Background

Evidence shows that closely-spaced pregnancies pose health risks to mothers and newborns. An analysis of data from the Demographic and Health Survey (DHS) for various years shows that babies born less than two years after the next oldest sibling were more than twice as likely to die in the first year as compared to babies born after an interval of three years. Also, women with short inter-pregnancy intervals (less than 6 months) were at higher risk of maternal death (OR=2.54), third trimester bleeding (OR=1.73), premature rupture of membranes (OR=1.72) and anemia (OR=1.30).

Adequate spacing—24 months from delivery to the next pregnancy—could save the lives of mothers and newborns. Family planning could prevent up to one-third of all maternal deaths by allowing women to delay motherhood, space births, avoid unintended pregnancies and unsafe abortions, and stop childbearing when they have reached their desired family size.

However, national-level surveys show that the adoption of contraceptive methods for spacing has remained low in India, including rural Uttar Pradesh (UP), despite the fact that many women (50 percent) desire at least a three-year gap between two births. NFHS-3 data (2005-06) show that among married women aged 15-34 in rural UP, only 20 percent were using any contraceptive method for spacing.

\(^1\)Unless otherwise indicated, data from NFHS-1, NFHS-2, NFHS-3 and DLHS-3 presented in this article are based on an analysis, conducted by the Population Council, of currently married women aged 15-34 in rural UP who had given birth in the 12 months preceding the survey.

Shruti Goel, Consultant, Isha Bhatnagar, Assistant Program Officer, M.E. Khan, Senior Program Associate and Avishek Hazra, Program Officer, Population Council, Zone 5A, India Habitat Centre, New Delhi-110003

Vol. 56, Special Issue - 2010 57
Objectives

In October 2009, the Population Council conducted a formative study in rural UP with the following objectives:

(a) to assess the level of adoption of postpartum contraception for spacing among low parity women;

(b) to identify the facilitating factors and barriers to the adoption of this target behavior,

(c) to identify programmatic and behavior change communication (BCC) initiatives that could accelerate the adoption of postpartum contraception for spacing and improve the service delivery system, if required, to facilitate the process.

The project was funded by the Bill and Melinda Gates Foundation.

Methodology

The formative study was conducted in two phases. First, a survey was conducted covering 4,754 households, 4,472 currently married women aged 15-34 years who delivered a child in the last three years, 2,274 husbands, 2,372 mothers-in-law, 289 ASHAs, 284 AWWs, 161 ANMs, 316 local private practitioners, 284 local private practitioners, 251 panchayat members (including Village Health and Sanitation Committee members) and staff at 144 government health facilities (PHCs/CHCs) from 225 villages in 12 districts spread over the Western, Central and Eastern regions of UP. In the second phase, 308 in-depth interviews were conducted with family-level stakeholders (women, husbands and mothers-in-law), health care providers (ASHAs, AWWs, private practitioners, dais) and panchayat members to complement the information gathered in the quantitative survey. The qualitative study was conducted in 24 villages: eight villages each from three districts, one district from each of the three regions.

Key Findings

Status

The Population Council study reveals that among currently non-pregnant women aged 15-34 years (N=4,049), 41 percent were using a contraceptive method in the postpartum period. Contraceptive method use was 28 percent among women who had given birth in the 12 months preceding the survey. Of these, 27 percent were using modern methods while 14 percent were depending on traditional methods. Condoms (14 percent) and the safe days method (11 percent) were the most common methods reported.

Figure 1 shows the trend in postpartum contraceptive use in rural UP among women who had given birth in the 12 months preceding the survey, indicating that postpartum contraception is slowly increasing.

Regional variations in the use of modern contraceptive methods are evident. Rates were higher in the Western and Eastern regions of UP (each around 31 percent) as compared to the Central region (22 percent) (ANOVA test, p<0.001).

