A Survey Experiment of Women's Attitudes about Intimate Partner Violence against Women in Rural Bangladesh

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ABSTRACT

According to the Demographic and Health Surveys (DHS) in poorer countries, 4% – 90% of women of reproductive age report that *wife hitting or beating* is *justified*. Yet, the sensitivity of women's responses to the wording of this attitudinal question is unknown. Using data from 496 female participants in a survey experiment in rural Bangladesh, we explored response effects to versions of the attitudinal question in the 2007 Bangladesh DHS that (1) followed its original wording, (2) portrayed the wife as *not at fault* in the five situations to which the question was applied, and (3) portrayed the wife as *at fault* in these five situations. The situations portraying the wife as *not at fault* resulted in low probabilities of *justifying wife hitting or beating* (0.01–0.09). Portraying the wife as *at fault* resulted in higher, more variable probabilities of this response (0.41–0.70), which resembled the probabilities when the original situations were used (0.38–0.57). Thus, attitudinal questions in the DHS may overestimate women's *justification* of *wife hitting or beating*, and better data on women's adherence (or not) to prevailing norms of wife blaming for violence may inform interventions to promote ideational change where violence against wives is prevalent.

Keywords: Bangladesh, demographic and health surveys, gender attitudes, intimate partner violence, survey experiment

INTRODUCTION

Intimate partner violence (IPV)—or psychological, physical, or sexual assault by a current or former spouse or dating partner (Saltzman et al. 1999)—is a widely prevalent social problem. Globally, 11% – 71% of women of reproductive age report some prior physical IPV (Garcia-Moreno et al., 2006; ICF Macro, 2010; Johnson, Ollus, and Nevala 2008). Since 1995, 77 Demographic and Health Surveys (DHS) in 52 lower-income countries have gathered data on women's attitudes about such violence. Accordingly, between 4% and 90% of interviewed women have justified such violence for some reason (Author forthcoming).

The DHS are known for their cross-national comparability, and researchers increasingly are using these data in comparative studies of attitudes about IPV against women (e.g., Uthman, Lawoko, and Moradi, 2009, 2010; Uthman, Moradi, and Lawoko, 2009). Yet, since this question was first included in the DHS, notable variations to it have been used both contemporaneously across countries and over time within countries. Some of these variations have considerable predictive power and account for a non-trivial portion of the variance in women's reported attitudes (Author forthcoming). The latter study, although based on non-experimental DHS data, raises questions about the robustness of women's responses to variations in this question.

Using data from 496 women who took part in a survey experiment in rural Bangladesh, we explored response effects to variations in the attitudinal question about IPV against women that was included in the 2007 Bangladesh DHS (BDHS). This question asked respondents whether wife hitting (*aaghat*) or beating (*maardhor*) was justified in any of five situations. These situations reflected, to different degrees, a wife's transgression of gender normative behaviors, such as *neglecting the children* and *not asking permission to go out*. Cognitive interviews with a separate sample of village women informed the development of two alternative versions of these situations for inclusion in a

controlled survey experiment. The control version of these five situations used their exact wording in the 2007 BDHS question. One alternative set added details to each situation portraying the wife as *not at fault*, and the second added details to each situation portraying the wife as *at fault*, by the standards of prevailing gender norms. Large differences in women's responses depending upon the version used suggest that prior estimates of women's *justification* of *wife hitting or beating* should be read with caution. Better data on women's adherence (or not) to the norm of wife blaming for violence may identify subgroups for interventions directed at ideational change.

<div align="center">WOMEN'S JUSTIFICATION OF IPV UNDER CLASSIC PATRIARCHY</div>

To frame our focus on *fault* in this experiment, we adapted Kandiyoti's (1988) theory of bargaining under classic patriarchy to clarify (1) how gendered rights and obligations are distributed in rural Bangladeshi marriages, and (2) the associated structural and ideological constraints that may pressure women to *justify wife hitting or beating.* According to Kandiyoti (1988), different forms of male domination have motivated different strategies by women to maximize their security. *Classic patriarchy* is one type of male domination that has appeared in parts of the Muslim Middle East, North Africa, and South and East Asia (Kandiyoti 1988). Under classic patriarchy, girls are married at relatively young ages into households that are headed by their husbands' fathers. The marriage market in rural Bangladesh is no exception (e.g., Alam 2007). Although Muslim women legally have the right to choose their spouse, in practice their fathers or elder brothers often choose (Alam 2007; Baden et al. 1994), and legal guardianship for the woman passes from father to husband (Alam 2007). More broadly, a new bride is subordinate to the men and more senior women, and the patrilineage appropriates her labor and offspring (Kandiyoti 1988). In rural Bangladesh, the division of labor remains highly gendered, with women expected to work inside the home and men expected to work outside (Alam 2007; Baden et al. 1994; Chowdhury 2009). Although this division is relaxing in rural

areas, husbands often appropriate the earnings of working wives (Chowdhury 2009). Thus, a wife is expected to exchange obedience for her husband's maintenance (e.g., Alam 2007; Author 2010). Obedience and the avoidance of shame are central to norms of respectable femininity (Alam 2007; Feldman 2010; Author 2010). In turn, hegemonic norms of masculinity grant husbands the authority to interpret and enforce their wives' obedience (Author forthcoming), as well as the legitimacy to sanction wives who are labeled as shamed (Feldman 2010).[1]

Despite the hardships of young wives under classic patriarchy, its perceived benefits for women may motivate their conformity (Kandiyoti 1988). Marriage provides women with social prestige, confers a sense of personal and social identity, and ensures their social standing in the village community (*samaj*) (Alam 2007). Across her life cycle, a woman's authority over daughters-in-law also displaces the hardships of early marriage. Women's expectations of "inheriting the authority of senior women" encourage them to internalize this form of patriarchy (Kandiyoti 1988: 279). Thus, women's reading of *wife hitting or beating* as *justified* likely reflects these structural and ideological pressures, and IPV by husbands (especially in early marriage) becomes normalized as a legitimate "corrective" measure for deviant wives (Author 2009, 2010). Among South Asian immigrants to Canada, for example, women who have agreed with patriarchal social norms less often have defined spousal aggression as violence (Ahmad et al. 2004).

Yet, conformity to the norm of wife-blaming for violence may not be universal among rural women in Bangladesh. Structural changes—including rapid increases in women's schooling (Asadullah and Chaudhury 2009; Baden et al. 1994)—have exposed women to new opportunities and ideas about gender. As a result, women's attitudes about IPV against women may be more nuanced than the above discussion suggests. Qualitative data from rural Bangladesh provide evidence of women's ideological resistance (Author 2008). Some women have condemned wife

beating that occurs for what they see as trivial reasons or based on false accusations (Author forthcoming). Thus, according to prevailing gender norms in rural Bangladesh, the depiction of a wife as innocent or at fault may strongly influence women's attitudes about IPV against women. In this context, we developed a survey experiment to assess women's attitudes about IPV against women when the basic DHS question was varied to capture prevailing ideologies regarding the circumstances when wives are or are not at fault for violence.

