"Having another child would be a life or death situation":
Understanding pregnancy termination among couples in rural Bangladesh

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Abstract

Objectives: An estimated 700,000 elective pregnancy terminations occur annually in Bangladesh. We conducted a mixed-method study with couples in Southwestern Bangladesh to explore women's and couples' motivations to terminate pregnancies.

Methods: Quantitative data from a 1998 cross-sectional survey and a longitudinal demographic surveillance system (1998–2003) were combined with qualitative data gathered via 84 in-depth interviews with 19 couples in 2004-05.

Results: The quantitative results indicated that 11% of couples reported a pregnancy termination in the study period; however, levels were highest among couples who wanted no more children in 1998 (29%). Both wives' and husbands' fertility preferences significantly predicted pregnancy termination (wives' adjusted OR=4.30; husbands' adjusted OR=3.31). Over half of the qualitative informants reported at least one attempt to terminate a pregnancy in their lifetime.

Conclusions: The results highlight the importance of collecting data from both partners and the influence of husbands' fertility preferences on reproductive decision-making. The prevalence of reported pregnancy terminations, in addition to attempted terminations using informal methods, highlight the need for continued contraceptive provision and access to safe and affordable pregnancy termination services in this setting.

Introduction

Globally, 20% of pregnancies are terminated via induced abortion each year.(1) In developing countries, the majority of induced abortions are unsafe, performed by individuals without the necessary skills or in an environment that does not conform to minimum medical standards, or both (1). Unsafe abortion represents a significant public health concern, with an estimated 68,000 women dying every year and millions more who suffer from abortion-related complications (2).

In Bangladesh, 18% of all pregnancies are voluntarily terminated (700,000 terminations annually), with approximately two-thirds of these terminations resolved by menstrual regulation (MR), a pregnancy termination via vacuum aspiration within the first 12 weeks (3, 4). Although induced abortion is illegal in Bangladesh except to save the life of the woman, the MR program has existed since 1974 when the Bangladeshi Ministry of Health and Population Control trained government doctors and paramedics to provide MR services throughout the country (5, 6). Due to the provision of MR by trained providers, Bangladesh has lower rates of hospitalization due to unsafe abortion as compared to other developing country settings (3, 7). Despite the availability and relative safety of MR, however, unsafe abortions (e.g., abortions performed by untrained providers or by women themselves) still occur, resulting in over 71,000 women admitted to the hospital with abortion-related complications annually (7, 8).

Background

It is estimated that 41% of Bangladesh's population is illiterate and that nearly one-half of its 138 million inhabitants live below the poverty line (9, 10). Bangladesh is a predominantly Muslim country and one which is characterized by patriarchal practices including the seclusion of women and restriction of their mobility. These practices affect the status of women, limiting their

educational and employment opportunities, and leaving women with limited societal roles beyond reproduction (11).

Despite persistent poverty and stagnation of some social development indicators, the total fertility rate (TFR) in Bangladesh has declined from just under seven children per woman in the 1970's to a current average of three children, with concurrent increases in contraceptive use (10, 12). Even with the decline in fertility, however, nearly one-third of births are unintended (16% mistimed; 14% unwanted) and the current TFR still exceeds the ideal family size of 2.3 children (10). Numerous studies have highlighted the continuing role of induced abortion and MR in regulating fertility (3, 13, 14). An analysis from the Matlab project area found that a greater percentage of pregnancies were aborted in 1990-95, as compared to 1984-89 (13). However, as shown in a recent analysis of Matlab data from 1976-2005, access to family planning and the availability of safe abortion services has resulted in a steep decline in abortion-related mortality since 1990 (15).

Given the persistent role of pregnancy termination as a means of regulating fertility, we sought to gain a more holistic understanding of fertility decision-making by conducting a mixed-method study with couples in rural Bangladesh. Using quantitative surveillance data and in-depth interview data we examine both the prevalence and contextual factors associated with pregnancy termination in Jessore, Bangladesh.

