

Use of Obstetric Care Services in Bangladesh: Does Knowledge of Husbands Matter?

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Abstract

The role of men in the use of reproductive health services has been receiving increased attention since the International Conference on Population and Development (ICPD) held in Cairo in 1994 and the fourth World Conference on Women held in Beijing in 1995. There is a growing need and understanding in the international and national communities regarding the role of men in the decision-making process which affects the use of essential obstetric care services by women.

The objectives of this study were: (a) to ascertain the knowledge of husbands on signs of obstetric complications, (b) to examine the association between the knowledge of husbands on obstetric complications and healthcare facilities and the use of essential obstetric care (EOC) services by their wives, (c) to identify the determining factors in using the services of trained care providers for management of obstetric complications, and (d) to identify the factors associated with the knowledge of husbands on obstetric complications.

The cross-sectional study was conducted in four rural upazilas of Bangladesh, the field sites of the Family Health Research Project (FHRP) [former Operations Research Project (ORP)] of ICDDR,B: Centre for Health and Population Research. The respondents were selected from the sample registration system which is a longitudinal surveillance system of the former ORP. A total of 7,218 husbands whose wives had at least one pregnancy outcome within the last five years preceding the interviews conducted and who were listed in the surveillance system were interviewed during November 1998-June 1999. In the case of multiple pregnancy outcomes during the reference period, the husbands were interviewed regarding the last pregnancy.

The findings showed that the majority (77%) of the husbands were aware of at least one symptom of complication relating to pregnancy and childbirth. Ninety percent of the respondents were aware of Upazila Health Complex, and about one-fifth mentioned district hospital as a health facility for the management of complications. Twelve percent of the husbands reported that their wives encountered one or more than one complication(s). Prolonged labour, bleeding, pre-eclamptic toxemia, postpartum bleeding, and fever for more than three days after delivery were mentioned as pregnancy and childbirth-related complications. Nearly half (47%) of the husbands sought care from the medically-trained providers for management of these complications. The majority reported that they either consulted the village practitioners for their wives, although these practitioners had no professional training or did not seek care at all. The husbands themselves were the decision-makers for their wives' use of obstetric care services in most cases. Very few took joint-decision as to which care provider and or facility should be consulted or attended to seek care from. About two-thirds of the husbands reported that their wives visited the trained care providers at least once for antenatal care, while 95% of the husbands viewed that antenatal care is important for keeping both mother and fetus healthy. Results of bivariate analysis showed that there was a significant association between the knowledge of husbands on obstetric complications and the use of an institutional facility for the management of complications. The analysis further showed that the use of the government facilities at the primary healthcare level for the management of obstetric complications was significant ($p < 0.05$) when compared with the knowledge of the husbands on complications. Results of multivariate analysis showed that the knowledge of the

husbands on obstetric complications and the use of health facilities by their wives had some influence but were not significant, while some other socioeconomic variables were significant.

It is concluded that the role of husbands in the use of obstetric care services by their wives is an important area of concern. For the improvement of maternal health, an intervention targeted to males, particularly husbands, to get their support and, for their involvement in the decision-making process for use of obstetric care services by their wives is, thus, required in the sociocultural context of Bangladesh. In addition, it is also equally important to empower women to take decision by themselves regarding their own healthcare by providing them with adequate information on health problems, and availability and use of EOC services in the most appropriate time.

Introduction

The role of men in the use of reproductive health services by their wives has been receiving increased attention since the International Conference for Population and Development (ICPD) held in Cairo in 1994 and the fourth World Conference on Women held in Beijing in 1995. Both the conferences endorsed the incorporation of reproductive health services that include men, mandating for men to share more responsibilities in reproductive health agenda [1]. Since many major health burdens of child bearing are directly carried out by women, there is an increasing need for men to share more responsibility in reproductive health matters by taking a more active role in issues relating to reproductive health of women, such as fertility regulation, use of essential obstetric care (EOC) services, pregnancy, birth planning, etc. There is a growing understanding in the international and national communities of the role of men as a fundamental influence along with their decision-making power by taking more active role in planning pregnancy and seeking healthcare. Along with the same line, the Government of Bangladesh has formulated the Health and Population Sector Programme (HPSP) 1998-2003, giving priority for improving maternal health under its reproductive health programme, and emphasized on the involvement of men in reproductive health issues [2].

Maternal mortality in Bangladesh is considerably high at 4.5 per 1,000 livebirths compared to other developing countries [3]. Complications relating to pregnancy and childbirth are the leading cause of maternal mortality. The majority of these deaths could be prevented if women would have access to and use of emergency obstetric care services. The Bangladesh Demographic and Health Survey 1999-2000 showed that the use of antenatal care and of trained providers for attending delivery and management of obstetric complications is poor [4]. The HPSP 1998-2003 has targets to reach 80% coverage of antenatal care, 50% of deliveries are to be attended by a trained provider, and maternal mortality is to be reduced to 3% per thousand livebirths by 2003. To achieve these, an increased use of obstetric care services is essential.

Results of various studies showed that a reproductive health programme might be more effective for women if men are involved in some way [5,6]. A study conducted in Bombay, India found that women made an increased number of antenatal health clinic visits when their husbands had attended an information communication session at the clinic compared to those whose husbands did not [7]. Results of studies conducted in Turkey and Addis Ababa showed that family-planning education provided at the individual level to wife and husband separately led to a higher contraceptive-use rate and lower discontinuation rate than if women alone were provided the education [8]. It is expected that men who have knowledge on the reproductive health issues are more likely to support their partners in making decisions about the use of reproductive healthcare. They are more likely to communicate with their partners and to be supportive during pregnancy and/or delivery-related complications, and may make better healthcare decisions in the use of obstetric care services for their partners on time.

