ARTICLE

Contraceptive awareness among men in Bangladesh

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Abstract

Objective A considerable gap exists between contraceptive awareness and use. Traditional approaches to measuring awareness are inadequate to properly understand the linkages between awareness and use. The objective of this study was to examine the degree of men's modern contraceptive awareness in Bangladesh and the associated determinants and further testing of a hypothesis that current contraceptive use confers a high degree of method awareness.

Methods This study used the couple data set from the Bangladesh Demographic and Health Survey (1999–2000). A two-level, multinomial logistic regression was used with the degree of contraceptive awareness as the dependent variable. The degree of awareness was measured by the reported number of modern contraceptive methods known among men aged 15–59 years. Men's responses on method awareness were classified according to those reported spontaneously and probed.

Results Nearly 100% of the study participants reported having heard of at least one method and about half reported awareness of at least eight different methods of contraception. Multinomial logistic regression analyses showed that older and educated men were more likely to have reported a high degree of awareness. The findings confirmed our hypothesis that current contraceptive use is likely to confer a high degree of modern method awareness among men (p<0.001), after controlling for other important characteristics.

Conclusions Men who had a low degree of contraceptive awareness seem not properly informed of the wide range of contraceptive options. It is imperative that family planning intervention strategies in Bangladesh should focus on the degree and functional knowledge of contraceptive methods to improve the uptake of especially male-based modern methods.

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Key message points

- **Most men in the survey reported a high degree of contraceptive awareness.**
- **Current users of family planning are very likely to have acquired a high degree of contraceptive awareness.**
- **Degree of contraceptive awareness should be measured using an ordinal scale rather than a dichotomy.**
- **Demographic and Health Surveys should consider including questions on functional knowledge of methods in order to appropriately measuring the true levels of contraceptive awareness.**

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Introduction

Contraceptive awareness is universal in Bangladesh. Unfortunately, the universally high prevalence of contraceptive awareness has little effect on method use, particularly male contraceptives; many couples restrict their method of contraceptive mostly to pills. The recent Demographic and Health Surveys (DHS) in Bangladesh (BDHS, 1999–2000) reported that 23% of currently married women used pills, 7% used injectables, nearly 1% used the intrauterine device (IUD), and condom use accounted for only 4% and male sterilisation was below 1%.[1] Although the DHS conducted in Bangladesh collect data on men's awareness about family planning and reproductive health, such data have not been analysed systematically. For instance, although these surveys demonstrated universal contraceptive awareness among men and women there is hardly any improvement in the uptake, especially of male methods. The reasons for the poor acceptance of male methods to date remain largely unknown.

An attempt is made here to examine the degree of men's contraceptive awareness and the associated determinants in Bangladesh using data from the recently conducted DHS (1999–2000). Furthermore, we tested the hypothesis that current method use influences individuals to acquire a high degree of contraceptive awareness. Individuals tend to learn about a greater number of methods and consequently switch to different methods based on their past and current experiences (e.g. side effects, dissatisfaction with a particular method). Knowledge is instantaneous and cumulative in nature. The data that BDHS collect on contraceptive knowledge are in fact not necessarily knowledge *per se* but rather reflect more awareness of various methods. Here we use the word awareness instead of knowledge. We believe the results of the present study will help policy planners and programme managers to identify the gaps that exist in the provision of a wide range of modern contraceptive information and develop strategies to improve the use of male methods in particular.

Background

Provision of appropriate contraceptive knowledge is essential to enhance male participation in reproductive health. The importance of involving men in reproductive health and family planning is widely discussed in the literature, especially after the proceedings of the International Conferences on Population and Development.[2–5] Until recently, most of the large-scale family planning surveys – the Knowledge, Attitudes and Practice Surveys; the World Fertility Surveys; the Contraceptive Prevalence Surveys and the first rounds of the DHS – collected reproductive health/family planning data from only women.[6] The limited options of modern male methods may be the reason why these surveys have paid little attention to understanding men's knowledge, attitudes and practice of contraception.[7] A comparative study of the DHS data pointed out that in 15/21 countries, more than 90% of men recall knowing at least one contraceptive method.[6] Conversely, the DHS data on knowledge do not necessarily mean that the respondent knows how to use the method, understands its effectiveness or side effects, or approves of it.[8,9] Other studies from Africa and the Middle East pointed out that men reported even wrong and inconsistent information regarding

methods that reflected on the poor use of contraception.[4,10,11] A few studies conducted elsewhere measured male knowledge using similar approaches[3,10,12–17] except the study by Adewuyi and Ogunjuyigbe[2] that used the same question to measure knowledge but reconfirmed it if the respondent could describe how to use the method. Despite these differences in measuring knowledge, none of these studies systematically addressed and modelled the degree of contraceptive awareness (i.e. the total number of various methods known among men).

