WOMEN'S EMPOWERMENT AND INTIMATE PARTNER VIOLENCE IN BANGLADESH: INVESTIGATING THE COMPLEX RELATIONSHIP

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Summary. The aim of this study was to assess whether women's empowerment ensures reduced intimate partner violence (IPV). The differential relationship between women's empowerment and IPV among married women in Bangladesh was investigated using 2007 Demographic and Health Survey data. Logistic regression models were used to assess whether women's empowerment had any influence on their likelihood of experiencing IPV while controlling for other covariates. The analyses revealed that older cohorts of women, who were more empowered, were more vulnerable to physical violence than less-empowered, younger women. The likelihood of being affected by physical violence among less-empowered, childless women was greater than that of more-empowered women with only male children. Less-empowered, uneducated women were more likely to experience physical violence than more-empowered, primaryeducated women. Less-empowered women who had been married for less than 5 years were more likely to suffer from physical violence than more-empowered women who had been married for more than 19 years. The likelihood of experiencing sexual violence was not found to have any significant association with women's empowerment. The findings suggest that although women's empowerment in Bangladesh is gradually improving, some sub-groups of empowered women are still susceptible to IPV.

Introduction

Improvement in women's empowerment situation is a development issue around the world. However, measurement of women's empowerment is not straightforward and depends on the cultural context of a country. Women's empowerment can be seen as a

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process of which awareness, alternatives, resources, voice, agency and participation are integral parts. The logic of women's empowerment is to enhance women's ability to make choices over the areas in their lives that matter to them (Charmes & Wieringa, 2003). Studies have found that women's rate of employment – a key indicator of women's empowerment – has increased over the years around the globe. In Bangladesh it has increased noticeably, rising at 4.3% each year over the period 2000–2005. The number of rural women with an education level greater than that of their partner is also growing (World Bank, 2008), and more women are contributing significantly to their family's household income. In Bangladesh, women are earning money for their households through microfinance programmes (Nazneen *et al.*, 2011). The more than 3 million women working in the garment sector in Bangladesh (International Monetary Fund, 2011) is another striking piece of evidence of women's empowerment in Bangladesh (Kabeer *et al.*, 2011).

It is expected that an empowered women will enjoy more decision-making power within her family and have a greater chance of mobility. However, this may also make her more vulnerable to intimate partner violence (IPV) as her increased voice within the family may be regarded as a threat to male dominance. Intimate partner violence against women exists in almost all societies (Campbell et al., 2002; Watts & Zimmerman, 2002) and is associated with considerable mortality (Campbell et al., 2002; WHO, 2002). The highest rate of IPV in the world has been reported in Bangladesh, and the gender disparity in which this occurs is well recognized (Schuler & Islam, 2008). In Bangladesh, almost half of ever-married women (49.6%) have been the victims of physical violence, while 27.3% have experienced sexual abuse from their husbands (Bangladesh Bureau of Statistics, 2016). Moreover, there is evidence that in Bangladesh some forms of IPV are approved of culturally, and the social expectation is that husbands will guide their wives, especially when the spousal age difference is high, in every aspects of their lives. Surveys have revealed that even IPV victims themselves sometimes think that some forms of IPV were okay and justified (Sayem et al., 2012). Hence, in-depth research is required to address how the high rates of IPV and progress in women's empowerment interact in Bangladesh (World Bank, 2008; Nazneen et al., 2011).

Women's empowerment, both economically and socially, may interact with IPV because women depend economically on men and tolerate some level of violence in return for economic and social support. If women's income increases, this may decrease their risk of violence as their economic dependence decreases (Perova, 2010). Their households become better off, so men feel less economic stress, which they might otherwise express through violence (Vyas & Watts, 2009). On the other hand, the risk of IPV may increase if men use violence as an instrument to disturb women's marketoriented activity, take away women's income or take authority over managing it (Hidrobo et al., 2016). Studies suggest that the economic empowerment of women and girls can be an effective method of preventing or reducing violence against them (Fraser, 2012). However, an in-depth study by Mathur and Slavov (2013) revealed that domestic violence may be reduced with women's economic empowerment, mainly among higher income groups. Studies in Bangladesh, though not nationally representative and mostly qualitative in nature, have suggested that women's empowerment may influence their risk of IPV in complex and contradictory ways, and their risk may vary with specific forms of empowerment (Bates et al., 2004; Naved & Persson, 2005; Schuler et al., 2014). This study aimed to assess the association between women's empowerment and IPV in Bangladesh through quantitative analyses using data from the nationally representative Demographic and Health Survey.

