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Indeterminate Responses to Attitudinal Questions About Intimate Partner Violence Against Women in Rural Bangladesh

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Abstract

Using data from 165 participants in a survey experiment in six Bangladeshi villages, we explored the levels and correlates of women's indeterminate responses to a five-part attitudinal question on intimate partner violence (IPV) against women from the 2007 Bangladesh Demographic and Health Survey. Over 80 % had indeterminate responses to all five parts of the question. Indeterminate responses included silence or initial non-response (53–58 %), misunderstanding the question (30–37 %), and conditional opinions (7–13 %). The percentages of women who justified IPV were lower when indeterminate responses were permitted (7–12 %) than when they were not (37–57 %). Older women (≥ 26 years) with less schooling (≤ 2 grades) whose husbands were older (≥ 36 years), had less schooling (≤ 8 grades), and were at least 7 years older than the respondent often had higher odds of giving indeterminate responses. Husbands' attributes and spousal age gaps were most consistently associated with women's indeterminate responses. *Latent power*, or fears of expressing transgressive views, may underlie women's indeterminate responses to attitudinal questions about IPV against women. Recommendations for further research are discussed.

Keywords

Attitudes about gender; Attitudinal surveys; Bangladesh; Demographic and Health Surveys; Indeterminate responses; Intimate partner violence; Response effects

Introduction

Intimate partner violence (IPV) refers to “assaultive and coercive behaviors that adults use against their intimate partners” (Holden 2003, p. 155). In Africa, Asia, Latin America, and the Middle East, 12–71 % of women have reported some prior physical IPV (Douki et al. 2003; Garcia-Moreno et al. 2006; Hindin et al. 2008; Watts and Zimmerman 2002), and

according to reports by both genders, women less often have initiated such violence (ICF Macro 2010a). Thus, reports of IPV in lower-income settings suggest a particular burden on women.

Yet, beliefs about IPV against women are understudied in poor settings (Exceptions include Hindin 2003; Lawoko 2006; Yount 2005; Yount and Li 2009; Yount and Carrera 2006), even though norms and attitudes concerning the treatment of wives are important determinants of IPV against women (e.g., Archer 2006; Boyle et al. 2009; Fincham et al. 2008; Gage 2005). In the U.S. from the 1950s to the 1980s, men's approval of domestic and other violence surpassed that of women (Smith 1984). Since then, in surveys often of college students, IPV typically has not been condoned (e.g., Smith et al. 2005), but men have blamed the victim more often than have women (e.g., Bryant and Spencer 2003; Locke and Richman 1999; Saunders et al. 1987). A comparison of university students in India, Japan, Kuwait, and the U.S. has shown (a) a greater tendency outside than inside the U.S. to blame the wife for physical IPV and (b) some variation in the gender gap in wife blaming, although wife blaming was consistently more common in men than women (Nayak et al. 2003).

Since 1995, 81 Demographic and Health Surveys (DHS) in 52 poorer countries have gathered data on women's views about physical IPV against women. Between 4 and 90 % of women across these DHS have reported that such violence is *justified* (Yount et al. 2011). In 17 DHS in African countries, women again have *justified* wife *hitting or beating* often (28 and 75 %), but in contrast to research from higher-income settings, have done so at twice the rate as men, on average (Uthman et al. 2010).

Within-country variations over time in responses to this question suggest that attitudes on this issue are modifiable (ICF International 2012), and several individual, spousal, and household attributes are associated with variation in reported attitudes. Poor, rural women have *justified* wife *hitting or beating* more often than their wealthier, urban peers (Hindin 2003; Oyediran and Isiugo-Abanihe 2005; Rani et al. 2004; Uthman, Lawoko et al. 2009; Uthman, Moradi et al. 2009; WHO 2005; Yount 2005; Yount and Li 2009). Women's lower schooling and spousal gaps favoring husbands in schooling (Yount 2005; Yount and Li 2009) and in decision-making (Hindin 2003; Lawoko 2006, 2008; Rani et al. 2004; Uthman, Moradi et al. 2009) also are associated with their *justification* of wife *hitting or beating*. Finally, ethnicity, religion, and exposure to the media have been associated variously with women's attitudes about such violence (Flood and Pease 2009; Hindin 2003; Lawoko 2006; Oyediran and Isiugo-Abanihe 2005; Uthman, Moradi, et al. 2009; Yount 2005; Yount and Carrera 2006; Yount and Li 2009).

Yet, the conceptual and technical difficulties inherent to measuring cultural norms and individual beliefs and inconsistencies between quantitative and qualitative findings raise concerns about response effects to attitudinal questions about IPV. In a 2002 survey of women in parts of rural Bangladesh, for example, 84 % *justified* wife *beating* in at least one of six circumstances; yet, in 14 group discussions with wives from 2001 to 2004 in similar areas, some resigned themselves to IPV without condoning it and suggested extreme punishments for the male perpetrators (Schuler and Islam 2008). These contradictions and complex narratives raise concerns about the meanings of women's responses to structured attitudinal questions about IPV against women, such as those that have appeared in the DHS.

In wealthier settings, seemingly minor changes to the response options can alter the rates of positive and negative answers to a range of attitudinal questions. The inclusion or exclusion of *don't know* as a response is a well-studied example in the U.S. Researchers who view

don't know as missing data may favor field efforts to minimize such responses (see discussions in Schuman and Presser 1977, 1996). In survey experiments of various attitudinal questions, including *don't know* as an explicit response option indeed has reduced the proportion of opinions offered (Schuman and Presser 1996). Moreover, its inclusion does not appear to mitigate other measurement concerns in attitudinal surveys, such as the reliability of reporting over time (e.g., Alwin and Krosnick 1991; Krosnick et al. 2002; McClendon and Alwin 1993), *acquiescence* or the tendency to agree irrespective of item content, and *recency response order effects* or the tendency to choose the first in a list of forced responses (McClendon 1991). Still, including a *don't know* filter in panel experiments at least has shown consistent response effects over time, permitting the same conclusions about the direction and magnitude of change in selected attitudes, including those about gender (Schuman and Scott 1989).

If permitting indeterminate responses reduces information without improving the quality of attitudinal data, what might be the reasons for their inclusion? Some argue that such responses reflect a non-random process and have substantive meanings for some questions in certain contexts (see discussion in Schuman and Presser 1977, 1996). In the U.S., *don't know* has been a systematic response to a range of attitudinal questions, with common predictors including female gender, lower schooling, higher age, and minority race or ethnicity (e.g., Atkeson and Rapoport 2003; Francis and Busch 1975; Rapoport 1982, 1985; Schuman and Presser 1977, 1996). Yet, the relevance of such findings for attitudinal questions about gender relations, or more specifically about IPV against women, in cross-cultural context remains highly uncertain (Pulerwitz and Barker 2007). A few recent methodological studies suggest that certain attitudinal items about IPV may function differently across ethnic groups (Herzog 2004) and genders (Edelen et al. 2009). Yet, indeterminacy in women's responses to attitudinal questions about IPV is largely unstudied in poorer countries, despite such questions having been administered for decades in scores of national Demographic and Health Surveys.

This paper begins to fill this methodological gap. It provides results from a thorough study of women's attitudes about IPV against women that was undertaken in six villages in rural Bangladesh. The full study began with formative qualitative research, in which the team explored a five-part attitudinal question about IPV against women that was administered in the 2007 Bangladesh DHS (BDHS). Variants of this question and the response options then were created for a formal survey experiment. A probability sample of 550 women across villages were selected and randomly assigned to one of six questionnaire groups. All participating women ($n = 496$) answered the same background questions, then each group completed one of six modules that included variants of the BDHS attitudinal question. The present analysis assessed women's responses in the two groups ($n = 165$) that received the exact question from the 2007 BDHS. Three research questions guided this analysis. First, what percentage of these 165 women initially had indeterminate responses to this question? Second, what were the reasons for these indeterminate responses? Finally, what attributes of respondents were associated with giving indeterminate responses? The findings provide insights about the meaning of such responses, the subgroups of women who are more likely to provide them, and the potential to improve these kinds of attitudinal questions for use in national surveys in poor settings.