<div align="center">SETTING</div>

According to the DHS in South Asia, between 29% of ever-married women in Nepal and 57% of such women in India have agreed that *wife beating* is *justified* (Rani and Bonu 2009). Reported attitudes in Bangladesh are intermediate, with 36% of ever-married women and men reporting that *wife hitting or beating* is *justified* (National Institute of Population Research and Training [NIPORT], Mitra and Associates [MA], and Macro International [MI] 2009). This percentage has been stable for men since 1999/2000 (National Institute of Population Research and Training [NIPORT], Mitra and Associates [MA], and ORC Macro [ORCM] 2001); yet, changes to the attitudinal question preclude strict comparisons (Yount, et al. forthcoming).[2]

Rural Bangladesh is a suitable setting for this study because of high reported levels of IPV against women (16% - 72%) (Bangladesh Institute of Development Studies [BIDS] 2004; Bates, et al. 2004; Khan, Rob, and Hossain 2001; Koenig, et al. 2003; Naved and Perrson 2005; Author 1996; Steele, Amin, and Naved 1998). The study sites were six villages in Faridpur, Magura, and Rangpur districts. These villages, although not randomly selected, are not unusual in rural Bangladesh (Bates et al. 2004), being poor and somewhat, but not atypically, conservative. As in most of Bangladesh, the villagers are ethnically and religiously homogeneous, with most self-identifying as Bangladeshi / Bengali and Muslim (96%). Each village has a school located in it or within 2.0 kilometers and at

least one non-governmental organization (NGO) providing primary health care, schooling, microcredit, or legal advice. At the time of this study, some women (40% in one village but 2% – 5% in the others) were working as vendors or in rice processing centers or small rural factories near their home villages. By 2008, around 1% to 15% also had migrated to the capital Dhaka or to district towns to work in garment factories or as cooks for factory workers. A few men from some of the villages had migrated to Dhaka or the Middle East for work.

SAMPLE AND DATA

This study was approved by the Emory Institutional Review Board and the Bangladesh Medical Research Council. The main data for this analysis came from the survey sample, and data from 27 cognitive interviews with different village women guided interpretation of the survey results (Details on the cognitive interviews are available in Author [forthcoming].). The survey sample was drawn from a census of households that was conducted in the study villages from September 15 to December 29 of 2008. This census updated one from 2002, and permitted probability sampling of the survey participants before purposively selecting different participants for the cognitive interviews. In the 2008 census, new household members since 2002 were listed, and prior members who had migrated, died, or were untraceable were recorded as such. Basic demographic attributes of all household members also were recorded, and an approximate one-third subsample of households ($n = 550$) was selected with probability proportional to the number of eligible women in each village. These women were ever-married, usual residents of reproductive age, defined as 18 to 49 years,[3] 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.[4] Each selected woman was randomly assigned to one of six attitudinal modules (Figure 1, Appendix A). Of the 550 selected women, 496 or over 90%

completed their interviews, with response rates similar across the six survey subgroups (87% – 94%, Figure 1).

[Figure 1]

All interviews were conducted in private in respondents' homes by interviewers with extensive prior work experience in the study villages. All participants first provided detailed information on their socio-demographic backgrounds by responding to identical questions that were modeled after the 2007 BDHS.[5] Such data included their prior and current residence(s), marital status, literacy, exposure to the media, religion, organizational membership, residence with spouse, decision-making about household matters, and own and husband's age, schooling, age at first marriage, work status, and occupation. Survey participants then received one of six randomly assigned modules, each containing two five-part questions. One of these questions pertained to personal attitudes about whether hitting or beating a wife was justified in the context of five situations, each reflecting an action of the wife that transgressed customary gender norms. Three variants of these situations were created, in which their wording (A) followed exactly that used in the 2007 BDHS, or portrayed the wife consistently as being (B) *not at fault* or (C) *at fault*, according to prevailing gender norms. Variants A, B, and C of this question were paired, respectively, with cognate variants D, E, and F of a second question pertaining to perceptions of community norms about whether hitting or beating a wife was justified. These three pairs of questions (A:D, B:E, and C:F) were administered at the end of the interview. The questions within each pair were ordered randomly (e.g., A and D were randomly ordered) to address the possibility that receiving one five-part question first framed responses to the second five-part question. Figure 1 summarizes the process undertaken to randomize survey participants to these six questionnaire subgroups (A then D, D then A, B then E, E then B, C then F, and F then C). Appendix A provides the exact (translated) questions to which

respondents were randomized.

The present analysis focused on whether and to what extent variations in the portrayal of the wife as *not at fault* or *at fault* altered the probability of a participant responding that *wife hitting or beating* was, in her opinion, *justified* in each of the five situations and in any of the five situations combined. Thus, six binary outcomes were created to address this question. Five captured whether the respondent answered *yes* (= 1) versus *no* (= 0) to this question in each of the five situations separately. The sixth outcome captured whether the respondent answered *yes* (= 1) versus *no* (= 0) to this question with respect to any of the five situations.

The main *treatment* variable of interest was the variant of the personal attitudes question that the respondent received, with those receiving variant A (the *DHS-control*) being in the control group (= 0), and those receiving variants B (*wife not at fault* = 1) and C (*wife at fault* = 2) being in the treatment groups. Covariates also were considered in this analysis to control for any observed differences (after randomization) across the above groups. Controls were considered for several characteristics of the respondent, including her marital status, religion, age in years, ever attendance of school, mean completed grades of schooling, work in the prior seven days, reported exposure to the media at interview (reading newspapers or magazines, listening to the radio, and watching television), and membership in specific community organizations. Controls for the age in years, coresidential status, ever schooling, and completed grades of schooling of the respondent's husband also were considered. (Note that missing values for the husband's age [*n* = 31], completed grades of schooling [*n* = 4], and residential status [*n* = 30] were imputed with the mean or modal value in the observed sample, and indicator variables for imputation were created for these three variables.) Finally, controls were considered for the sub-district (*upazila*) of residence, random ordering of the personal attitudes versus community norms questions, and presence of children less than 10 years

during the respondent's interview.

As shown in Table 1, the randomization process resulted in very few differences across the subgroups in the survey. Differences ($p \leq .10$) were apparent only for the respondent's marital status and exposure to print media, her husband's completed grades of schooling, and the presence of young children during the interview. These variables were controlled in the multivariate analysis (see below).