Methods and Analysis

Quantitative Component

The quantitative data for this study were abstracted from the Sample Registration System (SRS), a demographic surveillance system operated by the International Centre for Health and Population

Research (ICDDR,B) in the Jessore district of southwestern Bangladesh. The authors extracted data

for 3,052 husband and wife couples who participated in the 1998 Combined Baseline Survey (CBS)

and who participated in the SRS from 1998-2003.[a] Pregnancy status was ascertained during the SRS

quarterly surveillance visits by asking women to report the date of their last menstrual period.

Women who were determined to be fertile and not lactating, with at least one missed period, were

considered to be pregnant. During the 1998-2003 study period, a total of 1,066 pregnancies

occurred to study couples (see Table 1). The outcome of each pregnancy was registered in the

subsequent quarterly surveillance visits.

To investigate the factors associated with intentional pregnancy termination, sociodemographic

characteristics (wife's age, wife's education, family composition, and sum of household assets[b]) were

gathered from the wife's 1998 CBS responses. The family composition variable was constructed

according to the number and sex of children that the wife reported in the 1998 CBS. Categories for

this variable were based on quantitative and qualitative data indicating that fertility preferences are

determined by not only the number, but also the sex of the children. Walking distance to the

nearest health center was ascertained from the husband's survey and was used as a proxy for access

to health services. Fertility preferences were gathered directly from husbands and wives separately

in the 1998 CBS via the question, "Do you want to have any more children?" [c]

Cross-tabulations, Chi-square tests, and bivariate logistic regression were used to assess frequencies

and the relationships between pregnancy termination and the covariates of interest. Multivariate

logistic regression was then used to test the effect of wives' preferences on pregnancy termination

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[a] Women (n = 231) and men (n = 71) who reported using a permanent contraceptive method, women who were pregnant at the time of the survey (n = 187), and participants who reported that their spouse lived out of the house were excluded from the analysis (n = 3).
b Household assets included owning such items as a fishnet, cart, rickshaw, sewing machine or loom, etc.
c We also tested the inclusion of women's status variables and joint vs. nuclear household, but found no effects.

after controlling for sociodemographic variables, fertility characteristics, and access to health services. A log-likelihood ratio test assessed whether the addition of husband's preferences significantly improved the explanatory power of the model. All models accounted for possible clustering of responses at the administrative unit (*mouza*) level.

Qualitative Component

Qualitative data were collected via 84 semi-structured, in-depth interviews with 19 reproductive-aged, Muslim couples who participated in both the 1998 CBS fertility preference questions and in the ongoing SRS surveillance (until September 30, 2004). Husbands and wives were selected according to their marital status and their stated fertility preferences (16). The research protocols and instruments were approved by both the Johns Hopkins Bloomberg School of Public Health Institutional Review Board and the ICDDR,B Ethical Review Committee. Each husband and wife was interviewed separately and confidentially 2-3 times by a same-sex, trained, Bangladeshi interviewer after obtaining their informed consent. The interviews were conducted in Bangla using a life history approach and were digitally recorded after obtaining permission from the informant. All of the interview transcripts were transcribed, translated, and then reviewed by the lead author. The interview data were analyzed using QSR NVivo 2.0.(17) A focused coding process was used in which phrases and concepts that reappeared within the data were identified and combined into larger, overarching categories (18). The categories pertaining to and including descriptions of pregnancy termination were reviewed by the lead author to highlight key themes and to select narrative to illustrate these themes.

Results

Reported Levels and Methods of Pregnancy Termination

Table 1 presents the total number of pregnancies occurring to the study couples (n=1,066)

throughout the study period and the frequency of pregnancy termination according to the fertility

preferences stated by the husbands and wives in the 1998 CBS. Eighty percent of pregnancies

resulted in live births, while 11% of all pregnancies were terminated. Two percent of pregnancies

were terminated among couples in which both spouses reported wanting more children. The

proportion was higher among couples in which the wife wanted more children and the husband did

not (6%) and in which the husband wanted more children and the wife did not (7%). Many more

pregnancies (29%) were terminated by couples in which neither spouse reported wanting more

children.

