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Men's Awareness of Pregnancy Care in Bangladesh: A Multilevel Data Analysis

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Abstract

Since Bangladesh approved the ICPD recommendations formulated in 1994 it has demonstrated a considerable success in achieving most of the ICPD goals. Unfortunately, a little has been done in involving men in the reproductive health (RH) process, especially their awareness in pregnancy care. This study explores men's awareness of pregnancy care using the 1999-2000 Bangladesh Demographic and Health Survey. About 83% of the men know at least one serious complication related to pregnancy and 82% of them approve of pregnant women having check if not sick. Slightly more than 62% of the men think that pregnant women should have more food than before. A composite indicator named 'Degree of awareness of pregnancy care' was measured using three types of information mentioned above. If a man knows at least one serious complication regarding pregnancy, approves pregnant women of having check if not sick and believes that pregnant women should eat more than before, he is considered to be highly aware of pregnancy care. He is considered to be moderately aware if he conforms to at least two of the above, otherwise, he is considered to be poorly aware of pregnancy care. Analysis of data suggests that only 48% of the men are highly aware of pregnancy care. Two-level random intercept multinomial logistic regression analysis suggests that age, division, education, access to mass media, number of living children are significant determinants of degree of awareness of pregnancy care. Significant community effect was found in the data set. The research emphasises that men should be more involved in the pregnancy care component of the ongoing RH program, which is recognised as women oriented to ensure better RH of women. The results highlight the need for appropriate community-level interventions to improve men's involvement in RH process.

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Introduction

Bangladesh is one of the countries which has achieved a considerable progress towards implementation of most of the International Conference on Population and Development (ICPD) goals (Hardee et al., 1999; UN, 1995). But men's involvement in the reproductive health (RH) program in terms of their awareness of pregnancy care has received inadequate attention among researchers and policy makers. Even though, as part of the on going RH programme men's involvement in this area has been emphasized, it is still at the planning stage.

Men's involvement in pregnancy care has been emphasized in different studies identifying the sectors where men can contribute for the well being of their pregnant wives (Drennan, 1998). Men can plan their families, promote safe motherhood by arranging for skilled care during delivery, and ensuring nutritious food for their wives during pregnancy (UNICEF, 1998). Men are often the ones who decide when a women's condition is serious enough to seek medical care (Drennan, 1998). Men's decision and action during the pregnancy, delivery and after the baby is born often make the difference between illness and health, life and death (Thaddeus and Maine, 1994).

Men's involvement in safe motherhood is limited due to social system and culture in Bangladesh. Traditionally, men have been excluded from activities related to pregnancy care. The only time the father's help is required is when an emergency requires the women or child to seek treatments in hospitals, or when an external doctor is needed (Akhter et al., 1996; Population Council, 2001). Usually, men do not have enough information to make good decisions and, consequently, when an obstetric emergency arises they are unable to take quick action (Piet-Pelon, 1997).

This article investigates men's awareness of pregnancy care in Bangladesh and further explores the associated determinants using the 1999-2000 Demographic and Health Survey (DHS) data. The results of this study are expected to provide program and policy recommendations that will help to ensure men's greater and effective

participation in RH issues, especially in pregnancy care, both at the individual and community levels.

Data and methods

The study uses the couple data set (N=2249) based on the 1999-2000 Bangladesh Demographic and Health Survey (BDHS) (National Institute of Population Research and Training (NIPORT), Mitra and Associates (MA), and ORC Macro (ORCM), 2001). The couple data set is generated by linking spouses from the male data set constituting a sample of 2556 currently married men aged 15-59 years and that from females which has a sample of 10,544 ever married women aged 10-49 years. The BDHS data is nationally representative two-stage sample and covers all the six administrative divisions. In urban strata the primary sampling units (PSUs) are mahallas and in rural strata these are mauzas. In the forthcoming analysis PSUs will be referred as 'communities' while interpreting the regression results. Since, the objective of BDHS was to provide separate estimates for each division as well as for urban and rural areas, it was necessary to increase the sampling rate for Barisal and Sylhet divisions, so that BDHS sample is not self weighting. For the convenience of the readership 'husbands' will be interchangeably use as 'men' or 'respondents'.