[Table 1]

METHOD

Univariate analyses of all outcomes and covariates were performed to assess their completeness and distributions. Bivariate analyses, using χ^2 tests of independence, then were performed to assess (a) the unadjusted associations of all variables, (b) the comparability of characteristics of the subgroups, and (c) potential colinearities among the covariates.

Twelve regressions then were estimated to explore the associations of survey *treatment* with each of the six outcomes, unadjusted and adjusted for observed differences across experimental groups in marital status, exposure to print media, the husband's completed grades of schooling, the presence of young children in the interview, and the ordering of the two questions in the attitudinal module. Let i denote respondent, Y_i the outcome for respondent i, $\mathbf{T}_i$ the personal attitudes question to which respondent i was randomized, and $\mathbf{X}_i$ a vector of covariates for respondent i. For each outcome, binomial logistic regression was used to model the conditional probability of the outcome, $\pi_i = Pr(Y_i = 1 \mid \mathbf{T}_i , \mathbf{X}_i)$ as a linear function of the covariates:

$$\text{logit}(\pi_i) = \beta_0 + \boldsymbol{\beta}\mathbf{T}_i + \boldsymbol{\beta}\mathbf{X}_i \tag{1}$$

where $\text{logit}(\pi_i) = \ln(\pi_i /1- \pi_i)$. Model diagnostics were performed, and no multivariate model showed significantly poor fit (Hosmer and Lemeshow 2000). From these models, predicted values were

estimated at the mean (for husband's grades of schooling) or mode (for categorical variables) of the covariates to compare the probabilities of *justifying wife hitting or beating* for each of the outcomes, by experimental group. Finally, a descriptive analysis was performed to characterize respondents who *justified hitting or beating wives* even when they were portrayed as *not at fault* and those women who did not justify hitting or beating wives even when they were portrayed as *at fault*, according to prevailing gender norms. Based on the multivariate findings, quotes were selected from the cognitive interviews to provide a more in-depth understanding of the meanings of women's responses to the survey questions.

RESULTS

Characteristics of Respondents

Women across all experimental groups were similar on most observed attributes, and so those of the full sample are discussed (Table 1). Most women (94%) were married at the time of interview, and 96% self-identified as Muslim. The mean age was around 34 years, and the mean age of their husbands was 43 years. Around 60% of women had ever attended school, and women had completed a mean of 3.4 grades. More than half of their husbands had ever attended school, and husbands had completed 4.4 grades, on average. A small minority of women (9%) reportedly read the print media, slightly more women (19%) listened to the radio, but almost half (44%) reportedly watched television. Membership in organizations generally was uncommon, but around one quarter (26%) of women belonged to the Grameen Bank. Almost 90% of women were living with their husband at the time of the interview, and 40% had worked outside of the house in the prior week. A majority (53%) of women reportedly decided alone about purchases for daily household needs, and one quarter to one third reportedly decided alone about health care for themselves and visits to family. Proportionately fewer (16%) reportedly decided alone about major household purchases. The

percentage of imputed values for the age, co-residential status, and grades of schooling of respondent's husbands did not differ significantly across the survey subgroups.

Table 2 provides estimates of the percentages of women responding *yes* to the three sets of variants (A, B, C) of the personal attitudes question about IPV against women, overall as well as by order of the question with its pair (D, E, F) and situation for which the question was asked. In most situations, the order in which the question pairs were asked did not affect the percentage of women responding *yes* to the personal attitudes question when the DHS-control and wife *not at fault* situation variants were asked. However, when women were asked first about their perceptions of community norms regarding hitting or beating a wife who was portrayed as *at fault*, they personally justified such violence marginally more often in two situations—when the wife goes out without telling her husband and when she does not obey elders in his family.

[Table 2]

Otherwise, across all situations, few respondents (1% – 8%) agreed that hitting or beating a wife was justified when the wife was portrayed as *not at fault*. By contrast, much higher and more variable percentages (38% – 68%) of respondents agreed that such violence was justified when the wife was portrayed as *at fault*. In this group, women most often stated that such violence was justified for disobeying elders in the marital family (68%), neglecting the children (65%), and arguing with the husband (59%). In general, when the DHS-control situations were used, the percentages of women who *justified wife hitting or beating* were intermediate (37% – 57%) to the percentages when the *at fault* and *not at fault* variants of the situations were used.

Table 3 provides the unadjusted and adjusted log odds and odds of *justifying wife hitting or beating* for each treatment group relative to the DHS-control group, by situation. In general, the unadjusted and adjusted relative odds were very similar, so only the latter are discussed. Except for

two situations (the wife *goes out without telling him* and the wife *refuses to have sex with him*), women who received the *wife at fault* variants of the five situations had 1.6 to 2.4 times higher adjusted odds of *justifying wife hitting or beating* than when the DHS-control situations were used. Across all situations except one (the wife *goes out without telling him*), women who received the *wife not at fault* variant of each situation had between 90% and 99% lower adjusted odds of *justifying wife hitting or beating* than when the DHS-control situations were used. No control variables were consistently significantly associated with women's responses to the attitudinal question across situations.

[Table 3]

Table 4 shows the predicted probabilities of *justifying wife hitting or beating* for the DHS-control situations, *wife not at fault* situations, and *wife at fault* situations. All other covariates were set to their mean (husband's grades of schooling) or mode (all other covariates). Certain results in Table 4 are especially notable. First, the probability that a woman *justified wife hitting or beating* was highly sensitive to the wording of the situation. Portrayals of the wife as *not a fault* yielded consistently low probabilities of justifying such violence across each situation (0.01 – 0.09) and for at least one situation (0.10). By contrast, portrayals of the wife as *at fault* yielded consistently higher probabilities of justifying such violence across each situation (0.41 – 0.70) and for at least one situation (0.80). Second, portrayals of the wife as *at fault* yielded much more variable probabilities of justifying such violence, with justification more likely for *disobeying elders* (0.70), *neglecting the children* (0.67), and *arguing with the husband* (0.63) and less likely for *refusing to have sex with the husband* (0.41) and *going out without telling him* (0.51). Thus, a substantial probability of NOT *justifying wife hitting or beating* was apparent across all situations (0.30 – 0.59), even when the situations were framed in accordance with the prevailing norm of blaming a husband's violence on the wife's transgressions.

