

**Knowledge and care seeking behavior of safe abortion in four selected districts of Bihar and Jharkhand, India**

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## **Abstract**

Unsafe abortion in India leads to significant morbidity and mortality – with as many as 12,000 deaths reported annually. Despite the fact that abortion has been legal in India since 1971, access to services remains limited, particularly for women residing in rural areas. Most interventions have focused on supply issues such as equipping facilities and training providers. Recently, there has been growing recognition of the need to educate and prepare women to access abortion services. This community household survey in two intervention districts and two matched control districts establishes understanding of baseline knowledge, attitudes, behavior and practice (KABP) of women's responses to unwanted pregnancy and develops a theoretical behavior communication change model to inform a subsequently designed KABP intervention.

## **Introduction**

Unsafe abortion is a neglected women's health issue in India and in many developing nations even though maternal mortality and morbidity due to unsafe abortions can easily be prevented when women have access to safe abortion services. Unsafe abortion is defined by the World Health Organization (WHO) as "a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards, or both" (WHO 1992). Worldwide, 46 million pregnancies each year end in abortion, with 19 million of these abortions taking place under unsafe conditions; nearly all unsafe abortions (95%) occur in developing countries (WHO 2004). Of the 6.4 million abortions performed in India in 2002 and 2003, 3.6 million (56%) were unsafe (Duggal and Ramachandran 2004).

The WHO has explained that almost all abortion-related deaths are preventable when performed by a qualified provider using correct techniques under sanitary conditions (WHO 2003). Yet 68,000 women die due to lack of access to safe abortion services and treatment for abortion related complications (WHO 2004). Globally, abortion complications constitute 13% of all maternal deaths; in India, there are 12,000 deaths each year due to abortion related complications (Banerjee 2007).

Recognizing the preventable nature of most maternal mortality and morbidity related to unsafe abortion, in 1971 the Indian parliament passed the Medical Termination of Pregnancy (MTP) Act which enables women to seek abortion for many indications. Unfortunately, this relatively liberal law has not led to significant reduction in unsafe abortion or related maternal mortality and morbidity. Even 35 years after passage of the MTP Act, rural women overwhelmingly rely on unsafe methods and illegal providers because they lack access to safe abortion procedures.

The focus of much work has been on supply side interventions, particularly training and equipping health care providers and facilities to offer safe and legal services. Despite improvements in the availability of safe abortion services, women in India remain unaware of available options and even the legality of abortion services.

With this backdrop, the purpose of this project is to create a behavior change communication (BCC) intervention that will directly educate women on safe abortion. The first step in launching any communication intervention is to assess and document the baseline state of knowledge, attitude, behavior and practice (KABP), media exposure and attributes of behavior of the target population. In particular, this paper focuses on KABP in managing unwanted pregnancy, accessing safe abortion services, and understanding available options, health care seeking behavior, and preferred source of information for different reproductive health issues including abortion. The findings of the baseline study are also intended to identify social stigma, myths/misconceptions and barriers to accessing safe abortion services for optimal intervention design. The specific purpose of this initial phase of the study is to:

1. Determine the baseline levels of knowledge, attitude, behavior & practice (KABP) indicators related to unwanted pregnancies in four selected districts of Bihar and Jharkhand, and
2. Understand barriers and forces of influence lead to particular abortion-seeking behavior or decisions.

## **Method**

This study is the first phase of a larger design to evaluate the impact of the BCC intervention over a period of time using a rigorous pre-post quasi-experimental research design. Based on availability of

safe abortion services, one district from each state has been selected for intervention, including district Patna in Bihar and district Lohardaga in Jharkhand. Control districts were selected by comparing socio-demographic characteristics of the rural population, then a field level review was conducted to assess whether other agencies were working on safe abortion issues (Table 1).

The target population was married women ages 15 – 44 from all villages with more than 100 population of Lohardaga district and 10 selected blocks in Patna district. Respondents (or husband of the respondent) who have been using any permanent method (namely, female or male sterilization) for more than 36 months were excluded from the sample universe. Women were selected using two-stage stratified random sampling. First, 18 villages from each of the four districts (total 72 villages) were selected using probability proportional to population size (PPS) sampling (18 villages from each of the four districts), next 20 households within each sampled village were selected using systematic random sampling (target total 1440 women). A detailed household listing effort was carried out in each selected village to generate the universe of households with eligible women.