A two-level multinomial logistic regression model was fitted to identify the significant determinants of the 'Degree of husbands' awareness of pregnancy care'. The response variable is coded as poor, moderate and high (reference category). Degree of awareness of pregnancy care is computed by combining the responses of the men's knowledge of pregnancy complications, attitude towards check up during pregnancy of women if not sick and their perception regarding eating changes of women during pregnancy. If a man knows at least one serious complication regarding pregnancy, approves pregnant women of having check if not sick and believes that pregnant women should eat more than before, he is considered to be highly aware of pregnancy care. He is considered to be moderately aware if he conforms to at least two of the above, otherwise, he is considered to be poorly aware of pregnancy care.

Results

Descriptive analysis

Table 1 shows that about 83% of the men know at least one serious complication related to pregnancy. 'Labour more than 18 hours', 'Severe headache/blurry vision/swollen' and 'Convulsions' are the highly reported pregnancy complications reported by 38.8%, 35.7% and 33% of the men respectively. About 82% of the men reported that they approve of pregnant women having check if not sick (Table 2). Still 15.2% of the men do not approve of pregnant women having check if not sick. Slightly more than 62% of the men think that pregnant women should have more food than before and another 18.2% think that pregnant women should eat same as before (Table 3). Rest of the men have either miss conception or no knowledge regarding eating change during pregnancy of a woman. A bi-variate analysis (not shown in table) reveals that as the education level of men increases their knowledge of at least one pregnancy complication, approval of pregnant women having check if not sick and perception that pregnant women should eat more than before increases (Figure 1).

Table 4 reveals that about 48% of the men are highly aware of pregnancy care, another 34% are moderately aware and the rest are poorly aware of pregnancy care. Among the men aged less than 25 years 40.5% have moderate degree of awareness of pregnancy care followed by 38.9% of men having high degree of knowledge of pregnancy care. High degree of awareness of pregnancy care is the highest among men in the age group 25-39 (51.4%).

Among the men in Barisal and Dhaka division more than half are highly aware of pregnancy care (54.8% and 54% respectively). Sylhet division has the highest proportion of men having poor degree of awareness of pregnancy care (24.7%) among all the divisions. Urban men are likely to have high degree of awareness of pregnancy care.

Among men, high degree of awareness of pregnancy care increases with the increase in their education level. The poor degree of awareness of pregnancy care decreases drastically with increase of men's educational level. Men from the religious group other than Islam are likely to have high degree of awareness of pregnancy care more than their counterparts. Men having 1-2 children are likely have high degree of

awareness of pregnancy care more. As the number of children increases the degree of poor awareness of pregnancy care increases among the surveyed men. Men who have access to mass media are more likely to have high degree of awareness of pregnancy care. Men engaged in professional/managerial/technical jobs are more likely to show high degree of awareness of pregnancy care, while men engaged in employed agriculture are less likely to have high degree of awareness of pregnancy care than their counterparts.

High degree of awareness of pregnancy care is observed more among men with age difference between spouses less than 7 years. Men with marital duration 5-10 years are more likely to have high degree of awareness of pregnancy care (52.4%).

Regression analysis

A single-level multinomial logistic regression model was fitted to identify the determinants of 'Degree of husbands' awareness of pregnancy care' (using SPSS 12.0). The response variable is coded as poor, moderate and high (reference category). All the variables listed in Table 4 were considered in the analysis as independent variables. Only the significant variables, except division and place of residence (to control for over enumeration) were considered in the single-level final model. The same model was then refitted as a two-level random intercept multinomial logistic regression model in order to identify the possible community (PSU) level variation in the data (using MLwiN 2.0). As significant community (PSU) effect was found in the data the two-level multinomial logistic regression model is retained as the final model (Table 5).

Men aged less than 25 years are significantly more likely to have poor degree of awareness of pregnancy care, while men aged 25-39 years are less likely to have poor degree of awareness of pregnancy care than men aged 40 years and above when compared with high degree of awareness of pregnancy care (Table 5). Men from Barisal, Dhaka and Rajshahi divisions are significantly less likely to have poor degree of awareness of pregnancy care than men from Sylhet division. Men with education of higher than secondary level are significantly less likely to have poor degree of awareness of pregnancy care than men with education of secondary level and below. Men who do not have access to mass media (radio, TV and newspaper) are

significantly more likely to have poor degree of awareness of pregnancy care. Men who are engaged in Professional/managerial/technical and skilled manual type of jobs are significantly less likely to have poor degree of awareness of pregnancy care than men involved in un-skilled manual type of jobs.