Data

The present study is based on nationally represented data from the BDHS 1999–2000 data.[1] The sample covered all the six administrative divisions, which covered 64 districts and 490 *thanas* (subdistricts). The BDHS collected information from 10 544 ever-married women (aged 10–49 years) and 2556 currently married men (aged 15–59 years). We used the couple dataset (n = 2249) that was generated by linking spousal data from the total sample. The reason for using the couple dataset was to investigate a few additional important variables that were covered in the woman's questionnaire.

Definition of the degree of contraceptive awareness

Method awareness was assessed through a series of questions in the BDHS. Respondents were first asked to mention the way or methods by which a couple could delay or avoid pregnancy. When a respondent could not mention a particular method spontaneously, the interviewer described the method and asked whether the respondent had heard of it.[1] The spontaneous and prompted responses were used to determine the method awareness. The degree of contraceptive awareness was then measured by the number of different modern methods that men had ever heard of. The greater the number of methods known, the higher is the degree of awareness. The number of modern methods listed in the BDHS was nine: pills, IUD, injectables, condoms, Norplant®, menstrual regulation, foam/diaphragm/jelly, and male and female sterilisation. It should be noted that menstrual regulation by vacuum aspiration is a method for establishing non-pregnancy following a missed menstrual period, usually before the pregnancy is clinically confirmed. For this reason, the procedure is not legally defined as abortion. The procedure is allowed up to 10 weeks after the last menstrual period but in practice it is sometimes provided up to 12 weeks.[18,19] Since 1979, the practice of menstrual regulation has been permitted in Bangladesh and it is considered to be a family planning method. Induced abortion is still illegal and is permitted for health reasons only.

Methods

A descriptive analysis was carried out on the important sample characteristics *vis-à-vis* spatial, socioeconomic and demographic characteristics of the respondents. The variables that were significantly associated with the degree of awareness examined using bivariate analyses were further explored using multinomial logistic regression techniques. The dependent variable in the regression analysis was the degree of awareness of modern methods. We selected four categories to represent the degree of method awareness: (1) awareness of ≤3 methods, (2) 4–5 methods (reference category), (3) 6–7 methods and (4) 8–9 methods. The reported top five methods (awareness and ever-use of reversible methods) were pills, condoms, female sterilisation, injectables and male sterilisation. The category that included men who knew most of these popular methods was chosen as the reference category. In fact more than 80% of men in this category knew at least four of these popular methods. Hence, this category can be thought of as comprising individuals with basic awareness of modern methods. The four categories were chosen based on the ranking of both reported awareness (spontaneous) and ever-use of different methods. The analysis considered both spontaneous and prompted responses for two reasons. First, we do not know how interviewers handled these questions in the survey, particularly spontaneous responses of contraceptive awareness. Second, a few of the modern methods do not have specific local (Bengali) names that people can easily remember (e.g. Norplant) and therefore prompting is necessary. The BDHS report considered both spontaneous and prompted responses together to measure awareness. The reasons behind high spontaneous response rates for pill and condom may be that these two are the most advertised methods of contraception in the local media. Information on other methods is disseminated mostly by the family planning workers to whom men/husbands usually have limited access.

Results

Descriptive analysis

The spontaneous reports of the top five modern methods known were ranked as: pills (93.9%), condoms (79.5%), injectables (45%), female sterilisation (44.8%) and male sterilisation (27.4%) (Table 1). Roughly 3% of respondents provided a spontaneous response of having heard of Norplant. Norplant was also the least commonly known among all modern methods (24%). The spontaneously reported awareness of any male modern method was 82.4%. The ranking of reported ever-use, particularly for reversal methods, also followed the same order.[1] None of these responses indicate any functional knowledge of methods since the BDHS did not collect such specific information. The mean number of modern methods known among men was 6.9 and about 47% of respondents reported having heard of 8–9 methods (data not shown in Table 1).