First, information was gathered for each of the 72 sampled villages to understand the available health services, accessibility to types of health care providers, general infrastructure and development conditions. Next, selected women were interviewed during one or two sessions using a semi-structured and pre-tested questionnaire. The first session focused on collecting quantitative information applicable from all respondents (including socio-demographic characteristics, media exposure, reproductive history, health care seeking knowledge and behaviors and KABP on abortion.

Finally, women who reported having or attempting an induced abortion during the three years prior to the survey, participated in a second interview. Information was collected using a semi-structured interview to discover persons/places where abortion counseling and services were sought, abortion

method, and complications. This study underwent ethical review and informed consent was obtained by all participants prior to enrollment.

Descriptive statistics are presented. Behavioral attributes were measured by agreement using a five-point scale to a number of statements (pre-tested and asked in local languages). Statistical analysis was conducted to ensure reliability of each construct. Scale items which did not support the reliability (tested through Cronbach Alpha) score were dropped from the analysis. The behavioral constructs are measured by aggregate mean scores that indicate the direction and relative strength of any particular behavior of the study community. In order to maintain consistency, all scale items have been made unidirectional.

## **Results**

Tables 3 show baseline characteristics of the study participants. About half of the women in each district are between the ages of 20 and 29. Nearly two-thirds of women are not literate. Just over half of women report living with their nuclear family. Religion, caste and work status differ between the two intervention districts. In Patna, nearly 94% are Hindu from OBC and general caste and only 14% of women report working for cash or kind; while the majority religion in Lohardaga is Sarna (55%) and tribal community and 46% of women work for cash or kind. Overall status of women appears to be low with low level of education.

Women reported a mean of 3.1 and 3.8 births in Patna and Lohardaga, respectively. Approximately 18% of women reported at least one spontaneous abortion while 5% reported induced abortion in their lifetime. Approximately 4% report induced abortion during the previous three years of survey period (data not shown).

Overall, women from both of the intervention districts report very little exposure to mass media (Table 5). In the state of Bihar, only 28% of respondents in intervention area and 13% of them in the control area are found exposed to television. Same is the case for radio listeners. Only 9% of respondents in the intervention and 20% of them in control sites listen to Radio. The situation further complicated in Jharkhand. About 11% of respondents in intervention area and 8% in control area are exposed to television while 16% of respondents in the intervention and 11% of respondents in the control areas are exposed to radio. A handful (6%) of respondents in Bihar and 4% in Jharkhand read newspapers. Social mobility is more limited in Patna: 37% of respondents go to village Hat, 5% visit the cinema hall, and 4% attend community meetings, while in Lohardaga, these percentages are 61%, 29% and 5% respectively.

Information appears to flow best within the community. For example, 73% of Patna women and 94% of Lohardaga women report that they receive information about their state (e.g., politics, sports, etc) from at least one of the following personal sources: husband, neighbors, villagers, family members or the market (Table 6). Similarly, nearly two-thirds of women report receiving information about their village or neighbors through neighbors, while the remaining third get such information from villagers, family members, Choukidar, husband, or their workplace. Approximately half of women report receiving health-specific communication on family planning during the last one year. In Patna, most information was received from family members (38%), followed by television (18%), AWWs (14%), ANMs (11%), and radio (4%). In Lohardaga, the source of such information was AWW (31%), ANM (26%), radio (10%), family members (10%), and television (5%).

Few women (Table 7) reported receiving communication on abortion during the past 1 year (21% in Patna, 19% in Lohardaga). Again the family was a large source of information in Patna (8%), followed by television (3%), ANMs (2%), and radio (1%). In Lohardaga, health workers were more

informative: abortion information was received from ANMs (13%), AWWs (10%), radio (3%), TV (3%) and family (1%). Knowledge on the legal aspects of abortion in India is low overall. Only 25% of women in Patna knew that abortion is legal and 10% believed it is only legal if you are married. However, none of these women knew the correct gestational age. In Lohardata, 45% correctly identified that abortion is legal in India and only 1% believed it was only legal if you are married. However, only 6% knew the correct gestational limits.