LAM is a natural contraceptive method that protects women from unwanted pregnancy for up to 6 months following delivery, only if the following three criteria are met: (i) the child is less than 6 months of age; (ii) the child is being exclusively breastfed; (iii) the woman’s menstrual cycle has not resumed.
The study shows that only 22 percent of women were aware that a woman can become pregnant within 3 months after delivery if any contraception is not being used. Lactational Amenorrhea Method (LAM)\(^b\) is not being considered as a contraceptive method since less than 1 percent of women had correct knowledge about it. Among all women interviewed, 32 percent incorrectly believed that fertility can return only after 3-6 months, while 18 percent believed that fertility returns after one year. Among mothers-in-law, 21 percent perceived the resumption of menstruation as the marker of fertility; husbands also shared the same misconception.

Amongst 4,049 women, 54 percent said they were not using any contraceptive method and perceived themselves to be protected from unwanted pregnancy as their child was small (35 percent) or their menstruation had not resumed (29 percent) (Figure 2).

An analysis of the 880 women shows that only 142 women (17 percent) were exclusively breastfeeding and their menstruation had not started. Though this shows that they fulfilled all the three conditions to be protected by LAM, however, this protection was available by proxy and was not intentional as there is no knowledge of LAM among women in UP. Hence, when their menstruation resumes or they stop breastfeeding exclusively, they will be exposed to the risk of unwanted pregnancy. Amongst women who did not fulfill any of the other two criteria of LAM (i.e. exclusive breastfeeding and menstruation not resumed), 564 women (64 percent of 880 women) were not using any family planning method while 174 women (20 percent of 880 women) were using a family planning method.

Among users of contraception (N=174), 114 women (65 percent) were using modern methods and 60 women (35 percent) were using traditional methods. During this period, condoms were the preferred choice (45 percent), followed by the safe days method (25 percent). Qualitative data show that couples have incorrect knowledge of the practice of traditional methods such as safe days method and so adoption of these methods may not ensure protection from unwanted pregnancy.

Women with a child older than 6 months of age constituted 78 percent of the total sample (3,169 women). Among them, 19 percent (616 women) wanted a child within two years. The rest (2,553 women) either did not want another child (59 percent) or wanted a child after two years (21 percent), and hence both these categories should be using family planning methods to avoid unwanted pregnancy. Of these (N=2,553), 50 percent (1,277 women) were using a family planning method, whereas another 50 percent (1,276 women), despite their need for a family planning method, were not using any method. This analysis shows that among women with a...
child less than 6 months (N=880), 76 percent were at risk of unwanted pregnancy. Among women with a child aged 6 months or more (N=3,169), 53 percent were at risk of unwanted pregnancy. Thus, among the total 4,049 women, 58 percent were at risk of unwanted pregnancy.

Among currently pregnant women (N=423), 62 percent reported the pregnancy was unwanted while for 38 percent it was a desired pregnancy, primarily to have a son. As one woman said:

“I wanted more children as all were girls. One boy should be there to take care of the household.”

An analysis of the reasons for unwanted pregnancy (N=265 women) reveals that 23 percent had delayed adopting contraception, 11 percent got pregnant before their menstrual cycle resumed, 7 percent reported method failure while for 13 percent fear of side effects discouraged them from adopting a method. As a woman said:

“I don’t know about any contraceptive method, the ASHA has never told me about this...I don’t want more children but my husband does, and forces me [to have sex] without using any contraception. Once he told me about Mala-D [name of an OCP] but I don’t use them since my sister-in-law told me that it does not work.”

For the remaining 43 percent, women’s lack of authority and family-level opposition (from self, husband) to adopt a contraceptive method had resulted in the unwanted pregnancy. As one woman, pregnant with her sixth child, reported:

“I wanted to get sterilized before this child but since I did not know much about it, or where to go for sterilization, this pregnancy happened. Apart from this my mother-in-law and father-in-law were pressing me that we should have at least two male children. My in-laws had told me that if I get sterilized they will make me leave the house.”

Amongst all women (N=4,472), 87 percent were aware of at least one contraceptive method for spacing. Awareness was high for oral contraceptive pills (OCPs; 80 percent) followed by condoms (67 percent) and IUDs (46 percent). In contrast, awareness of injectable contraceptives was only 12.8 percent, and emergency contraceptive pills for use in case of unprotected sex was just 0.6 percent.

