

Mobilizing women to change maternity services: a cluster randomized control study

T. Kabakian-Khasholian, R. Shayboub, F. El Kak, M. Kanaan, Z. Mahfoud

Introduction

Studies in developing countries focus on maternal mortality and morbidity or obstetrics emergency care¹. Reduction in maternal mortality and morbidity has been achieved through the provision of professional care during childbirth however that came in expense of over-medicalization of maternity care in several developing country settings², as is the case in many countries in the Arab region³.

Lebanon has a dominant private sector with complete lack of regulatory bodies and physician accountability. There are currently 116 hospitals providing maternity care in all of the country. Most of these hospitals do not have written guidelines, policies and standard procedures⁴. Use of prenatal care and institutional deliveries are the common norm of birthing in Lebanon; 88% of deliveries occur in hospitals, 73% of which are with obstetricians, and 87% attend prenatal care⁵. The high ratio of obstetricians to women had created a competitive environment where obstetricians are just beginning to pay more attention to women's needs and demands in order to ensure the continuity of their practice. In the majority of cases, obstetricians provide prenatal care in private clinics and deliver the women in hospitals however nurses and midwives are the primary care providers during labor. Prenatal care is not standardized and usually characterized by a high number of visits than recommended⁶. Moreover, information to pregnant women is not widely available as there are no organized systems delivering prenatal classes in the country, only few individual hospitals organize information sessions.

Intra-partum and postpartum practices constitute problematic aspects in the delivery of maternity services in Lebanon. Many intra-partum practices proven to be ineffective or even harmful are routinely applied in Lebanese hospitals, such as pubic shaving, enema, application of IV drips and episiotomy as well as restricting fluid intake and mobility⁴. Beneficial postpartum practices such as early mother-infant contact and rooming-in are routinely restricted in many hospitals in Lebanon⁴.

These practices are contrary to women's "silent" desires and expectations from maternity services. Women delivering in Lebanese hospitals are not encouraged by providers to be involved in the decision-making process regarding their care. A fact that reflects in expression of dissatisfaction with many aspects of the provided care⁷.

In Lebanon, a study on women's views of maternity care shows that women appreciate "good" communication with their providers. Women define "good" communication as time devoted for expression of needs during prenatal visits and readiness of the provider to answer for requests to information. These were perceived as creating a desirable patient-provider relationship⁷. A recent review on trials for improving communication between women and providers in maternity care highlights the lack of evidence on strategies that best improve the woman-provider communication in maternity care⁸. Despite the universally recognized importance of woman-provider communication in maternity care, much is still needed in terms of research to identify best ways of improving it with the aim of involving women in the decision-making process and increasing their satisfaction.

This study is a first attempt looking at the effect of using prenatal sessions to mobilize women and enable them to use effective communication and negotiation skills to demand changes in maternity

care. The study will examine the impact of providing women with information and communication skills through prenatal sessions on their demand to change certain intra-partum and postpartum practices as well as actual changes in those practices.

Objectives of the study

To measure the effect of mobilizing women with providing effective communication skills through prenatal sessions during the last trimester of pregnancy on:

1. The decrease in the following intra-partum practices: pubic shaving and enema during labor.
2. The increase in the following postpartum practices: early mother-baby contact and keeping the infant for longer time periods in the mother's room.
3. Women's use of communication skills to demand changes in the provided care.
4. Women's satisfaction
5. Women's postpartum well-being.
6. Women's childbirth expectations.

Outcomes

Primary outcome

- Use of pubic shaving and enema
- Early mother-baby contact and the time the baby spends in the mother's room
- Women's demand not to undergo pubic shaving and enema during labor
- Women's demand for early mother-baby contact and for keeping the baby for longer periods in their rooms

Secondary outcomes

- Women's knowledge of necessary/useful hospital postpartum and intra-partum practices.
- Women's overall satisfaction with the care received during pregnancy, delivery and postpartum.
- Postpartum well-being
- Women's childbirth expectations

Summary on data collection method

A list of all hospitals in Lebanon was compiled from different sources. We established contact with each hospital on the list to enquire whether they had a functioning maternity unit and to get the average number of deliveries per month. After completing the list with the above information, we excluded all baby-friendly hospitals (for possible interference with some of our outcomes) and those having an average number of deliveries below 20 per month. All remaining 63 hospitals on the list were contacted to secure their consent to participate in the study and to provide the study team with a list of obstetricians working within their facilities. We, then, contacted all obstetricians (as on the list provided by hospitals) to insure their consent to recruit women from their clinics.

Allocation of hospitals into the different study groups was done by one of the statisticians in the team (Z. Mahfoud) and revealed to the field team just before recruiting women from each clinic. Field workers visited each consenting clinic to get the contact information of pregnant women visiting that particular clinic. They then contacted each woman by phone, explained the nature of the study and secured their consent to participate. The baseline interview was completed during that first telephone contact. The intervention team (a midwife and a health educator) contacted women in the intervention group by phone to invite them to attend the two intervention sessions during the last trimester of their pregnancy. Field workers visited women (both intervention and control) at their residence after their delivery to complete the postpartum interview.

Analysis

This analysis was conducted on data collected in two regions of Lebanon, Mount Lebanon and South for purposes of interim reporting. Upon the results of this analysis the study was terminated considering the already shown effects on a small sample and the shortage of funds to continue the study in other regions of the country.