Associations of the behavioral attributes in the behavior change model for safe abortion are displayed in Figure 1. Mean score for any BCC construct less than three indicates negative attitude towards accessing safe abortion services (shown in red), while mean score of three infers an apathetic attitude (shaded yellow) and greater than three shows positive attitudes towards safe abortion (shown in green). Affordability, accessibility, knowledge, self efficacy, social norm, and stigma are found to be the basic barriers to promote behavior change communication. Findings of this section identify potential challenges of addressing desired behavior and eventually guide our future communication focus.

## **Discussion**

The participants of this study represent all ages. Most women are non-literate, in fact the overall status of women seems to be low with low levels of education. Religion, caste and family structure of Patna are quite different from Lohardaga, which is dominated by the Sarna religion and tribal communities. These women are representative of their communities.

In general, community members including ANMs, AWWs, and family members appear to be the most powerful sources of communication about sensitive issues such as abortion. However, knowledge and awareness on the legal aspects of abortion appear limited. Despite relatively low



levels of knowledge and awareness, abortion is an outcome of unwanted and unplanned pregnancies. Many women attempt to perform abortions themselves at home, but eventually end up receiving some care from health workers. Private providers, while not clearly identified as legal providers, are reported as the most common influencers in decisions about where to obtain an abortion. The average cost seems relatively high, 998 Rupees in Lohardaga and 1414 Rupees in Patna.

Although the overall status of women appears to be low in both of the intervention districts, the demographic and social-cultural attributes of women in Lohardaga are quite different from Patna in terms of religion, caste and social mobility. This complicates the implementation challenges which need to be addressed carefully.

Limited exposure to mass-media (including television, radio, & newspaper) also had left no room to choose any generic campaign through electronic media. However, there exists an internal social mechanism where messages reach to overwhelming majority of women either through peers & relatives or through community workers. This once again suggests an implementation strategy which can run within the community to improve awareness amongst women.

Awareness and knowledge on the legal aspects of MTP Act or abortion has always been regarded as the basic impediment to access safe-abortion. This report however shows comparatively better awareness in terms of feeling abortion is legal. But knowledge on the legal gestation and other related issues are extremely poor.

The implication of this poor knowledge is well reflected with the experience and practices of the rural women who experienced induced abortion during the past three years. Abortion at home and more through unsafe technologies are still quite common. In both of the intervention districts private doctors are reported as the most preferred source of abortion services which eventually costs higher

than the public sector. This implementation which aims at increasing safe access through training of medical doctors and support staffs at primary health centres would have another critical challenge to make women aware on the safe and quality access close to their home.

An effort to understand behavioral attributes which lead positive attitudes towards accessing safe-abortion services highlight a numbers of factors ranging from availability, accessibility and knowledge to self-efficacy, social norm and stigma. While the first phase of intervention can initiate focusing on the availability and knowledge components, the other three components can be highlighted in the next phase when rural women at least would have minimum opportunity to act on the desired behavior. Affordability, accessibility, knowledge, self efficacy, social norm, and stigma are found to be the basic barriers to promote behavior change communication. Given low literacy and mass media exposure of the target audience, the intervention will eventually rely on the outreach workers to establish interpersonal communications (IPCs) amongst women of reproductive age. This approach will not only empower women to discuss their concerns but will help realizing myths and misconceptions through positive counseling. Findings of this analysis not only help us understand the challenges of addressing desired behavior, but will also guide our future communication focus. Additional description of the subsequent intervention will be provided.

## References

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**Table 1: Sociodemographic profile of rural population of intervention and control sites (%)**

	<b>Bihar</b>		<b>Jharkhand</b>	
	<b>Patna (Intervention)</b>	<b>Saran (Control)</b>	<b>Lohardaga (Intervention)</b>	<b>Gumla (Control)</b>
Scheduled Caste	19.6	12.2	3.5	5.0
Scheduled Tribe	0.7	0.2	60.3	70.2
Population Literate	51.4	50.1	39.0	40.5
Female Literacy	13.8	13.4	27.3	30.8
Non-agricultural activity	20.9	22.3	46.1	41.3