**Barriers**

**Low awareness of the critical consequences of closely spaced births**

The most commonly reported adverse consequence of closely spaced births, as perceived by ASHAs, husbands and women, were the mother becomes weak (ranging between 80-89 percent), followed by the baby being low birth weight (43-48 percent of ASHAs and husbands, 22 percent of women). Other critical or fatal complications like miscarriage, pregnancy complications, stillbirth or child death during delivery were mentioned by very few (Table 1). ASHAs’ lack of knowledge would need to be addressed as they are key change agents at the community level.

![Table 1](image-url)

**TABLE 1**

Perceived dangers of closely spaced births (within 15 months from previous delivery) reported by women, husbands and ASHAs (percent)

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Husbands</th>
<th>ASHAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woman becomes weak</td>
<td>80</td>
<td>87</td>
<td>89</td>
</tr>
<tr>
<td>Low birth weight/smaller baby</td>
<td>22</td>
<td>48</td>
<td>43</td>
</tr>
<tr>
<td>Miscarriage</td>
<td>14</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>Stillbirth</td>
<td>10</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Pregnancy complications</td>
<td>17</td>
<td>23</td>
<td>25</td>
</tr>
<tr>
<td>Child may die during delivery</td>
<td>5</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,699</strong></td>
<td><strong>2,274</strong></td>
<td><strong>281</strong></td>
</tr>
</tbody>
</table>

Note: Percentages may not add to 100 due to multiple responses.
No knowledge of timing of the return of fertility and LAM

Four-fifths (80 percent) of all women (N= 4,472) did not know how soon a woman can become pregnant after delivery. In-depth interviews reveal that most believed that women can become pregnant only after their menstrual cycle resumes. As one husband said:

"My wife’s menstrual cycle has not started so we don’t use a method since there is no need...when it starts I will use condoms...I have used them before."

An AWW also reported:

"Many women do not get their menstrual cycle for 6 months to a year after delivery; that is why I advise women to use OCPs only after 6 months."

Knowledge of LAM and its use was almost negligible (<1 percent) among all the stakeholders in the family. A typical response during the qualitative study was:

"I do not know about LAM. If the menstrual cycle does not resume, then how can anyone get pregnant?"

Frontline health workers' knowledge of LAM was also poor; only 6-7 percent of ASHAs and AWWs, and 22 percent of ANMs had correct knowledge of LAM.

Misconceptions and fear of side effects of OCPs and IUDs

Among non-users of contraception, 17 percent of women had not adopted a method because they wanted the next child soon. Of the remaining 1,814 women, 11 percent had not adopted contraception due to fear of side effects. The most commonly reported side effects of OCPs were that it makes a woman feel hot, cause rashes, harms the uterus and results in infertility if used continuously. For example, a woman said:

"In the village people say that the use of pills [OCPs] will cause complications. I took Mala-D after my first child was born but my stomach would become bloated."

For IUDs, commonly reported side effects were heavy bleeding, harm to the uterus and movement of the IUD to the heart which causes death. According to a woman:

"My menstruation has just started so my husband told me to get an IUD. I told him that I’m scared because my neighbor got it and she had heavy bleeding."

Incorrect knowledge of rhythm/safe days method

Though the safe days method is the second most commonly used method (11 percent) after condoms, and it’s use has been continuously increasing—from 2 percent in the early 1990s\(^5\) to 12-15 percent in 2005-06\(^6\)—in-depth interviews reveal incorrect knowledge and practice. Many women and husbands believe that the first 10 days of the menstrual cycle is the most unsafe period. A husband said:

"We don’t have sex for 16 days from the day the menstrual cycle starts, as women get pregnant during this time; my friends told me this."

A woman said:

"I have many children so I did not want this child. I used to follow protection by not talking [not having sex] during my menstrual cycle, as these are the most risky days. Once I made a mistake and this happened [I conceived]."

Another husband expressed incorrect knowledge of the safe period:

"I know a woman cannot become pregnant 15 days after menses starts. Whenever I want to make contact [have sex] with my wife within 15 days from start of menses I use a condom. This time the condom
may have burst ... I am not sure what happened... and she became pregnant.”