We have significant community effect for poor degree of awareness when compared with high degree of awareness of pregnancy care in the model. The intra-community correlation coefficient[1] indicates that 9% of the variation in having poor degree of awareness of pregnancy care is due to community factors not accounted for in the model (for details about intra-community correlation coefficient see Snijders and Bosker, 1999).

Men aged less than 25 years are significantly more likely to have moderate degree of awareness of pregnancy care than men aged 40 years and above when compared with high degree of awareness of pregnancy care. Men from Barisal and Dhaka divisions are significantly less likely to have moderate degree of awareness of pregnancy care than men from Sylhet division. Men with education of less than higher secondary level are more likely to have moderate degree of awareness of pregnancy care than men with education of higher secondary level. Access to TV conforms that respondents are less likely to have moderate degree of awareness of pregnancy care than who do not have access to TV when compared to high degree of awareness of pregnancy care. If the respondents have 1-2 children they are less likely to have moderate degree of awareness of pregnancy care than the respondents who have 5 and above number of children.

[1] Intra-community correlation coefficient, $\rho = [\sigma_u^2 / (\sigma_u^2 + \pi^2/3)]$. Where σ_u^2 is the community level variance in the model and π=3.142.

Conclusion

Men's involvement in RH is a priority of the on going RH program of Bangladesh. But a little has been achieved to involve men in the pregnancy care, in terms of their perception, attitude and over all awareness. The program components use to disseminate information regarding various aspect of pregnancy care but the effectiveness of these interventions has not been examined properly. Again, men's performance against individual program component may not necessarily ensure their good motivation/involvement, because absent of one component may result in ineffective practice. For example, if a husband knows all the complications of pregnancy but disapproves pregnant women of having check if not sick and thinks pregnant women should eat less than before, his motivation and subsequent practice will end up with unfavourable pregnancy outcome. This paper goes beyond the traditional approach of measuring men's awareness of pregnancy care and considers combining some of the information collected by DHS to generate a composite indicator named 'Degree of awareness of pregnancy care' to better understand men's awareness of pregnancy care. Men's involvement in RH is still not satisfactory in terms of their degree of awareness of pregnancy care. Sylhet division is still lagging behind in this area. Mass media can be involved to increase men's awareness of pregnancy care. Men should be more involved in the pregnancy care component of the ongoing RH program, which is recognised as women oriented to ensure better RH of women. The results highlight the need for appropriate community-level interventions to improve men's involvement in RH process.

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Table 1 Men's knowledge of pregnancy complications, Bangladesh, 1999-2001

Name of pregnancy complication	%
Severe headache/blurry vision/swollen	35.7
Vaginal bleeding	8.7
Labour more than 18 hours	38.8
Excessive bleeding	12.8
convulsions	33.0
Fever more than 3 days	3.1
Bad smelling vaginal discharge	1.9
Other	18.8
Knowledge of at least one complication	83.1
Total	**2249**

Table 2 Men's Approval of pregnant women having check if not sick, Bangladesh, 1999-2001

Approves	%
Yes	81.6
No	15.2
Don't know	3.2
Total	**2249**

Table 3 Men's perception of eating change during pregnancy of women, Bangladesh, 1999-2001

Eating changes during pregnancy	%
More	62.6
Same	18.2
Less	15.6
Don't know	3.7
Total	**2244**

Note: there are 5 missing cases

Table 4 Men's degree of awareness of pregnancy care by selected individual and couple characteristics, Bangladesh, 1999-2001 (%)

