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Patient perception, preference and participation

Findings from the use of a narrative story and leaflet to influence shifts along the behavior change continuum toward postpartum contraceptive uptake in Sylhet District, Bangladesh

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ABSTRACT

Objectives: Postpartum women face uncertainty about timing of return to fecundity. Many women wait to use contraception until menses return, resulting in unintended pregnancies. This study explored the use of behavior change communication to address perceptions of postpartum return to fecundity and contraceptive adoption.
Methods: This study, which took place in Sylhet District in Bangladesh, explored knowledge and perceptions about postpartum return to fecundity and used the Steps to Behavior Change framework to assess the reported influence of a leaflet and fictional story (“Asma’s Story”) incorporated within community health activities. The study relied on in- depth interviews and focus group discussions.
Results: The study revealed nearly universal exposure to Asma’s Story. Reported shifts in perceived susceptibility to pregnancy, benefits of pregnancy spacing, and increased social support for postpartum family planning (PPFP) were noted. However, only approximately one third of women were using a modern contraceptive method.
Conclusions: Using a fictional story offers a promising approach for motivating shifts along the continuum.
Practice implications: It is recommended that Asma’s Story be incorporated within future efforts to scale up PPFP in Bangladesh, and that similar approaches be tailored and tested in other countries.

1. Introduction

1.1. Background

Postpartum women and their families have unique needs when it comes to family planning (FP). Closely spaced pregnancies pose serious health risks to mothers and their children [1,2]. A multi-country analysis of Demographic and Health Surveys indicated that more than nine of 10 women during their first year postpartum desire to delay the next pregnancy at least two years, or not get pregnant at all, yet there is high unmet need for FP during this period [3].

Many factors affect women’s use of contraception in the first year postpartum, including: resumption of sex; breastfeeding practices and resulting postpartum amenorrhea; awareness of the lactational amenorrhea method (LAM)[1] or circumstances for transition from LAM to another modern contraceptive method; and understanding of return to fecundity. Providers, women, and families are often unaware that women’s fecundity can return in the early months after birth [4] and with timely initiation most contraceptive methods are safe for breastfeeding mothers [5]. Women often wait to initiate contraception until after menstruation resumes, considering themselves at no risk of

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[1] The lactational amenorrhea method (LAM) is a natural, modern method of FP which requires that three criteria be met: (1) the baby is exclusively breastfed; (2) the baby is less than 6 months; (3) the mother’s menses have not returned. Women practicing LAM should transition to another modern method of FP before any of these three criteria no longer apply.