[Table 4]

The latter findings suggested two final questions: First, what were the attributes of the respondents who *justified wife hitting or beating* in at least one of the five situations in which the wife was portrayed as *not at fault*? We called these respondents *conformists* to the prevailing norm of blaming the wife for her husband's violence against her. Second, what were the attributes of the respondents who did not *justify wife hitting or beating* in at least one of the five situations in which the wife was portrayed as *at fault*? We called these responses *non-conformists* to the prevailing norm of blaming the wife for her husband's violence against her. Table 5 presents the descriptive characteristics of each of these groups. In general, *conformists* were less often married at interview (81% versus 94%), marginally less often had ever attended school (38% versus 60%), had completed fewer grades of schooling (1.5 versus 3.4), marginally less often listened to the radio (e.g., 0% versus 19%), marginally less often belonged to the Grameen Bank (6% versus 26%), and less often made decisions about purchases for daily needs (25% versus 53%). *Non-conformists*, by contrast, more often had attended school (69% versus 60%), had completed more grades of schooling (4.3 versus 3.4), more often read a newspaper or magazine (15% versus 9%), more often had a husband who had ever attended school (69% versus 59%), and had a husband with a higher mean number of grades of schooling (5.6 versus 4.1).[Table 5]

Cognitive interviews corroborated the idea that diverse moral standards regarding wife beating were present in these villages. Some women stated their personal ambivalence with wife-beating: "Well, in one sense he is justified in beating the wife while in another sense he is not." (ID 512002, 35 years, no schooling) (see Author under review). In addition, groups of village women adhered to different morals standards. One *strong conformist* advised us that "[e]very woman should possess an inner fear that if she does something wrong then her husband would beat her, so that she chooses to live in such a way that she avoids beating" (ID 605902, 30 years old, 2 grades of

schooling). In contrast, a minority of *non-conformist* women condemned wife beating most of the time, describing men who beat their wives as "evil," "ignorant," "without consciences," and "lacking in humanity" (full results available upon request). One *non-conformist* made the following ironic statement when asked whether people in her village thought it justified for a man to beat his wife if she served his meal late because she had spent the morning gossiping with friends: "Nobody likes it when a few women get together to talk with each other. Everyone thinks the only purpose of a woman's life is to cook" (ID 606402, 43 years old, 12 grades of schooling). Another *non-conformist* explained that "[t]here has been a change among people. The modern generation thinks it is not justified for a husband to beat his wife under any circumstance. People who stick with outdated ideas and beliefs would say that beating is a justified action" (ID 602602, 39 years old, 9 grades of schooling).

DISCUSSION

This analysis used novel data from a survey experiment of women in rural Bangladesh to explore response effects to variations in an attitudinal question asking whether them domestic violence against women was justified. Our experiment compared the probabilities of justification when the 2007 Bangladesh DHS question wording was used, versus modifications portraying the wife as *at fault* or *not* in five situations of gender-transgressive behavior. Our experiment explored Kandiyoti's (1988) idea that many women who live under *classic patriarchy* are pressured to conform to the norms of wife blaming for violence. We expected, on the basis of separate cognitive interviews, that not all women would conform, given recent and substantial changes in rural women's opportunities. To our knowledge, this study is the first experiment of its kind, and documents the sensitivity of women's responses to controlled variations in questions intended to elicit their attitudes about wife beating. Such methodological research is greatly needed, given that 77 DHS across 52 lower-income

countries have gathered data on this topic from women.

Several important findings warrant comment. First, the situations portraying the wife as *not at fault* resulted in negligible probabilities of *justifying wife hitting or beating* (0.01–0.09). These findings expose women's strong inclination not to justify violence that they see as indiscriminate (also see Author forthcoming). Findings from the cognitive interviews confirmed that some women, while perhaps justifying wife beating in some circumstances, believed that much of what actually occurred was capricious and unjust. That said, we identified a few women assigned to the *wife-not-at-fault* group (16 of 171) as *conformists*, in that they justified violence in at least one *not-at-fault* situation. These women, as expected, were less schooled, reported less power in decisions, less often were members of women's credit organizations, and had less exposure to certain forms of media. Thus, rural women with fewer resources and less exposure to new ideas may be the most likely to adhere to the prevailing norm of blaming women for their husbands' violence against them (Author forthcoming).

Second, the situations portraying the wife as *at fault* resulted in higher, more variable probabilities of *justifying wife hitting or beating* (0.41–0.70). In this case, respondents tended not to justify such violence when wives refused sex but tended to justify it when they disobeyed elders. Refusing to have sex with one's husband is a private act, which wives may rarely do unless they are unwell, a circumstance in which refusing may be mutually accepted. In contrast, disobeying elders is a public act, and men may feel pressured by parents and others to "discipline" such acts. These findings contradicted somewhat the idea that women under classic patriarchy will conform to prevailing gender norms (Kandiyoti 1988). Instead, these findings corroborate (at least cross-sectionally) the idea that substantial changes in rural women's lives were leading them to adopt non-conformist gender attitudes. Indeed, many women assigned to the *wife-at-fault* group (109 of 160) reported for at least one situation that *wife hitting or beating* was not *justified*. The attributes of these

non-conformists were indicative of social changes in rural Bangladesh, including having higher schooling, more media exposure, and more schooled husbands.

Finally, the probabilities of *justifying wife hitting or beating* among the DHS-control group of women (0.38 – 0.57) were more similar to the probabilities among the *at-fault* group (0.41 – 0.70). Thus, it is possible that the 2007 BDHS overestimated the extent to which women *justify wife hitting or beating*. This finding further corroborates the ambivalence and inconsistency in some women's responses to the DHS-type question in the cognitive interviews (Author under review).

Our findings offer useful guidance for the modification of structured attitudinal questions pertaining to domestic violence against women. In general, the DHS and other surveys that wish to explore such attitudes in women need to reconsider the wording of this attitudinal question to capture prevailing gender norms that define when a woman is or is not at fault. Such questions may help to track over time the extent to which women adhere to notions of fault, or abandon them as they acquire new opportunities and exposures.

Our findings also generate new questions for research. First, how generalizable are these findings beyond our study villages? An answer to this question would require comparative survey experiments. Second, to what extent would men's responses to this attitudinal question depend on prevailing notions of wife blaming for a husband's violence? This question suggests the need for survey experiments among men, and comparing women to men. Third, is the current DHS attitudinal question adequately capturing the most salient transgressive behaviors of a wife to which her husband might respond with violence? This question would motivate experimental research in which the wife's transgressive behaviors would be systematically altered. Finally, additional experiments might be useful to assess the response effects among women and men of altering the wording of the actual question (Appendix). Such experiments, for example, might test the effects of

using different terms to connote a husband's violence (*hit*, *beat*, or both) and/or women's attitudes about it (is it *justified*, *right*, or *normal*?) (Yount et al. forthcoming). The broader goal of this methodological research is to better understand the nature and meanings of women's personal attitudes about domestic violence against women. Our findings here strongly suggest that more research of this kind is needed in various settings.