With regard to decision-making for safe motherhood, mothers-in-law have traditionally played an important role. However, results of recent studies in Bangladesh showed that there was a shift in the decision-making process for seeking care, and husbands play a significant role in using obstetric care services [9,10,11]. Results of

studies conducted in 1995 by the University Research Corporation and the BIPERHT in Bangladesh showed that men were far less knowledgeable about the signs of obstetric complications than their wives, but they were the decision-makers on issues relating to the treatment of their wives when they had obstetric complications [11,12]. Results of a study conducted in Uttar Pradesh, India, indicated that husbands' were less knowledgeable about pregnancy and delivery-related complications [13].

Bangladesh has a fairly extensive network of providing maternal and child health services from grass-roots to higher levels. The female field workers make selective visitation to pregnant women at the household level, and motivate them to visit paramedics for antenatal check-ups at the Community Clinic (CC) or at the union-level Health and Family Welfare Centre (H&FWC). The CC is meant for providing services to an average 6,000 population, and a H&FWC covers, on an average, a population of 25,000. The upazila-level hospital, named as Upazila Health Complex (UHC) (1 hospital for about 250,000 to 3,00,000 population), provides basic EOC services, and refers clients with complications to the district-level hospital where comprehensive EOC services are provided. However, despite the availability of EOC services, the use of these services is still poor. Husbands are increasingly being found as the major decision-makers for their wives in the use of any reproductive health service. Therefore, it is important to explore whether the knowledge of husbands on obstetric complications and the healthcare facility has any influence toward the use of obstetric care services by their wives.

Research question

The study tried to find out to what extent did the knowledge of husbands on obstetric complications and sources of trained care increase the use of EOC services by their wives for the management of obstetric complications?

Objectives

The study was carried out to:

- a) ascertain the knowledge of husbands on the signs of obstetric complications;
- b) examine the association between the knowledge of husbands on complications and facilities with the use of obstetric care services by their wives;
- c) identify the determining factors in the use of trained care for the management of obstetric complications; and
- d) identify the factors associated with the knowledge of husbands on obstetric complications.

Methodology

This cross-sectional survey was conducted in four rural upazilas (subdistricts) of Bangladesh. These four upazilas are Abhoynagar and Keshabpur under Jessore district and Mirsarai and Satkania under Chittagong district. These upazilas are the field sites of the Family Health Research Project (FHRP) [former Operations Research Project (ORP)] of ICDDR,B: Centre for Health and Population Research. Two of the subdistricts are situated in the southeastern part, and the other two are situated in the southwestern part of Bangladesh. The Project has been maintaining a Sample Registration System (SRS), which is a longitudinal surveillance system. A two-stage sampling design was used for the SRS. In the first stage, a systematic random selection of unions (average population of a union is 27,000) was made. In the second stage, a complete list of households was made, and the households were then selected through the systematic random sampling techniques. Married women of reproductive age (MWRA) of selected households are routinely interviewed about their demographic events and services used. A total of 23,624 sample households were covered in the surveillance system of the FHRP [14].

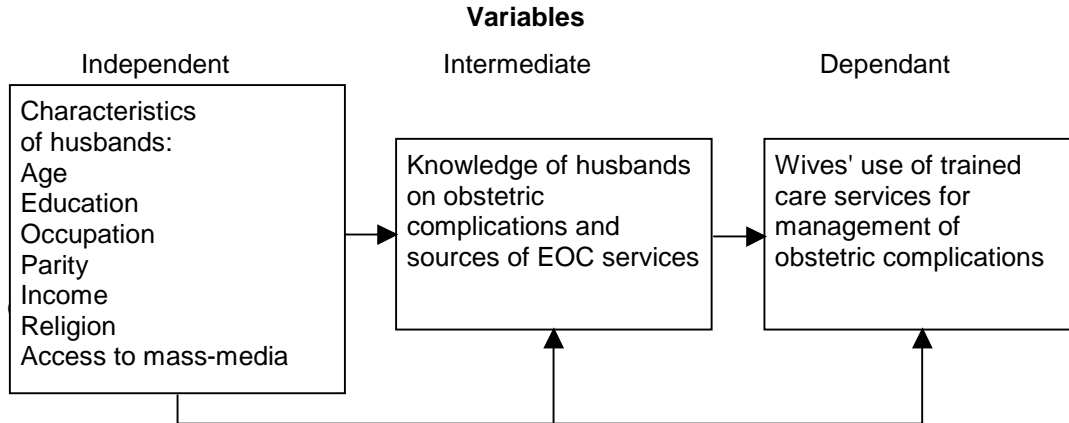
A total of 19,106 women from the SRS were interviewed to collect baseline data, preceding interventions, pertaining to clinical contraceptives, EOC, and status of child health. A total of 10,216 women, who were members of the surveillance system and had a pregnancy outcome within the 5 years preceding the survey, were interviewed. Husbands of these women were selected for interview and a total of 7,218 husbands who matched the described criteria were successfully interviewed during November 1998-June 1999. The trained and experienced male interviewers conducted the interviews. A structured questionnaire with both closed and open-ended questions was used for interview. A maximum of three attempts was made to complete interviews for absentees.

The respondents were only probed for answers to assess the knowledge on obstetric complications. The knowledge of husbands on the availability of health facility for EOC services was examined. The respondents were allowed multiple responses for selected variables, and were probed for their responses. The husbands were also asked whether their wives had encountered any obstetric complications, and whether their wives visited any health facilities and/or providers for services for the management of obstetric complications.