Methods

Study sample

The study was based on the 2007 Bangladesh Demographic and Health Survey (BDHS) (NIPORT *et al.*, 2009), as this was the most recent BDHS data set to collect IPV-related information. The BDHS 2007 survey was the fifth in a series of national-level population and health surveys. The data were collected over a 5-month period from 24th March to 11th August 2007. The study sample comprised 3933 ever-married women aged 15–49 years. If a woman had been married more than once, information relating to her current marriage was considered.

Study variables

As decision-making and mobility are the most frequently studied domains of women's empowerment (Ndola *et al.*, 2017), women's empowerment was measured in four dimensions, namely: 1) mobility, 2) decision-making power, 3) employment status and 4) headship of the respondent in the household. Mobility had two categories: i) ability to go the medical/health centre and ii) ability to go outside the house. Decision-making had six categories: respondent's ability to make a decision about i) spending own income, ii) household purchases for daily needs, iii) large purchases, iv) own medical treatment, v) their children's health care and vi) visits to family or a relative's house. These two measurements were given scores within a hypothetical range of 0 to 2 (using a modified form of scoring suggested by Hossain *et al.*, 2016). A respondent's overall empowerment score was obtained by adding the scores of these four dimensions (1–4), giving a range of 0 to 20. If her overall empowerment score was 0 a respondent was considered to be 'unempowered'; if her score was more than 0 but ≤10, the respondent was considered to be 'less empowered'; if her score was >10 she was regarded as 'more empowered'.

Intimate partner violence was defined as i) physical or ii) sexual violence experienced by the respondent in her life time. Physical violence was measured with questions such as whether the respondent's husband ever 'pushed her, shook her, or threw something at her', 'slapped her', 'twisted her arm or pulled her hair', 'punched her with his fist or with something that could hurt her', 'kicked her', 'dragged her or beat her up', 'tried to choke her or burn her on purpose' or 'threatened or attacked her with a knife, gun, or any other weapon'. Sexual violence was considered by only one question, 'Did your husband [ever] physically force you to have sexual intercourse with him even when you did not want to?' A score of 1 was given if a respondent was abused physically (or sexually) and 0 otherwise (hypothetical values: 0, 1).

For employment status, unemployed respondents were assigned a score of 0, and employed respondents a score of 2. Similarly, if a respondent was not the household head she was given a score 0, and 2 otherwise.

Analysis

Binary logistic regression models were used to determine the influence of women's empowerment on IPV while controlling for other covariates. All the relevant independent study variables and their interactions with women's empowerment during the analysis were selected. Most of the variables were re-coded for the research analysis. Only significant relationships were kept in the final model.

Results

Descriptive analysis

Data analysis revealed that about 65% of respondent women were 'less empowered' and 34.74% were 'more empowered'; there were no unempowered women. About 47.4% of respondents had been abused physically by their husbands, while 16.4% reported having experienced sexual violence by their husbands (Table 1). Among the background characteristics considered, area of residence, religion, respondent's education, partner's education, wealth index, respondent's occupation and contraceptive use were found to have significant associations with both experiencing physical and sexual violence. On the other hand, age of the respondent, Bangladesh division, sex of children, marital duration and partner's occupation were found to have significant associations with experiencing physical violence. Furthermore, respondents being able to go to the health centre alone and decide on spending their own money were found to be significantly associated with both experiencing physical and sexual violence, while other components of mobility and decision-making were only significantly associated with experiencing physical violence (Table 1).

Data analysis suggests that women from rural areas, Muslims, the less educated, those with a partner with less education, the poorest, the employed and those not currently using contraceptives were more likely to suffer from both physical and sexual violence. Furthermore, women with a marital duration of between 10 and 19 years and those with husbands employed in agriculture were more likely to experience physical violence by their husbands (Table 1).

Binary logistic regression analysis: physical violence

The relationship between experiencing physical violence and women's empowerment was explored using binary logistic regression analysis. Exposure to physical violence (1 = abused, 0 = otherwise) was considered as the response variable (Table 2). Non-Muslim women were 0.83 times less likely to suffer from physical violence than their Muslim counterparts. When the spousal age difference was more than 15 years, the likelihood of a woman being physically abused was 1.27 times higher compared with when a woman had a spousal age difference of less than 6 years. Figure 1 shows that the likelihood of experiencing physical violence increased among more-empowered, older women. On the other hand, Fig. 2 suggests that, although the likelihood of physical violence was less among educated women, irrespective of their level of empowerment, there was a higher likelihood of experiencing physical violence among less-empowered, primary-educated women.