ENDNOTES

[1] The recent legal provisions of up-to-death penalty for violence against women in Bangladesh should discourage IPV against women (Bhuiya, Sharmin, & Hanifi 2003); however, access to legal services for poor, rural women is limited because such services are largely city-based and have associated psychic and financial costs. Discussions with villagers also suggest that IPV against women is neither condoned nor fully condemned, but that at times, one needs to resort to violence to control one's wife. Thus, the deterrent provided by legal provisions is limited to extreme violence or femicide (Bhuiya et al. 2003).

[2] The wording of the question in 1999–2000 read: "It is normal for couples to have quarrels and disagreements. During those quarrels some husbands occasionally severely reprimand or even beat their wives. In your opinion, do you think a man would be justified to beat his wife: If she goes out without telling him? If she neglects the children? If she argues with her husband? If she fails to provide food on time?" The wording of the question in 2007 read: "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: If she goes out without telling him? If she neglects the children? If she argues with him? If she refuses to have sex with him? If she does not obey elders in the family?"

[3] This age range differed slightly from the DHS (15 – 49 years) to include only adult women, defined as at least 18 years.

[4] Few 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.

[5] 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 Bangladesh Demographic and Health Survey (BDHS).

Appendix

Control Survey A: DHS question, Personal attitudes
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 "not at fault," Personal attitudes
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 <u>children</u>. I am asking whether you think the husband is justified in hitting or beating <u>his wife</u> 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 "at fault," Personal attitudes
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 <u>children</u>. I am asking whether you think the husband is justified in hitting or beating <u>his wife</u> 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?

Control Survey D: DHS question, Perceived community 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. 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 "not at fault," Perceived community 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 <u>children</u>. I am asking whether other people in your community think the husband is justified in hitting or beating <u>his wife</u> 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 "at fault," Perceived community 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 <u>children</u>. I am asking whether other people in your community think the husband is justified in hitting or beating <u>his wife</u> 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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Table 1. Characteristics of the study sample, by experimental questionnaire groups, n = 496 women in six villages in rural Bangladesh

	DHS-control question: standard situations 1 - 5				DHS-modified question: wife not at fault in situations 1 - 5				DHS-modified question: wife at fault in situations 1 - 5					Full sample	
Order of individual attitude (A, B, C) and perception of community norm (D, E, F) question sets: (n)	A then D (81)		D then A (84)		B then E (86)		E then B (85)		C then F (81)		F then C (79)			(496)	
	Mean	(s.e.)	Mean	(s.e.)	Mean	(s.e.)	Mean	(s.e.)	Mean	(s.e.)	Mean	(s.e.)	p	Mean	(s.e.)
Characteristics															
Marital status (married=1)	95.00	(0.02)	95.00	(0.02)	91.00	(0.03)	88.00	(0.04)	94.00	(0.03)	99.00	(0.01)	†	93.50	(0.01)
Religion (Islam=1)	96.00	(0.02)	96.00	(0.02)	95.00	(0.02)	98.00	(0.02)	94.00	(0.03)	99.00	(0.01)		96.00	(0.01)
Age in years	33.63	(1.03)	34.13	(1.00)	34.13	(1.01)	34.08	(1.00)	33.20	(1.01)	34.41	(1.06)		33.92	(0.41)
Ever attended school (yes=1)	62.00	(0.05)	60.00	(0.05)	60.00	(0.05)	51.00	(0.05)	68.00	(0.05)	62.00	(0.05)		60.20	(0.02)
Mean completed grades of schooling	3.70	(0.39)	3.03	(0.37)	3.33	(0.37)	2.85	(0.38)	3.70	(0.39)	4.10	(0.47)		3.44	(0.16)
Worked outside in last 7 days (yes=1)	34.50	(0.05)	44.70	(0.05)	46.50	(0.05)	36.40	(0.05)	40.70	(0.05)	37.90	(0.05)		40.30	(0.02)
Reads a newspaper or magazine (yes=1)	7.00	(0.03)	5.80	(0.03)	6.90	(0.03)	9.40	(0.03)	8.60	(0.03)	15.10	(0.04)	†	8.80	(0.01)
Listens to the radio (yes=1)	12.00	(0.04)	17.00	(0.04)	26.00	(0.05)	14.00	(0.04)	23.00	(0.05)	19.00	(0.04)		18.50	(0.02)
Watches television (yes=1)	51.00	(0.06)	33.00	(0.05)	48.00	(0.05)	42.00	(0.05)	47.00	(0.06)	46.00	(0.06)		44.30	(0.02)
Belongs to the ASHA (yes=1)	12.00	(0.04)	10.00	(0.03)	12.00	(0.03)	11.00	(0.03)	6.00	(0.03)	15.00	(0.04)		10.80	(0.01)
Belongs to GRAMEEN (yes=1)	27.00	(0.05)	24.00	(0.05)	30.00	(0.05)	31.00	(0.05)	25.00	(0.05)	20.00	(0.05)		26.20	(0.02)
Belongs to BRAC (yes=1)	17.00	(0.04)	12.00	(0.04)	12.00	(0.03)	7.00	(0.03)	10.00	(0.03)	11.00	(0.04)		10.00	(0.01)
Belongs to BRDB (yes=1)	0.00	(0.00)	2.00	(0.02)	3.00	(0.02)	0.00	(0.00)	4.00	(0.02)	3.00	(0.02)		2.00	(0.01)
Belongs to PROSHIKA (yes=1)	1.00	(0.01)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)		0.20	(0.00)
Belongs to any community organization	48.10	(0.06)	41.60	(0.05)	48.83	(0.05)	43.50	(0.05)	41.97	(0.06)	45.56	(0.06)		44.90	(0.02)
Husband's age in years	43.07	(1.27)	43.23	(1.24)	41.62	(1.06)	43.20	(1.12)	41.99	(1.15)	43.67	(1.26)		42.77	(0.48)
Husband's age in years imputed (yes=1)	49.69	(0.02)	4.76	(0.02)	9.30	(0.03)	11.76	(0.04)	6.17	(0.03)	1.26	(0.01)		6.45	(0.01)
Husband coresident (yes=1)	86.00	(0.03)	94.00	(0.04)	87.00	(0.03)	81.10	(0.03)	88.80	(0.03)	92.40	(0.04)		88.30	(0.01)
Husband coresidence status missing (yes=1)	4.93	(0.02)	4.76	(0.02)	9.30	(0.03)	10.58	(0.03)	6.17	(0.03)	12.66	(0.01)		6.25	(0.01)
Husband ever attended school (yes=1)	57.00	(0.05)	51.00	(0.05)	57.00	(0.05)	55.00	(0.05)	67.00	(0.05)	68.00	(0.05)		59.00	(0.02)
Husband's mean completed grades of schooling	4.49	(0.50)	3.86	(0.50)	3.69	(0.46)	3.88	(0.46)	5.44	(0.53)	5.22	(0.53)	*	4.41	(0.20)
Husband's completed grades of schooling imputed (yes=1)	0.00	(0.00)	1.19	(0.01)	0.00	(0.00)	1.17	(0.01)	0.00	(0.00)	2.53	(0.02)		0.80	(0.00)
Wife decides about healthcare for herself (yes=1)	27.00	(0.05)	29.00	(0.05)	23.00	(0.05)	33.00	(0.05)	26.00	(0.05)	25.00	(0.05)		27.20	(0.02)
Wife decides about major household purchases (yes=1)	15.00	(0.04)	14.00	(0.04)	16.00	(0.04)	21.00	(0.04)	15.00	(0.04)	14.00	(0.04)		15.92	(0.02)
Wife decides about purchases for daily needs (yes=1)	54.00	(0.06)	51.00	(0.05)	53.00	(0.05)	52.00	(0.06)	51.00	(0.06)	57.00	(0.06)		53.02	(0.02)
Wife decides about visits to family (yes=1)	38.00	(0.05)	35.00	(0.05)	36.00	(0.05)	42.00	(0.05)	27.00	(0.05)	33.00	(0.05)		35.28	(0.02)
Presence of children < 10 years during interview (yes=1)	6.17	(0.24)	13.09	(0.34)	17.44	(0.38)	4.70	(0.21)	8.64	(0.28)	11.39	(0.32)	†	10.28	(0.30)