Chi-square (X^2) was used to see the association between wives' use of obstetric care services from trained providers and various socioeconomic and demographic characteristics of husbands. Multivariate logistic regression analysis was used for assessing the influence of knowledge of husbands on obstetric complications and facilities where EOC services are available on the use of trained care by their wives i.e. seeking of care from health care facility or from trained providers for the management of complications. For the presentation of results, odds ratios were used. The dependent variable refers to the use of trained care for the management of obstetric complications and it was in the 'yes' or 'no' category. The knowledge of husbands on obstetric complications and sources of care were also considered as intermediate variables while analyzing data.

Since this paper used secondary data from a large survey of the Project, the following conceptual framework was developed based on the available data and furthermore considering the purpose of this study:

Conceptual framework



Operational definition

With regard to the knowledge of obstetric complications, the husbands were asked about common complications of pregnancy and childbirth for which a woman needs to go to a hospital for care. Based on the recommendations made by the Safe Motherhood Initiative, a list of medically-recognized obstetric complications was prepared before the interviews began, as life-threatening complications [15]. The following operational definitions were considered for the purpose of the study.

Knowledge: Knowledge indicates any symptom of obstetric complication(s) reported by husbands which may occur in women during pregnancy (antenatal), delivery, and/or within 42 days after delivery.

Complications: Complications considered here were any vaginal bleeding (during pregnancy, delivery, and postpartum), pre-eclamptic toxemia, convulsion, fever for more than three days, leaking membrane, prolonged labour, retained placenta, eclampsia, mal-presentation, and sepsis.

Trained care: The dependent variable 'trained care' for management of obstetric complications was defined as use of any trained providers or visiting any health facility either public or private. For this study, paramedics, nurses, and MBBS doctors were considered as trained providers for the management of obstetric complications and health facilities included H&FWC, UHC, district hospital, and any private clinic or hospital. Any other types of providers, such as village practitioners (quack), homeopaths, and herbalists (*kabiraj*) were considered as untrained providers who did not have any professional training to provide services for the management of obstetric complications.

Result

Socioeconomic and demographic characteristics

Nearly half (46%) of the husbands interviewed were aged 30-39 years. More than half (60%) of the husbands had some level of schooling, and 36% were involved in agriculture followed by small business. Most (80%) of the respondents were Muslim, and 42% of the wives had 2-3 pregnancies. Nearly one-third (30%) of the husbands reported having a sanitary latrine at their home, and 51% spend Tk. 2,000-4,000 per month (Table 1).

Table 1. Socioeconomic and demographic characteristics of husbands

Characteristics	Percentage (n=7,218)
Age (in years)	
<24	4
25-29	14
30-34	22
35-39	24
40-44	16
45+	20
Education (in years)	
No schooling	40
Primary	28
Secondary and above	32
Occupation	
Agricultural labourer/farmer	36
Non-agricultural day labourer	10
Small business	23
Service	12
Skilled labourer	17
Others	2
Religion	
Muslim	82
Hindu	17
Others	1
Total no. of wife's pregnancies	
0 -1	24
2 -3	42
4 and above	34
Sanitation facility	
Sanitary	30
Pit	42
No latrine/bush/field	28
Monthly expenditure	
Tk <2,000	11
Tk 2,000- 4,000	51
Tk 4,001 and above	38

Access to mass-media

The husbands were asked whether they had access to mass-media, such as radio, TV and newspaper. More than three-quarters of the husbands had regular access to radio (77%) and television (76%). Forty-one percent reported of often reading newspapers (Table 2).

Table 2. Access of husbands to mass-media

Type of mass-media	Percentage (n=7,218)
Listen to radio	
Yes	77
No	23
Watches TV	
Yes	76
No	24
Read newspapers often	
Yes	41
No	59

Knowledge on obstetric complications

The knowledge of the husbands on complications relating to pregnancy and childbirth was assessed. More than three-quarters (77%) of the husbands were aware of at least one symptom of obstetric complications. The knowledge of the husbands on complications that can occur during pregnancy and after delivery was lower compared to that on delivery-related complications. More than half of the respondents were knowledgeable about prolonged labour (labour pain for more than 12 hours), and 30% mentioned malpresentation of the foetus as a delivery-related complication. Only 18% could mention at least two symptoms of pre-eclamptic toxæmia, i.e. swollen feet, headache and/or blurring of vision, as pregnancy-related complications. More than one-fifth (22.5%) mentioned that severe bleeding might occur during the postnatal period, followed by postpartum eclampsia, i.e. convulsion. A very few percentage of the husbands could mention that women may experience sepsis, i.e. foul smelling vaginal discharge (3%) and fever after delivery (9%) (Fig. 1).

