

## Gender Norms, Violence in Childhood, and Men's Coercive Control in Marriage: A Multilevel Analysis of Young Men in Bangladesh

### Abstract

**Objective:** Coercive control in marriage is common in patriarchal settings, but multilevel determinants are understudied.

**Method:** Using a probability sample of 570 *junior men* (married, 18–34 years) from the Bangladesh survey of the 2011 *UN Multi-Country Study of Men and Violence*, we examined how exposure to violence in childhood and community-level gender norms were related to men's attitudes about gender equity and use of controlling behavior. We tested whether community-level gender norms moderated the relationship between men's exposure to violence in childhood and our outcomes.

**Results:** According to results from multilevel Poisson regression models, as community gender norms become more equitable by 1 standard deviation, a junior married man's expected rate of controlling behavior is lower by 0.11, and his rate of agreement with gender equitable attitudes is higher by 0.27. More gender-equitable community norms were negatively related to a junior married man's use of controlling behavior. Childhood exposure to violence was not associated with use of controlling behavior. There was a significant cross-level interaction such that exposure to violence had a stronger negative impact on men's gender equitable attitudes in communities with lower overall gender equity than those with higher overall gender equity. The corresponding cross-level interaction effect was not significant for the controlling behavior outcome.

**Conclusions:** More equitable community gender norms may encourage more gender-equitable attitudes and discourage use of controlling behavior among junior men, suggesting that interventions to change community gender norms may reduce coercive control of women in marriage.

**Keywords:** child maltreatment, community gender norms, controlling behavior, intimate partner violence, domestic violence, multilevel analysis

The movement against intimate partner violence (IPV) has focused on reducing men's desire to control their partners (Whitaker, 2015). Some scholars see controlling behavior as psychological IPV (Robertson & Murachver, 2011); whereas, others see it as a unique form of IPV (Kabir, Nasreen, & Edhborg, 2014). We define controlling behavior as effort by one partner in an intimate relationship to reduce the other partner's power to make decisions, participate in daily activities, as well as attempts to damage their partner's ego and self-image, and control or limit other relationships (Robertson & Murachver, 2011). It is well-documented that controlling behavior is a correlate of physical and sexual IPV (Antai, 2011; Grose & Grabe, 2014; Yount, Miedema, Martin, Crandall, & Naved, 2016). Perpetrators who use controlling behavior in tandem with physical or sexual IPV are among the most violent, and their victims experience the most negative outcomes (Day & Bowen, 2015). Despite the impact of men's controlling behavior, studies to understand the multilevel associates of coercive control are lacking (Whitaker, 2015).

Leveraging data from men in Bangladesh, we use feminist theory at the community level (Schuler, Hashemi, & Badal, 1998; Yount, Miedema, et al., 2016) and social learning theory at the individual level (Bandura, 1971; Hearn, 1998) to examine how a man's exposure to community gender norms and violence in childhood may be associated with his attitudes about gender and his use of coercive control in marriage. According to feminist theory, the systemic devaluation of women vis-à-vis men provides a normative context in which men's control over women is condoned (Yllo, 2005). According to gendered social learning theory, boys who witness or experience violence in the home come to see violence and control as normal in interpersonal relationships (Cyr, Michel, & Dumais, 2013). We assess the association of each of these exposures separately, and include a cross-level interaction to assess whether more equitable community gender norms can mitigate the adverse influence of a man's exposure to violence in childhood on the outcomes.

Our findings offer insights about what intervention strategies increase men's endorsement of gender-equitable attitudes, and reduce use of controlling behavior in Bangladesh and other South Asian contexts. We expect that addressing the developmental and contextual influences of men's use of controlling behavior will have cascading effects, reducing men's perpetration of physical and sexual IPV.

## **Background**

### **Physical IPV and Coercive Control**

Differentiating between forms of IPV is important in order to target interventions to reduce IPV (Kelly & Johnson, 2008). Antecedents to physical IPV have been studied, both in Bangladesh (Naved, 2013; Sambisa, Angeles, Lance, Naved, & Curtis, 2010; VanderEnde, Sibley, Cheong, Naved, & Yount, 2015; Islam, Tareque, Tiedt, & Hoque, 2014), and in other developing countries (Hindin, Kishor, & Ansara, 2008). Controlling behavior is usually studied as an antecedent to other forms of IPV (Antai, 2011; Mandal & Hindin, 2013). Consequently, there is a lack of research on the antecedents to controlling behavior. As controlling behavior is often a precursor to IPV (Antai, 2011; Graham-Kevan & Archer, 2008), knowledge about drivers of motivations to control would allow for the design of interventions to reduce controlling behavior before it escalates to physical IPV.