Regression analyses

The determinants of the degree of men's contraceptive

Table 1 *Contraceptive awareness among husbands aged 15–59 years, Bangladesh, 1999–2000* (n = *2249)*

Contraceptive method	Spontaneous		Prompted		Total awareness (%)
	n	%	*n*	%	
Pill	2112	93.9	133	5.9	99.8
Intrauterine device	450	20.0	1126	50.1	70.1
Injectable	1013	45.0	1055	46.9	91.9
Condom	1788	79.5	403	17.9	97.4
Female sterilisation	1008	44.8	1111	49.4	94.2
Male sterilisation	616	27.4	1329	59.1	86.5
Norplant®	77	3.4	469	20.9	24.3
Foam/diaphragm/jelly	450	20.0	1126	50.1	70.1
Menstrual regulation	92	4.1	1146	51.0	55.1
Periodic abstinence	270	12.0	1402	62.3	74.3
Withdrawal	77	3.4	1004	44.6	48.0
Lactational amenorrhoea	16	0.7	466	20.7	21.4
Other (folklore)	154	6.8	0	0.0	6.8
Any male method[a]	1878	83.5	355	15.8	99.3
Any modern male method[a]	1853	82.4	371	16.5	98.9
Any traditional method	423	18.8	1437	63.9	82.7
Any method	2213	98.4	36	1.6	100.0
Any modern method	2210	98.3	38	1.7	100.0

[a]Any male method includes condom, male sterilisation, periodic abstinence and withdrawal, and any male modern method includes condom and male sterilisation.

Table 2 *Background characteristics of husbands, Bangladesh, 1999–2000 (*n = *2249)*

Characteristic		*n*	%
Age (years)			
15–19		16	0.7
20–24		110	4.9
25–29		295	13.1
30–34		366	16.3
35–39		459	20.4
40–44		363	16.1
45–49		304	13.5
50–54		195	8.7
55–59		141	6.3
Mean age	38.6		
Median age	38.2		
SD	9.4		
Education			
No education		740	32.9
Primary		666	29.6
Secondary		529	23.5
Higher		314	14.0
Place of residence			
Urban		690	30.7
Rural		1559	69.3
Division			
Barisal		199	8.8
Chittagong		389	17.3
Dhaka		582	25.9
Khulna		404	18.0
Rajshahi		460	20.5
Sylhet		215	9.6
Religion			
Islam		1925	85.6
Hindu		290	12.9
Buddhist		26	1.2
Christian[a]		8	0.3
Living children (*n*)			
0		201	8.9
1		416	18.5
2		523	23.3
3		410	18.2
4		290	12.9
5		203	9.0
6+		206	9.2
Marital duration (years)			
0–4		391	17.4
5–9		398	17.7
10–14		387	17.2
15–19		363	16.1
20–24		240	10.7
25–29		276	12.3
30+		194	8.6
Mean (SD = 9.79)	15.0		
Age difference between spouses (years)			
<3[b]		144	6.4
3–7		731	32.5
≥8		1374	61.1
Mean (SD =5.07)	9.2		
Access to radio (at least once a week)			
Yes		1169	52.0
No		1080	48.0
Access to TV (at least once a week)			
Yes		1253	55.7
No		996	44.3
Access to newspaper (at least once a week)			
Yes		662	29.4
No		1587	70.6
Occupation			
Unemployed		46	2.0
Professional/technical/managerial		692	30.8
Agriculture self employed		581	25.8
Agriculture employee		159	7.1
Skilled manual		283	12.6
Unskilled manual		457	20.3
Don't know		14	0.6
Missing		17	0.8

[a]Includes three missing cases and one reporting other religion.
[b]Includes a few cases (1.6%) where husbands were younger than their wives by at least 6 years. Another 2.5% were the same age as their wives.

awareness were explored using multinomial logistic regression techniques. The variables included in the model were screened initially for multicollinearity problems and one of the highly correlated variables was removed from the model (e.g. marital duration and age). The spatial variables – division and residence – were controlled in the regression model to capture the effect of over-enumeration particularly in two divisions, Barisal and Sylhet. A description of the background variables considered in the model is shown in Table 2. When we included a community level random effect using a two-level random intercept model it was not statistically significant – the variations within primary sampling units were almost negligible. Therefore, we relied on fixed effects, single-level, multinomial regression models.

The results showed that older men aged 40+ years had a comparatively high degree of awareness (8–9 methods) compared to their counterparts (Table 3). Men from the Chittagong, Dhaka and Rajshahi divisions had lower odds of knowing ≤3 methods when compared with those in Sylhet. Sylhet division, in general, was found to lag behind in terms of male contraceptive awareness. Place of residence was not significant in the model. Conversely, men with high levels of education, those belonging to Islam and those who had accessed media (at least once a week) were more likely to have a high degree of awareness of family planning methods. Levels of men's education were significantly and positively associated with degree of contraceptive awareness. More than 50% of the men had access to television/radio and they were more likely to have a high degree of method awareness; the results were statistically significant. As expected, those men who had approved a method seemed relatively more likely than others to have had a high degree of awareness. Those who had a greater number of living children were likely to have heard of a greater number of methods.

