Promoting healthy spacing between pregnancies in India: Need for differential education campaigns

Mary Philip Sebastian a,*, M.E. Khan a, Sohini Roychowdhury b

a Population Council, New Delhi, India
b UNICEF State Office for West Bengal, Kolkata, India

1. Introduction

The unmet need for contraceptive methods in India is 13 percent and 21 percent pregnancies are unplanned [1]. Although there is an increase in knowledge about different contraceptive methods, families still lack information about the risks associated with short spaced pregnancies. According to the Indian DHS (2007) 77 percent of sterilized women did not use a family planning method before their sterilization [1]. Additionally India has the highest neonatal mortality and one of the highest maternal mortality ratios in South Asia [2]. 12 percent child mortality was reported among currently married women in the recent DHS [1]. The recommended birth interval is 24 months between a live birth and the next pregnancy. The result is the reduced risk of adverse maternal, perinatal and infant outcomes [3]. Birth intervals of three to five years could increase the chances of infant and maternal survival to 2.5 times more when compared to children born at interval of 2 years or fewer [4–7]. However, currently 11 percent of births in India occur within 18 months of previous birth [1] and 30 percent of births in India’s largest State of Uttar Pradesh (UP) occur within 24 months of the previous birth [8].

Existing studies underscore the limited control of women in India have over their lives [9–12]. In reality the husband controls all major expenditures, even fertility and contraceptive use decisions [11]. Mothers-in-law also play a dominant role in young woman’s contraceptive use decisions. In a study conducted in Uttar Pradesh, 56 percent women of reproductive age deferred health care decisions to their mothers-in-law and 15 percent to their husbands [11]. Furthermore pressure from husbands or in-laws can also lead to contraceptive discontinuation [13,14]. These studies highlight the importance of not only reaching the young woman, but also the decision makers in the woman’s life, through appropriate messages. A study in Nepal showed that exposure to mass media campaigns increased inter-personal communication about contraceptive use, thereby increasing positive attitudes towards family planning [15]. Another study indicated the influence of exposure to messages in changing the belief that Islam opposes contraceptive use [16].
To devise suitable communication strategies and messages for the diverse audiences [17], it is important to understand the similarities and differences in the beliefs and attitudes of young women, elderly women and men. Existing theories and experiences play a critical role in developing effective health communication tools and messages [18–20]. In addition, the number and types of communication channels and messages were seen to influence interpersonal communication, attitudinal change and contraceptive use [16,21]. This paper discusses the processes engaged in the development of suitable messages for the different audiences.

1.1. Location

The study was carried out in the rural areas of Meerut district in Uttar Pradesh (UP), India. Uttar Pradesh is the most populous state (166 million) of India with relatively poor socio-economic development and demographic indicators [22]. UP is fifth poorest among the states of India according to the latest Tendulkar Committee report based upon goods and services instead of a calorie intake measure to calculate the poverty line basket [23]. Age of marriage is particularly low in UP; 59 percent women aged 20–24 years in rural areas are married before the legal minimum age of 18 years. Fertility in UP is 3.8 children per women; which is much higher in rural areas—4.1 children per women [8]. As mentioned earlier, birth intervals are short, particularly among young women. Among mothers aged 15–19 years, 50.7 percent of births are spaced less than two years apart.

Meerut, the study district in Uttar Pradesh is approximately a two-hour drive from Delhi (country’s capital) and has a rural population of 217,000. Maternal health indicators for the district were far from satisfactory as per the RCH-2 evaluation report. Only 24 large villages from 2 sub-districts were far from satisfactory as per the RCH-2 evaluation report. Only 73 percent of mothers had received tetanus toxoid injections; 38.8 percent pregnant women had institutional delivery and only 49 percent of couples were using contraceptives [24].

2. Methods

To understand the socio-cultural and programmatic barriers promoting early marriage as well as short spaced pregnancies, data were collected using specific qualitative methods. Altogether 16 Focus Group Discussions (FGDs) and 30 In-Depth Interviews (IDIs) were conducted. While acknowledging the theories that influence health decisions [16–20], we developed tools for qualitative data collection for the different participants who would be audience for the messages: the young women, their spouses, and the elderly women/mothers-in-law. These different audiences were chosen because of the role they play in the contraceptive use of young women-men, especially in decisions related to the use of family planning methods for spacing.