Notes. Missing values for three variables were imputed with a mean or an estimated value. 31 (6.2%) missing values for husband's age in years were replaced with the mean husband's age (42.77); 4 (0.8%) missing or unknown values for husband's completed grades of schooling were replaced with the mean completed grades within a particular level of schooling; 30 (6.0%) missing values for husband's coresidence status were replaced with a 1.

† $p \leq 0.10$, * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Table 2. Percent distribution of responses to individual attitude question about domestic violence against women, by experimental group and situation, $n = 496$ women in six villages in rural Bangladesh

Order of individual attitude (A, B, C) and perception of community norm (D, E, F) (n)	DHS-control question: standard situations 1 - 5				DHS-modified question: wife *not at fault* in situations 1-5				DHS-modified question: wife *at fault* in situations 1-5				
	A (165)	A then D (81)	D then A (84)	p	B (171)	B then E (86)	E then B (85)	p	C (160)	C then F (81)	F then C (79)	p	p
Situation 1: Goes out without telling him?													
Yes	46.06	39.50	52.38	†	8.18	6.90	9.41		48.13	40.74	55.69	†	***
No	53.94	60.50	47.62	†	91.82	93.10	90.59		51.87	59.26	44.31	†	***
Situation 2: Neglects the children?													
Yes	44.24	39.50	48.80		2.34	2.32	2.35		65.00	64.19	65.82		***
No	55.76	60.50	51.20		97.66	97.68	97.65		35.00	35.81	34.18		***
Situation 3: Argues with him?													
Yes	49.69	51.85	47.61		0.58	0.00	1.17		59.38	56.79	62.03		***
No	50.31	48.15	52.39		99.42	100.00	98.83		40.62	43.21	37.97		***
Situation 4: Refuses to have sex with him?													
Yes	36.96	34.56	39.28		0.58	0.00	1.18		37.50	35.37	38.75		***
No	63.04	65.44	60.72		99.42	100.00	98.82		62.50	64.63	61.25		***
Situation 5: Does not obey elders?													
Yes	56.96	58.02	55.90		1.17	1.16	1.17		68.13	61.73	74.68	†	***
No	43.04	41.98	44.10		98.83	98.84	98.83		31.87	38.27	25.32		***
Any situation?													
Yes (in any Situation)	67.27	69.13	65.47		9.36	8.14	10.59		79.38	76.54	82.28		***
No	33.33	30.87	34.53		90.64	91.86	89.41		20.62	23.46	17.72	†	***

Notes. DHS = Demographic and Health Survey.

† $p \leq 0.10$, * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Table 3. Unadjusted and adjusted log odds and odds of giving an affirmative response to the individual attitude question about intimate partner violence against women, n = 496 respondents randomly assigned to the DHS-control question or one of two DHS-modified questions, six villages in rural Bangladesh

Outcome	Unadjusted				Adjusted			
Covariates	β	p	OR	$p>\chi2$	β	p	OR	$p>\chi2$
Situation 1: Goes out without telling him?								
Experimental group (ref: DHS-control)								
DHS-modified - wife not at fault	-2.26	0.00	0.10		-2.27	0.00	0.10	
DHS-modified - wife at fault	0.08	0.71	1.09		0.13	0.57	1.14	
Marital status (married=1)					1.00	0.10	2.71	
Reads a newspaper or magazine (yes=1)					-0.71	0.10	0.49	
Husband's completed grades of schooling					-0.02	0.53	0.99	
Husband's completed grades of schooling imputed (yes=1)					1.74	0.03	5.70	
Presence of children < 10 years during interview (yes=1)					0.16	0.64	1.17	
Perceptions of community norms question asked first (yes=1)					0.50	0.02	1.65	
Constant	-0.16	0.31			-1.29	0.04		
HL Goodness-of-fit Test				1.00				0.89
Situation 2: Neglects the children?								
Experimental group (ref: DHS-control)								
DHS-modified - wife not at fault	-3.50	0.00	0.03		-3.48	0.00	0.03	
DHS-modified - wife at fault	0.85	0.00	2.34		0.89	0.00	2.44	
Marital status (married=1)					0.81	0.19	2.25	
Reads a newspaper or magazine (yes=1)					-0.52	0.19	0.59	
Husband's completed grades of schooling					-0.004	0.87	1.00	
Husband's completed grades of schooling imputed (yes=1)					0.16	0.87	1.17	
Presence of children < 10 years during interview (yes=1)					-0.01	0.99	0.99	
Perceptions of community norms question asked first (yes=1)					0.21	0.35	1.24	
Constant	-0.23	0.14			-1.07	0.08		
HL Goodness-of-fit Test				1.00				0.86
Situation 3: Argues with him?								
Experimental group (ref: DHS-control)								
DHS-modified - wife not at fault	-5.12	0.00	0.01		-5.12	0.00	0.01	
DHS-modified - wife at fault	0.39	0.08	1.48		0.47	0.04	1.60	
Marital status (married=1)					0.47	0.39	1.60	
Reads a newspaper or magazine (yes=1)					-1.02	0.02	0.36	
Husband's completed grades of schooling					-0.01	0.71	0.99	
Husband's completed grades of schooling imputed (yes=1)					-1.07	0.37	0.34	
Presence of children < 10 years during interview (yes=1)					0.08	0.84	1.08	
Perceptions of community norms question asked first (yes=1)					0.07	0.76	1.07	
Constant	-0.01	0.94			-0.40	0.47		
HL Goodness-of-fit Test				1.00				0.62