Characteristics	N	Degree of awareness of pregnancy care		
		Poor	Moderate	High
Individual				
Age (p=.003)				
Less than 25	126	20.6	40.5	38.9
25-39	1120	15.2	33.4	51.4
40 and above	1003	20.2	34.2	45.6
Division (p=.001)				
Barisal	199	18.1	27.1	54.8
Chittagong	389	18.0	38.0	44.0
Dhaka	582	14.4	31.6	54.0
Khulna	404	21.0	35.1	43.8
Rajshahi	460	15.4	35.7	48.9
Sylhet	215	24.7	35.3	40.0
Area of residence (p=.0001)				
Urban	690	11.6	33.8	54.6
Rural	1559	20.5	34.3	45.2
Education (p=.0001)				
No education	740	28.8	37.7	33.5
Primary	666	18.8	35.9	45.3
Secondary	529	9.1	33.3	57.7
Higher	314	4.1	23.6	72.3
Religion (p=.409)				
Islam	1925	18.1	34.2	47.6
Other	324	15.4	33.6	50.9
No. of living children (p=.0001)				
0	201	14.4	39.3	46.3
1-2	939	15.8	31.5	52.7
3-4	700	17.9	33.9	48.3
5 and above	409	23.7	38.1	38.1
Access to newspaper (p=.0001)				
No	1587	22.2	36.3	41.5
Yes	662	6.9	29.2	63.9
Access to TV (p=.0001)				
No	996	27.5	38.4	34.1
Yes	1253	10.0	30.8	59.2
Access to radio (p=.0001)				
No	1080	24.0	34.0	42.0
Yes	1169	12.0	34.3	53.7
Husband's occupation (p=.0001)				
Unemployed	77	19.5	27.3	53.2
Professional/managerial/technical	692	10.5	32.9	56.5
Agriculture self-employed	581	22.0	34.9	43.0
Agriculture employed	159	26.4	36.5	37.1
Skilled manual	283	9.9	36.0	54.1
Unskilled manual	457	24.7	34.1	41.1

Contd…

Table 4 (continued)

Characteristics	N	Degree of awareness of pregnancy care		
		Poor	Moderate	High
Couple				
Age difference between spouses (p=.285)				
Less than 3	144	15.3	34.7	50.0
3-7	731	16.1	33.0	50.9
8and above	1374	18.9	34.7	46.4
Marital duration (p=.002)				
Less than 5	391	14.6	35.8	49.6
5-10	473	12.9	34.7	52.4
11 and above	1385	20.3	33.5	46.2
Total	2249	17.7	34.1	48.2

Note 1: Row sum to 100 %.
Note 2: p-values are based on chi-square tests.

Table 5 Multinomial logistic regression parameter estimates for the effect of demographic and socio-economic characteristics on the degree of husbands' awareness of pregnancy care, Bangladesh, 1999-2000

	Estimates (degree of awareness of pregnancy care)			
	Poor		Moderate	
Independent Variables	β	**SE**	β	**SE**
Intercept	-2.777***	0.430	-1.057***	0.261
Age (*r*: 40 and above)				
Less than 25	0.644**	0.278	0.482**	0.225
25-39	-0.313**	0.146	-0.043	0.112
Division (*r*: Sylhet)				
Barisal	-0.790***	0.298	-0.630***	0.217
Chittagong	-0.149	0.255	0.124	0.181
Dhaka	-0.784***	0.243	-0.357**	0.171
Khulna	0.198	0.247	0.131	0.179
Rajshahi	-0.793***	0.249	-0.227	0.176
Place of residence (*r*: Urban)				
Rural	0.202	0.176	-0.122	0.111
Education (*r*: Higher)				
No Education	1.807***	0.364	0.983***	0.197
Primary	1.254***	0.356	0.678***	0.186
Secondary	0.634*	0.358	0.500***	0.173
Access to TV (*r*: Yes)				
No	1.020***	.0138	0.626***	0.102
Access to Radio (*r*: Yes)				
No	0.568***	0.127	0.036	0.095
Access to Newspaper (*r*: Yes)				
No	0.459**	0.216	0.170	0.133
Number of living children (*r*: 5 +)				
0	0.008	0.275	0.123	0.210
1-2	-0.165	0.189	-0.255**	0.150
3-4	-0.230	0.168	-0.191	0.136
Occupation (*r*: Unskilled-manual)				
Unemployed	0.233	0.341	-0.101	0.280
Professional/managerial/technical	-0.347*	0.187	0.133	0.141
Agriculture Self	-0.102	0.165	0.055	0.138
Agriculture employed	-0.218	0.230	0.009	0.196
Skilled manual	-0.485**	0.246	0.115	0.168
Community level variance	0.326***	0.093	0.000	0.000

Note: Level of Significance: *p<.10, ** p<.05, *** p<.01; SE denotes Standard Error; *r* denotes reference category
† based on wife's perception of husband's approval of FP

Figure 1 Men's awareness of pregnancy care