Six FGDs each with men and women were conducted; who were newly married or first time parents. Four FGDs were exclusively of the elder women in the family. In each group there were 10 participants. In addition to the FGDs, to understand the views and experiences of newly married and young parents in detail, 30 in-depth interviews were conducted—five each with newly married (six months or less), non pregnant and pregnant women, women with one child delivered in the last 6 months, and women with one or two children of which the last delivery was in the last 12–18 months. To understand the husband’s experiences about tackling the pressure for pregnancy, 10 in-depth interviews were specially conducted with husbands. Their views and expectations on spacing and family planning were also discussed during the IDI.

Data were collected in the local language after receiving informed consent. No incentives were offered, the participation was completely voluntary. To ensure that the same person was not part of both the FGD and IDI, different villages were selected for the two. Further, to prevent any contamination of study findings, villages from a sub-district that was not part of the quantitative survey were included for qualitative data collection. From this sub-district, villages close to the main road (so that the research team can reach the village by car) were identified. A village close to the health facility and a village far from the health facility were chosen for FGD and another 2 each for IDI. The community workers maintain a register of pregnant women and newly married couples. From the register, women satisfying the specific requirements (like married in last 6 months, pregnant or 6–12 months postpartum or the like) were chosen to participate in our research study. If a woman or her husband refused to be part of the IDI or FGD, or was out of station; another person was chosen from the register.

Pregnant women from 48 villages were registered for the quantitative part of the study; 24 large villages from 2 sub-districts were randomly assigned to control and experimental areas. Each of the groups was comparable in key socio-demographic variables. 600 women, 4–7 months pregnant with parity 0 or 1 and below the age of 25 years were registered in the two study areas and interviewed at baseline and follow-up surveys. Additionally, from the two study areas: husbands and a third of mothers-in-laws were interviewed at baseline and at 9 months postpartum of women.

The qualitative data were tape recorded, transcribed and translated to English. The data were analyzed using Atlas-ti [25]. Data analysis was performed using a modified grounded theory—a process that allows researchers to discover categories, themes and patterns that emerge from data sets [26]. Beliefs and experiences related to timing of first pregnancy, the need of spacing, and the disadvantages of a closely spaced pregnancy to mother, child, fetus and family; and from these, the messages considered suitable for the different audiences to effect behaviors that would promote spacing between births were investigated [27]. Accordingly, messages were identified for the women, husbands and mothers-in-laws, and communication aids were prepared. Quantitative data were analyzed using Stata 8 [28].

2.1. Intervention: educational campaign

The key intervention comprised: (a) an educational campaign carried out by the community workers (CW) using communication materials—leaflets, posters, wall paintings and booklets addressing pregnant women, their husbands, mothers-in-law and community opinion leaders; (b) training of all community workers on the topics for the educational campaign before the campaign’s implementation. These added components were presented only in experimental areas, enhancing the existing government intervention, and in the control areas the existing government program was run without any additional modification.

The community workers were an Auxiliary Nurse and Midwife (ANM) and Accredited Social Health Activists (ASHA) from the Department of Health and Family Welfare and Anganwadi Workers from the Department of Women and Child Development. The ANM is the community mid-wife who has received one and a half years of training in nursing and midwifery. Correspondingly, ASHAs are health volunteers who receive a performance linked fee. ASHA volunteers receive an initial training of three weeks in various aspects of mother and child care. Anganwadi workers also counsel pregnant women and lactating mothers in the community. The Anganwadi worker runs an anganwadi centre (creche and play group) in the morning for children 6 years and under, and visits the households of pregnant women in the afternoon. In addition, they provide supplementary nutrition to this target population and receive a monthly honorarium.