Over half of the husband-wife couples who participated in the in-depth interviews reported that

they had attempted to terminate at least one pregnancy in their lifetime. Many participants reported

initial attempts to use informal or traditional methods to terminate a pregnancy, including: allopathic

or homeopathic medicine, plant roots, bottles of yellow liquid from the kobiraj (traditional healer),

and the use of oral contraceptives. Some women reported that they first attempted one of these

methods, but when it failed, would opt for another method:

> "Once I felt movement in my womb, I went to the doctor with my mother-
>
> in-law. After some tests the doctor told me that I was 7 months pregnant. I
>
> tried to take the child out from my womb. I spent 7-8 thousand taka
>
> (approximately US$120) to buy different kinds of medicine to take it out. I
>
> took herbal medicine, whatever herbal medicine my neighbors told me to
>
> take, I did that. I also tried to go to the hospital to take it out, but my

mother-in-law did not let me go. She told me that you will die if you abort

this mature baby."

<div align="right">(Wife, age 21 with 2 sons)</div>

Several women described a process in which, when faced with an unintended pregnancy, they would first use more readily available and less expensive medicines (e.g., ingesting plant roots, drinking hot salt water). When these methods proved unsuccessful, women would seek out methods which were perceived to be more effective and were often more costly (e.g., clinic-based MR).

Influence of Family Members on Pregnancy Termination Decision-Making

The cross-tabulations in Table 1 suggest that both husbands' and wives' 1998 fertility preferences are predictive of subsequent pregnancy termination (1998-2003). Table 2 shows the results of the multivariate analyses. Model 1 indicates that after controlling for other sociodemographic variables, women who reported in 1998 that they did not want to have any more children were over five times as likely to have a subsequent pregnancy termination (Adjusted Odds Ratio (AOR): 5.25; 95% Confidence Interval (CI): 2.89-9.55), as compared to women who said that they wanted another child. When husband's fertility preferences were added to the model (Model 2) the explanatory power of the model improved (Log-Likelihood Ratio Chi-Square Test: 9.28; p-value: 0.002). The inclusion of husbands' preferences somewhat attenuated the effect of wives' preferences; however, Model 2 indicates that both wives' and husbands' preferences independently and significantly predict subsequent pregnancy termination after controlling for other sociodemographic characteristics (wife's AOR=4.25; 95%CI: 2.26-7.99; husband's AOR=3.35; 95%CI: 1.72-6.54).

In the qualitative interviews, women described the influence that husbands had on determining the number and timing of children. Husbands were often integrally involved in the process of deciding whether to terminate a pregnancy, where to obtain the methods or services, and in facilitating their access to both traditional forms of pregnancy termination, as well as clinic-based MR services. Women often relied on husbands for permission to leave the house, to accompany them and pay for the services, as well as to negotiate with resistant family members to gain support for terminating the pregnancy:

> "After my three daughters were born I told my husband that I did not want more babies. I was so weak. And we were poor. But he insisted on having a son. After this son I again got pregnant. When my menstruation stopped, I told my husband that I did not want more babies and that I wanted to wash my uterus. Then he said that he did not want any more babies, either. Then he gave me money and I went to the hospital to wash my uterus when I was 3-4 months pregnant."
>
> (Wife, age 41 with 1 son and 3 daughters)

In-depth interviews with both husbands and wives provided additional insight into the concerns of each spouse with respect to the pregnancy and its potential impacts on their family. Interviews with both spouses provided a unique opportunity to learn more about how the decision was made to resolve the pregnancy and who participated in this decision:

> Wife: When it came to my womb I was afraid - my first child was sick, and my second child was only 9 months old. When I asked my husband what we should do, he said, "It is not possible to have a child now. We have to wash this." Then we both went to the hospital and washed my womb.

