)	
Skilled worker	27 (62.8)		20 (83.3)		6 (33.3)	
Unskilled worker	78 (66.1)		66 (83.5)		9 (25.0)	
Army	16 (51.6)		14 (87.5)		2 (13.3)	
Working outside home						
Yes	79 (77.5)	0.06	57 (87.7)	0.69	20 (58.8)	0.01
No	186 (67.4)		150 (85.7)		31 (32.3)	
Area of residence						
Beirut	188 (80.0)	0.00	143 (85.6)	0.673	40 (64.5)	0.00
Bekaa	77 (53.8)		64 (87.7)		11 (16.2)	
Reporting any postpartum health problem						
Yes	197 (79.3)	0.00	141 (82.5)	0.007	42 (70.0)	0.00
No	66 (54.0)		66 (95.7)		8 (11.8)	
Given information about serious signs and symptoms related to mother's health at discharge						

Determinants	Having a postpartum visit					
	<i>n</i> (%)	<i>P</i>	Given an appointment		Not given an appointment	
			<i>n</i> (%)	<i>P</i>	<i>n</i> (%)	<i>P</i>
Yes	95 (81.9)	0.00	82 (86.3)	0.964	9 (52.9)	0.21
No	167 (64.5)		124 (86.1)		42 (37.2)	
Given any teaching at hospital postpartum						
Yes	87 (82.9)	0.00	67 (84.8)	0.650	15 (71.4)	0.00
No	176 (64.9)		140 (87.0)		36 (33.0)	
Obtained information on maternal health problems						
Yes	163 (83.2)	0.00	125 (86.2)	0.981	33 (71.7)	0.00
No	100 (55.6)		82 (86.3)		18 (21.4)	
Allocation group						
Intervention	159 (85.0)	0.00	134 (88.2)	0.259	22 (68.8)	0.00
Placebo	106 (55.5)		73 (83.0)		29 (29.6)	
Given an appointment for postpartum visit at discharge						
Yes	207 (86.3)	0.00	–	–	–	–
No	51 (39.2)					

Table 2

Adjusted odds ratios and 95% confidence intervals for determinants of postpartum visit ($N = 378$). Any inconsistency in totals is due to missing information.

Determinant	<i>n</i>	OR	95% CI
Educational level of women			
Illiterate/Elementary/Intermediate (r)	135	1.0	–
Secondary	101	1.8	1.1–2.5
University	129	2.7	2.1–3.4
Obtained information on maternal health problems			
No (r)	177	1.0	–
Yes	188	2.2	1.6–2.8
Allocation group			
Placebo (r)	185	1.0	–
Intervention	180	2.8	2.2–3.4
Given an appointment			
No (r)	127	1.0	–
Yes	238	6.8	6.2–7.4
Likelihood ratio test		320.0	

(r) = reference category.

Table 3

Adjusted odds ratios and 95% confidence intervals for determinants of postpartum visit stratified for having been given an appointment for postpartum visit. Any inconsistency in totals is due to missing information.

Determinant	Given an appointment (<i>n</i> = 240)			Not given an appointment (<i>n</i> = 130)		
	<i>n</i>	OR	95% CI	<i>n</i>	OR	95% CI
Educational level of women						
Illiterate/Elementary/ Intermediate (r)	80	1.0	–	57	1.0	–
Secondary	74	2.0	1.1–2.9	27	2.3	1.2–3.4
University	85	3.3	2.3–4.2	45	3.6	2.6–4.7
Obtained information on maternal health problems						
No (r)	95	1.0	–	84	1.0	–
Yes	145	0.9	0.07–1.8	46	4.9	4.0–5.8
Allocation group						
Placebo (r)	88	1.0	–	97	1.0	–
Intervention	151	1.6	0.8–2.4	32	2.9	2.0–3.9
Likelihood ratio test		184.1			129.2	

(r) = reference category.