Study Setting

Bangladesh is a suitable setting for this study because of high reported levels of IPV against women (16–72 % of married women in rural areas) (Bates et al. 2004; Bangladesh Institute of Development Studies [BIDS] 2004; Khan et al. 2001; Koenig et al. 2003; Naved and Persson 2005; Schuler et al. 1996; Steele et al. 1998) and of women reporting that such

violence is justified (36 %) (National Institute of Population Research & Training [NIPORT], Mitra & Associates, and Macro International 2009). The study sites were six villages in Faridpur, Magura, and Rangpur districts, where a co-author has been working since 1991. Although not randomly selected, these six villages together are not atypical of rural Bangladesh (NIPORT et al. 2009; Table 1). They are similarly poor and culturally homogeneous, with most villagers self-identifying as Bangladeshi/Bengali and Muslim (96 % versus 90 % nationally) (Table 1). The study villages are somewhat but not unusually conservative with respect to women's social and economic life outside of the family (Table 1). In particular, compared to rural women nationally, women in the study villages have somewhat less schooling and less exposure to various forms of media, but they work outside the home slightly more often. Governmental, nongovernmental, or religious schools are located in or within 2.0 km of each village, and at least one non-governmental organization (NGO) in each village is providing primary health care, microcredit, or schooling, or is promoting legal awareness or gender equity (Bates et al. 2004). In 2002 across the villages, between 2 and 40 % of women were working in rice processing centers, as vendors, or in small rural factories near their home villages, and between 1 and 15 % had migrated to the capital Dhaka or to district towns to work in garment factories or as cooks for factory workers (Schuler and Islam 2008). A few men from some of the six villages had migrated to Dhaka or to Middle Eastern countries for work.

Samples and Data

This study was approved by the Emory Institutional Review Board and the Bangladesh Medical Research Council. The study began with a census of households that took place in the study villages from September 15 to December 29 of 2008. As a part of the census, new households and household members since 2002 were listed, and prior members who had migrated, died, or were untraceable were recorded as such. Data on current age, gender, schooling, and marital status were recorded for all household members in 2008. From this census, a probability sample was drawn and reserved for a survey experiment (described below), and samples of village women and men were selected purposively from the remaining households for formative qualitative research.

This formative work included three rounds of cognitive interviewing, during which 108 interviews were conducted with 27 married women 18–48 years and 25 married men 22–75 years. This phase was designed to explore intensively the cognitive processes underlying women's and men's responses to questions from the 2004 and 2007 Bangladesh DHS regarding personal attitudes about wife *hitting* or *beating*. Cognitive interviews often are used to diagnose and resolve overt and covert problems with survey instruments (Collins 2003; Ericsson and Simon 1980, 1984; Willis 1999). Interviewers may ask informants to “think aloud” while formulating their responses to survey questions, and interviewers may probe to elicit the cognitive contexts of the responses. In this study, cognitive informants were not explicitly asked to “think aloud” while answering the survey questions, but instead interviewers recorded spontaneous explanations for the answers given. Interviewers also used intensive probing techniques, asking participants to verbalize their understandings of the overall question, words within the question, and the reasons for their responses. These interviews were conducted privately by same-sex interviewers, each with masters-level education and extensive prior experience working in the study villages. Data from the cognitive interviews informed systematic variations to the 2007 BDHS attitudinal question, and the original and its variants were included in a survey experiment. Further detail on the cognitive interviews and their analysis are available elsewhere (Schuler et al. 2011).

For the survey experiment, an approximate one-third subsample of households ($n = 550$) was selected from the village census with probability proportional to the number of eligible

women in each village. Eligible women were ever-married, usual residents of reproductive age, defined as 18–54 years,¹ and villages had between 111 and 369 such women. To ensure confidentiality (Kishor and Johnson 2004) and to achieve a representative, self-weighted sample, one eligible woman was selected randomly from each sampled household.² Of the 550 women selected to participate, 496 or more than 90 % completed their interviews.

Female interviewers aged 26–38 years with masters degrees and extensive prior experience in the villages³ conducted all survey interviews in Bangla, in private, and in the homes of respondents. All survey interviews began with identical background questions that were modeled after the 2007 BDHS.⁴ These questions focused on the respondent's prior and current residence, marital status, literacy, exposure to the media, religion, and organizational membership; the respondent's and husband's age at first marriage, age, schooling attainment, work status, occupation, and co-residence; and decision-making about household matters.

Survey participants then were randomized to receive one of six questionnaire modules, each of which included (a) one of three variants (A, B, or C) of a five-part question pertaining to personal attitudes about IPV against women, and (b) one of three variants (D, E, or F) of a five-part question pertaining to perceptions of community norms about such violence. Figure 1 summarizes the question sets asked of respondents in each of these six groups (A then D; D then A; B then E; E then B; C then F; and F then C, respectively). Appendix 1 provides English translations of the exact questions to which respondents were randomized. Response rates were similar across the six groups (87–94 %, Fig. 1).

This analysis is based on the 165 women who were randomized to receive question A, the 2007 BDHS question on personal attitudes about IPV against women. This question was as follows:

I will now ask you some questions. Please listen to them and then answer thoughtfully. Please tell me what you think. Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations: (1) If she goes out without telling him?, (2) If she neglects the children?, (3) If she argues with him?, (4) If she refuses to have sex with him?, and (5) If she does not obey elders in the family?

Immediately after being asked the above attitudinal question with respect to the first situation listed (*if she goes out without telling him*), respondents were permitted to answer freely *yes*, *no*, *do not understand*, *it depends*, or *don't know*. Interviewers then recorded one of these responses or *silence* if women provided no initial answer to the question.⁵ Participants who gave an indeterminate response (*do not understand*, *it depends*, *don't know*, *silence*) were asked the following supplemental question: *If you had to choose, in your opinion, is a husband justified in hitting or beating his wife if she (referent situation)?*, to which only a *yes* or *no* response was permitted. Interviewers then asked the same attitudinal

¹This age range differed slightly from the DHS (15 – 49 years) in order to include only “adult” women, defined as at least 18 years.

²Few sampled households had more than one eligible woman. Reporting of age and date of birth was inconsistent for some respondents, and one selected respondent had a reported age of 62.

³Because all interviewers were similar in gender, schooling attainment, age, and prior experience, subgroups in the survey experiment effectively were matched on these attributes, and their effects on women's responses to the attitudinal question cannot be assessed.

⁴Questions were taken from the Bangla translation of the 2007 Bangladesh Demographic and Health Survey (BDHS). A limited number of questions were modified for suitability in the study villages. For example, the question on membership in community-based organizations included more detailed response options in our survey than in the 2007 BDHS.

⁵In the DHS in general and the 2007 BDHS in particular, respondents are permitted to answer *yes*, *no*, or *don't know* to this question. Yet, based on findings from the formative cognitive interviews, the list of indeterminate response options was expanded in this survey experiment to quantify better the exact nature of such responses. Since the question implied a *yes* or *no* response, the response options were not read aloud, but the actual response given was recorded using the complete list. It is unknown how long the interviewers waited before recording *silence* as the initial response.

question with reference to the next situation, and proceeded in this fashion until all five situations were covered.

Six binary outcomes were created to capture initial, *indeterminate* responses to the above attitudinal question. Five outcomes captured whether the participant initially had an indeterminate (=1) or a *determinate yes or no* (=0) response to the question when it was asked with respect to each of the five scenarios. The sixth outcome captured *whether* (=1) or *not* (=0) the participant initially had *indeterminate* responses to the question for *all five scenarios*.⁶

The covariates for this analysis were selected on the basis of prior research on the correlates of *affirmative* responses to this attitudinal question as well as the correlates of *indeterminate* responses to related attitudinal questions (see the review, above). These variables included attributes of the respondent, namely her work outside the home in the prior seven days (*yes, no*), membership in a community organization (*yes, no*), current exposure to print or audio-visual media (*yes, no*), age in years (25, 26), and completed grades of schooling (2, 3). These variables also included attributes of the respondent's husband, namely his age in years (35, 36) and completed grades of schooling (8, 9). A third set of variables captured the respondent's relative status in marriage, namely spousal gaps in age (husband 7 years older, husband 6 years older) and completed grades of schooling (equal, wife more, husband more). Survey-design based controls included the sub-district of residence (*upazila*) and randomization to question A before D (versus D before A). In general, the cutpoints for each covariate were selected to reflect meaningful subgroups in the local context (e.g., the threshold for the husband's completed grades reflects examination after the eighth grade) and to minimize correlations among the covariates (e.g., for spousal ages, $r = 0.68$).

Analysis

For the full survey sample ($n = 496$), descriptive analyses of all covariates and other demographics were performed to assess their completeness and distributions. The distributions of these variables also were compared across survey subgroups to assess the success of the randomization.

For the sample of main interest ($n = 165$), univariate analyses of the outcomes were performed to assess the relative frequencies of determinate and indeterminate initial responses to the 2007 BDHS question when asked with respect to each of the five scenarios and all five combined. On the basis of these distributions, illustrative quotes were selected from the cognitive interviews with village women to interpret the pre-coded reasons in the survey for these indeterminate responses (*do not understand, it depends, don't know, silence*). Reference to published analyses of the cognitive interviews provided further context for interpreting these responses (e.g., Schuler et al. 2011). Finally, we compared rates of *justifying* IPV against women based on responses to the initial and supplemental questions, which did and did not allow for indeterminate responses, respectively.