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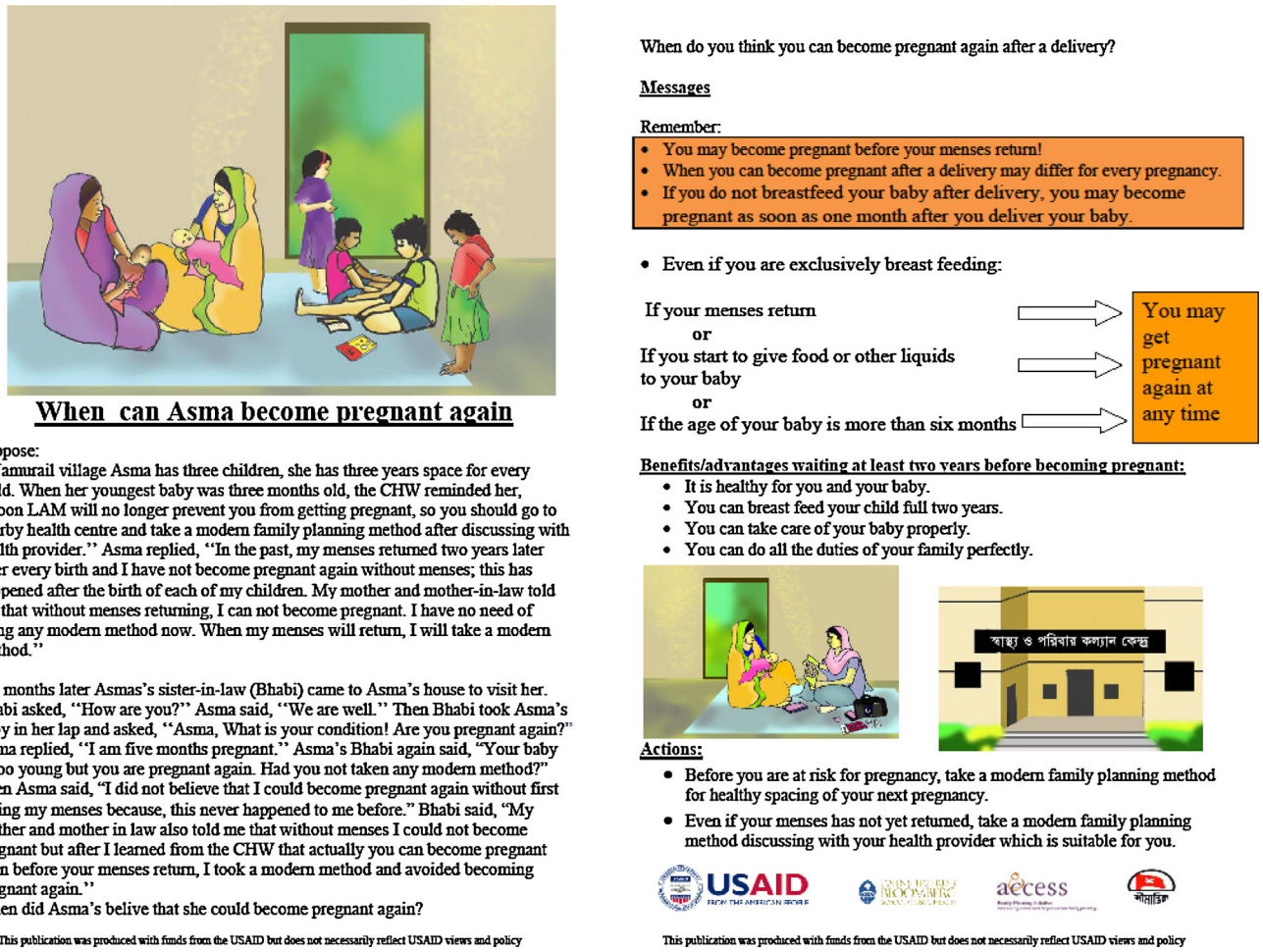

When can Asma become pregnant again

Suppose:
In Jamurail village Asma has three children, she has three years space for every child. When her youngest baby was three months old, the CHW reminded her, "Soon LAM will no longer prevent you from getting pregnant, so you should go to nearby health centre and take a modern family planning method after discussing with health provider." Asma replied, "In the past, my menses returned two years later after every birth and I have not become pregnant again without menses; this has happened after the birth of each of my children. My mother and mother-in-law told me that without menses returning, I can not become pregnant. I have no need of using any modern method now. When my menses will return, I will take a modern method."

Six months later Asmas's sister-in-law (Bhabi) came to Asma's house to visit her. Bhabi asked, "How are you?" Asma said, "We are well." Then Bhabi took Asma's baby in her lap and asked, "Asma, What is your condition! Are you pregnant again?" Asma replied, "I am five months pregnant." Asma's Bhabi again said, "Your baby is too young but you are pregnant again. Had you not taken any modern method?" Then Asma said, "I did not believe that I could become pregnant again without first seeing my menses because, this never happened to me before." Bhabi said, "My mother and mother in law also told me that without menses I could not become pregnant but after I learned from the CHW that actually you can become pregnant even before your menses return, I took a modern method and avoided becoming pregnant again."
When did Asma's belive that she could become pregnant again?

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When do you think you can become pregnant again after a delivery?

Messages

Remember:

- You may become pregnant before your menses return!
- When you can become pregnant after a delivery may differ for every pregnancy.
- If you do not breastfeed your baby after delivery, you may become pregnant as soon as one month after you deliver your baby.