A pre and post training questionnaire was used during training of community workers to assess the knowledge gained from the
different topics on which community workers were going to counsel women, and to assess if further training was required. After the training, during the community workers’ monthly meetings, project staff assisted the supervisors of community workers to plan the activities for the coming month, assist in problem solving of problems faced during the women’s counseling sessions, and plan topic and content for group meetings.

Each pregnant woman was individually visited by the community workers. During the visit, community workers explained about birth spacing and postpartum care including LAM and postpartum contraception. Women were provided with a booklet that they were instructed to share with their husband and mother-in-law. Besides the pregnant women, elder women were also invited to attend the group meetings at the anganwadi center. In addition, a focused educational campaign was launched to educate the women’s husbands on a variety of topics. This included occasional group meetings for them. During the first male group meeting in each of the study villages, the booklet was made available and attendees were encouraged to take extra booklets home.

3. Results

3.1. Findings from the qualitative data

The analysis of the qualitative data highlighted several important social constructs and compulsions that influence young couple’s early reproductive life. This includes; compulsion to bear first child as early as possible; desire of couples to have 2nd pregnancy at least 3 years after first birth but their failure to translate their desire into action; causes of the failure to delay 2nd pregnancy are more programmatic than cultural; same message to promote postpartum contraception may not convince all the stakeholders—young woman, husband and mother-in-law.

Since this paper focuses on the development of messages, we give below few quotes to highlight the need of different messages for woman, husband and mother-in-law. The health of the first child was the most important theme that emerged in the discussion with young women, mothers-in-law and husbands.

As a women with two children mentioned, “First child will fall ill very often and remain weak if second child is born very soon. After my first delivery, when he (husband) saw that I had started doing household chores, he started having sex. And in six months I became pregnant again. I was very weak and my first child also became weak since I could not take care of him.” Young woman IDI, 6 month postpartum

Husbands also gave primary importance to child’s health, “Second child should be born five years after first child. By then our 1st child is grown up and healthy and mother too is healthy to conceive another without pregnancy complications. Father too is in secure position to receive the next child.” Husband’s FGD

Mother-in-law reiterated similar sentiment, “If second child comes soon, then mother has to look after him. So how will mother take care of the first child?—Once second child is born, no matter how much you try, first child will definitely get ignored and hence become very weak.” Elder women FGD

While young women gave primary importance to health of her children, taking care of her own health also emerged as an important reason for supporting adequate spacing between births.

Given the fact that very often her own health care decisions are taken by her husband or mother-in-law, the emerging theme in young woman’s IDI and FGD were ‘helplessness’. They were unable to act on their knowledge of the benefits of spacing or the desire for spacing.

“Which woman will not desire spacing? All the work in the house the daughter-in-law (young woman) will have to do. If you have a good mother-in-law, you would get some help in caring for your first child. Whether she (young woman) is ill, or feeling weak, she has to complete all the work. No one understands her troubles”. Young woman FGD

It was encouraging to notice that mothers-in-law by and large understood the need for spacing. They highlighted that in their younger days, tradition (by the mother staying in her natal home after delivery) had prevented closely spaced pregnancy by ensuring long period of abstinence. This custom has eroded now and so young and old have to accept that alternative mechanisms (accepting contraceptive method for spacing) need to be adopted for spacing. Myths and misconceptions also led to not using spacing methods in time. Generally menstruation is taken as the marker of return to fertility after delivery.

Young women who were using contraceptive method as a result of mutual discussion and planning were relaxed and happy as visible in the following quote.

“I had second child after 3 years of my 1st child and I am happy. We had nice fun together before first child was born and we enjoyed taking care of the first child. I used copper-T for 3 years because we had planned to have second child after three years”. Young woman IDI, 12 months postpartum

Expenses involved in childcare and in pregnancy was a strong concern among men. Following are some of their concerns expressed during FGD.

“Delivery is mostly at home. Only when there is a problem we take our women to a doctor because it is expensive”.

“If husband is a daily wage earner, then money will be a constraint. He will find it difficult to bring up the children well-fed and well-cared for. Financial burden will be experienced”.