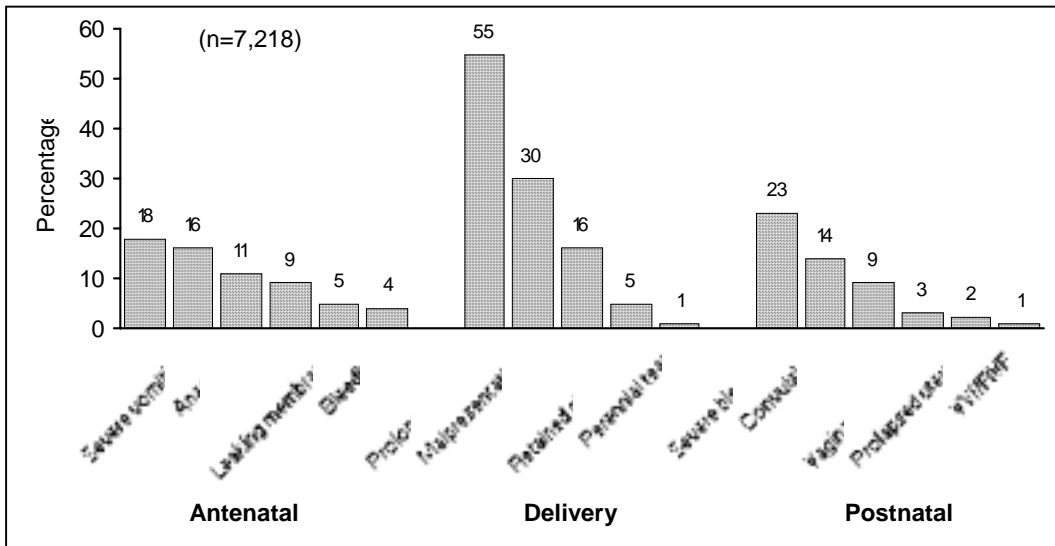


Fig. 1. Knowledge of husbands on complications relating to pregnancy and childbirths

Knowledge on facilities of obstetric care service

The Knowledge of the husbands on health facilities where services for management of obstetric related complications are available was assessed. Most husbands (90%) mentioned about the Upazilla Health Complex (UHC), followed by Health and Family Welfare Centre, (H&FWC) as health facilities where obstetric care services are available. The UHC is the first-level referral hospital where both in and outpatient services are provided to the community. Only 10% of the husbands mentioned about private health service facilities where services relating to pregnancy and childbirth are provided (Fig. 2). In the study area a few private facilities are available from where obstetric care services are provided.

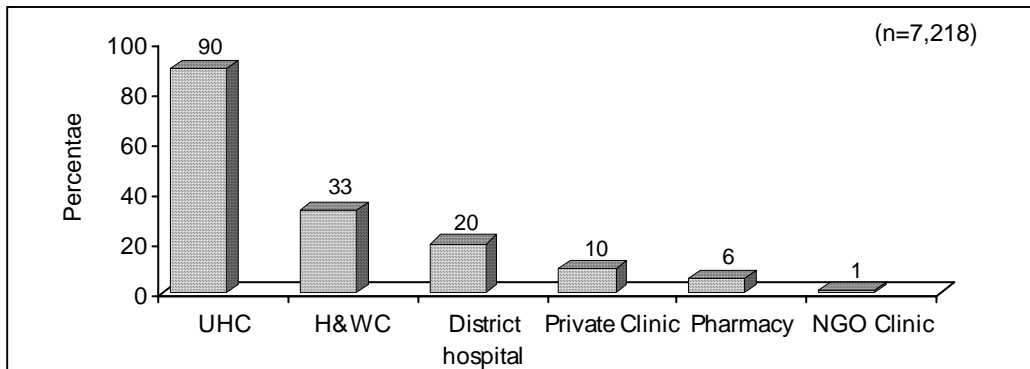


Fig. 2. Knowledge of husbands on source of care for management of obstetric complications

Antenatal care

Ninety-five percent of the husbands stated that antenatal care was important for keeping both mother and foetus healthy. Of them, 72% mentioned that three or more visits are required, and the rest were either in favour of only one visit or said that visit during pregnancy is only required if any complication occurs.

The husbands were also asked about antenatal care visit by their wives during their last pregnancy. Sixty-one percent of the husbands reported that their wives visited health providers at least once for antenatal care during their last pregnancy (Fig. 3).

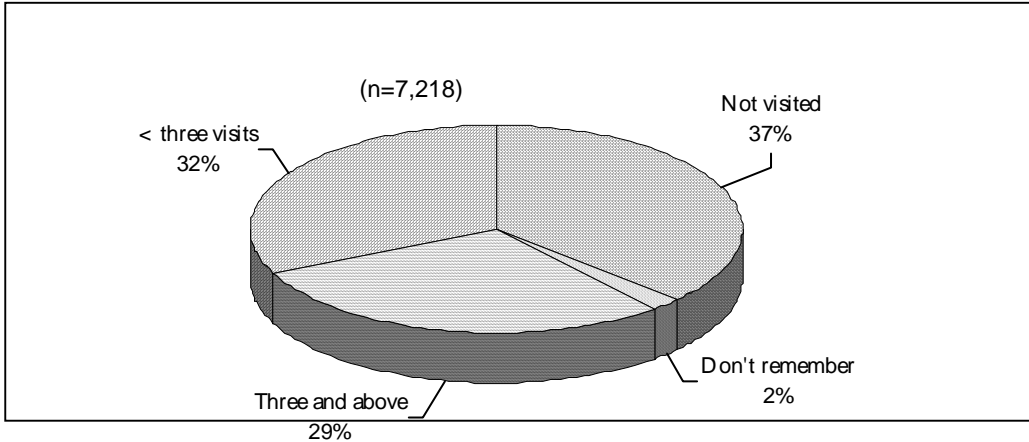
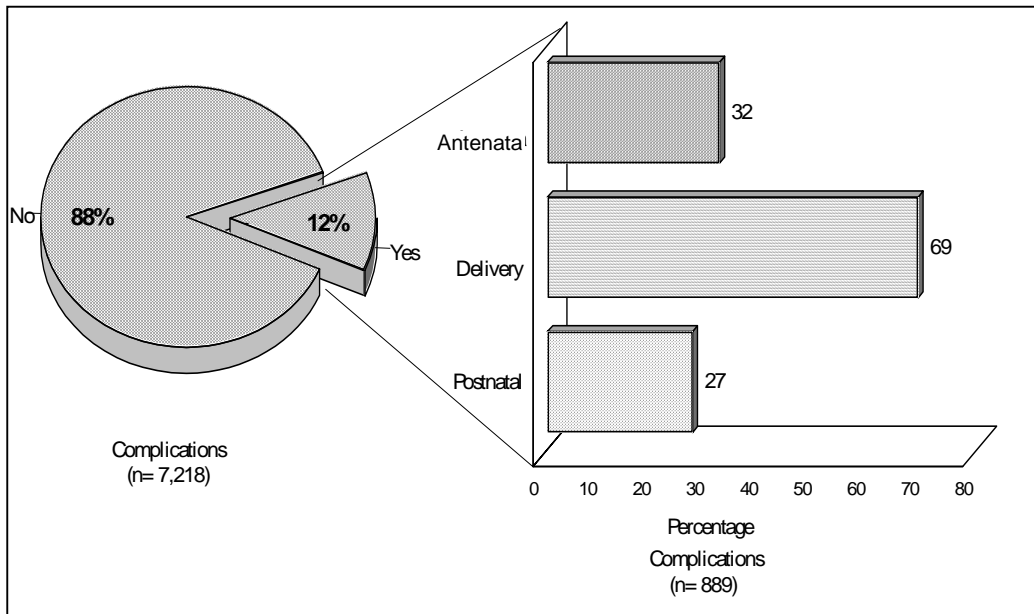