- Even if you are exclusively breast feeding:

If your menses return
or
If you start to give food or other liquids to your baby
or
If the age of your baby is more than six months

→ You may get pregnant again at any time

Benefits/advantages waiting at least two years before becoming pregnant:

- It is healthy for you and your baby.
- You can breast feed your child full two years.
- You can take care of your baby properly.
- You can do all the duties of your family perfectly.

স্বাস্থ্য ও পরিবার কল্যান কেন্দ্র

Actions:

- Before you are at risk for pregnancy, take a modern family planning method for healthy spacing of your next pregnancy.
- Even if your menses has not yet returned, take a modern family planning method discussing with your health provider which is suitable for you.

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Fig. 1. Asma's Story (English translation).

pregnancy during amenorrhea, although ovulation can occur prior to appearance of menses [6,7]. Misconceptions about timing of return to fecundity and factors affecting postpartum pregnancy risk can lead to delays in timely contraceptive initiation [4].

This study is a sub-study of the Healthy Fertility Study (HFS),[2] which was conducted in Sylhet District in northeastern Bangladesh [8]. In Sylhet District, in 2011, almost half (46.5%) of non-first births occurred at short intervals of less than 36 months since the previous birth [9]. Under-five and neonatal mortality and total fertility are higher, and contraceptive prevalence is lower in Sylhet Division compared to the rest of Bangladesh [9].

HFS promoted optimal pregnancy spacing by integrating postpartum family planning (PPFP) within a community-based maternal and newborn health program. Within HFS, female community health workers (CHWs) counseled women on PPFP and provided contraception to women during household visits. Community mobilizers convened group discussion sessions with women, husbands, mothers/mothers-in-law, and other community members.

In order to address noted gaps in PPFP knowledge and understanding, the HFS study team developed a leaflet including "Asma's Story" and a pictorial on one side, and critical messages about return to fecundity on the reverse. The leaflet and story (Fig. 1) were shared and discussed with women during counseling sessions with postpartum women and group meetings with mothers-in-law, postpartum women, and men. Asma's Story tells how one woman ("Asma") incorrectly assessed her risk of pregnancy to be minimal during the months before her menstruation returned. Asma says she will wait until her menstruation returns before starting a modern FP method, but then becomes pregnant. She learns that conception can occur before menstruation returns, and it is important to start using an FP method soon after giving birth.

This study was designed to assess: knowledge and perceptions regarding return to fecundity among postpartum women, husbands, and mothers/mothers-in-law; short-term outcomes of efforts to raise awareness about postpartum return to fecundity and encourage PPFP use; and the ways in which the approach may have affected postpartum women's progression along the steps to behavior change (SBC) continuum toward modern contraceptive use. The study aimed to contribute to emerging global knowledge about behavioral approaches for PPFP in order to inform future efforts in Bangladesh and globally.

Postpartum women were the main respondents for this study. Focus groups with husbands and mothers/mothers-in-law were also included with the understanding that decisions about contraceptive use are not necessarily taken by the woman alone. Formative research conducted at the outset of HFS identified husbands and mothers/mothers-in-law as key influencers of FP decisions [10].

[2] For more information about the Healthy Fertility Study, please see Ahmed S, Norton M, Williams E, Ahmed S, Shah R, Begum N, et al. Operations research to add postpartum family planning to maternal and neonatal health to improve birth spacing in Sylhet District, Bangladesh. Glob Health Sci Pract 2013;1(2):262–276. ⟨http://dx.doi.org/10.9745/GHSP-D-13-00002⟩.

Few studies have examined perceptions around return to fecundity and pregnancy risk after delivery in low resource settings [6,11] or have used behavior change frameworks to identify processes influencing postpartum contraceptive uptake. While some studies have assessed use of narrative stories to influence FP uptake, none specifically related to *postpartum* FP. Thus, this study aims to fill a noted gap in existing literature.