Source: Census 2001

**Table 2. Number of households interviewed and response rate**

	<b>Intervention Households</b>		<b>Control Households</b>		<b>Response Rate</b>		
	<b>Selected</b>	<b>Interviewed</b>	<b>Selected</b>	<b>Interviewed</b>	<b>Intervention</b>	<b>Control</b>	<b>Overall</b>
Bihar	360	352	360	359	97.8	99.7	98.7
Jharkhand	360	350	360	350	97.2	97.2	97.2
<b>Total</b>	<b>720</b>	<b>702</b>	<b>720</b>	<b>709</b>	<b>97.5</b>	<b>98.5</b>	<b>97.9</b>

**Table 3. Sociodemographic characteristics (%) of respondents, by district and state**

	Intervention		Control		Combined	
	Patna (n = 352)	Lohardaga (n = 350)	Saran (n = 359)	Gumla (n = 350)	Bihar (n = 711)	Jharkhand (n = 700)
Current Age						
15-19 yrs	3	4	3	3	3	3
20-24 yrs	22	17	16	17	19	17
25-29 yrs	33	31	32	28	33	29
30-34 yrs	22	21	24	21	23	21
35-39 yrs	15	18	17	22	16	20
40 & above	6	9	7	9	6	9
Education						
Primary	5	4	4	3	4	3
Medium	17	21	25	25	21	23
Secondary	10	5	10	7	10	6
High school & above	5	4	3	6	4	5
Never attend school	63	66	58	60	61	63
Religion						
Hindu	94	18	89	43	91	31
Muslim	5	18	11	8	8	13
Christian	<1	9	0	16	<1	12
Sarna	0	55	0	32	0	44
Caste						
SC	12	6	11	5	11	5
ST	0	68	1	58	1	63
OBC	70	22	65	34	68	28
General	17	3	23	3	20	3
Family type						
Nuclear family	43	52	27	55	35	54
Extended family	20	19	18	15	19	17
Joint family	38	29	55	30	47	29

**Table 4. Economic characteristics (%) of respondents by district**

	Intervention		Control	
	Patna (n = 352)	Lohardaga (n = 350)	Saran (n = 359)	Gumla (n = 350)
Work in past year				
Yes, only cash	11	42	8	20
Yes, only kind	0	1	0	1
Yes, cash & kind both	2	3	1	1
No, not working	86	54	91	78
Occupation				
Cultivation/family farm	2	8	6	0
Agriculture labour	65	30	35	57
Non-agro- wage labour	19	55	35	30
Business	4	2	12	1
Salaried	10	4	6	7
Other	0	2	6	5
Main source of household income				
Own farm	18	48	25	69
Share farm	9	3	5	6
Daily wage	44	35	30	14
Business	16	8	21	7
Salaries/pension	11	5	18	5
No regular work	<1	<1	1	0
Other	2	1	<1	<1
Average monthly HH income				
< 1000	26	37	21	21
1001-2000	39	43	34	43
2001-3000	24	0	16	0
3000 & above	10	16	27	25
Did not share	1	4	1	11

**Table 5. Exposure to mass media and sources of information (%), by district and state**

	Intervention		Control		Combined	
	Patna (n = 352)	Lohardaga (n = 350)	Saran (n = 359)	Gumla (n = 350)	Bihar (n = 711)	Jharkhand (n = 700)
Watch television						
All 7 days	13	3	5	1	9	2
5-6 days	3	2	2	3	3	2
3-4 Days	5	1	2	2	3	1
Not regular	8	6	4	3	6	4
Never	72	89	87	92	79	91
Listen to the radio						
All 7 days	3	6	10	2	7	4
5-6 days	3	3	3	3	3	3
3-4 Days	1	2	2	1	1	2
Not regular	2	5	5	5	4	5
Never	92	84	81	89	86	86
Read newspapers						
All 7 days	2	2	3	3	2	3
5-6 days	1	2	2	1	2	1
3-4 Days	1	<1	1	1	1	<1
Not regular	1	1	1	3	1	2
Never	94	95	93	92	94	93
Attend women's club/village committee						
Yes	13	49	8	77	11	63
No	84	49	90	21	87	35
No Idea/Don't know	3	1	3	1	3	1
Attend community meetings						
Yes, regularly	21	45	21	52	21	48
Yes, sometime	9	15	14	23	11	19
Never	70	41	64	26	68	32
Go to the cinema hall						
Weekly	0	<1	1	1	<1	<1
Once in 15 days/once in month	4	5	<1	2	2	3
Not regular	1		1	1	1	<1
Never	95	95	98	97	97	96
Go to Hatt/market						
Weekly	14	27	8	32	11	30
Once in 15 days	9	15	4	29	7	22
Once in a month	1	2	1	6	1	4
Not regular	13	16	6	9	9	13
Never	63	39	82	23	73	31