Fig. 3. Percentage of husbands, reported of antenatal care visits made by their wives to trained providers

Obstetric complications encountered as reported by husbands

The husbands were asked if they knew about any complications encountered by their wives during their last pregnancy and/or childbirth during the reference period. Over 12% of the husbands reported that their wives encountered at least one complication during the last pregnancy, delivery, and/or after delivery. Of them, nearly 70% mentioned about delivery-related complications (Fig. 4)



Types of obstetric complications reported by husbands

Of the husbands reported of complications encountered by their wives, 50% reported that their wives had suffered from prolonged or obstructed labour. Four percent of the husbands reported the occurrence of life-threatening complications, such as bleeding during pregnancy, 7% reported bleeding during delivery, and 9% had bleeding after delivery (Table 3).

Table 3. Types of obstetric complications encountered by wives as reported by husbands

Obstetric complication	Percentage of husbands (n=889)
Antenatal	
Bleeding during pregnancy	4
Swollen feet, headache, blurring of vision	7
Leaking membrane	2
Convulsion during pregnancy	1
Severe vomiting	5
Anaemia	4
Delivery	
Prolonged labour	50
Severe bleeding	7
Retained placenta	4
Malpresentation of foetus	7
Perennial tear	1
Postnatal	
Fever for more than three days	7
Postpartum convulsion	2
Severe bleeding	9
Foul-smelling vaginal discharge	1
VVF/RVF	-
Prolapsed uterus	1

Multiple responses were accepted

Care sought for management of obstetric complications

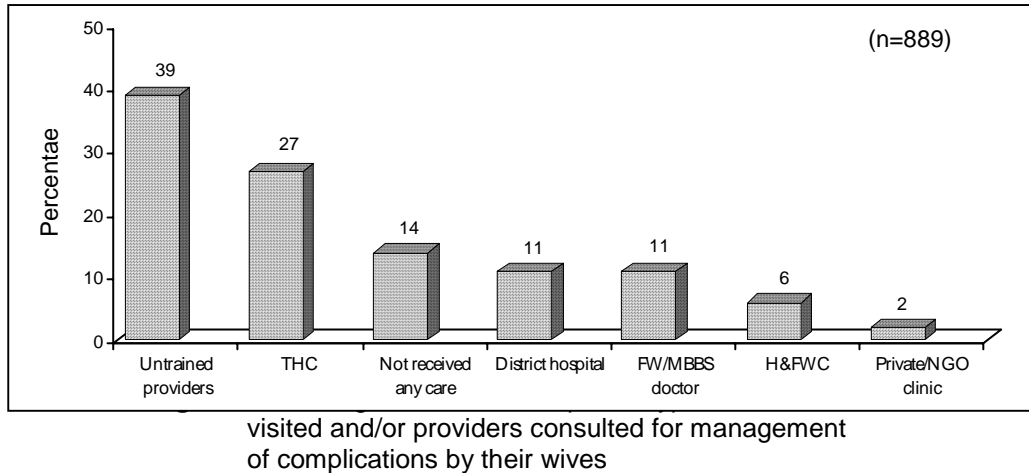
Of the husbands who reported of obstetric complications encountered by their wives, 47% mentioned that they themselves either consulted the trained providers or their wives were taken to any health facility for the management of complications relating to pregnancy, delivery, or post-delivery. Nearly half of the husbands sought trained care for their wives' delivery-related complications (Table 4).

Table 4. Seeking of care for management of complications as reported by husbands

Type of care sought	Percentage of husbands (n=889)
Trained care	47
Untrained care	38.5
Care not received	14.2
Trained care	(n=421)
Pregnancy-related complications	28
Delivery-related complications	60
Postnatal-related complications	23

Multiple responses only applied for 'trained care'.

Multiple care providers were used as reported by the husbands for the management of complications of their wives. Figure 5 indicates that more than one-quarter of the husbands reported that their wives visited the UHC, followed by district hospital, for the management of their obstetric complications. Thirty-nine percent of the husbands reported that they consulted the untrained providers, such as allopathic village practitioners, homeopathic practitioners, *kabiraj*, and moulanas (religious persons).