1.2. Literature review

Hinyard and Kreuter define narrative communication as, "... any cohesive and coherent story with an identifiable beginning, middle, and end that provides information about scene, characters, and conflict; raises unanswered questions or unresolved conflict; and provides resolution" [12]. They also note that audiences may be able to more closely identify with narrative approaches than non-narrative approaches, as they are more personal and believable than other forms of communication. When the audience feels they connect with characters in a story, they may be less likely to discount its messages. Houts and colleagues also found that adding pictures to written and spoken language can increase attention, comprehension, recall and adherence to health communication guidance and that viewers prefer pictures that are culturally sensitive and include representations of people similar to themselves [13].

Asma's Story highlights risks of not initiating a modern FP method in a timely manner. A study by Garrud and colleagues found that printed materials can be used to successfully communicate *risk*, without causing undue stress to clients [14]. The study found a significant increase in knowledge and satisfaction with information contained in a leaflet containing risk information.

Development of entertainment-education narratives draws heavily on social cognitive theory by using role models, creating attitude accessibility (e.g., attitudes accessible in appropriate contexts are more likely to predict behavior), and increasing self-efficacy [15].

1.3. Conceptual model

Findings from this study are structured around the steps to behavior change (SBC) framework, which presents a mechanism for assessing an individual's progress toward adopting and sustaining a new behavior. The SBC framework is similar to the transtheoretical model (TTM), another stage-based framework which was developed by Prochaska and colleagues [16]. The SBC framework identifies five stages of change which individuals experience in the process of adopting a new behavior: knowledge, approval, intention, practice, and advocacy. Progress from one stage to the next increases likelihood of achieving and sustaining the behavior [17]. Successful behavior change activities facilitate movement across these stages towards adoption of a desired behavior.

Several studies apply similar conceptual models to contraceptive uptake and condom use. Dempsey and colleagues found preliminary evidence that constructs of TTM may be predictive of contraceptive pill continuation at six months [18]. Perceived benefits and negative consequences of contraceptive and condom use are associated with respondents' stage of change for those behaviors [19,20].

Applied to FP, advocacy is critical to ultimate maintenance of behavioral outcomes. Piotrow and colleagues note:

"Once the benefits of family planning or any other health practice are confirmed by experience, a person's public advocacy of the practice to others cements conviction and sustains the new behavior. Advocacy also helps other people move through the steps by offering them a behavioral model and confirming community norms" [17].

The behavior of interest for this study is use of modern contraception within one year after giving birth (within a context of voluntary and informed contraceptive choice).

2. Methods

This study was approved by the Johns Hopkins University Institutional Review Board and the Bangladesh National Ethics Committee of Bangladesh Medical Research Council and is registered as a Clinical Trial (Identifier: NCT01702402).

The study involved in-depth interviews with postpartum women and focus group discussions (FGDs) with mothers/mothers-in-law and husbands of postpartum women (see Table 1). The study relied on semi-structured methods of inquiry allowing for quantification of some qualitative data.

For the in-depth interviews, 40 postpartum women who had given birth in the past year were selected using maximum variation sampling, with the aim of achieving representativeness of a range of backgrounds and experiences, and geographic locations within the intervention area. Ten women were randomly selected from each of the four HFS intervention unions (the lowest administrative unit with average 20,000 population and one health center) using program registers, and the researchers verified that variations in timing postpartum, age, and parity were represented.

Husbands and mothers/mothers-in-law of these 40 postpartum women were invited to participate in focus group discussions. After identification, the research team contacted respondents by visiting them at home and asked whether they were willing to participate in the study using oral informed consent. All 40 postpartum women, 35 of 40 mothers/mothers-in-law, and 34 of 40 husbands agreed to participate.

Semi-structured research tools guided interviews and FGDs. Questions were designed to elicit information on respondents' PPFP knowledge, intention, current use, factors influencing FP use, and exposure to Asma's Story. The research team reviewed transcribed responses and identified common themes aligned with each of the priority research areas. Response frequencies were also calculated for select questions.