Table 1. Intimate partner violence prevalence by demographic and socioeconomic characteristics of respondents and their husbands, 2007 BDHS

		IPV (%)		
Characteristic	n	Physical violence	Sexual violence	
Respondent's age#				
15–19	438	41.3	16.9	
20–24	789	45.9	17.4	
25–29	803	49.3	16.2	
30–34	637	50.5	17.3	
35–39	602	47.0	15.6	
40–44	374	48.7	15.5	
45–49	290	47.2	14.5	
Area of residence*				
Urban	1467	45.1	14.0	
Rural	2466	48.7	17.8	
Religion*				
Muslim	3543	48.5	17.0	
Non-Muslim	390	37.4	10.5	
Division#				
Barisal	544	51.5	19.7	
Chittagong	677	44.2	15.4	
Dhaka	869	49.6	17.1	
Khulna	612	50.5	16.0	
Rajshahi	741	51.4	16.1	
Sylhet	490	33.3	13.9	
Respondent's education*				
No education	1196	57.3	19.3	
Primary only	1210	52.8	18.3	
Incomplete secondary	966	39.0	13.9	
Complete secondary or more	561	28.9	10.5	
Husband's education*				
No education	1290	56.4	20.5	
Primary only	1081	53.4	17.1	
Secondary	989	42.1	14.0	
Higher	573	24.8	9.9	
Sex of children#				
No children	331	22.7	14.5	
Only boy(s)	697	45.5	14.9	
Only girl(s)	576	45.8	14.6	
Other	2329	51.8	17.6	
Marital duration (years)#	>		- /	
<5	660	32.6	15.5	
5–9	765	47.8	16.9	
10–19	1354	52.7	16.5	
>19	1154	49.3	16.6	

Table 1. Continued

		IPV (%)		
Characteristic	n	Physical violence	Sexual violence	
Wealth Index*				
Poorest	676	58.3	22.8	
Poorer	742	52.3	18.3	
Middle	748	52.9	19.0	
Rich	1767	38.8	12.1	
Respondent's occupation*				
Unemployed and other ^a	2688	44.1	14.8	
Employed	1245	54.5	19.8	
Husband's occupation#				
Farmer	1072	50.6	18.1	
Service holder ^b and business	2745	46.6	15.8	
Unemployed and other ^a	116	37.1	15.5	
Spousal age difference (years)‡				
<6	864	48.6	15.9	
6–10	1833	48.3	16.5	
11–15	874	45.1	17.4	
>15	362	45.0	14.9	
Contraceptive use*				
Not using	1690	48.0	16.7	
Using	2243	39.3	12.7	
Respondent's' mobility				
Visits to health centre*				
Never visits health centre	900	41.3	15.1	
Alone	1896	52.1	18.1	
With children	599	47.7	15.0	
With husband	379	41.4	13.2	
With relatives or in-laws	131	33.6	14.6	
With other	28	57.1	25.0	
Going outside#				
Never goes outside	531	39.2	14.7	
With other	689	41.9	14.9	
With relatives or in-laws	84	52.4	7.1	
With husband	106	41.5	18.9	
With children	21	19.0	9.5	
Alone	6	0.0	33.3	
Respondent's decision-making	Ü	•••	20.0	
Decisions on how to spend money*				
Alone	330	57.3	21.5	
With husband	581	54.6	17.9	
With other	18	38.9	16.7	
Husband alone decides	118	59.3	25.4	
Other decides	9	44.4	22.2	
Final say on own health care#	,		-2.2	
Alone	570	53.2	18.6	
Aione				

Table 1. Continued

		IPV (%)		
Characteristic	n	Physical violence	Sexual violence	
With other	194	38.7	16.0	
Husband alone	1253	47.2	15.8	
Other	160	34.4	16.2	
Final say on making large purchases#				
Alone	353	47.6	15.3	
With husband	1956	49.5	16.7	
With other	305	36.7	15.1	
Husband alone	1063	48.9	16.3	
Other	256	37.1	18.0	
Final say on making household purchases for daily needs#				
Alone	1316	49.8	16.3	
With husband	1270	50.9	16.2	
With other	226	30.5	14.2	
Husband alone	830	47.8	18.0	
Other	291	32.6	15.1	
Final say on visits to family or relatives#				
Alone	546	44.1	15.6	
With husband	1892	50.1	16.2	
With other	246	32.1	17.1	
Husband alone	1024	50.0	17.2	
Other	224	37.1	16.1	
Decisions on child's health care#				
Alone	792	49.0	17.4	
With husband	1886	50.8	16.6	
With other	158	31.6	16.5	
Husband alone	668	49.3	15.6	
Other	109	42.2	14.7	
Total	3933	47.4	16.4	

^aOther means students and retired people.