Bivariate analyses, using χ^2 tests of independence, then were performed to assess the unadjusted associations of the six outcomes with a more extensive set of covariates reflecting characteristics of the respondent, her husband, and the respondent's relative status in marriage. Potential colinearities among the covariates also were assessed. From this set of covariates, those attributes of the respondent, her husband, and the respondent's relative status in marriage that arguably were exogenous to the outcomes of interest and had a clear

⁶The number of indeterminate responses was considered as an outcome; however, the distribution of this variable was highly left-skewed, with most women giving indeterminate responses to the attitudinal question for all five situations.

pattern of bivariate association with the outcomes were selected for the multivariate analysis. These covariates included the respondent's age and completed grades of schooling, her husband's age and grades of schooling, and spousal gaps in age and grades.

For the multivariate analysis, let i denote respondent, Y_i the outcome for respondent i , $\mathbf{R}_i$ a vector of the respondent's attributes, $\mathbf{H}_i$ a vector of her husband's attributes, $\mathbf{S}_i$ a vector of the respondent's relative status in marriage, and $\mathbf{X}_i$ a vector of design-based controls. For each outcome, binomial logistic regression was used to model the log odds of the outcome as a linear function of the covariates:

$$\text{logit}(\pi_i) = \beta_0 + \beta \mathbf{R}_i + \beta \mathbf{H}_i + \beta \mathbf{S}_i + \beta \mathbf{X}_i \quad (1)$$

where $\text{logit}(\pi_i) = \ln(\pi_i / 1 - \pi_i)$. To address the high correlation of spousal ages, six multivariate models controlled sequentially for (1) the respondent's age and grades, (2) her husband's age and grades, (3) the respondent's age and grades with spousal gaps in age and grades, (4) her husband's age and grades with spousal gaps in age and grades, (5) the respondent's age and grades, husband's grades, and the spousal gap in age, and (6) the husband's age and grades, respondent's grades, and the spousal gap in age. Model diagnostics were performed, and none showed significantly poor fit (results available upon request) (Hosmer and Lemeshow 2000). Because of the small sample size available for analysis, significant ($p < 0.05$) and marginally significant ($p < 0.10$) findings are reported.

Results

Women across all survey subgroups were similar on most observed attributes (Columns (1)–(6), Table 1). Marginal or significant differences across groups were apparent in the percentage who were married (88–99 %), the percentage who read a newspaper or magazine (6–15 %), and the mean grades of schooling of respondents' husbands (3.7–5.4); yet, the percentages of respondents whose husbands had ever attended school did not differ across subgroups, and the attributes of the survey subgroups of interest resembled those of the full sample (Columns (1) and (2) versus full sample, Table 1). Therefore, the attributes of these subgroups are discussed further.

In these two groups, almost all women were married at the time of interview and self-identified as Muslim (Table 1). On average, women were in their early thirties, and a majority had ever attended school. Still, the schooling attainments of women were not high, averaging less than four grades. Women rarely reported reading the print media or listening to the radio, but one-third to one half reportedly watched television. Large minorities of women had worked outside of the house in the prior week (35 and 45 %). Just under one half of the women were members of a community organization, and about one quarter belonged to the Grameen Bank alone, a banking system that provides small loans to the poor in rural Bangladesh.

Most women were living with their husband at the time of interview, and husbands on average were in their early forties (Columns (1) and (2), Table 1). Just over half of the husbands had ever attended school, and over 10 % had completed at least nine grades. Almost three quarters of respondents had a husband who was at least seven years older, and over one-third had a husband with more schooling; however, about one quarter of respondents had more schooling than their husband. About half of the women reportedly decided alone about purchases for daily household needs, and between one quarter and one-third of women reportedly decided alone about health care for themselves and visits to family. Relatively few women (~15 %) reportedly decided alone about major household purchases.

A high percentage of women had indeterminate responses to the BDHS attitudinal question about IPV against women (Table 2). Across all of the five scenarios for which this question was asked, more than 80 % of women had indeterminate responses. More than half (53–57 %) of these indeterminate responses across all scenarios occurred when women remained silent and did not answer the question (Table 2). In one cognitive interview with a village woman, silence arose partly because she had difficulty understanding the whole question, or at a minimum, specific words in it:

I: ...[i]s it right for a husband to beat his wife if she neglects their children?

R: [Silent.]

I: Okay, I am repeating my question again for you. Is it right for a man to beat his wife if she does not take good care of their children or if she neglects them?

R: No, it is not right. Husband and wife need to understand each other. And the husband cannot beat his wife (**312402**, 39 years, 10 grades of schooling, 1 living son, 2 living daughters).

In this example, repeating the question and clarifying phrases within it (*neglects the children*) appear to have prompted a meaningful, definitive response. Yet, as elaborated elsewhere (Schuler et al. 2011), five other female cognitive informants required prompting to produce a definitive response, and 15 others considered *neglecting the children* to be a non-sensical scenario in this context. The perceived implausibility of this particular scenario may have prompted silence for the respondent quoted above.

Another one-third (30–37 %) of indeterminate responses to the attitudinal question arose when respondents stated openly that they did not understand the question (Table 2). The following quote from a cognitive interview illustrates this circumstance:

I: ...You said they do not think it is right for a husband to beat his wife if she fails to take proper care of the children and now you are saying you think it is right? Why have you changed your opinion?

R: I could not understand the matter before. (**302202** 42 years, no schooling, 3 living sons, 3 living daughters)

With respect to the scenario of *beating wives for neglecting the children*, it is notable six cognitive informants had understood the question to be asking for their attitudes about *beating children* (see Schuler et al. 2011, for more detail). In some of these cases, as illustrated by the quote below, the informants did not realize the misunderstanding and provided a definitive answer:

I: ...First, is it right for a husband to beat the wife if she neglects the children?

R: If the wife neglects the children? I have got only daughter. Why shouldn't the child be taken care of? Why should she be beaten? Or, why should she be scolded always? (**300702**, 30 years old, 8 grades of schooling, 2 living daughters)⁷

In the absence of narrative responses like the one above, such cases of misunderstanding could go undetected in a structured survey. Thus, our estimates of *stated* misunderstanding in the survey may be lower than the extent to which this question was interpreted contrary to its intent.

⁷This quote reveals several levels of reinterpreting the original question. First, the respondent may have become confused if the Bengali translation “beat her” was used instead of “beat the wife.” Second, the respondents’ response “I have got only daughter” suggests she is confusing “children” with the Bengali conversational translation “boys.” So, the respondent “corrects” the interviewer by saying “I have two daughters.” Third, the respondent’s misunderstanding of the question becomes apparent when she questions why her daughters should be beaten.

Finally, for 7–13 % of the indeterminate survey responses (Table 2), participants explicitly stated *it depends*. Such contingent responses also arose in the cognitive interviews. As illustrated by the quote below, some informants explained such responses by distinguishing capricious beatings of an innocent wife from corrective punishments of a disobedient wife:

I: I asked you whether it is right for a husband to beat the wife if she argues with him. In answer you said it is not always right to do so [and] you said sometimes he can beat... Why do you think beating for this cause is not right always?

R: I am a woman and he is a man. We both are human. Now if he comes everyday and beats me, will I take it right? It might happen sometimes that I fail to carry out what he asks me to do. As a result he may get enraged and do something. I might keep silent if he scorns or abuses me. I will accept this rebuke because I have made some mistakes (300702, 19 years old, 8 grades of schooling, 2 living daughters, no living sons).

In other cognitive interviews (see Schuler et al. 2011 for more detail), many informants who had answered definitively also had inferred similar details about the wife's behavior. In many cases, these details were uncovered only with probes about the reasons for the informant's response. For example, most informants who had assumed that the hypothetical wife's behavior had resulted from extenuating circumstances did not justify the beating; whereas, informants who had assumed that the wife's behavior reflected willful disobedience often viewed the beating as a legitimate punishment. Thus, our estimates from the survey of *it depends* responses may not reflect their full extent in this sample.

When women in the survey who had indeterminate responses were asked to choose *yes* or *no*, a minority reported that wife beating was *justified* across all listed scenarios (35–46 %), except for *disobeying elders* (47 %). Combining determinate responses across the initial and supplemental questions, a similar minority of women reported that such violence was *justified* in all listed scenarios (37–46 %), except for *disobeying elders* (57 %) and *arguing with [the husband]* (50 %).

Thus, most women in this sample had indeterminate responses to a standard DHS question that has been used in Bangladesh since 1999 to elicit personal attitudes about IPV against women. Moreover, the rates at which women justified IPV were considerably lower when indeterminate responses were allowed (7–12 %) than when definitive responses were forced (37–57 %).