**Lack of counseling efforts by frontline health workers**

Most women (80 percent) did not receive any advice on spacing or family planning methods either during ANC or at the time of discharge from the facility after delivery. PNC contact, which also provides an opportunity for family planning counseling, was limited; just 14 percent of women reported PNC contact with any frontline health worker.

**Frontline health workers’ reluctance to involve husbands in family planning counseling**

Although 39 percent of ASHAs and 20 percent of ANMs mentioned that the husband is the key decision-maker on reproductive health and contraceptive issues, only 12 percent of ASHAs reported that they had advised husbands on birth spacing or contraceptive methods. An ASHA said:

“I do not talk to men on this topic [family planning] as they are our elders. They avoid talking to me on such issues and I also feel shy talking to them.”

Another ASHA mentioned:

“My husband talks to them [men] about ANC, delivery preparedness and family planning. In this way I am able to reach all women. Mostly my husband talks to men.”

As sterilization continues to be the focus of the family planning program, few young low parity women are approached and advised to use contraceptives for spacing. Only 21 percent of women were given any advice on contraception to space births at the time of discharge from the facility after delivery (N=1,979) or in the subsequent postpartum period. Moreover, ASHAs get a performance-linked fee for promoting sterilization, and hence promoting spacing methods is not considered to be profitable. Woman also had similar views about frontline health workers:

“Nasbandhi waali behenji [the lady who promotes sterilization, probably the ASHA/ANM] just tells us to get the operation [sterilization] done.”

**Facilitating Factors**

To identify the determinants and facilitating factors for postpartum contraception, a logistic regression analysis was conducted among all currently non-pregnant women. Results of the analysis for postpartum contraception are presented in Table 2. The key facilitating factors that were identified are discussed below.

**Background characteristics**

Women’s background characteristics such as educational attainment (secondary or higher education; OR=1.29, p<0.05) and high standard of living (OR=1.63, p<0.001) facilitate the adoption of the desired practice.

**Spousal communication**

The logistic regression analysis shows that women who discussed family planning with their husband were four times more likely (OR= 4.57, p<0.001) to adopt postpartum contraception than others. Hence, a BCC campaign to trigger spousal communication on family planning could lead to the uptake of the practice.

**IPC through frontline health workers**

The study shows that for 50 percent of women, the ASHA/ANM is the preferred source of information on birth spacing and contraceptives. The logistic regression analysis shows that women who received advice twice on family planning were more likely to adopt postpartum contraception (unadjusted OR=1.63 p<0.001) than those who were not advised at all.
Exposure to birth spacing messages increases the likelihood of adoption of family planning methods. The analysis shows that among women who had heard or seen any message on birth spacing in the last three months, 50 percent were using a contraceptive method while among those who had no exposure to birth spacing messages, only 37 percent were using a method (z test, p<0.001).

### Source of information on family planning for women and men differ

For media planning due consideration should be given to the fact that though the preferred source of information on birth spacing is frontline health workers (50 percent), women mainly received birth spacing messages from friends and neighbors (39 percent) and their spouse (26 percent), while husbands mainly received these messages from the mass media (65 percent from the radio and 59 percent from TV) and posters/ banners displayed at health centers and other public places.

### Husband’s involvement is important

Husbands are key influencers and decision-makers for the adoption of postpartum contraception. BCC efforts that focus on the husband to promote spousal communication and joint decision-making on the adoption of postpartum contraception could help to promote mother and child health as well as reduce the burden on the family economy. In the context that almost two-thirds of men (those who are educated up to Class 9 or above) in UP can be reached by a combination of the press, TV and radio,7 BCC efforts to reach men through the mass and mid-media, such as community radio, may be effective and could help in triggering spousal communication.