Column percentages are not mutually exclusive. Multiple responses possible. The sum of the response categories for the questions on mobility and decision-making may not add up to 3933 due to missing cases.

The likelihood of being affected by physical violence among the less-empowered, childless women was more than among more-empowered women with only male children (Table 2). Also, the likelihood of suffering physical violence among less-empowered women with a marital duration of less than 5 years was higher than among more-empowered women with a marital duration of more than 19 years (Table 2).

^bService holders include rickshaw drivers, brick breakers, construction workers, domestic workers, factory workers, blue collar service works, semi-skilled labourers (carpenters, bus/taxi drivers) and professionals (medical workers, lawyers, accountants, teachers).

^{*}Significant (to at least at p < 0.005) for both physical and sexual violence; #significant for physical violence; ‡not significant.

Table 2. Binary logistic regression estimates of the effects of women's empowerment on the likelihood of them experiencing physical violence by socioeconomic and demographic characteristics, 2007 BDHS

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				95%	6 CI
Respondent's age (Ref.: 15–19 years) 20–39	Independent variable	β	OR	Lower	Upper
20-39 0.055 1.056 0.987 1.131 40-49 -0.256**** 0.74 0.570 1.051 Religion (Ref.: Muslim) -0.184**** 0.832 0.668 1.036 Respondent's education (Ref.: uneducated) -0.184**** 0.832 0.668 1.036 Primary 0.052 1.053 0.988 1.123 Complete secondary or more 0.021 1.021 0.995 1.048 Spousal age difference (years) (Ref.: <6 years)	Intercept	0.395	1.484		
40-49	Respondent's age (Ref.: 15–19 years)				
Religion (Ref.: Muslim)	20–39	0.055	1.056	0.987	1.131
Non-Muslim -0.184*** 0.832 0.668 1.036 Respondent's education (Ref.: uneducated) Primary 0.312*** 1.366 1.000 1.866 Incomplete secondary 0.052 1.053 0.988 1.123 Complete secondary or more 0.021 1.021 0.995 1.048 Spousal age difference (years) (Ref.: <6 years)	40–49	-0.256***	0.774	0.570	1.051
Respondent's education (Ref.: uneducated) Primary 0.312*** 1.366 1.000 1.866 Incomplete secondary 0.052 1.053 0.988 1.123 Complete secondary or more 0.021 1.021 0.995 1.048 Spousal age difference (years) (Ref.: <6 years)	Religion (Ref.: Muslim)				
Primary 0.312** 1.366 1.000 1.866 Incomplete secondary 0.052 1.053 0.988 1.123 Complete secondary or more 0.021 1.021 0.995 1.048 Spousal age difference (years) (Ref.: <6 years)	Non-Muslim	-0.184***	0.832	0.668	1.036
Incomplete secondary 0.052 1.053 0.988 1.123 Complete secondary or more 0.021 1.021 0.995 1.048 Spousal age difference (years) (Ref.: <6 years) 0.036 1.037 0.992 1.084 11-15 0.005 1.005 0.999 1.011 >15 0.238*** 1.268 0.955 1.685	Respondent's education (Ref.: uneducated)				
Complete secondary or more 0.021 1.021 0.995 1.048 Spousal age difference (years) (Ref.: <6 years) 6-10 0.036 1.037 0.992 1.084 11-15 0.005 1.005 0.999 1.011 >15 0.238*** 1.268 0.955 1.685 Interactions Respondent's age (Ref.: 15-19 years) × Women's empowerment (Ref.: less empowered) 0.201 1.223 0.954 1.566 40-49 × More empowered 0.658*** 1.932 0.881 4.234 Respondent's education (Ref.: uneducated) × Women's empowerment (Ref.: less empowered) Primary × More empowered -0.524** 0.592 0.351 1.000 Incomplete secondary × More empowered -0.052 0.949 0.890 1.012 Complete secondary or more × More empowered -0.035 0.966 0.925 1.008 Sex of children (Ref.: no children) × Women's empowerment (Ref.: less empowered) -0.409* 0.664 0.487 0.906 Only boy(s) × More empowered -0.171 0.843 0.683 1.041 Other × More empowered -0.155 0.856	Primary	0.312**	1.366	1.000	1.866
Spousal age difference (years) (Ref.: <6 years)	Incomplete secondary	0.052	1.053	0.988	1.123
6-10	Complete secondary or more	0.021	1.021	0.995	1.048
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Spousal age difference (years) (Ref.: <6 years)				
No. 1.268 No. 1.268 No. 1.268 No. 1.268 No. 1.268	6–10	0.036	1.037	0.992	1.084
Interactions Respondent's age (Ref.: 15–19 years) × Women's empowerment (Ref.: less empowered) 0.201 1.223 0.954 1.566 20–39 × More empowered 0.658*** 1.932 0.881 4.234 Respondent's education (Ref.: uneducated) × Women's empowerment (Ref.: less empowered) −0.524** 0.592 0.351 1.000 Primary × More empowered −0.052 0.949 0.890 1.012 Complete secondary × More empowered −0.052 0.949 0.890 1.012 Complete secondary or more × More empowered −0.035 0.966 0.925 1.008 Sex of children (Ref.: no children) × Women's empowerment (Ref.: less empowered) −0.409* 0.664 0.487 0.906 Only boy(s) × More empowered −0.171 0.843 0.683 1.041 Other × More empowered −0.155 0.856 0.707 1.037 Marital duration (Ref.: <5 years) × Women's empowerment (Ref.: less empowered)	11–15	0.005	1.005	0.999	1.011