Interviewer: So who decides on this (to terminate the pregnancy)?

Wife: I tell my husband then he manages everything. He will go with me to hospital for wash. Actually he always takes me. I never go anywhere alone except my father's house. In fact in this topic we will both discuss it and decide together.

Husband: We did not know that she was pregnant. I was using methods (condom), but we didn't know how she got pregnant again. I took her to the doctor and he told her that she was pregnant. Then I talked with her.

Interviewer: What did your wife say?

Husband: She never speaks against my decision.

Interviewer: So how did you decide that you would abort?

Husband: She had gotten an operation (appendectomy) and was still thin. For that, I decided to abort that child. We went to the hospital and they washed the womb.

(Wife, age 36, and Husband, age 37, with 2 sons and 1 daughter)

Similar to findings from this same population on contraceptive use (16) some women were both willing and able to act independently and would not inform their husbands of their intentions to prevent or to terminate a pregnancy. One of the female informants was particularly candid about not following her husband's wishes if she were to get pregnant again:

"If Allah gives us another child, I will not keep it. I will try to make my husband understand that we are poor…what will we do with another baby? I will try to convince him to wash my uterus and if he does not listen to me, I

will not listen to him. I do not want any more children, and he does. If I

conceive now and my husband wants to keep it and does not listen to me,

then I will certainly do MR without informing my husband."

(Wife, age 30 with 2 daughters)

Other women reported clandestine use of readily-available methods, such as herbs, roots, and oral

contraceptive pills to terminate a pregnancy. Several women commented that oral contraceptive

pills (*bori* or *shukhi*), available in local pharmacies and government health clinics, could be ingested at

a higher dosage to induce an abortion and without their husband's knowledge:

"If I conceive a baby again for my irregularity in taking pills, then I may take

it (baby) out. My neighbor told me that if someone takes the red tablets

(active pills from the contraceptive pill pack) regularly, then a baby comes

out. So, I'll take the red ones regularly, and my husband will not know about

the pregnancy."

(Wife, age 33 with 1 son and 1 daughter)

Situational Acceptance of Pregnancy Termination

Although many husbands and wives voiced their discomfort with the use of pregnancy termination

due to personal or religious reasons, many felt that in certain circumstances it was justified and could

prevent further harm to the woman and the family:

"People here do not like this (abortion). As a Muslim country people

sometimes do not want to use contraception. Nowadays, some people agree

with contraception, but they never like abortion. I also dislike abortion, but

sometimes you have to do something even if you do not want to do it."

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Findings from both the quantitative and qualitative data suggest a strong motivating influence of the wife's age on the decision to terminate a pregnancy. Women 35 years and older were over four times as likely to terminate their pregnancy during the study period as compared to women less than 25 years old (adjusted OR: 4.59; CI: 2.19-9.62). In the in-depth interviews, both husbands and wives described the stigma of becoming pregnant and, particularly, of having another child when their older children were nearing marital age. Older parents' childbearing was perceived to be detrimental to their children's marital prospects and extremely shameful if their children were already married and of childbearing age.

The mother's health and ability to carry a pregnancy were also mentioned frequently in the interviews. There was particular concern for women who were recovering from a recent pregnancy. Additionally, informants were acutely aware of the difficulties that pregnancy may pose for women with existing health conditions:

> "If she were pregnant, then I would abort that child. I do not have any other
> choice. Her physical condition is bad – she had low (blood) pressure before
> having the third child (who subsequently died) and now she has high blood
> pressure. Having another child would be a life or death situation for her, so it
> would be better to abort."

> (Husband, age 40 with 1 son and 1 daughter)

Acceptance of abortion was also dependent on how far the pregnancy had progressed. Similar to the concern raised previously (narrative of the 21 year-old wife with 2 sons), the termination of

pregnancies of advanced gestational age were considered to be more dangerous and less socially acceptable. For some women an unsuccessful, initial attempt to abort prompted them to reconsider their decision, especially when faced with the decision to terminate a more-advanced pregnancy.