Based on responses to interview questions, postpartum women were categorized into the SBC framework using pre-determined criteria. Individuals were categorized as being: (1) in the

Table 1
Characteristics of respondents participating in qualitative interviews and FGDs to assess the narrative story and leaflet.

	Total no. of respondents	
Semi-structured in-depth interviews of postpartum women	40	
Characteristics	**N = 40**	
Median parity (range)	3.1 (1–9 births)	
Median month postpartum at time of interview (range)	10.5 (7–13 months)	
Menses return at time of interview	60%	
Number currently using modern FP method (percentage)	13 (32.5%)	
	No. of FGDs	Total no. of respondents
FGDs with mothers and mothers-in-law	4	35
FGDs with husbands	4	34

knowledgeable phase if they could recall key information presented in the leaflet; (2) in the *approving* phase if they reported discussing PPFP with friends/family and personally approved of postpartum contraceptive use; (3) in the *intending* phase if they expressed intention to use FP in the future; (4) in the *practicing* phase if they were currently using a modern contraceptive method; and (5) in the *advocating* phase if they were using a modern contraceptive method and had also advocated for others to do so. These classification criteria are aligned with those outlined by Piotrow and colleagues in their delineation of each of the SBC framework stages [17].

3. Results

Key findings are highlighted in Table 2. The assessment revealed high levels of exposure to the leaflet across respondent groups. Among postpartum women, the vast majority reported hearing Asma's Story from a community mobilizer or CHW. All mothers/mothers-in-law and most husbands reported having heard or seen Asma's Story.

3.1. Optimal pregnancy spacing

Guidance provided in the leaflet encourages women to wait at least two years after giving birth before the next pregnancy. When asked how long a woman should wait, all respondents across respondent groups identified that women should wait two years or more. Respondents identified numerous benefits of pregnancy spacing, including health of mother and baby and improved ability to complete household tasks and breastfeed the child for a longer duration. One father mentioned, "If there is little space between pregnancies, then the baby will be in ill-health and as a result the baby will suffer from diseases continuously. So the father will need to spend more money. In that sense also spacing is good."

3.2. Return to fecundity

Among the 40 postpartum women interviewed, 93% reported that the story and leaflet changed their understanding about fecundity and PPFP. Recognition that pregnancy can occur prior to menses return was found to be nearly universal across respondent groups. One female respondent mentioned, "I shared the story with my sister-in-law. . .. When I informed her that women could get pregnant before menses return, she was very concerned about her health and visited the health facility rapidly. After hearing the story, another sister-in-law went to Sylhet Women's Medical [college hospital] and got ligation."

Recognition that women cannot predict timing of future pregnancy based on past experiences, another key message from the story, was also widespread among respondents. One female respondent said, "After hearing Asma's Story, now I think it is not possible to predict when one can get pregnant again. My next pregnancy might not happen as like the earlier ones."

3.3. LAM and transition

Just over three quarters of the postpartum women could recite unprompted all three LAM criteria. Across all respondent groups, the criterion of "menses not yet returned" was the most frequently forgotten. Many respondents also mentioned "breastfeeding" as one criterion, without specifying that breastfeeding should be exclusive, or that other liquids and foods should not be provided.

Table 2
Results from in-depth interviews and focus group discussions (FGDs).