Respondent's age (Ref.: 15–19 years) × Women's empowerment (Ref.: less empowered) 20–39 × More empowered 40–49 × More empowered 80.658*** 1.932 0.881 4.234 Respondent's education (Ref.: uneducated) × Women's 800 empowerment (Ref.: less empowered) Primary × More empowered Primary × More empowered 10.524** 0.592 0.351 1.000 Incomplete secondary × More empowered 10.052 0.949 0.890 1.012 Complete secondary or more × More empowered 10.035 0.966 0.925 1.008 Sex of children (Ref.: no children) × Women's empowerment (Ref.: less empowered) Only boy(s) × More empowered 10.171 0.843 0.683 1.041 Other × More empowered 10.155 0.856 0.707 1.037 Marital duration (Ref.: <5 years) × Women's empowerment (Ref.: less empowered) 5–9 × More empowered 10–19 × More empowered 10–19 × More empowered 10.201 1.223 0.954 1.566 1.223 0.954 1.566 1.223 0.954 1.566 1.224 0.592 0.881 4.234	>15	0.238***	1.268	0.955	1.685
(Ref.: less empowered) 0.201 1.223 0.954 1.566 40-49 × More empowered 0.658*** 1.932 0.881 4.234 Respondent's education (Ref.: uneducated) × Women's empowerment (Ref.: less empowered) -0.524** 0.592 0.351 1.000 Primary × More empowered -0.052 0.949 0.890 1.012 Complete secondary × More empowered -0.035 0.966 0.925 1.008 Sex of children (Ref.: no children) × Women's empowerment (Ref.: less empowered) -0.409* 0.664 0.487 0.906 Only boy(s) × More empowered -0.171 0.843 0.683 1.041 Other × More empowered -0.155 0.856 0.707 1.037 Marital duration (Ref.: <5 years) × Women's empowerment (Ref.: less empowered)	Interactions				
20-39 × More empowered 0.201 1.223 0.954 1.566 40-49 × More empowered 0.658*** 1.932 0.881 4.234 Respondent's education (Ref.: uneducated) × Women's empowerment (Ref.: less empowered) -0.524** 0.592 0.351 1.000 Primary × More empowered -0.052 0.949 0.890 1.012 Complete secondary × More empowered -0.035 0.966 0.925 1.008 Sex of children (Ref.: no children) × Women's empowerment (Ref.: less empowered) -0.409* 0.664 0.487 0.906 Only boy(s) × More empowered -0.171 0.843 0.683 1.041 Other × More empowered -0.155 0.856 0.707 1.037 Marital duration (Ref.: <5 years) × Women's empowerment (Ref.: less empowered)	Respondent's age (Ref.: 15–19 years) × Women's empowerment				
40–49 × More empowered 0.658*** 1.932 0.881 4.234 Respondent's education (Ref.: uneducated) × Women's empowerment (Ref.: less empowered) -0.524** 0.592 0.351 1.000 Primary × More empowered -0.052 0.949 0.890 1.012 Complete secondary × More empowered -0.035 0.966 0.925 1.008 Sex of children (Ref.: no children) × Women's empowerment (Ref.: less empowered) -0.409* 0.664 0.487 0.906 Only boy(s) × More empowered -0.171 0.843 0.683 1.041 Other × More empowered -0.155 0.856 0.707 1.037 Marital duration (Ref.: <5 years) × Women's empowerment (Ref.: less empowered)	(Ref.: less empowered)				
Respondent's education (Ref.: uneducated) × Women's empowerment (Ref.: less empowered) Primary × More empowered -0.524** 0.592 0.351 1.000 Incomplete secondary × More empowered -0.052 0.949 0.890 1.012 Complete secondary or more × More empowered -0.035 0.966 0.925 1.008 Sex of children (Ref.: no children) × Women's empowerment (Ref.: less empowered) -0.409* 0.664 0.487 0.906 Only boy(s) × More empowered -0.171 0.843 0.683 1.041 Other × More empowered -0.155 0.856 0.707 1.037 Marital duration (Ref.: <5 years) × Women's empowerment (Ref.: less empowered)	$20-39 \times \text{More empowered}$	0.201	1.223	0.954	1.566
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	40–49 × More empowered	0.658***	1.932	0.881	4.234
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Respondent's education (Ref.: uneducated) × Women's				
Primary × More empowered -0.524** 0.592 0.351 1.000 Incomplete secondary × More empowered -0.052 0.949 0.890 1.012 Complete secondary or more × More empowered -0.035 0.966 0.925 1.008 Sex of children (Ref.: no children) × Women's empowerment (Ref.: less empowered) -0.409* 0.664 0.487 0.906 Only boy(s) × More empowered -0.171 0.843 0.683 1.041 Other × More empowered -0.155 0.856 0.707 1.037 Marital duration (Ref.: <5 years) × Women's empowerment (Ref.: less empowered)					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		-0.524**	0.592	0.351	1.000
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Incomplete secondary × More empowered	-0.052	0.949	0.890	1.012
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		-0.035	0.966	0.925	1.008
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$\begin{array}{llllllllllllllllllllllllllllllllllll$		-0.155	0.856	0.707	1.037
(Ref.: less empowered) 5–9 × More empowered 10–19 × More empowered -0.466 0.628 0.353 1.114					
5–9 × More empowered					
$10-19 \times \text{More empowered}$ -0.466 0.628 0.353 1.114		-0.127	0.880	0.753	1.030
		-0.466			1.114
$>19 \times \text{More empowered}$ $-0.663** 0.515 0.266 1.000$	>19 × More empowered	-0.663**			1.000