Several characteristics of the respondents, and especially their husbands, were associated with giving indeterminate responses in this sample (Table 3). In at least half of the scenarios for which the question was asked, younger women with three or more grades of schooling and current exposure to the media, and women who had younger and more-schooled husbands less often had indeterminate responses than their counterparts. Also, in all but one scenario, respondents with husbands who were at least seven years older more often had indeterminate responses. Otherwise, no other observed attributes (worked in the prior seven days, belonged to a community organization, district of residence, and random order of the attitudinal questions) were associated with women's propensity to give indeterminate responses.

The multivariate results are presented in Table 4. In model (1), which included the wife's age and schooling, older women (> 26 years) had at least marginally higher odds than younger women of giving indeterminate responses when asked whether wife beating was justified for *neglecting the children* (odds ratio [OR] = 3.34), *refusing sex* (OR = 2.34), *not obeying elders* (OR = 2.59), and all five scenarios combined (OR = 2.08). Women with three or more grades of schooling had lower odds than less-schooled women of giving

indeterminate responses when asked whether wife beating was justified for *going out without telling*, *refusing sex*, and *not obeying elders* ($OR = 0.22\text{--}0.41$). In model (2), which included spousal age and schooling, women with older husbands had at least marginally higher odds than those with younger husbands of giving indeterminate responses across each scenario and all scenarios combined ($OR = 2.12\text{--}4.41$). Also, women with more-schooled husbands had lower odds than those with less-schooled husbands of giving indeterminate responses across four scenarios (except *argues with him*) and all scenarios combined ($OR = 0.23\text{--}0.44$).

In models (3)–(6), which included various respondent, husband, and relative-spousal characteristics, the husband's age, the spousal age gap, and respondent's age were most consistently associated with a woman's indeterminate responses. Across models 4 and 6, respondents with older husbands had higher odds than those with younger husbands of giving indeterminate responses in four scenarios: *going out without telling him* ($OR = 2.34\text{--}2.62$), *neglecting the children* ($OR = 3.18\text{--}3.41$), *not obeying elders* ($OR = 2.77\text{--}3.41$), and all scenarios combined ($OR = 2.22\text{--}2.30$). Across models (4)–(6), respondents with husbands who were at least seven years older had higher odds of giving indeterminate responses in two scenarios: *going out without telling him* ($OR = 3.64\text{--}4.70$) and *refusing to have sex with him* ($OR = 2.61\text{--}3.31$). Across models (3) and (5), older women had higher odds than younger women of giving an indeterminate response in two scenarios: *neglecting the children* ($OR = 3.32\text{--}3.78$) and *not obeying elders* ($OR = 2.41\text{--}2.78$). Finally, across models (3)–(6), more-schooled women with more-schooled husbands had lower odds than their counterparts of giving an indeterminate response to one scenario each, *disobeying elders* ($OR = 0.28\text{--}0.29$) and *neglecting the children* ($OR = 0.14\text{--}0.27$), respectively. Otherwise, the associations of spousal gaps in schooling with each outcome were not robust to alternative model specifications (Models 3 and 4).

Discussion

In 2007 in Bangladesh, 36 % of women reportedly agreed that hitting or beating a wife was justified in specific scenarios (NIPORT, Mitra & Associates, and Macro International 2009). Yet, qualitative research in rural Bangladesh has exposed the complexity of women's views about IPV against women (Schuler and Islam 2008; Schuler et al. 2011). This paper has explored, in rural Bangladesh, the extent and nature of women's indeterminate responses to the attitudinal question on IPV against women that was administered in the 2007 BDHS. Three research questions guided our analysis: (a) what percentage of women give indeterminate responses to this question?, (b) what are the reasons for such responses?, and (c) what subgroups of women are more likely to give such responses? Experimental research on attitudinal questions about IPV is rare in the U.S. and virtually non-existent in poorer settings. This study, thus, fills important methodological gaps in both gender violence research and comparative survey research. The results offer insights about response effects to an attitudinal question that has appeared in the BDHS since 1999, and in over 81 Demographic and Health Surveys (DHS) in 52 poorer countries since 1995. Three major findings warrant discussion.

First, more than three quarters of women initially had indeterminate responses to the five-part attitudinal question on IPV taken from the 2007 BDHS. Also, relatively few women definitively justified IPV when indeterminate responses were permitted (7–12 %) than when indeterminate responses were not allowed (37–57 %). Moreover, the ratios of *justified* to *not justified* responses were 1.0 or higher when indeterminate responses were permitted but in most cases less than 1.0 when indeterminate responses were not allowed (see Schuman and Presser 1996). In sum, the percentages and ratios of women who justified IPV in listed scenarios depended importantly on the response set for the question. Although the suggested

response set for the DHS attitudinal question includes *yes*, *no*, and *don't know* (bICF Macro 2010b), the frequency of *don't know* is not available in the survey reports (aICF Macro 2010a), and the effect of its inclusion on estimates of affirmative responses is unknown. Moreover, the treatment of *don't knows* in substantive analyses of the DHS is rarely reported (see review, above). Thus, frequent indeterminate responses to this attitudinal question in our sample and their implications for estimates of justifying IPV expose a need to investigate this question more widely and in more depth.

A second major finding was that initially indeterminate responses to this DHS attitudinal question arose for diverse reasons, but that these reasons appeared consistently across the scenarios to which the question was applied. Specifically, about 10 % of indeterminate responses across all scenarios arose because women explicitly responded *it depends*. In cognitive interviews, *it depends* was a common response for women who needed more detail about the wife's behavior, as depicted in each scenario. Among informants who had inferred that the wife's behavior resulted from extenuating circumstances, most did not justify wife hitting or beating. Conversely, informants who had inferred that the wife was willfully disobedient often viewed the beating as a legitimate punishment. Although *it depends* was a relatively infrequent initial response in the survey, contingent responses were common in the cognitive interviews (Schuler et al. 2011) and may have underlain the responses of women who were silent or who explicitly misunderstood the question. Our findings suggest that, at least in these villages, the scenarios to which the DHS attitudinal question is applied may lack sufficient detail to be interpreted consistently and to avoid contingent responses from a non-trivial share of survey participants.

Another one-third of initially indeterminate responses across all scenarios arose because women stated that they had not understood the question. In the cognitive interviews, repeating the question sometimes spurred a definitive response, but often, rephrasing the question or providing further clarification was required. Also in the cognitive interviews, some women who had responded definitively had unknowingly interpreted the question contrary to its intent. In the absence of narrative responses from participants, such misunderstandings may be systematic and go undetected in structured surveys.

Finally, over half of the women who had initially indeterminate responses simply were silent, and provided no answer to the question. Silence may have arisen for multiple reasons, including (1) an unstated inability to understand all or part of the question, (2) an unstated view that at least some of the scenarios to which the question was applied were implausible, or (3) multiple unstated interpretations of these scenarios, resulting in an inability to answer the question. Another reason for initial non-response may have been the sensitivity of the question itself (Shoemaker et al. 2002). Thus, many of the other women's stated reasons for their indeterminate responses also may have underlain non-responses to the question. Findings from the cognitive interviews also suggested that giving one or another indeterminate response did not clearly reveal different attitudes about IPV (Schuler et al. 2011). Thus, many of the initial non-responses in this survey may have reflected what Gilljam and Granberg (1993) have called *false-negatives*, or people with an opinion who decline initially not to express it. In this survey, some initial non-responders may have had opinions about IPV but refrained initially from stating them for the above range of reasons.

A third major finding of this analysis was that, despite the high frequency of indeterminate responses and women's homogeneity on certain correlates of such responses (e.g., ethnicity, religion), several individual and relational attributes were associated with giving indeterminate responses. These attributes included the respondent's lack of recent exposure to the media, her older age and lower schooling attainment, her husband's older age and lower schooling attainment, and the husband's older age relative to the respondent. In

multivariate logistic regressions, the husband's greater absolute and relative age emerged as the most consistent correlates of women's indeterminate responses to this question. Other attributes being equal, a woman with a fifty-year-old husband had higher odds of giving an indeterminate response than a woman with a forty-year-old husband, and a woman with a husband senior by 10 years had higher odds of giving an indeterminate response than a woman with a similarly-aged husband. One explanation for these findings echoes Komter's (1989) notion of *latent power*, in which a woman who is married to an older, higher-status man may fear the repercussions of stating her views openly, especially if they contradict the perceived gender norm. This interpretation corroborates prior findings from the U.S. that respondents may censor their responses to sensitive questions to reduce the risk of providing ones that violate social norms (Shoemaker et al. 2002; Tourangeau et al. 2000). This interpretation is further supported by our data, in that women who had older husbands at least seven years older than themselves and who initially had indeterminate responses, when probed, typically said that IPV was *justified*, a view that conforms with prevailing norms in this context (results available upon request).