	In-depth interview responses ($n=40$)	Responses from FGDs w/husbands ($n=34$)	Responses from FGDs w/mothers and MILs ($n=35$)
Exposure to Asma's story and the leaflet	98% Reported hearing Asma's Story from a community mobilizer 83% Reported hearing Asma's Story from a CHW[a]	Most respondents reported having heard the story, and all reported having seen the leaflet	All respondents reported having heard Asma's Story and had seen the leaflet
Optimal birth to pregnancy spacing	<2 years (0%) 2 years (12.5%) 3 years (57.5%) 4 years (10%) 5 years (20%)	Responses ranged from 2 to 5 years No respondents in any of the FGDs expressed that women should wait <2 years	Responses ranged from 2 to 6 years No respondents in any of the FGDs expressed that women should wait <2 years
Benefits of birth spacing	Commonly cited by postpartum women: Health of mother/baby Improves mother's ability to care for family and housework Mother can breastfeed longer	Commonly cited by husbands Health of mother/baby Mother can breastfeed longer Economic benefits for the family	Commonly cited by mothers/MILs[b] Health of mother/baby Improves ability to do household work Improves ability to properly care for and educate children
Return to fecundity	97.5% Correctly recognized that women could become pregnant prior to menses return 97.5% Correctly recognized that the timing of when women can become pregnant after a delivery may differ for every pregnancy	Across all four FGDs, respondents widely expressed that women cannot predict when they can become pregnant based on past experiences	Mothers and MILs[b] in 3 of the 4 FGDs agreed that women could not predict timing of future pregnancy based on past experiences
LAM + transition	77.5% could recall the 3 LAM[c] criteria Lack of specific knowledge of when women should transition from LAM[c] to another modern method	Husbands and Mothers/MILs[b] often remembered the criteria of the baby being less than 6 months and feeding the baby only breast milk Gaps in recall of "menses not yet returned" criterion Lack of specific knowledge of when women should transition from LAM[c] to another modern method	
Current use of contraception	32.5% Currently using a modern family planning method 67.5% NOT currently using a modern family planning method		

[a] Community health worker.
[b] Mothers-in-law.
[c] Lactational amenorrhea method.

The assessment found a lack of specific knowledge among all respondent groups regarding when to transition from LAM to another modern method. The leaflet cites three indicators that a woman may be at risk of pregnancy after childbirth: when the baby reaches 6 months, when menses return, OR when the baby is fed other foods or liquids besides breastmilk. Nineteen of the 40 female respondents mentioned that transition to another method should occur "when LAM ends" or "when any of the three LAM criteria no longer apply." Others provided incomplete responses including only one or two criteria. Among husbands, most mentioned only that women should take another method by 6 months, and did not cite either of the other cues. Among mothers/mothers-in-law, most also only remembered that women should transition at 6 months, and did not cite the other two cues.

3.4. Current use of contraception

Approximately one third of postpartum women interviewed (32.5%) were currently using a modern contraceptive method. Of the 40 women interviewed, 6 reported using oral pills, 4 used injectables, 2 used implants, and 1 reported regularly using condoms. Fourteen of the 40 women reported previously using LAM, and half of those women ($n = 7$) had since transitioned to another modern method. No respondents were eligible for LAM at the time of the interview (all were beyond six months postpartum).

3.5. Factors affecting shifts along the steps to behavior change continuum

The 40 postpartum women interviewed for this assessment were categorized along the SBC continuum (based on the criteria outlined in Section 2) as seen in Fig. 2. Over half of the women were classified as "intending," approximately one third are either "practicing" or "advocating," and a smaller proportion fall earlier in the continuum at the "knowledgeable" and "approving" phases.

3.5.1. The knowledgeable phase

Many respondents expressed having learned new information about PPFP through Asma's Story and the leaflet. The vast majority of female respondents reported improved understanding about fecundity and FP. Women's knowledge of optimal pregnancy spacing and timing of return to fecundity also was reported by many to have improved after hearing Asma's Story. However, few respondents remained at the knowledgeable phase—most had moved further through the continuum. For the two women who did remain at this stage, both were knowledgeable about return to fecundity and optimal spacing of pregnancies, but felt that using FP was not consistent with their religious beliefs.

3.5.2. The approving phase

At the time of the interview, four of the 40 women were classified as being at the approving phase. Three of these women felt that Asma's experience was similar to the experience of some women in their community, and over half of all 40 postpartum women interviewed said they know someone personally who had a similar experience to Asma's. However, women remaining at the approving phase faced barriers preventing them from *intending* to act. Several expressed that although they personally approved, their husbands' opposition prevented them from using FP. One respondent at this stage also mentioned wanting more children before starting an FP method.