^{*}p < 0.01; **p < 0.05; ***p < 0.10.

Ref., reference category. OR, Odds Ratio.

A separate model (not shown in Table 2) was fitted to evaluate the likely impact of respondents' current use of contraception on the likelihood of experiencing physical violence, controlling for all relevant covariates (Table 2). Current use of contraception had a significant influence on physical violence (Fig. 3). More precisely, the likelihood of

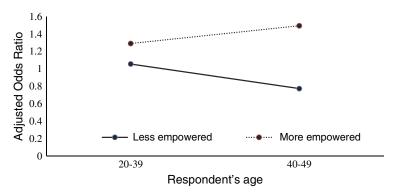


Fig. 1. Interaction of respondent's age and women's empowerment level and the likelihood of experiencing physical violence.

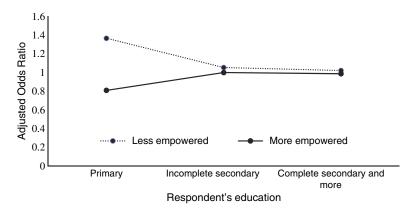


Fig. 2. Interaction of respondent's education and women's empowerment level and the likelihood of experiencing physical violence.

physical violence decreased for non-users of contraceptives (both eligible and non-eligible) compared with current users.

Binary logistic regression analysis: sexual violence

The results of the binary logistic regression model for sexual violence (1 = abused, 0 = otherwise) are presented in the Table 3. No significant relationship was found between women's empowerment with the likelihood of experiencing sexual violence. However, some socioeconomic and demographic characteristics were identified that had influential effects on sexual violence. Women from Chittagong and Khulna divisions had 2.57 times and 1.42 times higher likelihoods, respectively, of being subjected to sexual violence by their husbands than women from Barisal division. Non-Muslim women were 0.69 times less likely to be affected by sexual violence than Muslim women. Respondents who were primary educated, and those who had completed secondary education and above, were respectively 1.76 times and 1.33 times more likely to experience sexual violence compared with their uneducated counterparts. This suggests that the poorest women were more likely

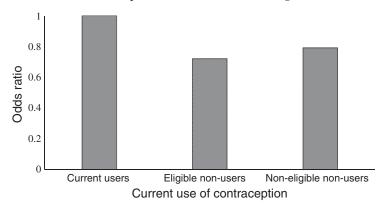


Fig. 3. The effects of respondent's current contraception use on the likelihood of experiencing physical violence.

to be affected by sexual violence. For example, rich women were 0.59 times less likely to suffer from sexual violence by their husbands compared with the poorest women. The wives of service holders and businessmen were 1.51 times more likely to be sexually abused by their husbands than the wives of farmers. Employed women were 1.47 times more likely to be sexually abused by their husbands than unemployed women. No significant effect of current use of contraception was observed.