The implications of our findings for interpreting prior research warrant comment. Most notably, spousal gaps in resources substantially favoring husbands have been associated with women's reported justification of IPV in other settings (e.g., Yount 2005; Yount and Li 2009) as well as women's indeterminate responses to this attitudinal question in our study sites. Thus, women in more gender inequitable marriages and communities may feel that "the realities of gender inequality" determine more strongly whether IPV is justified, leading women with personal views that contradict the norm either not to respond to this question or to give the socially desirable response (Schuler and Islam 2008; Schuler et al. 2011, p. 25). The latter interpretation may help to explain women's high propensity to justify IPV against women in settings where gender inequitable norms are predominant.

The present study and analysis were not without limitation. First and foremost was the narrow geographic scope of this study, which limits generalizability even within Bangladesh. Second, the small sample of women who received the BDHS question limited the number of covariates that could be considered at once. Third, the analysis was limited to women of reproductive age and so cannot be generalized to older or younger women or to men.

Still, the findings lay a critical foundation for expanded methodological research and survey innovations in poorer settings. First, this survey experiment, with cognitive interviews, should be replicated elsewhere in probability samples of women *and* men to ascertain the ranges of and reasons for their indeterminate responses and to assess any gendered response effects to attitudinal items. This call for replication is all the more urgent in light of a recent study of predominantly Latino high-school students in the U.S. showing differential item functioning across men and women with respect to three attitudinal questions about teen dating violence (Edelen et al. 2009). Given that women across Sub-Saharan Africa reportedly *justify* wife hitting or beating more often than men (Uthman et al. 2010), the potential for gendered response effects cross-culturally is real and worthy of scholarly attention. If our findings are replicated in multiple diverse contexts, then caution is warranted in the use of existing data to estimate women's justification of IPV and its correlates. Our research also exposes a potentially broader need for systematic, methodological research on structured attitudinal questions about IPV, as well as other sensitive topics concerning gender relations, across diverse contexts where such questions have been administered in national surveys.

Finally, the results provide guidance about formulating attitudinal questions on IPV against women for use in similar settings. First, as was done in the larger survey experiment, the

scenarios to which the question is applied might be augmented to clarify the reasons for the wife's behavior. Clarifying the scenarios in these terms may help to minimize item non-response and may distribute women along a more refined attitudinal continuum. Analyses of our full set of experimental data suggest that these modifications have some merit (Yount et al. forthcoming). Second, the question format might follow an explicit sequence in which an initial question permits determinate and indeterminate responses and a supplemental probe requires a determinate response for the relevant subsample. This structure would clarify the extent of indeterminate responses and their implications for estimates of justifying IPV among women in poor settings.

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Appendix 1

Questions on Personal Attitudes About Wife Hitting or Beating

Control Survey A: DHS Questions

I will now ask you some questions. Please listen to them and then answer thoughtfully. Please tell me what you think.

Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations

1. If she goes out without telling him?
  - 1a If you had to choose, in your opinion, is a husband justified in hitting or beating his wife if she goes out without telling him?
2. If she neglects the children?
  - 2a If you had to choose, in your opinion, is a husband justified in hitting or beating his wife if she neglects the children?
3. If she argues with him?
  - 3a If you had to choose, in your opinion, is a husband justified in hitting or beating his wife if she argues with him?
4. If she refuses to have sex with him?
  - 4a If you had to choose, in your opinion, is a husband justified in hitting or beating his wife if she refuses to have sex with him?
5. If she does not obey elders in the family?
  - 5a If you had to choose, in your opinion, is a husband justified in hitting or beating his wife if she does not obey elders in the family?

Variant Survey B: Wife Unintentionally Transgresses Gender Norms

I will now ask you some questions. Please listen to them and then answer thoughtfully. Please tell me what you think.

Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:

1. A wife is home alone; at this time someone comes to tell her that her mother is very ill. She rushes to her parents' house without telling her husband. In your opinion, is the husband justified in hitting or beating his wife for going out without telling him?
2. What if the wife is over-burdened with work one morning? Normally, she supervises the children's play and keeps them neat and clean. But, one day, it has been raining since morning. While she is working hard to finish her house work, the children play in front of the house and get dirty. She does not have time to bathe them before her husband returns. The husband returns and sees that the children are dirty. In your opinion, is the husband justified in hitting or beating his wife for neglecting the children? To be clear, I am not asking you whether you think it is justified to hit or beat the children. I am asking whether you think the husband is justified in hitting or beating his wife in this situation.
3. What if the husband stays home out of laziness for several days, refusing to go out and work. His wife tells him they are running out of food and there is not enough money to buy food—and asks him to go out and work. The husband tells his wife to shut up. The wife argues with him. In your opinion, is the husband justified in hitting or beating his wife for arguing with him?
4. What if the wife is ill and her husband returns home at night and wants to have sex with her? She talks about her illness and refuses to have sex with the husband. She explains that she has stomach pains and a fever. In your opinion, is the husband justified in hitting or beating his wife for refusing to have sex with him?
5. What if the mother-in-law of the woman tells her to sweep the home-yard? The wife disobeys because she is busy caring for her baby. The mother-in-law complains to her son when he returns home. In your opinion, is a husband justified in hitting or beating his wife for disobeying her mother-in-law?

Variant Survey C: Wife Willfully Transgresses Gender Norms

I will now ask you some questions. Please listen to them and then answer thoughtfully. Please tell me what you think.

Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:

1. What if a wife is home alone and goes to her parents' house just for fun without telling her husband? In your opinion, is the husband justified in hitting or beating his wife for going out without telling him?
2. What if the wife often leaves her young children unsupervised and lets them go around looking dirty? Her husband has asked her many times before to supervise their play and keep them clean, but she does not pay attention to what he asks. In your opinion, is the husband justified in hitting or beating his wife for neglecting the children? To be clear, I am not asking you whether you think it is justified to hit or beat the children. I am asking whether you think the husband is justified in hitting or beating his wife in this situation.
3. What if the wife is quarrelsome by nature? She often disagrees with what her husband says and argues with him for no reason. In your opinion, is the husband justified in hitting or beating his wife for arguing with him?

4. What if the wife refuses to have sex with her husband whenever she is not in the mood? In your opinion, is the husband justified in hitting or beating his wife for refusing to have sex with him?
5. What if the wife's mother-in-law tells her to sweep the home-yard, but the wife ignores that and spends the morning resting and chatting with her neighbor? In your opinion, is the husband justified in hitting or beating his wife for disobeying her mother-in-law?

Questions on Perceived Community Norms About Wife Hitting or Beating

Control Survey D: DHS Questions

I will now ask you some questions. Please listen to them and then answer thoughtfully. Please tell me what you think other people in your community believe.

Sometimes a husband is annoyed or angered by things that his wife does. According to other people in your community, is a husband justified in hitting or beating his wife in the following situations:

1. If she goes out without telling him?
  - 1a If you had to choose, according to other people in your community, is a husband justified in hitting or beating his wife if she goes out without telling him?
2. If she neglects the children?
  - 2a If you had to choose, according to other people in your community, is a husband justified in hitting or beating his wife if she neglects the children?
3. If she argues with him?
  - 3a If you had to choose, according to other people in your community, is a husband justified in hitting or beating his wife if she argues with him?
4. If she refuses to have sex with him?
  - 4a If you had to choose, according to other people in your community, is a husband justified in hitting or beating his wife if she refuses to have sex with him?
5. If she does not obey elders in the family?
  - 5a If you had to choose, according to other people in your community, is a husband justified in hitting or beating his wife if she does not obey elders in the family?

Variant Survey E: Wife Unintentionally Transgresses Gender Norms

I will now ask you some questions. Please listen to them and then answer thoughtfully. Please tell me what you think other people in your community believe.

Sometimes a husband is annoyed or angered by things that his wife does. According to other people in your community, is a husband justified in hitting or beating his wife in the following situations:

1. A wife is home alone; at this time someone comes to tell her that her mother is very ill. She rushes to her parents' house without telling her husband. According to other

people in your community, is the husband justified in hitting or beating his wife for going out without telling him?