Decision-makers

Three-quarters of the husbands were the main decision-makers for their wives' use of services for the management of obstetric complications. Only in 3% of cases, the husbands and wives jointly decided about which care provider to seek care from. Only 7% of the husbands mentioned that the mother or mother-in-law took the decision about which care provider to choose for the treatment of obstetric complications of their wives (Table 5).

Table 5. Decision-makers for use of care providers for management of complication as reported by husbands

Decision-maker	Percentage (n=889)
Self	75
Wife	3
Husband and wife together	3
Mother-in-law/mother	7
Relative/neighbour	11
Service provider	1

Results of bivariate analysis

Results of bivariate analysis of care-seeking patterns in relation to management of obstetric complications and background characteristics of husbands showed that the education of husbands had a significant influence on their wives' use of obstetric care facility. The monthly expenditure was also significantly ($p < 0.05$) associated with the use of trained care providers or visiting a facility for the treatment of complications. The husbands who read newspapers were more likely to use trained care compared to those who did not. Those who usually watched television or listened to radio did not use trained care significantly (Table 6).

Table 6. Association between care-seeking behaviour for management of complications as reported by husbands by their socioeconomic and demographic characteristics

Characteristics	Consultation of trained providers/ institutional facility visited		p value
	Yes (n=421) (%)	No (n=468) (%)	
Age of husbands (in years)			
<24	4.3	5.6	
25-29	14.5	17.5	
30-34	24.7	28.2	
35-39	22.3	21.8	
40-44	16.4	13.0	
45+	17.8	13.9	
Education of husbands (in years)			.012
No schooling	33.0	39.3	
Primary	25.2	28.4	
Secondary and above	41.8	32.3	
Total no. of wives' pregnancies			
0 -1	38.7	36.5	
2 -3	38.5	37.8	
4 and above	22.8	25.6	
Expenditure (in taka)			.05
<2,000	16.0	12.4	
2,000-3,999	47.5	43.7	
4,000 and more	36.6	44.0	
Religion			
Muslim	79.6	80.4	
Hindu	19.2	17.7	
Others	1.2	1.9	
Read news paper			.001
Yes	53.0	41.9	
No	47.0	58.1	
Watch TV			
Yes	81.0	77.6	
No	19.0	22.4	
Listen to radio			
Yes	80.3	79.7	
No	19.7	20.3	
Antenatal care			.018
Went for visit	79.1	72.9	
Did not go	20.9	27.1	

Association between seeking trained care and number of complications known by husbands

The knowledge of husbands on the number of obstetric complications was categorized into three types: husbands having no knowledge on symptoms of complications, husbands having knowledge of 1-2 symptom(s) of complications, and husbands who were aware of 3 or more symptoms of complications. Due to a small number of husbands reported of use of private/NGO healthcare facility at the union level by their wives, this category was merged with the H&FWC. Table 7 shows that the knowledge of husbands on obstetric complications was marginally significant for their wives' use of health facilities and/or trained providers.

Table 7. Association between knowledge of husbands on obstetric complications and seeking care from trained providers/facility by wives as reported by husbands

Knowledge of husbands on number of symptoms of complications	Use of trained providers/facility by their wives*	
	Yes (n=421) (%)	No (n=468) (%)
Do not know	13.7	9.2
1-2	35.1	44.7
3 and above	51.1	46.0

NB: Only the 'yes' answers are presented here

*p<0.05

Association between husbands' knowledge on health facilities and their wives' care-seeking for management of complications

The knowledge of husbands about a facility and their wives' use of that facility for the management of complications was significant only in the case of UHCs which is the first-level referral centre for the management of complications. The use of UHC was five-fold higher for those whose husbands were aware of about the UHC services are offered as a source of obstetric care services compared to those who could not mention about the availability of EOC services at the UHC (Table 8).

Table 8. Association between knowledge of husbands on trained care facilities/providers and use of health facilities/providers by their wives for management of complications

Knowledge of health facility/trained care providers	Use of trained care who had complications (n=889)	
	Yes %	No %
H&FWC		
Yes	5.5	94.5
No	8.5	91.5
UHC*		
Yes	28.4	71.6
No	6.4	93.6
District hospital		
Yes	11.4	88.6
No	8.5	91.5
Trained providers		
Yes	10.2	89.8
No	17.0	83.0

*p<0.0005

Results of multivariate analysis

Logistic regression analysis was carried out to examine the effect of the husbands' knowledge on complications on healthcare-seeking by their wives for the management of obstetric complications. Here, seeking of care from the trained providers or visiting any institutional facility was considered as a dependent variable. The results presented as odds ratio explain the effect of various factors on the use of trained care compared to the reference category.

Factors associated with use of trained care for management of complications

The results presented in Table 9 show that the model significantly associated with the socioeconomic characteristics of husbands and the use of trained care for the management of complications of their wives ($X^2=35.782$, with 15 df; $p<0.005$). The age of husbands had a significant effect on their wives' use of trained care ($p<0.005$). The odds of using trained care for the management of complications was higher if the age of husbands was 45 years or above compared to the odds if the age of husbands was less than 25 years. The odds of husbands who were involved in non-agricultural work took their wives for trained care had 1.5 times higher than the reference category. The odds of husbands who had more than one child was less likely to take their wives for trained care i.e. to any health care facility or any trained provider than the odds of husbands who had only one child, and this difference was significant ($p<0.005$). The wives of husbands with knowledge on trained care providers/facility had a 1.6 times higher use of trained care providers compared to the wives of husbands who was not aware of any healthcare facility. The knowledge of husbands on obstetric complications influenced

the use of trained care for the management of complications of their wives, but the difference was not significant in the model. The economic status of the husbands, i.e. the average monthly expenditure, had no significant association with the use of trained care for the management of complications. However, there was a significant association ($p < 0.05$) between the odds of husband's habit of reading newspapers and the use of trained care for their wives than the reference category.