Table 3. (continued)

Outcome	Unadjusted			Adjusted		
Covariates	β p	OR	p>χ2	β p	OR	p>χ2
Situation 4: Refuses to have sex with him?						
Experiment group (ref: DHS-control)						
DHS-modified - wife not at fault	-4.60 0.00	0.01		-4.64 0.00	0.01	
DHS-modified - wife at fault	0.02 0.92	1.02		0.11 0.64	1.11	
Marital status (married=1)				0.11 0.85	1.12	
Reads a newspaper or magazine (yes=1)				-1.01 0.05	0.36	
Husband's completed grades of schooling				-0.04 0.11	0.96	
Husband's completed grades of schooling imputed (yes=1)				1.19 0.31	3.29	
Presence of children < 10 years during interview (yes=1)				-0.28 0.48	0.75	
Perceptions of community norms question asked first (yes=1)				0.19 0.41	1.21	
Constant	-0.53 0.00			-0.50 0.40		
HL Goodness-of-fit Test			1.00			0.89
Situation 5: Does not obey elders?						
Experiment group (ref: DHS-control)						
DHS-modified - wife not at fault	-4.72 0.00	0.01		-4.80 0.00	0.01	
DHS-modified - wife at fault	0.48 0.04	1.61		0.55 0.02	1.74	
Marital status (married=1)				-0.05 0.94	0.95	
Reads a newspaper or magazine (yes=1)				-0.53 0.20	0.59	
Husband's completed grades of schooling				-0.03 0.21	0.97	
Husband's completed grades of schooling imputed (yes=1)				2.57 0.00	13.13	
Presence of children < 10 years during interview (yes=1)				-0.02 0.97	0.98	
Perceptions of community norms question asked first (yes=1)				0.20 0.39	1.22	
Constant	0.28 0.08			0.40 0.55		
HL Goodness-of-fit Test			1.00			0.74
Any of the five situations?						
Survey experiment (ref: DHS-control)						
DHS-modified - wife not at fault	-2.99 0.00	0.05		-2.99 0.00	0.05	
DHS-modified - wife at fault	0.63 0.02	1.87		0.65 0.01	1.91	
Marital status (married=1)				0.47 0.43	1.59	
Reads a newspaper or magazine (yes=1)				-0.20 0.63	0.82	
Husband's completed grades of schooling				-0.01 0.59	0.99	
Husband's completed grades of schooling imputed (yes=1)				1.23 0.10	3.42	
Presence of children < 10 years during interview (yes=1)				-0.04 0.92	0.97	
Perceptions of community norms question asked first (yes=1)				0.07 0.76	1.07	
Constant	0.72 0.00			0.32 0.59		
HL Goodness-of-fit Test			1.00			0.35

Notes. DHS=Demographic and Health Survey. HL=Hosmer and Lemeshow. Adjusted models control for marital status, reading a newspaper or magazine, husband's completed grades of schooling, whether husband's schooling was imputed, presence of children less than 10 years during the interview, and order of individual attitudes versus perceptions of community norms questions.

† $p \leq 0.10$, * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Table 4. Predicted probabilities of giving an affirmative response to the individual attitude question about intimate partner violence against women, $n = 496$ respondents randomly assigned to the DHS-control question or one of two DHS-modified questions, six villages in rural Bangladesh

Outcome	Probability of responding *yes*
Situation 1: Goes out without telling him?	
DHS-control	0.47
DHS-modified - wife *not at fault*	0.09
DHS-modified - wife *at fault*	0.51
Situation 2: Neglects the children?	
DHS-control	0.46
DHS-modified - wife *not at fault*	0.03
DHS-modified - wife *at fault*	0.67
Situation 3: Argues with him?	
DHS-control	0.52
DHS-modified - wife *not at fault*	0.01
DHS-modified - wife *at fault*	0.63
Situation 4: Refuses to have sex with him?	
DHS-control	0.38
DHS-modified - wife *not at fault*	0.01
DHS-modified - wife *at fault*	0.41
Situation 5: Does not obey elders?	
DHS-control	0.57
DHS-modified - wife *not at fault*	0.01
DHS-modified - wife *at fault*	0.70
Any of the five situations?	
DHS-control	0.68
DHS-modified - wife *not at fault*	0.10
DHS-modified - wife *at fault*	0.80

Notes. DHS=Demographic and Health Survey. HL=Hosmer and Lemeshow. Probabilities are estimated for married women who do not read newspapers or magazines, whose husbands have 4.4 completed grades of schooling, who have no imputed value for husband's completed grades of schooling, who did not have children present during the interview, and who did not receive the question on perceptions of community norms first.
† $p \leq 0.10$, * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Table 5. Characteristics of women who justified wife hitting or beating when the wife was portrayed as *not at fault*, and who did not justify wife hitting or beating when the wife was portrayed as *at fault*, women in six villages in rural Bangladesh