2. What if the wife is over-burdened with work one morning? Normally, she supervises the children's play and keeps them neat and clean. But, one day, it has been raining since morning. While she is working hard to finish her house work, the children play in front of the house and get dirty. She does not have time to bathe them before her husband returns. The husband returns and sees that the children are dirty. According to other people in your community, is the husband justified in hitting or beating his wife for neglecting the children? To be clear, I am not asking you whether other people in your community think it is justified to hit or beat the children. I am asking whether other people in your community think the husband is justified in hitting or beating his wife in this situation.
3. What if the husband stays home out of laziness for several days, refusing to go out and work. His wife tells him they are running out of food and there is not enough money to buy food—and asks him to go out and work. The husband tells his wife to shut up. The wife argues with him. According to other people in your community, is the husband justified in hitting or beating his wife for arguing with him?
4. What if the wife is ill and her husband returns home at night and wants to have sex with her? She talks about her illness and refuses to have sex with the husband. She explains that she has stomach pains and a fever. According to other people in your community, is the husband justified in hitting or beating his wife for refusing to have sex with him?
5. What if the mother-in-law of the woman tells her to sweep the home-yard? The wife disobeys because she is busy caring for her baby. The mother-in-law complains to her son when he returns home. According to other people in your community, is a husband justified in hitting or beating his wife for disobeying her mother-in-law?

Variant Survey F: Wife Willfully Transgresses Gender Norms

I will now ask you some questions. Please listen to them and then answer thoughtfully. Please tell me what you think.

Sometimes a husband is annoyed or angered by things that his wife does. According to other people in your community, is a husband justified in hitting or beating his wife in the following situations:

1. What if a wife is home alone and goes to her parents' house just for fun without telling her husband? According to other people in your community, is the husband justified in hitting or beating his wife for going out without telling him?
2. What if the wife often leaves her young children unsupervised and lets them go around looking dirty? Her husband has asked her many times before to supervise their play and keep them clean, but she does not pay attention to what he asks. According to other people in your community, is the husband justified in hitting or beating his wife for neglecting the children? To be clear, I am not asking you whether other people in your community think it is justified to hit or beat the children. I am asking whether other people in your community think the husband is justified in hitting or beating his wife in this situation.
3. What if the wife is quarrelsome by nature? She often disagrees with what her husband says and argues with him for no reason. According to other people in your

community, is the husband justified in hitting or beating his wife for arguing with him?

4. What if the wife refuses to have sex with her husband whenever she is not in the mood? According to other people in your community, is the husband justified in hitting or beating his wife for refusing to have sex with him?
5. What if the wife's mother-in-law tells her to sweep the home-yard, but the wife ignores that and spends the morning resting and chatting with her neighbor? According to other people in your community, is the husband justified in hitting or beating his wife for disobeying her mother-in-law?

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Fig. 1.

Experimental design and response rates, overall and by study group, six villages in rural Bangladesh. Variants of individual attitudes questions about domestic violence against women: A = standard DHS questions on personal attitudes about whether a husband is justified in hitting or beating his wife in any one of five situations (goes out without telling him, neglects the children, argues with him, etc ...). B = modified DHS questions on personal attitudes about whether a husband is justified in hitting or beating his wife in any one of the five situations in A, but with the situations revised to depict the wife as “not at fault” and the question repeated after describing each situation. C = modified DHS questions on personal attitudes about whether a husband is justified in hitting or beating his wife in any one of the five situations in A, but with the situations revised to depict the wife as “at fault” and the question repeated after describing each situation. Variants of questions eliciting individual perceptions of community norms about domestic violence against women: D = questions in A but respondents were asked to report their perception of what others in their community think about each situation. E = questions in B but respondents were asked to report their perceptions of what others in their community think about each situation. F = questions in C but respondents were asked to report their perceptions of what others in their community think about each situation

Characteristics of the study sample, by experimental questionnaire groups, six villages in rural Bangladesh

Survey group, by order of attitudinal question sets administered	DHS-control questions: standard situations 1–5				DHS modified questions: wife unintentionally transgresses in situations 1–5				DHS modified questions: wife intentionally transgresses in situations 1–5				$p > \chi^2$	
	Own attitudes, perceived community norms (81)		Perceived community norms, own attitudes (84)		Own attitudes, perceived community norms (86)		Perceived community norms, own attitudes (85)		Own attitudes, perceived community norms (81)		Perceived community norms, own attitudes (79)			
	Mean/Prop.	(s.e.)	Mean/Prop.	(s.e.)	Mean/Prop.	(s.e.)	Mean/Prop.	(s.e.)	Mean/Prop.	(s.e.)	Mean/Prop.	(s.e.)	Full sample	Rural Bangladesh (NIPORT et al. 2009)
(n)													(496)	(10,413)
Respondent's characteristics														
Marital status (married = 1)	0.95	(0.02)	0.95	(0.02)	0.91	(0.03)	0.88	(0.04)	0.94	(0.03)	0.99	(0.01)	0.94	0.92 (0.00)
Religion (Islam = 1)	0.96	(0.02)	0.96	(0.02)	0.95	(0.02)	0.98	(0.02)	0.94	(0.03)	0.99	(0.01)	0.96	0.90 (0.00)
Mean age in years	33.63	(1.03)	34.13	(1.01)	34.13	(1.01)	34.08	(1.00)	33.20	(1.01)	34.41	(1.06)	33.92	31.43 (0.00)
Age > 26 years (yes = 1)	0.78	(0.05)	0.79	(0.05)	0.78	(0.04)	0.76	(0.05)	0.76	(0.05)	0.81	(0.04)	0.79	0.68 (0.00)
Ever attended school (yes = 1)	0.62	(0.05)	0.60	(0.05)	0.60	(0.05)	0.51	(0.05)	0.68	(0.05)	0.62	(0.05)	0.60	0.67 (0.00)
Mean grades of schooling completed	3.70	(0.39)	3.04	(0.38)	3.33	(0.37)	2.85	(0.38)	3.70	(0.39)	4.10	(0.47)	3.44	4.45 (0.04)
Completed > 3 grades (yes = 1)	0.56	(0.06)	0.48	(0.05)	0.52	(0.05)	0.42	(0.05)	0.54	(0.06)	0.53	(0.06)	0.51	0.56 (0.00)
Exposed to any media (yes = 1)	0.59	(0.50)	0.39	(0.50)	0.57	(0.50)	0.51	(0.50)	0.53	(0.06)	0.57	(0.06)	0.53	0.84 (0.00)
Reads a newspaper or magazine (yes = 1)	0.07	(0.03)	0.06	(0.03)	0.07	(0.03)	0.09	(0.03)	0.09	(0.03)	0.15	(0.04)	0.09	0.29 (0.01)
Listens to the radio (yes = 1)	0.12	(0.04)	0.17	(0.04)	0.26	(0.05)	0.14	(0.04)	0.23	(0.05)	0.19	(0.04)	0.19	0.23 (0.00)
Watches television (yes = 1)	0.51	(0.06)	0.33	(0.06)	0.48	(0.05)	0.42	(0.05)	0.47	(0.06)	0.46	(0.06)	0.44	0.56 (0.00)
Worked outside the home in last 7 days (yes = 1)	0.35	(0.05)	0.45	(0.05)	0.47	(0.05)	0.36	(0.05)	0.41	(0.05)	0.38	(0.05)	0.40	0.30 (0.00)
Belongs to any community organization	0.48	(0.06)	0.42	(0.05)	0.49	(0.05)	0.44	(0.05)	0.42	(0.06)	0.46	(0.06)	0.45	0.28 (0.00)
Belongs to the ASHA (yes = 1)	0.12	(0.04)	0.10	(0.03)	0.12	(0.03)	0.11	(0.03)	0.06	(0.03)	0.15	(0.04)	0.11	0.12 (0.00)
Belongs to GRAMEEN (yes = 1)	0.27	(0.05)	0.24	(0.05)	0.30	(0.05)	0.31	(0.05)	0.25	(0.05)	0.20	(0.05)	0.26	0.12 (0.00)