3.5.3. The intending phase

At the time of the interview, more than half of the women (21 of 40) were at the intending phase. Many expressed that Asma's Story helped them recognize risks associated with delayed initiation of contraception, and that this newly perceived risk gave them an intention to act. The most commonly cited factor preventing individuals from moving from this stage to the practicing stage, cited by twelve respondents, was that their husbands were currently working abroad. One woman who was not using an FP method said that she went to the health facility for FP, but the doctor would not provide her with a method without menses return. Another woman mentioned that she intended to use FP in the future, but was already pregnant at the time of the interview.

3.5.4. The practicing phase

When asked about their current FP method use, 13 of the 40 women (32.5%) said they were using contraception. Just under half of these women (6/13 women) remained at the practicing phase, whereas the rest (7/13) had progressed to the advocating phase. Thirty five of the forty respondents reported that the story/leaflet led them to make a change in their behavior. Reported behavior changes included using a contraceptive method, practicing LAM, transitioning from LAM to another modern method, and sharing Asma's Story and discussing PPFP with others. Most husbands and mothers/mothers-in-law also agreed that behavior change had resulted from the health education efforts—primarily that women and husbands are more often using contraception. Barriers faced at the practicing phase preventing movement to the

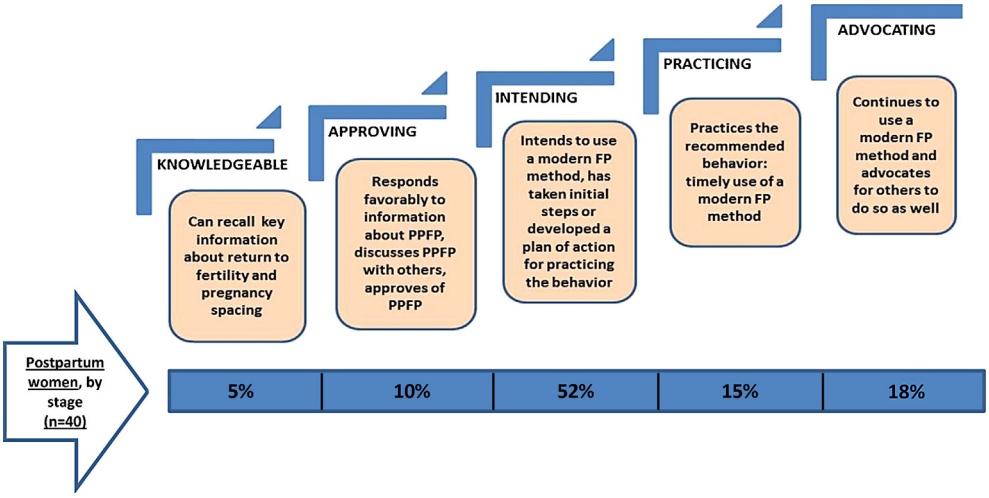

Fig. 2. Steps to behavior change framework applied to PPFP uptake and respondent status.

advocacy phase appear to include lack of self-efficacy and partner opposition.

3.5.5. The advocating phase

Many postpartum women, husbands, and mothers/mothers-in-law reported discussing Asma's Story with spouses, friends, and other family members, encouraging them to practice the recommended PPFP behaviors. Eighteen percent of the 40 women interviewed were not only using a modern contraceptive method, but had also advocated for others to do so. One postpartum woman said, "I have shared the story with my sister-in-law, sister, and neighbors. They accepted the story positively. After hearing the story they are all taking a method." Husbands also frequently cited sharing and discussing the leaflet and story with wives.

4. Discussion & conclusion

4.1. Discussion

Respondents cited Asma's Story as an important contributor to shifts in their PPFP knowledge, perceptions, and practices. The story seemed to resonate on a personal level with many respondents who indicated that they or their family members/peers had similar experiences to Asma's.