The results confirmed our hypothesis that contraceptive use instigates awareness of more methods among men. The results, which controlled for demographic and socioeconomic characteristics, showed that current method users were significantly more likely to report awareness of six or more methods ($p<0.001$).

Discussion

In the Bangladesh context, a high degree of men's awareness of family planning is a precursor to contraceptive use behaviour, particularly male-based methods. Men's lack of knowledge of a wide range of contraceptive options may perhaps explain the very low use of condoms and male sterilisation in Bangladeshi society. Our analysis showed that there are still many men who lack more than a basic awareness of the range of method options.

The analysis presented here moved beyond the traditional DHS approach of modelling contraceptive awareness data. We considered the degree of men's contraceptive awareness, namely the extent to which men knew about different options (reversible/irreversible modern methods). Men who had a low degree of contraceptive awareness seem not properly informed about the wide range of contraceptive options. Men in Sylhet division appeared to lag far behind in terms of the degree of contraceptive awareness. Our analyses suggested that the mass media could facilitate the dissemination of a wide range of contraceptive options in areas where contraceptive awareness was poor. Such efforts could focus on exclusive family planning programmes targeting both married and unmarried men in Bangladesh. The future family planning

Table 3 *Multinomial logistic regression parameter estimates for the effect of demographic and socioeconomic characteristics on the degree of contraceptive awareness of husbands, Bangladesh, 1999–2000*

Independent variables	Estimates (degree of contraceptive awareness) [OR (95% CI)]		
	≤3 methods	6–7 methods	8–9 methods
Age (years) (r: 40+)			
<25	1.13 (0.46–2.74)	0.40*** (0.22–0.73)	0.27*** (0.15–0.49)
25–39	0.77 (0.44–1.37)	1.03 (0.75–1.42)	0.76* (0.56–1.04)
Division (r: Sylhet)			
Barisal	0.55 (0.21–1.40)	1.69* (0.97–2.94)	1.76* (0.99–3.10)
Chittagong	0.32*** (0.14–0.73)	1.35 (0.84–2.18)	2.04*** (1.25–3.32)
Dhaka	0.18*** (0.07–0.43)	1.55* (0.99–2.42)	2.11*** (1.33–3.34)
Khulna	1.60 (0.82–3.11)	1.44 (0.88–2.34)	1.73** (1.05–2.84)
Rajshahi	0.46* (0.20–1.05)	2.53*** (1.56–4.12)	4.21*** (2.56–6.93)
Place of residence (r: Rural)			
Urban	1.10 (0.64–1.89)	1.02 (0.75–1.38)	1.05 (0.78–1.41)
Education (r: Higher)			
No education	3.33 (0.70–15.69)	0.52** (0.28–0.97)	0.10*** (0.05–0.18)
Primary	2.75 (0.58–13.00)	0.68 (0.37–1.27)	0.13*** (0.07–0.24)
Secondary	2.32 (0.47–11.48)	0.72 (0.38–1.38)	0.39*** (0.22–0.71)
Religion (r: Others)			
Islam	1.40 (0.71–2.77)	1.38* (0.96–2.00)	1.35* (0.95–1.93)
Access to TV (r: No)			
Yes	1.36 (0.83–2.23)	1.37** (1.03–1.82)	1.62*** (1.23–2.14)
Access to radio (r: No)			
Yes	0.62* (0.39–1.00)	1.03 (0.79–1.34)	1.37** (1.06–1.78)
Respondent approves of family planning (r: No)			
Yes	0.67 (0.40–1.13)	1.20 (0.86–1.67)	1.61*** (1.14–2.27)
Currently using method (r: No)			
Yes	1.00 (0.61–1.63)	1.33** (1.01–1.75)	1.46*** (1.11–1.91)
Number of living children (r: 5+)			
0	1.43 (0.56–3.60)	0.65 (0.36–1.14)	0.56** (0.31–1.01)
1–2	1.24 (0.60–2.58)	0.82 (0.54–1.24)	1.00 (0.66–1.52)
3–4	0.77 (0.38–1.57)	0.87 (0.59–1.28)	1.41* (0.96–2.06)

Level of significance: *p<0.10, **p<0.05, ***p<0.01. Reference category is denoted by r. OR, odds ratio.

programmes in Bangladesh should aim to promote awareness of a wide range of method options, especially the functional and utility aspects of each method, their advantages, disadvantages and potential side effects.

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