Discussion

The main aim of this research was to explore the relationship between women's empowerment and IPV in Bangladesh. Though no straightforward relationship was found, some subgroups of empowered women seemed to have experienced physical violence imposed by their husbands. More-empowered, older women were found to be more vulnerable to physical violence. This may be due to their greater involvement in the family and subsequent conflict over decision-making, such as spending their own income and issues related to children's health care.

A nationally representative study revealed that more than 50% of the ever-married women aged 45 and above, and 56.2% of income earners in Bangladesh had been exposed to physical violence (Bangladesh Bureau of Statistics, 2016). The current study suggested that less-empowered, primary-educated women were more vulnerable to physical violence. This may be due to their lower status in terms of power relations compared with their husbands. In traditional societies, IPV seems to be a routine experience among women (Begum & Dey, 2013), especially among those of lower status, whose husbands tend to be violent if their wives fail to meet their demands (Khatun & Rahman, 2012). Also, such violence in many cases seems to be considered acceptable to the victims. Sayem *et al.* (2012) found that about 49.5% of women in Bangladesh experiencing physical violence thought it was okay for a man to beat his wife. A recent study among ever-married women in Bangladesh revealed that 52.5% of primary educated, 48.3% of non-earners and 57.4% of the poorest women experienced physical violence by their partners in their life time (Bangladesh Bureau of Statistics, 2016).

Table 3. Binary logistic regression estimates of the effects of women's empowerment on the likelihood of experiencing sexual violence by socioeconomic and demographic characteristics, 2007 BDHS

			95% CI		
Independent variable	β	OR	Lower	Upper	
Intercept	1.473	4.362			
Division (Ref.: Barisal)					
Chittagong	0.948*	2.572	1.258	5.295	
Dhaka	0.307	1.366	0.931	1.984	
Khulna	0.348***	1.422	0.935	2.145	
Rajshahi	0.273	1.310	0.939	1.839	
Sylhet	0.216	1.247	0.951	1.620	
Religion (Ref.: Muslim)					
Non-Muslim	-0.365**	0.694	0.482	1.000	
Respondent's education (Ref.: uneducated)					
Primary	0.563**	1.762	1.000	3.083	
Incomplete secondary	0.237	1.272	0.946	1.697	
Complete secondary or more	0.287***	1.338	0.946	1.877	
Wealth Index (Ref.: poorest)					
Poorer	-0.381***	0.683	0.434	1.076	
Middle	-0.428**	0.648	0.425	1.000	
Rich	-0.521**	0.590	0.353	1.000	
Partner's occupation (Ref.: farmer)					
Service holder and business	0.410*	1.507	1.104	2.056	
Unemployed and other	0.175	1.192	0.960	1.478	
Respondent's occupation (Ref.: unemployed)					
Employed	0.383**	1.467	1.000	2.151	

^{*}p < 0.01; **p < 0.05; ***p < 0.10.

Ref.: reference group. OR, Odds Ratio.

Muslim women seemed to experience more physical violence than non-Muslims in the current sample (Table 2), which may have been related to religious restrictions on mobility (Sayem *et al.*, 2012) and on engagement in economic activities in some parts of society (Koenig *et al.*, 2003; Lamichhane *et al.* 2011).

The finding that women with a higher spousal age difference were more vulnerable to physical violence corroborates the findings of other studies (Schuler *et al.*, 1998; Koenig *et al.*, 2003). Furthermore, the current study found that physical violence was more frequent among the younger cohorts, indicating that the same subset of women (with older husbands) are suffering from physical violence. More-empowered women with longer marital duration were less likely to suffer from physical violence. This may be due to the fact that with increased marital duration a more-empowered woman achieves some sort of protection against physical violence in Bangladeshi society. This is as expected, as with increased marital duration women are protected by their increased number of children. This is supported by the finding that more-empowered women with only boys were less likely to be affected by physical violence (Table 2). This was confirmed by Ghosh (2007) in a study

on Indian women, which suggested that the likelihood of physical violence tended to decrease with increasing marital duration. However, the relationship between physical violence and marital duration is culture sensitive. For example, Kusanthan *et al.* (2016) found the opposite result among Zambian women, where the prevalence of physical violence increased with increased marital duration.