Survey group, by order of attitudinal question sets administered	DHS-control questions: standard situations 1–5				DHS modified questions: wife unintentionally transgresses in situations 1–5				DHS modified questions: wife intentionally transgresses in situations 1–5				$p > \chi^2$		Rural Bangladesh (NIPORT et al. 2009)	
	Own attitudes, perceived community norms (81)		Perceived community norms, own attitudes (84)		Own attitudes, perceived community norms (86)		Perceived community norms, own attitudes (85)		Own attitudes, perceived community norms (81)		Perceived community norms, own attitudes (79)					
	Mean/Prop.	(s.e.)	Mean/Prop.	(s.e.)	Mean/Prop.	(s.e.)	Mean/Prop.	(s.e.)	Mean/Prop.	(s.e.)	Mean/Prop.	(s.e.)	Mean/Prop.	(s.e.)	Mean/Prop.	(s.e.)
(n)																
Belongs to BRAC (yes = 1)	0.17	(0.04)	0.12	(0.04)	0.12	(0.03)	0.07	(0.03)	0.10	(0.03)	0.11	(0.04)	0.11	(0.01)	0.08	(0.00)
Belongs to BRDB (yes = 1)	0.00	(0.00)	0.02	(0.02)	0.03	(0.02)	0.00	(0.00)	0.04	(0.02)	0.03	(0.02)	0.02	(0.01)	0.01	(0.00)
Belongs to PROSHIKA (yes = 1)	0.01	(0.01)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.01	(0.00)
Husband’s characteristics																
Husband coresident (yes = 1)	0.86	(0.03)	0.94	(0.03)	0.87	(0.04)	0.81	(0.04)	0.89	(0.03)	0.92	(0.03)	0.88	(0.01)	0.89	(0.00)
Husband’s age in years	43.07	(1.27)	43.13	(1.25)	41.62	(1.06)	43.20	(1.12)	41.99	(1.15)	43.67	(1.26)	42.77	(0.48)	40.41	(0.11)
Husband > 36 years (yes = 1)	0.72	(0.05)	0.70	(0.05)	0.64	(0.05)	0.78	(0.05)	0.69	(0.05)	0.75	(0.05)	0.71	(0.02)	0.67	(0.00)
Husband ever attended school (yes = 1)	0.57	(0.05)	0.51	(0.06)	0.57	(0.05)	0.55	(0.05)	0.67	(0.05)	0.68	(0.05)	0.59	(0.02)	0.67	(0.00)
Husband’s mean grades of schooling completed	4.49	(0.50)	3.86	(0.49)	3.70	(0.46)	3.88	(0.46)	5.44	(0.53)	5.22	(0.53)	4.41	(0.20)	5.16	(0.05)
Husband completed > 9 grades	0.14	(0.04)	0.13	(0.04)	0.09	(0.03)	0.08	(0.03)	0.19	(0.04)	0.20	(0.04)	0.14	(0.20)	0.30	(0.00)
Respondent’s relative status in marriage																
Husband is > 7 years older (yes = 1)	0.70	(0.50)	0.73	(0.50)	0.58	(0.50)	0.65	(0.50)	0.63	(0.50)	0.73	(0.50)	0.67	(0.20)	0.71	(0.00)
Husband has more schooling (yes = 1)	0.38	(0.50)	0.37	(0.50)	0.36	(0.50)	0.39	(0.50)	0.54	(0.06)	0.47	(0.06)	0.42	(0.20)	0.40	(0.00)
Respondent has more schooling (yes = 1)	0.26	(0.50)	0.24	(0.50)	0.31	(0.50)	0.24	(0.50)	0.20	(0.04)	0.22	(0.50)	0.24	(0.20)	0.27	(0.00)
Respondent decides alone about																
Purchases for daily needs (yes = 1)	0.54	(0.06)	0.51	(0.05)	0.53	(0.05)	0.52	(0.05)	0.51	(0.06)	0.57	(0.06)	0.53	(0.02)	0.35	(0.00)
Visits to family (yes = 1)	0.38	(0.05)	0.35	(0.05)	0.36	(0.05)	0.42	(0.05)	0.27	(0.05)	0.33	(0.05)	0.35	(0.02)	0.18	(0.00)
Healthcare for herself (yes = 1)	0.27	(0.05)	0.29	(0.05)	0.23	(0.05)	0.33	(0.05)	0.26	(0.05)	0.25	(0.05)	0.27	(0.02)	0.19	(0.00)

Survey group, by order of attitudinal question sets administered	DHS-control questions: standard situations 1–5			DHS modified questions: wife unintentionally transgresses in situations 1–5			DHS modified questions: wife intentionally transgresses in situations 1–5			$p > \chi^2$		Rural Bangladesh (NIPORT et al. 2009)
	Perceived community norms, own attitudes			Perceived community norms, own attitudes			Perceived community norms, own attitudes			Full sample		
	Own attitudes, perceived community norms (81)	(s.e.)	Mean/Prop.	Own attitudes, perceived community norms (84)	(s.e.)	Mean/Prop.	Own attitudes, perceived community norms (86)	(s.e.)	Mean/Prop.	Perceived community norms, own attitudes (79)	(s.e.)	
(n)												
	0.15	(0.04)	0.14	0.16	(0.04)	0.21	0.15	(0.04)	0.14	(0.04)	0.16	0.13
Major household purchases (yes = 1)												(0.00)

31 (6.2% of) respondents had missing data on husband's age. In these cases, the mean husbands age (42.8) for the observed sample was imputed. Four (0.8% of) respondents had missing data on husbands mean grades of schooling. In these cases, the husbands mean grades from the observed sample were imputed. 30 (6.0% of) respondents had missing data on husbands coresidence. These values were replaced with a 0. Situations 1–5 refer to whether the wife (1) goes out without telling him (her husband), (2) neglects the children, (3) argues with him, (4) refuses to have sex with him, and (5) does not obey elders in the family

$\dagger$ $p < 0.10$,
* $p < 0.05$,
** $p < 0.01$,
*** $p < 0.001$, for χ^2 test of independence across groups

Table 2

Reported attitudes about intimate partner violence against women, $n = 165$ respondents in a survey experiment who were randomly assigned to the “standard” 2007 Bangladesh DHS question, six villages in rural Bangladesh

Is a husband justified in hitting or beating his wife in the following situations:	She goes out without telling him?			She neglects the children?			She argues with him?			She refuses to have sex with him?			She does not obey elders in the family?		
Response:	<i>n</i>	Prop.	(SD)	<i>n</i>	Prop.	(SD)	<i>n</i>	Prop.	(SD)	<i>n</i>	Prop.	(SD)	<i>n</i>	Prop.	(SD)
Definitive yes	16	0.10	(0.30)	17	0.10	(0.30)	19	0.12	(0.32)	12	0.07	(0.26)	19	0.12	(0.32)
Definitive no	13	0.07	(0.27)	6	0.04	(0.19)	9	0.05	(0.23)	12	0.07	(0.26)	5	0.03	(0.17)
Indeterminate	136	0.82	(0.38)	142	0.86	(0.35)	137	0.83	(0.38)	141	0.84	(0.35)	141	0.85	(0.35)
Silence	72	0.53	(0.50)	81	0.57	(0.50)	75	0.55	(0.50)	81	0.58	(0.50)	77	0.55	(0.50)
Don't understand	49	0.36	(0.48)	51	0.36	(0.49)	44	0.32	(0.47)	42	0.30	(0.46)	53	0.37	(0.49)
It depends	15	0.11	(0.31)	10	0.07	(0.26)	18	0.13	(0.34)	16	0.11	(0.32)	11	0.08	(0.27)
Don't know										2	0.01	(0.12)			
Forced Yes	60	0.44	(0.50)	56	0.39	(0.49)	63	0.46	(0.50)	49	0.35	(0.48)	75	0.53	(0.50)
Forced No	76	0.56	(0.50)	86	0.61	(0.49)	74	0.54	(0.50)	92	0.65	(0.48)	66	0.47	(0.50)
Definitive and Forced Yes	76	0.46	(0.50)	73	0.44	(0.50)	82	0.50	(0.50)	61	0.37	(0.48)	94	0.57	(0.50)
Definitive and Forced No	89	0.54	(0.50)	92	0.56	(0.50)	83	0.50	(0.50)	104	0.63	(0.48)	71	0.43	(0.50)

Table 3

Percent distribution of indeterminate responses to an attitudinal question about intimate partner violence against women, by situations to which the question was applied and covariates, $n = 165$ respondents randomly assigned to the 2007 Bangladesh DHS question, six villages in rural Bangladesh

Is a husband justified in hitting or beating his wife in the following situations?	She goes out without telling him?	$p > \chi^2$	She neglects the children?	$p > \chi^2$	She argues with him?	$p > \chi^2$	She refuses to have sex with him?	$p > \chi^2$	She does not obey elders in the family?	$p > \chi^2$	Indeterminate responses for all situation	$p > \chi^2$
Respondent's characteristics												
Age												
25 years or less	69.4	*	69.4	**	72.2	*	72.2	*	69.4	**	58.3	*
26 years or more	86.1		90.7		86.1		89.2		89.9		77.5	
Grades of schooling completed												
2 or less	90.0	*	92.5	*	87.5		92.5	*	95.0	***	80.0	†
3 or more	75.3		80.0		78.8		78.8		76.5		67.1	
Exposed to media												
Yes	77.8		80.3	*	79.0		80.3	†	79.0	*	66.7	†
No	86.9		91.7		86.9		90.5		91.7		79.8	
Worked outside the home in last 7 days												
Yes	84.8		87.9		83.3		84.9		86.4		72.3	
No	80.8		84.9		82.8		85.9		84.9		76.1	
Member of a community organization												
Yes	81.1		83.8		79.7		83.8		86.5		73.6	
No	83.5		87.9		85.7		86.8		84.6		73.0	
Husband's characteristics												
Age												
35 years or less	66.7	**	72.9	**	75.0		72.9	*	72.9	*	58.3	*
36 years or more	89.0		91.7		87.2		90.8		90.8		79.8	
Grades of schooling												
8 or less	84.6	†	88.8	**	83.9		87.4	†	88.1	*	75.5	
9 or more	68.2		68.2		77.3		72.7		68.2		59.1	
Respondent's relative status in marriage												
Husband												
7 or more years older	89.8	***	89.8	†	86.4	†	90.7	*	88.1		78.0	*