**Table 6. Source of information for type of issue, by district and state**

	Intervention		Control		Combined	
	Patna (n = 352)	Lohardaga (n = 350)	Saran (n = 359)	Gumla (n = 350)	Bihar (n = 711)	Jharkhand (n = 700)
<b>General Issues</b>						
Husband	6	8	9	10	7	9
Neighbors	24	40	27	23	26	32
Television	18	5	7	4	12	5
Radio	5	10	10	8	8	9
Villagers	27	31	30	43	29	37
Market Place	1	7	3	2	2	0
Teacher	<1	0	0	0	<1	0
Friends	<1	<1	1	0	1	<1
Other Family Members	15	7	13	4	14	6
Newspaper	6	3	3	6	4	5
Outside people	5	1	3	3	4	2
AWW	0	0	0	<1	0	<1
Sahiyya	0	0	0	1	0	<1
Gram Pradhan	0	1	0	0	0	1
Don't know	2	2	1	3	2	3
<b>Local Issues</b>						
Neighbors	65	61	50	56	57	59
Women group	6	5	4	2	5	3
Villagers	25	29	33	35	29	32
Sahiya	<1	<1	0	1	<1	1
Chokidar	0	1	<1	2	<1	2
Family member	2	4	10	3	6	3
Friend	1	1	2	0	1	<1
Workplace	0	<1	0	0	0	<1
Husband	1	<1	3	2	2	1
Gram	0	4	0	1	0	3
<b>Family Planning</b>						
Television	18	5	7	3	12	4
Radio	4	10	13	5	9	8
Newspaper	2	2	1	1	2	2
Wall sign	1	1	0	1	<1	1
Poster/billboard	3	5	3	4	3	4
Community club	1	4	0	1	<1	2
NGO worker	0	4	0	2	0	3
Village doctor (RMP)	2	1	0	1	1	1
Chemist	1	2	<1	1	<1	1
ANM/Nurse	11	26	14	31	13	29
Sahiya/AWW	14	31	18	29	16	30
Dai/TBA	0	2	1	<1	1	1
Govt. health facility	4	3	3	2	3	2
Private provider	3	2	3	1	3	2
Husband	15	6	8	9	12	7
Family member/friends	24	4	14	21	19	13
No information	51	49	57	44	54	47

**Table 7. Information on abortion issues during last one year, by district and state**

	Intervention		Control		Combined	
	Patna (n = 352)	Lohardaga (n = 350)	Saran (n = 359)	Gumla (n = 350)	Bihar (n = 711)	Jharkhand (n = 700)
Source of information						
Television	3	3	2	1	3	2
Radio	1	3	1	3	1	3
Newspaper	1	0	1	<1	1	<1
Poster/Billboard	2	2	1	1	1	1
Community Club	0	1	0	1	0	1
NGO workers	0	1	1	<1	<1	1
Village Doctor	2	0	0	2	1	1
Chemist	0	1	<1	<1	<1	<1
ANM/Nurse	2	13	3	9	3	11
Sahiyya/AWW	1	10	1	8	1	9
Dai/TBA	0	2	0	0	0	1
Govt. Heath Facility	2	3	1	0	1	1
Private Provider	2	2	2	1	2	2
Husband	0	0	<1	0	<1	0
Family	8	1	4	5	6	3
Others	1	2	1	2	1	2
No information	89	81	93	87	31	84
Legality of MTP						
Yes, legal	25	45	35	39	30	42
Yes, legal if woman is married	10	1	6	2	8	2
No, illegal	53	42	50	47	52	44
No idea/ do not know	12	12	10	13	11	12
Gestation of legal MTP						
Correct Knowledge	0	1	3	0	2	<1
No correct knowledge	80	88	73	77	76	83
No idea/Do not know	21	12	24	23	23	17

**Figure 1. Behavior Change Model for Safe Abortion Reflecting Baseline Findings for Scale Items among 702 Womn in Patna and Lohardaga, 2008.**