Table 9. Factors associated with the use of trained care for management of obstetric complications

Characteristic of husbands	Odds ratio
Age (in years)	
Less than 25 (ref)	1.0
25-34	1.08
35-44	1.70
45 and above	2.59*
Education	
No education (ref)	1.0
Primary	0.89
Secondary or above	0.98
Occupation	
Farmer/agricultural labour (ref)	1.0
Service	1.15
Business	1.22
Non-agricultural labour	1.51*
Skilled labour	1.20
Parity (no. of pregnancies)	
One (ref)	1.0
2-3	0.83
4 and above	0.49**

Contd...

Table 9. (Contd.)

Characteristic of husbands	Odds ratio
Knowledge of healthcare facility	
No (ref)	1.0
Yes	1.61
Number of obstetric complications knew	
Not knew (ref)	1.0
1-2 complication(s)	1.41
3 and above	1.24
Reading newspaper	
No (ref)	1.0
Yes	1.34*
Average monthly expenditure (in taka)	
Less than 2,000 (ref)	1.0
2,000-4,000	1.10
4,001 and above	1.32

R² value = 5%

* p<0.05; ** p<0.005

Factors associated with husbands' knowledge on obstetric complications

The factors that had effect on the husbands' knowledge of obstetric complications are presented in Table 10. The model fitted with the variables was highly significant ($X^2=253.248$ with 16 df; $p<0.0005$). The findings showed that the odds of husbands who were aged 44 years and above were 1.4 times higher knowledgeable about the symptoms of obstetric complications than the odds of husbands who were aged less than 25 years. The odds of husbands who were aware of the facilities where EOC services are provided were 2.5 times more aware of the symptoms of obstetric complications, and this difference was highly significant ($p=0.0005$). There was a greater odds (1.9 times) of the husbands who read newspapers in knowing of complications compared to the husbands who did not read newspapers, and the difference was highly significant ($p<0.0005$). Listening to radio and watching TV had significant positive effects (at $p=0.05$ and $p=0.005$ respectively) on the odds of husbands with knowledge on obstetric complications. There was a greater odds of Muslim husbands who were aware of obstetric complications than the odds of husbands from other religions, and the difference was significant ($p<0.005$).

Table 10. Factors associated with husbands' knowledge of obstetric complications

Characteristics of husbands	Odds ratio
Age (in years)	
Less than 25 (ref)	1.0
25-34	1.22
35-44	1.33
45 and above	1.43*
Occupation	
Farmer/agricultural labour (ref)	1.0
Service	1.08
Business	0.95
Non-agricultural labour	0.95**
Skilled labour	0.72
Gravida/parity	
One (ref)	1.0
2-3	1.09
4 and above	0.98
Knowledge of healthcare facility	
No (ref)	1.0
Yes	2.4***
Reading newspaper	
No (ref)	1.0
Yes	1.93***
Listening to radio	
No (ref)	1.0
Yes	1.22*
Watching TV	
No (ref)	1.0
Yes	1.24**
Religion	
Muslin (ref)	1.0
Others	0.80**
Average monthly expenditure (in taka)	
Less than 2,000 (ref)	1.0
2,000-4,000	0.92
4,001 and above	0.86

* p<0.05 ; ** p<0.005; *** p<0.0005
(n=7,218)

Discussion

Ever since the ICPD in 1994, efforts have been made to involve males in reproductive health. The aim was to explore and help them communicate and create support for reproductive health needs of their wives, and make them more responsible for their own reproductive behaviour. Various studies, so far undertaken on male involvement in reproductive health both nationally and internationally, emphasize particularly on family planning and STD/HIV/AIDS-prevention programme. Studies or programmes have so far found very limited approaches in involving men for safe motherhood. To date, the role of husbands in safe motherhood has not been defined clearly. It is obvious that providing information on safe motherhood benefits both husband and wife. Little is so far known about the involvement of husbands in safe motherhood for the increased use of trained care in informing complications of their wives and management issues relating to pregnancy and childbirth.

Safe motherhood consists of ensuring good health for women and their babies during pregnancy and delivery, and in the postnatal period. Men play many key roles during pregnancy and delivery and after the birth of baby. Their decision and actions often make the difference between illness and healthy life and death of women. Males can help protect the lives and health of women as these women will become mothers and attend health of their children. The support of husbands can help increase the use of healthcare services, such as antenatal care, postnatal care and delivery care, and if they can make a prompt decision to seek trained care in the case of an obstetric emergency, both mother and new-born will remain in good health.

Various studies that support the role of husbands as decision-makers for their wives' use of obstetric care services also ascertained findings similar to the findings of the current study [9,12,16]. In fact, in a traditional society, men and older kin have an authority over women and younger family members. Due to the extended nature of the family, wives are usually dependent on a number of people for decision-making, especially if the decision involves going outside the household or spending money. A woman is usually directly dependant on her husband. Thus, husbands' awareness of obstetric complications will help their wives avoid delays in seeking prompt treatment and reduce suffering from diseases. This study found that the knowledge of husbands on complications was positively associated with their wives' use of essential obstetric care services, and the more the husbands were aware of complications, the more their wives sought care from the trained providers.