Characteristics	Full sample (n = 496)		Women who justified wife hitting or beating in any of the five situations in which the wife was portrayed as *not at fault*? (n = 16)			Women who justified wife hitting or beating in any of the five situations in which the wife was portrayed as *at fault*? (n = 109)	
	Mean	(s.e.)	Mean	(s.e.) p^a		Mean	(s.e.) p^b
Marital status (married=1)	93.50	(0.01)	81.25	(0.10)	*	95.41	(0.02)
Religion (Islam=1)	96.00	(0.01)	100.00	(0.00)		97.25	(0.02)
Age in years	33.92	(0.41)	36.44	(2.72)		33.06	(0.86)
Ever attended school (yes=1)	60.20	(0.02)	37.50	(0.13)	†	68.81	(0.04) *
Mean completed grades of schooling	3.44	(0.16)	1.50	(0.56)	*	4.27	(0.38) **
Worked outside in last 7 days (yes=1)	40.30	(0.02)	25.00	(0.11)		39.45	(0.05)
Reads a newspaper or magazine (yes=1)	8.80	(0.01)	6.25	(0.06)		14.68	(0.03) *
Listens to the radio (yes=1)	18.50	(0.02)	0.00	(0.00)	†	22.02	(0.04)
Watches television (yes=1)	44.30	(0.02)	31.25	(0.12)		45.87	(0.05)
Belongs to the ASHA (yes=1)	10.80	(0.01)	6.25	(0.06)		11.93	(0.03)
Belongs to GRAMEEN (yes=1)	26.20	(0.02)	6.25	(0.06)	†	17.43	(0.04) *
Belongs to BRAC (yes=1)	11.49	(0.01)	12.50	(0.09)		11.93	(0.03)
Belongs to BRDB (yes=1)	2.00	(0.01)	0.00	(0.00)		2.75	(0.02)
Belongs to PROSHIKA (yes=1)	0.20	(0.00)	0.00	(0.00)		0.00	(0.00)
Belongs to any community organization (yes=1)	44.90	(0.02)	25.00	(0.11)		41.28	(0.05)
Husband's age in years	42.77	(0.48)	43.56	(2.60)		41.89	(1.02)
Husband's age in years imputed (yes=1)	6.45	(0.01)	18.75	(0.10)	*	4.59	(0.02)
Husband coresident (yes=1)	88.30	(0.01)	100.00	(0.00)		94.50	(0.02)
Husband coresidence status missing (yes=1)	6.25	(0.01)	12.50	(0.09)		4.59	(0.02)
Husband ever attended school (yes=1)	59.00	(0.02)	68.75	(0.12)		68.81	(0.04) *
Husband's mean completed grades of schooling	4.41	(0.20)	4.06	(0.91)		5.61	(0.47) **

Table 5. (continued)

|	Full sample (n = 496)		Women who justified wife hitting or beating in any of the five situations in which the wife was portrayed as *not at fault*? (n = 16)			Women who justified wife hitting or beating in any of the five situations in which the wife was portrayed as *at fault*? (n = 109)		
	Mean	(s.e.)	Mean	(s.e.) p^a		Mean	(s.e.) p^b	
Husband's completed grades of schooling imputed (yes=1)	0.80	(0.00)	0.00	(0.00)		0.92	(0.01)	
Wife decides about healthcare for herself (yes=1)	27.20	(0.02)	31.25	(0.12)		23.85	(0.04)	
Wife decides about major household purchases (yes=1)	15.92	(0.02)	18.75	(0.10)		17.43	(0.04)	
Wife decides about purchases for daily needs (yes=1)	53.02	(0.02)	25.00	(0.11)	*	52.29	(0.05)	
Wife decides about visits to family (yes=1)	35.28	(0.02)	31.25	(0.12)		32.11	(0.04)	
Presence of children < 10 years during interview (yes=1)	10.28	(0.30)	6.25	(0.06)		10.09	(0.03)	

Notes. Missing values for three variables were imputed with the mean or mode among observed values. 31 (6.2%) missing values for husband's age in years were replaced with the mean husband's age (42.77); 4 (0.8%) missing or unknown values for husband's completed grades of schooling were replaced with the mean completed grades within a particular level of schooling; 30 (6.0%) missing values for husband's coresidence status were replaced with a 1.

[a] P-value for tests of difference in means between the full sample excluding 16 observations (496 - 16) and 16 "outlying" observations who responded *yes* that wife hitting or beating was justified in any of the five situations in which the wife was portrayed as *not at fault*.

[b] P-value for tests of difference in means between the full sample excluding 109 observations (496 - 109) and the "outlying" 109 observations who responded *no,* that wife hitting or beating was not justified, in any of the five situations in which the wife was portrayed as *at fault*.

† $p \leq 0.10$, * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Figure 1. Experimental design and response rates, overall and by study group, six villages in rural Bangladesh
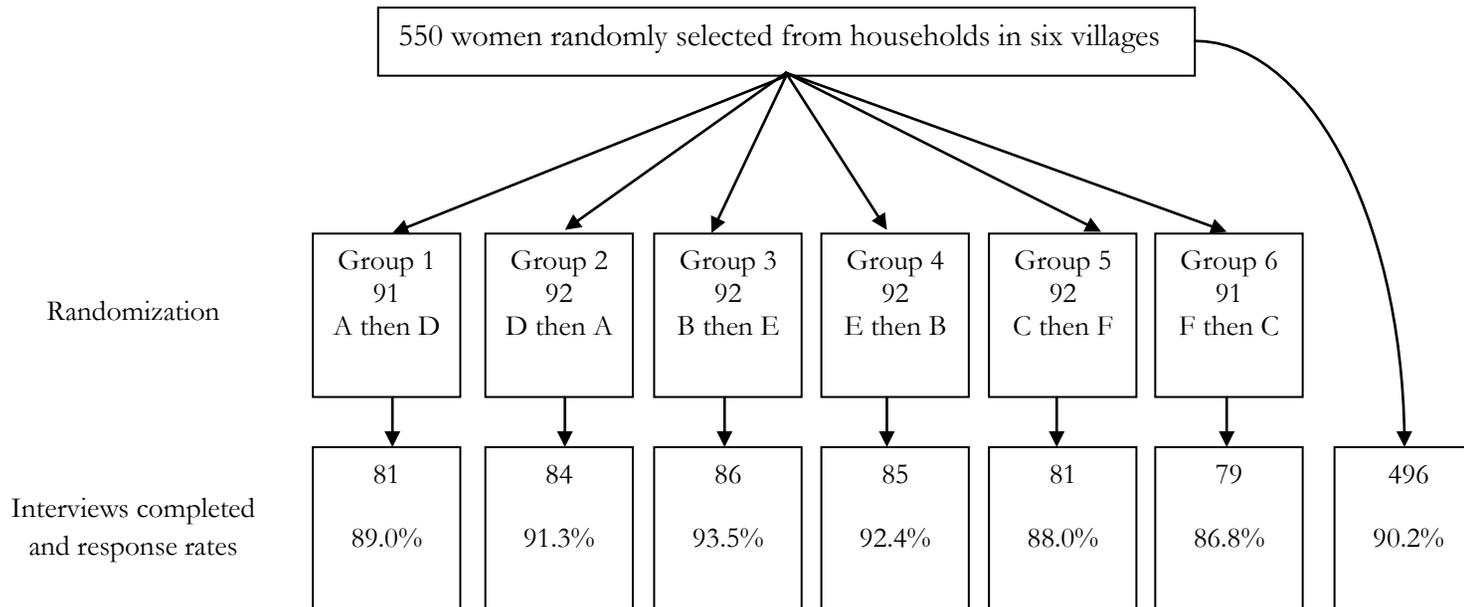
Legend:
Variants of question eliciting personal attitudes about domestic violence against women
A = standard DHS questions on personal attitudes about whether a husband is justified in hitting or beating his wife in any one of five
    situations (goes out without telling him, neglects the children, 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 situatic
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 question eliciting personal 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.