"So we went to the doctor and took medicine to abort the child but that medicine didn't work. The doctor told us that we had to do Caesarian (surgery) if we would want to abort the child...we had no other way. But we didn't agree to do that and my in-laws' family also told us to not do that. Then I talked to my wife and she said, 'Let us give birth to the child, let's see what Allah will do.'"

(Husband, age 36, discussing their second pregnancy, immediately after the birth of their first child)

However, terminations of early term pregnancies were characterized differently:

"I washed my uterus when I was only 1-2 months pregnant. So it was not a baby. I believe that if we wash our uterus when we are 1-2 months pregnant it is not a sin."

(Wife, age 41 with 1 son and 3 daughters)

Discussion

Pregnancy termination is prevalent in this population, with 11% of all pregnancies terminated in the 5-year study period. As compared to cross-sectional surveys in which women are asked to recall and to report on sensitive events such as pregnancy termination, the SRS households were visited on a quarterly basis. Such longitudinal surveillance data collection methods likely reduce recall bias since participants are followed over time and are specifically questioned on their menstrual and pregnancy

status at each visit. Even with longitudinal, quantitative data, however, gathering in-depth

information on the various methods, terminology, and decision-making surrounding pregnancy

termination necessitates the use of qualitative methods.

Descriptions of abortion attempts from the qualitative interviews indicate that quantitative estimates,

which only count completed abortions, may severely underestimate individuals' and couples' desires

to terminate an unwanted or mistimed pregnancy. Bangladeshi women may rely on untrained

providers and unsafe methods (e.g., homeopathic tablets and syrups, insertion of roots into the

vagina) for their initial abortion attempts since these methods are often less expensive and more

confidential, and may only seek out clinic-based services once these methods prove ineffective (8,

19). Although the effects were somewhat inconsistent, having to walk more than 10 minutes to a

health facility was associated with lower odds of a pregnancy termination, suggesting that women

may face barriers in accessing MR services. From a public health perspective, knowledge of the

larger population of women who are actively attempting to terminate their pregnancies, and who use

informal and often ineffective methods, highlights the need for continued contraceptive provision

and access to safe and affordable menstrual regulation services.

Pregnancy termination was particularly common among older women and couples who agreed they

did not want more children. From a programmatic perspective, this finding indicates that

identifying older, reproductive-aged women and relying on reports of fertility preferences may serve

as effective means of targeting family planning intervention efforts to segments of the population

most at risk for an unintended pregnancy and subsequent pregnancy termination. From a research

perspective, this finding indicates the importance of ascertaining fertility preferences from both

husbands and wives. Reproductive health surveys have traditionally only gathered fertility-related

information from women; however, the quantitative analysis indicated that fertility preferences of husbands and wives were both independently and highly predictive of subsequent abortion in the five-year study period.

The qualitative component of this study also indicated that while some wives acted autonomously according to their fertility preferences, most engaged in joint decision-making processes with their husbands. Other studies from Bangladesh have produced similar findings (19, 20); however, the couple narratives from this mixed-method study help to illustrate how this decision-making process occurred and, according to each spouse, what factors figured in to their decision to terminate a pregnancy. Although pregnancy terminations were common among our study population, the qualitative interviews illustrated the complexities and the unique situations that precipitated the decision to terminate a pregnancy.