The total number of recruited women from these two regions equals to 313 (completed baseline questionnaires), divided as 184 in the intervention group and 129 in the control group.

The socio-demographic variables considered for this analysis were: age of the woman, working status of the woman, educational level of the woman, educational level of the husband and the number of live births. The analysis of the associations between these background variables showed that the educational level of the woman is associated with all the other variables. For that purpose and for its significance related to the objectives of the study, the educational level of the woman was the only background variable considered during this analysis.

Cross-tabulations with chi-square statistics are used for this analysis to show trends and potential associations. Intend to treat analysis was followed as well as analysis by groups actually receiving or not the intervention was conducted. The preliminary analysis showing the effect of the cluster sampling did not indicate major differences from the currently shown results.

Results

There were no differences with regards to the socio-demographic variables between women who had consented to participate in the study and those who had refused. Similarly, no statistical differences were observed in terms of the socio-demographic variables between intervention group women and control group women. As the results of the intend to treat analysis and the actual receipt of the intervention were similar, the tables below presents the study groups as intended to be allocated (intend to treat).

Table 1 presents the distribution of the intra-partum and postpartum outcomes of interest by allocation group. There is a trend of improvement both in the actual practice and in women's demands in all of the practice related outcomes. Statistical significance is not reached in the outcome measuring holding the baby directly after birth. These trends remained the same when analysis was stratified by educational level of woman and by region of residence (data not shown).

Table 2 presents the distribution of knowledge and satisfaction of women by the allocation groups. Women's overall knowledge score as well as their knowledge on specific areas related to the outcomes of the study are higher in the intervention group compared to the control group. This trend remained statistically significant after controlling for educational level of the woman and her region of residence. Women's satisfaction of their overall childbirth experience was lower in the intervention group although this trend did not reach statistical significance. This trend remained the same after stratifying women by educational level and region of residence.

The results suggest the possibility of changing women's behaviors and affecting actual services by providing women with information about labor and delivery practices and giving them the skills to negotiate the care they receive.

Table 1: Distribution of intra-partum and postpartum practices by allocation groups.

Outcomes	Allocation groups				X ²	p-value
	Intervention (n=100)		Control (n=82)			
	N	%	N	%		
Had an enema during delivery	32	32.0	45	54.9	9.661	0.002
Demanded no enema during delivery	27	27.0	5	6.1	13.584	0.000
Undergone pubic shaving during delivery						
Yes	10	10.0	29	35.4		
Prepared self at home	86	86.0	50	61.0	17.318	0.000
Demanded not to be shaved during delivery						
Yes	4	4.0	3	3.7		
Prepared self at home	86	86.0	50	61.0	17.318	0.000
Did hold baby directly at birth	42	42.0	29	35.4	0.833	0.361
Demanded to hold baby directly at birth	40	40.0	24	25.3	2.276	0.131
Was brought the baby within first 2 hrs of birth	77	77.0	46	56.1	8.985	0.003
Demanded to have the baby within first 2 hrs of birth	54	54.0	45	54.9	0.014	0.906
Kept the baby in mother's room as much as wanted	87	87.0	58	70.7	7.362	0.007
Demanded to keep the baby in mother's room as wanted	75	75.0	40	48.8	13.316	0.000

Table 2: Distribution of knowledge and satisfaction of women by allocation groups.

Outcomes	Allocation groups				X ²	p-value
	Intervention (n=100)		Control (n=82)			
	N	%	N	%		
Scoring above average on knowledge scale (X=2.9; range 0-5)	20	20.0	46	56.1	25.400	0.000
Holding baby directly after birth improves bonding	97	97.0	71	86.6	6.882	0.009
Keeping infants in nursery decreases risk of infection	66	66.0	35	42.7	9.918	0.002
Rooming-in baby with mother improves breastfeeding	91	91.0	63	76.8	6.950	0.008
Enemas are necessary to prevent infections	40	40.0	12	14.6	14.205	0.000
Pubic shaving increases risk of infection	43	43.0	25	30.5	3.014	0.083
Scoring above average on satisfaction scale (Median=105)	35	46.7	31	56.4	1.194	0.275

1 Yayla M. (2003). Maternal mortality in developing countries. *Journal of Perinatal Medicine*; 31(5):386-91.

2 Ram K. (1994) Medical management and giving birth: Responses of costal women in Tamil Nadu. *Reproductive health matters*; 4:20-26

3 Choices and Challenges in Changing Childbirth. (2005) Routines in facility-based maternity care: evidence from the Arab World. *BJOG*; 112: 1270-1276.

4 Khayat R, Campbell O. (2000) Hospital practices in maternity wards in Lebanon. *Health Policy and Planning*; 15(3):270-8

5 Ministry of Public Health, Republic of Lebanon (1998). PAPCHILD: Important results and recommendations.

6 El Kak F, Chaaya M, Campbell O, Kaddour A. (2004). Patterns of antenatal care in low versus high risk pregnancies in Lebanon. *Eastern Mediterranean Health Journal*. 10(3): 1-9.

7 Kabakian-Khasholian T, Campbell O, Shediak-Rizkallah M, Ghorayeb F. (2000) Women's experiences with maternity care: satisfaction or passivity? *Social Science & Medicine*, 51:103-113.

8 Rowe RE, Garcia J, Macfarlane AJ, Davidson LL (2002) Improving communication between health professionals and women in maternity care: a structured review. *Health Expectations*, 5: 63-83.