Non-users of contraceptives were found to be less exposed to physical violence compared with current users. Eligible non-users of contraceptives (those not using due to husband's opposition, religious opposition etc.) are more likely to compromise and avoid any conflict. On the other hand, non-eligible non-users do not need to face any conflict of opinion with their husbands, at least regarding contraception. These may be the reasons for lesser exposure to physical violence among non-users of contraceptives. A significant relationship between IPV and contraception use has also been reported in other studies (Williams *et al.*, 2008; Maxwell *et al.*, 2015).

Prevalence of sexual violence and its determinants are very difficult to interpret in a cultural setting like Bangladesh, especially when the occurrence of sexual violence is determined by a single interview question and there is no situation analysis. Also, without probing questions there is a high possibility of under-reporting due to the sensitivity (religious and social desirability) of the content. This is a limitation of quantitative studies that fail to address religious and social desirability issues when addressing sexually intimate topics. Qualitative studies are more able to handle these issues efficiently. Paradata related to these type questions would give more insight into the findings. This study's analysis suggested that women from Chittagong and Khulna division were more likely to experience sexual violence than those from Barisal division. This may be due to the distinctive sexual behaviour of males in these two divisions with their port cities. Caldwell et al. (1999) reported that around half of the males from Chittagong under study had experienced premarital sexual relations. Also, some of them had had extramarital relationships. A similar finding was observed in Khulna, where 29% of condom users in the greater Khulna region were found to have had premarital sexual relationships and almost 7% of married men had had extramarital sex. Surprisingly, Folmer et al. (1993) observed similar behaviour in rural areas of Khulna.

Muslim women have been found to be more likely to suffer from sexual violence, and this may be due to sharia law (Jahan, 1994; Zaman, 1999; Sayem et al., 2012). The current study found that educated women experienced sexual violence more compared to their uneducated counterparts in Bangladesh. This may be due to the greater involvement of educated women in decisions related to coital relationships. Lamichhane et al. (2011) supported this view by arguing that educated women tend to reject traditional gender roles, against the longstanding practice and beliefs of male-dominated society and thus making them more vulnerable to violence. A similar result was found by Kusanthan et al. (2016) among Zambian women. They suggested that less-educated women were more likely to be submissive to their husbands and consequently avoid being sexually harassed. The results of the current study suggested that the poorest women in Bangladesh were more likely to be affected by sexual violence. Generally, these are the most vulnerable in terms of human rights, both in society and within the family. They are unlikely to raise their voice against unwanted sexual attention (timing, willingness) by their husbands and consequently surrender to such exploitation. This vulnerability seemed to decrease with increasing wealth status (Table 2). Again, sexual violence and its relationship with wealth status may be culturally sensitive and other studies may reveal different results (Heise, 1998; Kishor & Johnson, 2004; Kusanthan et al., 2016). For example, Zambian women in the middle wealth group were found to be more likely to experience sexual violence than poorer women (Kusanthan et al., 2016). Employed women in this study were found to be more likely to be sexually abused than unemployed women. The obvious reason is that employed women are empowered women and will take an active part in any coitus-related decision. Hence, the likelihood of disagreement and subsequent violence is greater. This has also been found to be the case in other cultural settings (Bhattacharya, 2015; Kusanthan et al., 2016).

Women's empowerment situation in Bangladesh has improved over the years. However, its benefit is not realized equally at every level of society, especially by socioeconomic class. It is a general assumption that women's empowerment will reduce the prevalence of IPV. At the aggregate level this is the case in most developing countries, including Bangladesh. However, the continued existence of IPV among some sub-groups of empowered women cannot be ruled out. This study identified some groups of women in Bangladesh who are susceptible to IPV, despite having achieved higher empowerment. This requires special policy attention. Further research is needed to identify how to address this problem in vulnerable groups and ensure they benefit fully from their increased empowerment.

This is the only nationally representative quantitative study of this kind in Bangladesh to date, and it provides important policy information for decision-makers. It had to rely on the BDHS 2007 as information on IPV was not collected in the later rounds of the survey. However, the results will still be useful as structural and behavioural changes within Bangladeshi society occur very slowly. It is recommended that the BDHS includes IPV-related questions in future rounds. Also, the definition of sexual violence should be re-visited and more than one question should be used. Paradata related to IPV should be collected to help explain often complex results.

Ethical Approval. This research used the BDHS 2007 dataset for which no ethical approval was required.

Conflicts of Interest. The authors have no conflicts of interest to declare.

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