### Janani Suraksha Yojana (JSY) provides counseling opportunities

The increase in three ANCs and institutional delivery due to JSY presents additional opportunities for provider contact with couples. These opportunities should be optimally utilized to ensure that birth spacing advice is given during ANC and pre-discharge counseling. Use of counseling aids by frontline health workers could increase the effectiveness of counseling. Currently 47-70 percent of

---

**TABLE 2**

Results of the logistic regression analysis on postpartum contraception

<table>
<thead>
<tr>
<th>Variable</th>
<th>Categories</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caste</td>
<td>SC/ST*</td>
<td>1.02</td>
</tr>
<tr>
<td></td>
<td>OBC</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td>General caste</td>
<td></td>
</tr>
<tr>
<td>Standard of Living Index</td>
<td>Low*</td>
<td>1.20*</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>1.63**</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Age of women</td>
<td>15-19*</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>20-24</td>
<td>1.09</td>
</tr>
<tr>
<td></td>
<td>25-29</td>
<td>1.07</td>
</tr>
<tr>
<td></td>
<td>30-34</td>
<td></td>
</tr>
<tr>
<td>Education of women</td>
<td>No education*</td>
<td>0.87</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>1.29*</td>
</tr>
<tr>
<td></td>
<td>Secondary and above</td>
<td></td>
</tr>
<tr>
<td>Number of children ever born</td>
<td>One*</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td>Two</td>
<td>1.19</td>
</tr>
<tr>
<td></td>
<td>Three</td>
<td>1.33**</td>
</tr>
<tr>
<td></td>
<td>Four and more</td>
<td></td>
</tr>
<tr>
<td>Number of ANC check-ups</td>
<td>No ANC*</td>
<td>1.10</td>
</tr>
<tr>
<td></td>
<td>&lt;3 check-ups</td>
<td>1.40**</td>
</tr>
<tr>
<td></td>
<td>≥3 check-ups</td>
<td></td>
</tr>
<tr>
<td>Received advice on family planning</td>
<td>No*</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>Once</td>
<td>0.97</td>
</tr>
<tr>
<td></td>
<td>Twice</td>
<td></td>
</tr>
<tr>
<td>Exposure to mass media</td>
<td>No*</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>1.13</td>
</tr>
<tr>
<td>Exposure to birth spacing messages in the last three months</td>
<td>No*</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>1.15</td>
</tr>
<tr>
<td>Spousal communication regarding family planning</td>
<td>No*</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>4.57**</td>
</tr>
<tr>
<td>Village population</td>
<td>&lt;1,000*</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>1,001-3,000</td>
<td>1.27*</td>
</tr>
<tr>
<td></td>
<td>&gt;3,000</td>
<td>1.24*</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4.049</td>
</tr>
</tbody>
</table>

Note: Dependent variable: Using any contraceptive method (Yes=1, No=0);* Reference category; *p<0.05; **p<0.001.

**Implications For The BCC Strategy**

**Exposure to birth spacing messages**

Exposure to messages and information on birth spacing increases the likelihood of adoption of family planning methods. The analysis shows that among women who had heard or seen any message on birth spacing in the last three months, 50 percent were using a contraceptive method while among those who had no exposure to birth spacing messages, only 37 percent were using a method (z test, p<0.001).
frontline health workers have received any counseling aids.

Addressing myths and misconceptions

ASHAs’ counseling aids should include information to dispel myths and misconceptions among couples regarding contraceptives. A choice of mass media and mid-media could be used to reinforce this information.

Orientation on LAM

A re-orientation of all frontline health workers is necessary to promote the correct practice of LAM and timely transition to modern contraceptive methods. A home visit by the ASHA in the fifth month post-delivery is crucial to facilitate this transition from LAM to modern contraceptive methods and to provide advice on initiating complementary feeding.

Message alignment

Messages on birth spacing should be aligned with those on newborn health, exclusive breastfeeding and timely introduction of appropriate complementary feeding to comprehensively address mother and child health.

Reaching the unreached

The limited mobility of women, especially young daughters-in-law, prevents them from accessing information on birth spacing. An effective method to reach such groups would be to provide information through IPC in small groups, for example, during self-help group meetings and Village Health and Nutrition Days. The ASHA is a depot holder for promoting spacing methods like condoms, OCPs and emergency contraceptive pills; ASHAs could be given a small fee to supply these products, which could lead to deeper rural penetration of contraceptives.

REFERENCES