“When a child is very young, the expenditures are not much. But when he/she grows up, that’s when they (couple) realize how expensive bringing up children are and then they say ‘we should not have hurried and should have saved some money before having second child’”.

Mothers-in-law gave importance to household expenses and were not specific like men about child care or pregnancy related expenses.

“Whether they are earning well or very little, no one is bothered about expenses. They (men) are all strong in their desires, thinks of nothing else. Enjoyment is primary for the husband. How will you find enough money for household expenses if number of children keep increasing and falling ill?”

The findings showed that many young couples want to space births, but a number of social and programmatic barriers limit the scope of translating their desire into action. The formative research revealed that while women, husband and many mother-in-laws approve spacing between births, their reasons for supporting such
spacing varied. Hence if the same messages are given to all, perhaps it will not be as effective in promoting postpartum contraception. Selective messaging by type of audiences could reinforce their concerns and stimulate them to adopt the targeted behavior. Although young woman, husband and mother-in-law gave first preference to the health of the young child, the order of importance varied there after. Table 1 shows the order of importance accorded by young woman, her husband and mother-in-law.

Audience specific messages for young women, husband and mother-in-law were developed based on their interest and prioritization. The dialogues of each of the audience groups during the in-depth interviews and FGDs formed the basis of the messages. The following different types of communication mediums were developed:

(1) Posters: Four types of posters giving key messages about delaying first pregnancy till age 18 years; birth to pregnancy interval of 24 months, fertility return after delivery and use of contraceptive methods to prevent pregnancy and what is LAM (Lactational Amenorrhea Method).

(2) Wall Paintings: Key messages were painted on walls in important locations like the sub-center, Primary Health Centre (PHC) and Panchayat (village office) buildings.

(3) A booklet as counseling guide for the providers and information booklet for couples were provided giving information on advantages of well spaced pregnancies, importance of spacing for mother, child and the family as a whole, how to use LAM and various contraceptive choices correctly. The booklet also had stories for newly married woman, mother-in-law and husband that were prepared from the dialogues in the qualitative data.

(4) Additionally, leaflets from an existing project (SIFPSA) in Uttar Pradesh, on the various contraceptive methods were distributed in the intervention sites along with the above mentioned new materials.

3.2. Pre-testing

Pre-testing was an essential step in the development of job aids and communication materials. A simple guide was developed for pre-testing the booklet and posters. In total, 15 questions were asked—general opinion on the entire booklet, specific views for each page in the booklet and for each of the posters. Fifteen women who were either pregnant or had a child in the last one year had participated. They were from different villages outside the experimental area. Answers were recorded on an answer sheet prepared by the pre-testing team. Wherever necessary, information was recorded in verbatim. The main focus was to understand the adequacy of the material in educating semi-literate or illiterate women. Although three of their mothers-in-law and two of their husbands too were part of the pre-test, the discussion in this paper is only referring to findings from the young women's pre-test. No new points had emerged in the pre-testing with mother-in-law.

The aim of the pre-testing was to measure five variables:

(1) Comprehension: Are the materials conveying the message in an easy and comprehensible way? (2) Attractiveness: The materials were tested for their layout, use of pictures, typeface and colors. (3) Acceptance: Were the messages and the way in which they were communicated acceptable to the intended audience? (4) Involvement: Respondents were asked whether the messages, pictures, words were easily identifiable with them and their place of residence. (5) Action: The respondents were asked whether they understood the expected behavior and if behavior change was possible from the messages communicated.

Overall, all the 15 respondents felt that the booklet was a useful source of information about the importance of birth spacing, delaying first pregnancy and provided comprehensive knowledge of all spacing methods. About half the women said that they had knowledge about various contraceptive methods but felt that it was the first time they were being told the importance of spacing in such detail. Five felt that the size of the booklet should have been smaller so that it could be concealed from their children (see Table 2).