Is a husband justified in hitting or beating his wife in the following situations?	She goes out without telling him?	$p > \chi^2$	She neglects the children?	$p > \chi^2$	She argues with him?	$p > \chi^2$	She refuses to have sex with him?	$p > \chi^2$	She does not obey elders in the family?	$p > \chi^2$	Indeterminate responses for all situation	$p > \chi^2$
6 or fewer years older	63.8		76.6		74.5		72.3		78.7		61.7	
Relative schooling												
Husband-respondent same	86.8		91.8		88.5		90.1		91.8	*	78.6	
Husband has more schooling	80.6		83.8		83.8		85.4		87.0		74.1	
Respondent has more schooling	78.6		80.9		73.8		78.5		73.8		64.2	
Design-based control variables												
District of residence												
Upzila 1	80.4		86.3		92.2		90.2		86.3		72.6	
Upzila 2	82.3		87.5		79.2		84.4		86.5		72.9	
Upzila 3	88.9		77.8		77.8		77.8		77.8		77.8	
Randomized to question												
A then D	84.0		86.4		80.3		86.4		85.2		76.2	
D then A	81.0		85.7		85.7		84.5		85.7		70.4	

[†] p 0.10,

* p 0.05,

** p 0.01,

*** p 0.001

Table 4

Results from logistic regressions of giving an indeterminate (versus determinate) response to an attitudinal question about intimate partner violence against women, by situation to which the question was applied, $n = 165$ respondents randomly assigned to the 2007 Bangladesh DHS question, six villages in rural Bangladesh

Outcome Covariates	(1)		(2)		(3)		(4)		(5)		(6)	
	β	OR	β	OR	β	OR	β	OR	β	OR	β	OR
She goes out without telling him?												
Age												
26 years (ref: 25)	0.71	2.04			0.64	1.89			0.71	2.04	-0.57	0.56
Grades of schooling completed												
3 (ref: 2)	-0.89 [†]	0.41			-0.73	0.48			-0.53	0.59	0.85 [†]	2.34
Husband's age in years												
36 years (ref: 35)			-1.44 ^{***}	4.23			0.96 [*]	2.62			-0.94	0.39
Husband's grades of schooling												
9 (ref: 8)			-1.07 [†]	0.34			-1.58 [*]	0.21			1.29 ^{**}	3.64
Husband is 7 years older (yes = 1)					1.47 ^{***}	4.35	1.39 ^{**}	4.01	1.55 ^{***}	4.70		
Husband has more schooling (yes = 1)					-0.08	0.92	0.38	1.47				
Respondent has more schooling (yes = 1)					-0.04	0.96	-0.43	0.65				
Constant	1.57 ^{**}		0.84 ^{**}		0.67		0.36		0.57		0.75	
She neglects the children?												
Age												
26 years (ref: 25)	1.21 [*]	3.34			1.20 [*]	3.32			1.33 [*]	3.78		
Grades of schooling completed												
3 (ref: 2)	-0.78	0.46			-0.53	0.59			-0.34	0.72	-0.52	0.60
Husband's age in years												
36 years (ref: 35)			1.48 ^{**}	4.41			1.23 [*]	3.41			1.16 [*]	3.18
Husband's grades of schooling												
9 (ref: 8)			-1.47 [*]	0.23			1.99 ^{**}	0.14	-1.35 [*]	0.26	-1.30 [*]	0.27
Husband is 7 years older (yes = 1)					0.76	2.14	0.65	1.92	0.89 [†]	2.43	0.55	1.73
Husband has more schooling (yes = 1)					-0.56	0.57	0.22	1.25				

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Outcome Covariates	(1)		(2)		(3)		(4)		(5)		(6)	
	β	OR	β	OR	β	OR	β	OR	β	OR	β	OR
Respondent has more schooling (yes = 1)												
Constant	1.47**		1.21***		-0.48	0.62	0.87	0.42	0.81		1.35*	
She argues with him?												
Age												
26 years (ref: 25)	0.71	2.04		1.88	0.63			1.99	0.69			
Grades of schooling completed												
3 (ref: 2)	-0.43	0.65		0.88	-0.13			0.76	-0.28		-0.39	0.68
Husband's age in years												
36 years (ref: 35)			0.75 [†]	2.12			0.47	1.60			0.44	1.55
Husband's grades of schooling												
9 (ref: 8)			-0.45	0.63			-0.82	0.44	-0.34		-0.31	0.73
Husband is 7 years older (yes = 1)					0.66	1.93	0.61	1.84	0.67	1.96	0.56	1.74
Husband has more schooling (yes = 1)					-0.28	0.76	0.02	1.02				
Respondent has more schooling (yes = 1)					-0.80	0.45	-0.93 [†]	0.39				
Constant	1.31*		1.16***		1.11 [†]		1.28*		0.85		1.20**	
She resutss to have sex with him?												
Age												
26 years (ref: 25)	0.85 [†]	2.34		2.12	0.75			2.36	0.86 [†]			
Grades of schooling completed												
3 (ref: 2)	-0.96 [†]	0.38		0.47	-0.75			0.53	-0.64		-0.74	0.48
Husband's age in years												
36 years (ref: 35)			1.33**	3.76			0.93 [†]	2.54			0.80	2.23
Husband's grades of schooling												
9 (ref: 8)			-1.06 [†]	0.35			-1.80*	0.17	-0.85	0.43	-0.84	0.43
Husband is 7 years older (yes = 1)					1.15*	3.17	1.10*	3.02	1.20**	3.31	0.96 [†]	2.61
Husband has more schooling (yes = 1)					-0.09	0.91	0.53	1.69				
Respondent has more schooling (yes = 1)					-0.39	0.68	-0.81	0.45				
Constant	1.77**		1.15***		1.14		0.90 [†]		0.97		1.29*	

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Outcome Covariates	(1)		(2)		(3)		(4)		(5)		(6)	
	β	p	OR	β	p	OR	β	p	OR	β	p	OR
She does not obey elders in the family?												
Age												
26 years (ref: 25)	0.95 [†]		2.59			0.88 [†]			2.41			1.02 [†] 2.78
Grades of schooling completed												
3 (ref: 2)	-1.51 [*]		0.22			-1.27 [*]			0.28			-1.23 [†] 0.29 -1.33 [*] 0.26
Husband's age in years												
36 years (ref: 35)				1.36 ^{**}			3.90			1.23 [*]		3.41 1.02 [†] 2.77
Husband's grades of schooling,												
9 (ref: 8)				-1.37 [*]			0.25			-2.77 ^{***}		0.06 -0.96 0.38
Husband is 7 years older (yes = 1)						-0.45			1.57	0.42		1.53 0.47 1.59 0.17 1.19
Husband has more schooling (yes = 1)						-0.11			0.89	1.02		2.77
Respondent has more schooling (yes = 1)						-0.71			0.49	-1.37 [*]		0.25
Constant	2.12 ^{**}			1.20 ^{***}		1.99 [*]				1.42 [*]		1.76 ^{**} 2.10 ^{***}
All situations												
Age												
26 years (ref: 25)	0.73 [†]		2.08			0.67			1.95			0.75 [†] 2.11
Grades of schooling completed												
3 (ref: 2)	-0.48		0.62			-0.29			0.75			-0.25 0.78 -0.30 0.74
Husband's age in years												
36 years (ref: 35)				1.05 ^{**}			2.85			0.83 [*]		-2.30 0.80 [†] 2.22
Husband's grades of schooling												
9 (ref: 8)				-0.83 [†]			0.44			-1.29 [*]		0.28 -0.71 0.49 1.57
Husband is 7 years older (yes = 1)						0.67 [†]			1.95	0.54		1.71 0.70 [†] 2.01 0.45
Husband has more schooling (yes = 1)						-0.09			0.92	0.35		1.41
Respondent has more schooling (yes = 1)						-0.43			0.65	-0.63		0.53
Constant	0.73			0.44		0.37				0.35		0.22 0.45

[†] $p < 0.10$,
^{*} $p < 0.05$,

**
 $p < 0.01$,
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 $p < 0.001$

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