The results of multivariate analysis minimized this independent effect of husbands' knowledge on obstetric complication on their wives' use of trained care facilities, which may have occurred due to interaction with other variables. The results, therefore, suggest that both socioeconomic status and role of husbands in safe motherhood are both critical for saving lives of women. Lives of many women could be saved or may be prevented disability from obstetric complications if the decision-makers, mostly husbands would have takes prompt, informed decisions for their wives' use of services for the management of obstetric complications [15]. Therefore, they need more information and motivation on and about when and where to go for services for the management of obstetric complication of their wives. Results of a study conducted in UP, India, showed that husbands in the younger age were the least informed about obstetric complications, and a considerable proportion of husbands who

completed higher education could not even name at least one danger sign of complications [13]. The reasons could be an inadequate communication about reproductive health matters with the husbands and service providers, or could be less information, education and communication (IEC) with husbands about their role in reproductive health decisions (through mass-media/programme), or lack of political commitment or policy support.

The use of trained care by wives for the management of complications was also influenced by the husbands' knowledge on the availability of healthcare facility or medically-trained providers where EOC services are provided. The results of logistic regression showed that the wives of husbands who had knowledge of trained care facility tended to use the trained care for the management of complications more compared to the wives whose husbands were not aware of trained care providers/facilities. Therefore, increasing husbands' knowledge on healthcare facilities may reduce the delay in decision-making for seeking care for their wives from trained providers for the management of obstetric complications.

The socioeconomic status of husbands is also an important determining factor in their wives' use of trained care for the management of complications. It was observed that the wives of older aged husbands used more trained care. However, this could be that the percentage of husbands belonging to the reference categories was very small. Couples with higher parity reduced the chance of using trained care. The monthly expenditure of husbands and access to newspapers had a positive influence on their wives' use of trained care. Thus, programmes need to focus on IEC activities targeting husbands on danger signs of obstetric complications, availability of EOC services, and advantage of keeping their family small for better family health. In addition, the underlying socio-economic and cultural factors which might have influenced on their wives' use of trained care for the management of obstetric complications also a matter of concern where intervention is required.

Results of multivariate analysis also showed that the aged husbands who listened to radio, watched TV, and were involved in non-agricultural jobs had more knowledge on obstetric complications. Religion had a significant influence on husbands' knowledge of complications.

Results of this study showed that 95% of the husbands were aware of the necessity of antenatal care, while only 61% reported that their wives made at least one visit to the trained providers during their last pregnancy for antenatal care. Results of bi-variate analysis showed that the antenatal visits of wives had a significant influence on the use of trained care for the management of obstetric complications. The preliminary findings of a study, conducted on maternal health services and maternal mortality in 2001, showed the similar results with regard to the use of antenatal care [17]. Thus, when a woman becomes pregnant, her husband can make sure that she gets proper antenatal care. He can accompany his wife for antenatal visits or assure provision of transportation or funds to pay for her visits. While attending the clinic for antenatal care, the husbands can also get on opportunity to learn about the symptoms of pregnancy and childbirth-related complications and where to go for services if they accompany their wives. On the other hand, the healthcare providers also need to be motivated to give more attention to husbands when they come to the facility.

Good nutrition and plenty of rest are also important during pregnancy. A husband can help his wife to have a safe pregnancy and a healthy baby by ensuring that his wife receives enough nutritious food which would reduce the risk of his wife of being anaemic, avoiding the threats of occurring complications aggravated in anaemic condition. He can also arrange for skilled care during delivery. In Bangladesh, 16% of deliveries are attended by trained providers, and the use of postnatal care is even far less than that of antenatal care [4]. Husbands can help their wives even after the baby is born by ensuring postnatal visits and care for newborns and in family planning by using a contraceptive method.

Programme Implications

Appropriate interventions for targeting males, particularly husbands, in the informed decision-making process for their wives' use of obstetric care services is the main feature for the improvement of maternal health. Husbands can play an important role in promoting maternal health by making plans for assisted delivery by trained providers and by reducing the delay in recognizing obstetric complications when their wives require medical attention. In Bangladesh, where women's autonomy is particularly low, and where women are dependent on their husbands for decisions, such as seeking healthcare, educating and involving husbands in reproductive health matters are one of the effective means of influencing changes in poor health outcomes of women. Moreover, involving men in decision-making has received greater attention, in the use of reproductive healthcare services, from both the Government of Bangladesh and non-government organizations. If the husbands who have the power to make decisions do not understand when medical attention is needed, their wives may not get the care they need in time to save their lives. Thus, husbands need to know well about why, where, and when this assistance is required for management of obstetric complications, and they need more information and support from the healthcare system.

It is also important to take into account about the women's role in the decision-making process. The women also need to be empowered for making decisions on their own healthcare along with their husbands. Data of the Bangladesh Demographic and Health Survey (BDHS) 1993-1994 on husbands' involvement in family planning show that when women dominate the decision-making, 88% select female methods, while only 5% selected condoms or vasectomy. But when husbands are the main decision-makers, 21% select either condoms or vasectomy [18]. The opposite was also found from the Zimbabwe Male Motivation and Family Planning Methods Expansion Project that did not promote the idea of joint decision-making. Men who were exposed to the campaign were 2.4 times more likely than others to state that the husbands alone should decide whether to practice family planning [19]. Therefore, along with husbands, wives also need more information on the needs and availability of health services. A programme needs to be designed where men will be motivated to provide more attention and support to their wives for making decisions on their own health and use of services.

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