Almost all respondents clearly understood the key message that the three stories in the booklet were conveying. Some suggestions included, “Use the word 'padosan' instead of 'padosi' (means neighbor-one referred to female and the latter to male), "Change title of story" (referring to one of the stories in the booklet). Respondents had some difficulty with the meaning of a few words in the booklet. Words changed were Grafasye ki bhitri parat (means 'uterine lining'), Asamanya (means 'not common'), Aarthik (means 'Financial'), and Asthayi (means 'temporary'). All the above feedback received was incorporated into the different materials.

3.3. Educational campaign

Although the various IEC materials were received with enthusiasm by the community workers, there were issues that needed attending to with respect to the educational campaign. A major concern expressed by the workers was non-acceptance of them when they go to households to counsel about family planning method. As fallout of the emphasis on sterilization by the family welfare program in the early 1980s; talking of this method had become an innate habit of the workers. Over time, this led to non-acceptance of workers in many households.

Community workers training were for two days and each afternoon was set aside to practice counseling young women on different topics. Role plays were extensively used to practice counseling skills and to distinguish skills required for counseling young pregnant women versus older women. Handling counseling in different situations like when husband or mother-in-law was present at the time of house visits was also discussed and practiced. Despite specific instruction during the role play to worker that counseling topic should only be birth spacing; invariably elaborate discussion of contraceptive use was observed. Hence it required long practice to unlearn their habit and provide focused counseling on the various topics.

Community workers were also provided with job aids and leaflets for distribution. They were given a work register with the topics of counseling. This also assisted them to stick to a topic during house visit and not mix different topics while counseling. This was desirable for women and family members to assimilate the information provided. Assimilation of knowledge was gauged by spot checks in random families by the supervisors during
supervisory visits to the villages. By introducing birth spacing as a health intervention—a topic community was not aware of—to accept reception of community workers in households and facilitated the discussion of other topics of maternal and child care in subsequent house visits.

Four different posters were put up at the anganwadi centre (creche), sub-centre, PHC and panchayat ghar (village office). These messages were also disseminated through wall paintings. Three wall paintings were done in each village at strategic locations from where people, especially women could notice and read the messages. In some villages while panchayat ghar’s wall was chosen, in others, it was the sub-center’s wall or the wall of some prominent community member. The number of different IEC materials that were distributed during the project period, among women and men from 24 villages that belonged to the experimental area is given in Table 3. While these educational materials acted as important vehicles for dissemination of the information, individual counseling by the community workers made all the difference since majority of the women required assistance to read and understand the materials.

Discussing the findings from the various surveys conducted to evaluate the intervention is beyond the purview of this paper. However, it is necessary to mention a few findings to show that the IEC materials were well received and well used.

At baseline survey, counseling on postpartum care and contraception besides other topics were reported by less than six percent couples. Nine months postpartum follow up survey revealed significant increase in counseling on all the topics in the experimental area than in control areas (Fig. 1). The knowledge of LAM was practically non-existent at baseline and continued to be so in the control areas at the end of the study. Eighty-eight percent women from experimental area had received the booklet and read it. Of those who received the booklet, 89 percent had shown it to their husbands and 49 percent had shared it with their mothers-in-law too (Table 4).

Sharing booklet with husband also created an opportunity to discuss their plan for the next child and use of contraceptive methods. Husband–wife communication on using contraceptive method for spacing significantly increased in the experimental area compared to control area. In experimental area, knowledge gain of young women, husbands and mother-in-law in healthy spacing between births (interval of 24 months from birth to next pregnancy) and three conditions for breastfeeding to act as contraceptive method (LAM) were significantly higher than in control area (Table 5). At the time of 9 months postpartum follow-

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Table 2
Pre testing results for pages carrying information on dangers for mother, child and family due to early pregnancy and closely spaced births.

<table>
<thead>
<tr>
<th>Pages in the booklet</th>
<th>Number of women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearly understood</td>
<td>Somewhat clear</td>
</tr>
<tr>
<td>Not clear</td>
<td>Difficulty with some words</td>
</tr>
<tr>
<td>Dangers for the mother</td>
<td>15 - - 6</td>
</tr>
<tr>
<td>Dangers for the child</td>
<td>14 1 - 3</td>
</tr>
<tr>
<td>Dangers for the family</td>
<td>13 2 - 7</td>
</tr>
</tbody>
</table>

Table 3
IEC materials distributed.