Overall, this study provides a more holistic understanding of pregnancy termination in rural Bangladesh. The prevalence of reported induced abortion in this study, combined with the narratives of women who attempted unsuccessfully to terminate their pregnancies indicates that the occurrence of unintended pregnancies, and the resolution of these pregnancies, continues to be a salient issue in this context. Efforts to ensure access to safe and effective contraceptive methods and menstrual regulation are imperative, especially in light of evidence from other Bangladesh studies demonstrating the importance of family planning in reducing maternal mortality (21) and child mortality (22), and the availability of safe menstrual regulation services as a means of reducing abortion-related maternal mortality (15). Lastly, findings from the quantitative and qualitative components highlight the need to ascertain the perspectives of both men and women to gain a

better understanding of how reproductive decisions, including those involving pregnancy

termination, are negotiated and realized in this and other settings.

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Table 1: Pregnancy Outcomes (1998-2003) to Study Couples, by Fertility Preferences (n = 1,066)

Pregnancy Outcome	Both husband and wife want more	Neither husband nor wife wants more	Wife wants more, Husband does not	Husband wants more, Wife does not	Percent of total pregnancies
Live birth (incl multiple births)	88%	64%	81%	84%	**80%** (n = 851)
Non-live birth outcomes					
Induced abortion/ Pregnancy termination	2%	29%	6%	7%	**11%** (n = 115)
Spontaneous miscarriage	8%	5%	7%	7%	**7%** (n = 73)
Stillbirth	2%	2%	7%	2%	**3%** (n = 27)
Total	**100%** (n = 584)	**100%** (n = 319)	**100%** (n = 120)	**100%** (n = 43)	**100%** (n = 1,066)

Table 2: Adjusted Odds of Pregnancy Termination by Study Couples (1998-2003) (n = 1,066)

	Bivariate Models		Multivariate Model 1		Multivariate Model 2	
	Unadjusted ORs	CI	Adjusted ORs	CI	Adjusted ORs	CI
Sociodemographic Characteristics (1998)						
Wife's age						
< 25 years (ref)	1.00	--	1.00	--	1.00	--
25-35 years	3.07***	1.99 – 4.75	1.25	0.73 – 2.13	1.14	0.67 – 1.95
> 35 years	19.47***	10.94 – 34.66	4.92***	2.38 – 10.17	4.59***	2.19 – 9.62
Wife's education						
No education (ref)	1.00	--	1.00	--	1.00	--
Any education (>1 year)	0.73	0.49 – 1.07	1.25	0.74 – 2.13	1.29	0.76 – 2.21
Household assets						
0 assets	1.00	--	1.00	--	1.00	--
1 asset	1.09	0.66 – 1.81	0.85	0.50 – 1.45	0.84	0.49 – 1.43
2 or more assets	1.09	0.68 – 1.76	1.35	0.77 – 2.36	1.29	0.73 – 2.26
Family Composition (1998)						
<2 children, male or female (ref)	1.00	--	1.00	--	1.00	--
2+ daughters and no sons	2.43*	1.14 – 5.14	0.80	0.33 – 1.92	0.51	0.20 – 1.31
≥ 2 children with at least 1 son	10.38***	6.36 – 16.93	1.99†	0.94 – 4.23	1.00	0.41 – 2.42
Access to Services: Distance to nearest health center						
0-5 minutes (ref)	1.00	--	1.00	--	1.00	--
6-10 minutes	1.16	0.70 – 1.93	1.39	0.74 – 2.60	1.35	0.74 – 2.48
>10 minutes	0.48**	0.30 – 0.79	0.54†	0.29 – 1.03	0.53*	0.28 – 1.00
Couples' Fertility Preferences						
Wife wants more children (ref)	1.00	--	1.00	--	1.00	--
Wife does not want more children	11.41***	7.25 – 17.95	5.25***	2.89 – 9.55	4.25***	2.26 – 7.99
Husband wants more children (ref)	1.00	--			1.00	--
Husband does not want more children	10.31***	6.29 – 16.92			3.35***	1.72 – 6.54
Log Likelihood			-281.04		-276.40	
Chi square from Log-Likelihood Ratio test comparing Models 1 and 2					9.28**	

***p≤0.001; ** p≤ 0.01; * p ≤ 0.05; †p≤ 0.10 . Note: n = 1,066