Findings from this study align with other operations research studies which have indicated that when mothers and families learn about healthy pregnancy spacing and its benefits, motivation to use FP increases substantially, as does PPFP use. A study in Egypt found that providing birth spacing messages to low parity women during antenatal and postpartum care and to husbands through community activities was feasible and acceptable and led to an increase in the use of contraception at 10–11 months postpartum [21]. Another study in India found that an educational campaign for pregnant women, husbands, mothers-in-law, and community leaders using communication materials was associated with substantially higher use of modern contraception at nine months postpartum [22].

Asma's Story was incorporated within a broader package of maternal, newborn, and child health activities and through an approach emphasizing community mobilization and participatory discussion. This process of multidirectional communication and community engagement was critical to the success of Asma's Story and other program activities.

The application of the SBC framework allowed researchers to identify areas where additional focus is needed to increase PPFP use in Sylhet. It was revealed that many women remain between the intention and action phases, largely due to husbands working abroad. Sylhet experiences unusually high levels of migration, especially among men, many of whom have found temporary or long term work abroad. A woman's husband working abroad is not in itself a barrier to PPFP uptake, but women may be at risk if they do not initiate contraceptive use in a timely manner before their husbands' return. Although the project did not collect data on husbands' work patterns, it is anticipated that many husbands return home intermittently for visits during their time abroad. For future PPFP efforts, it will be important to emphasize the importance of women starting an FP method prior to the husband's return, to avoid another pregnancy too soon. CHWs can encourage women to contact them for an FP method before their husband returns (through phone call or text message), and can conduct proactive routine follow-up with women whose husbands are away to take note of upcoming planned visits and provide contraceptive methods as needed. These women should be provided emergency contraception to use in the event that they are unable to obtain a contraceptive method before their husbands return.

4.1.1. Limitations

An assessment of women's status along the SBC continuum was not conducted prior to initiation of program activities, so an objective measure of shifts over time is not possible. The study did not ask directly about whether women had resumed sexual activity since the birth of their last child. Additionally, the study includes a high proportion of women with husbands living abroad. This may compromise the ability to apply findings to other settings with a greater proportion of cohabitating couples. FGDs with husbands included only those who were in Sylhet and not working abroad at the time of the study. Husbands abroad at the time of the study were not included, so their perspectives on return to fecundity, FP use, and exposure to Asma's Story were not captured.

4.2. Conclusion

This study sheds light on the process of behavior change as it relates to PPFP uptake, including how Asma's Story may have affected movement along the behavior change continuum. Social and behavior change strategies are key to providing postpartum women and their families with the information they desire, engaging communities in dialogue to shift social norms, and linking women to needed FP services. The story and leaflet, along with other community mobilization and health promotion activities, is reported to have enhanced support for optimal pregnancy spacing and timely contraceptive uptake. Knowledge, approval, and intention to practice PPFP is widespread. However, barriers to PPFP uptake remain. Opportunities for bridging intention and action include ensuring that women whose husbands are away are proactively linked to FP services before husbands' return, greater engagement of religious leaders, more involvement of spouses during community sessions, and developing alternative strategies to reinforce information about LAM and the importance of timely transition.

4.3. Practice implications

The study reveals that fictional stories presented in leaflet and oral form within home visits and group discussion sessions provide a promising approach to build support for PPFP uptake. After the completion of HFS, the Government of Bangladesh indicated a desire to scale up the HFS approach throughout Sylhet. Based on findings from this assessment, it is recommended that Asma's Story be incorporated within future efforts to scale up PPFP in Bangladesh, and that similar approaches be tailored and tested in other countries. More programmatic research on successful communication strategies about LAM and transition is needed. Findings reinforce the importance of tailoring social and behavior change strategies to respond to unique needs of postpartum women at various stages of the behavior change continuum, as barriers and motivating factors vary by stage.

Role of the funding source

The study sponsors had no role in the study design, data collection, analysis, interpretation, or dissemination, or in the decision to submit this paper for publication. The corresponding author had full access to all the data in the study and had the final responsibility for the decision to submit for publication.

Conflict of interest statement

The authors declare they have no competing interests.

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Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.pec.2014.09.007.

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