<table>
<thead>
<tr>
<th>Type of material distributed</th>
<th>Total numbers dispersed</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 types of posters</td>
<td>594</td>
</tr>
<tr>
<td>Wall painting</td>
<td>75</td>
</tr>
<tr>
<td>Booklet to women</td>
<td>1170</td>
</tr>
<tr>
<td>Booklet during first group meeting</td>
<td>720</td>
</tr>
</tbody>
</table>

Table 4
Exposure to educational campaign.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received booklet (n=570)</td>
<td>88.1</td>
</tr>
<tr>
<td>Read the booklet (n=502)</td>
<td>66.5</td>
</tr>
<tr>
<td>Themselves</td>
<td>31.1</td>
</tr>
<tr>
<td>Some one read to her</td>
<td>2.4</td>
</tr>
<tr>
<td>Neither read nor heard</td>
<td>2.4</td>
</tr>
<tr>
<td>Showed to husband (n=502)</td>
<td>89.1</td>
</tr>
<tr>
<td>Showed to mother-in-law (n=502)</td>
<td>48.6</td>
</tr>
<tr>
<td>Did not show</td>
<td>42.3</td>
</tr>
<tr>
<td>Not alive/staying elsewhere</td>
<td>9.1</td>
</tr>
<tr>
<td>Shared booklet with others (n=502)</td>
<td>24.4</td>
</tr>
<tr>
<td>Seen at least one poster (n=570)</td>
<td>34.0</td>
</tr>
<tr>
<td>Seen at least one wall painting (n=570)</td>
<td>30.2</td>
</tr>
</tbody>
</table>

Table 5
Husband wife discussion and knowledge on various indicators at end of study.

Young women responses:

1. Husband and wife discussed contraceptive use for spacing next birth
2. Mentioned all three conditions of LAM
3. Mentioned minimum 24 months birth to pregnancy interval

Husband responses:

1. Mentioned minimum 24 months birth to pregnancy interval
2. Mentioned all three conditions of LAM

Mother-in-law responses:

1. Mentioned minimum 24 months birth to pregnancy interval
2. Mentioned all three conditions of LAM

Use of modern contraceptives by young couple

<table>
<thead>
<tr>
<th>Experimental area</th>
<th>Comparison area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young women responses:</td>
<td></td>
</tr>
<tr>
<td>1. Husband and wife discussed contraceptive use for spacing next birth</td>
<td>61.4***</td>
</tr>
<tr>
<td>2. Mentioned all three conditions of LAM</td>
<td>78.1***</td>
</tr>
<tr>
<td>3. Mentioned minimum 24 months birth to pregnancy interval</td>
<td>64.2***</td>
</tr>
<tr>
<td>Husband responses:</td>
<td></td>
</tr>
<tr>
<td>1. Mentioned minimum 24 months birth to pregnancy interval</td>
<td>43.7***</td>
</tr>
<tr>
<td>2. Mentioned all three conditions of LAM</td>
<td>17.0***</td>
</tr>
<tr>
<td>Mother-in-law responses:</td>
<td></td>
</tr>
<tr>
<td>1. Mentioned minimum 24 months birth to pregnancy interval</td>
<td>38.6*</td>
</tr>
<tr>
<td>2. Mentioned all three conditions of LAM</td>
<td>8.9***</td>
</tr>
<tr>
<td>Use of modern contraceptives by young couple</td>
<td>61.8***</td>
</tr>
</tbody>
</table>

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* n=560 and 570 for women.
** n=429 and 453 for husband.
*** n=158 and 163 for mother-in-law in experimental and comparison area respectively.

\( p \leq 0.05. \)
\( ** p \leq 0.01. \)
\( *** p \leq 0.001. \)

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Fig. 1. Few topics covered by community workers during house visits.
up of young women, 62 percent couples from experimental area were using contraceptives against 32 percent in the control area.

4. Discussion and conclusion

4.1. Discussion

The various IEC materials developed for this project, especially counseling aids and work registers for community workers were found to be highly effective and useful tools. Pre-testing was an essential part in the development of IEC materials. This was of valuable assistance in establishing that the planned materials and messages are helpful for influencing behavior change of the targeted population in the community, more specifically the young couples and elders in their family.

Unless provider discusses various family planning methods with its specific details; clients would know the methods by name and may not know its correct use. In the recent Indian DHS, knowledge of different contraceptive methods was seen to be universal [8]. However, correct knowledge on the spacing methods was limited. For example, only 39 percent women knew that IUD was placed in the women’s uterus and less than one percent women knew that IUD lasts for 10 years (IUD 380A is being used in the government facilities) [28]. Not only would visual aids increase comfort level of clients, it makes explaining family planning methods simple and easily understandable [15,30]. Visual aids remove an element of embarrassment or shyness in the client because of the way it is used by the community worker to explain methods with it and leads to discussion on the topic between women and the worker. The visual aids can also assist to clarify the existing myths and misconceptions. While the community worker explains the need for spacing between births, she has to use the opportunity to clarify misconceptions existing in her locality [16–20,30,31].

The Indian Family Welfare program had given importance to sterilization in the 1980s [17,32,33]. Overtime, discussing this method during house visits had become a habit for community workers. It is certainly the case from our findings that the discussion of family planning methods after the family had learnt the importance of spacing and the dangers to mother and child with lack of spacing; was a useful strategy in promoting postpartum contraception. It was important to communicate and reinforce the positive intention (spacing between births) before suggesting a method, so that the young women and her family members see the benefit of the proposed behavior (postpartum contraceptive use) [3–7,17,31].

Clients do better with brief, well-organized, clear information on how to use their selected method, and if misconceptions exist, clearing them with concise explanations [29–33]. Both verbal and non-verbal communication play crucial role in determining the positive outcome of counseling. Hence counselor’s beliefs and biases can prevent the intention of promoting postpartum contraception from turning into a reality [30,31]. In this context teaching aids act as a reminder to community workers to shed their biases and help young women differentiate facts from myths.

Though the IEC materials were tested for its acceptability and simplicity; the role played by community workers as educators and counselors cannot be under estimated. Giving the women the booklet for her to read and understand is not sufficient. The booklet given to the women after a full explanation and educating her was supportive and desirable in achieving the objectives. Random household monitoring checks done by the project staff indicated that these instructions were followed by the community workers. This concurs with other studies that providers improve their performance when they feel they are being observed [34–37].

The focus of the qualitative data collection and its pre-testing were the young women. It was assumed that if semi-literate women who may not have much knowledge of fertility and pregnancy could follow the contents of the IEC materials, other stakeholders would be able to understand the messages even better. Hence, one limitation of the study was that there was lack of equal representation from husbands and mothers-in-law. Further, research is required to strategize and evaluate how to reach husbands who are not at home when community workers organize group meetings and to evaluate the effect of such an intervention in effecting positive attitudes towards spacing in the community.

4.2. Conclusion

This paper describes the formative research undertaken to prepare audience specific communication materials and the process of pre-testing to finalize the communication messages. The formative research highlighted the importance given by young women, husband and mother-in-law to the health of child, mother, relaxation, expenses, enjoyment and others varied across groups and so needed focused messages for the different audiences. The findings from the surveys verified the effectiveness of targeted IEC materials and educational campaign.

4.3. Practice implications

For an effective communication in the community, health care professionals need to systematize the topics and timing of the counseling of young women and her family members. Similarly, it is necessary that grass root level workers/community workers know how exactly to convey the different health messages to young women, her husband and mother-in-law. Additionally, educating their supervisors on how to monitor the activities of the community workers is necessary since very often the way the correction is presented to community workers is not supportive; that is, it is not presented as problem solving suggestions. The use of job aids for counseling clients has received much attention in the health communication literature. The importance of using specially targeted communication for young women, her husband and elders is stressed in this article.

Conflict of interest

We declare that there are no conflicts of interest.

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Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.pec.2010.10.019.

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