### **A Multilevel “Ecological” Model of Men’s Use of Coercive Control**

Feminist theory and gendered social learning theory may offer a multilevel model for explaining men’s use of coercive control in marriage. According to feminist theory, any act of IPV derives from patriarchal gender norms, which emphasize men’s dominance over women (Schuler et al., 1998; Yount, James-Hawkins, Cheong, and Naved, 2016; Yount, Miedema, et al., 2016). Studies of physical and sexual IPV in Bangladesh have often employed this perspective in places that follow the tenets of classic patriarchy (Chowdhury, 2009; Kandiyoti, 1988). Certain elements of classic patriarchy persist, despite interventions to empower women and enhance gender equity (Joshi & Schultz, 2013; Yount, James-Hawkins, et al., 2016). For example, although women in Bangladesh may legally choose their spouse, in practice, the father or brothers often do so (Yount, Halim, Schuler, & Head, 2013; Yount, James-Hawkins, et al., 2016; Yount, Miedema, et al., 2016). A father is the legal guardian of his daughter, with legal guardianship passing to her husband (Yount, James-Hawkins, et al., 2016; Yount, Miedema, et al., 2016). Women exchange subservience for material support (Kandiyoti, 1988; Yount, James-Hawkins, et al., 2016; Yount, Miedema, et al., 2016), legitimizing and institutionalizing men’s control over their wives (Yount, James-Hawkins, et al., 2016; Yount, Miedema, et al., 2016).

Social norms about gender under classic patriarchy, are passed from older, married men to younger, married men, influencing their attitudes and their behavior (Ball & Wahedi, 2010; Yount, James-Hawkins, et al., 2016). In Bangladesh control over women is tied to men's honor, and women's modesty and respectability (Mandelbaum, 1993). Men's desire to protect their family's honor motivates use of coercive control, and the norms that privilege men and subordinate women contribute to the view that women belong to men, justifying use of control and violence (Yount, Miedema, et al., 2016). It follows that norms among senior men in a community are largely representative of broader community norms as passed down from one generation to the next. In addition, younger men are establishing patterns of behavior in their marriages, and their beliefs and actions may be more easily influenced and more easily changed (Johnson & Das, 2008; Yount, James-Hawkins, et al., 2016).

Social Learning Theory (SLT) has been used to explain men's perpetration of IPV. SLT states that children learn about normal behavior by observing the behavior of adult role models (Bandura, 1971). Boys who witness violence against their mothers may come to see violence as normal (Cyr et al., 2013). Further, boys understanding of male dominance and violence may be learned in gendered ways (Hearn, 1998; Yount, James-Hawkins, et al., 2016; Yount, Miedema, et al., 2016). Boys who witness men's violence toward themselves or members of their family (Holt, Buckley, & Whelan, 2008; Martin et al., 2002; Schwartz, Hage, Bush, & Burns, 2006; Yount, James-Hawkins, et al., 2016), may come to see violence as a legitimate way to control their future wives (Hearn, 1998; Yount et al., 2015; Yount, James-Hawkins, et al., 2016). Men exposed to violence in youth, either witnessed or experienced, may also learn that masculine superiority and dominance should be expressed through violence and control of others (Nicholls, 2006). Thus, according to gendered models of social learning, a man's exposure to violence in childhood, even if witnessed and not experienced, will influence his personal views about using power and control in intimate relationships.

**Hypotheses:** Based on feminist theory and social learning theory we expect that both gender norms within a community (as defined by senior men 35-44 years old), and exposure to violence in childhood will influence a junior man's (18-34 years) gender equitable attitudes and engagement in controlling behavior. Specifically, we expect that married junior men in more equitable communities will have more equitable

gender attitudes than junior men in less gender-equitable communities (Hypothesis 1a – H<sub>1a</sub>) and engagement in controlling behavior (Hypothesis 2a – H<sub>2a</sub>). We also expect junior men’s exposure to violence in childhood to influence their gender equitable attitudes such that junior men who experienced more exposure to violence in childhood will exhibit less gender-equitable attitudes (Hypothesis 1b – H<sub>1b</sub>), and engage in more controlling behavior (Hypothesis 2b – H<sub>2b</sub>) than men who experienced less exposure to violence in childhood. Further, we expect that high gender-equity in an individual junior man’s community will attenuate the association between his exposure to violence in childhood and his gender-equitable attitudes (Hypothesis 1c – H<sub>1c</sub>), and engagement in controlling behavior (Hypothesis 2c – H<sub>2c</sub>).

[Figure 1]

## Methods

### Sample and Data

**Study Site.** This secondary analysis was based on data collected in one urban and one rural site in Bangladesh as part of the *UN Multi-Country Study of Men and Violence*. The International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b) conducted the original data collection. The urban site was Dhaka metropolitan city, the capital and commercial center of Bangladesh with a population of 6.9 million (BBS, 2014). About 95% of the residents of Dhaka are Muslims (BBS, 2014) and the male out-migration rate is 30 per 1000 (BBS, 2014). The rural site covered icddr,b’s Health and Demographic Surveillance (HDS) area in Matlab, which is about 55km southeast of Dhaka with a population of about 225,038. Matlab is about 88% Muslim (icddr, b, 2012a), and out-migration by men is common, at 60 per 1000 men in 2010 (icddr, b, 2012b).

**Study Sample.** Data were collected from January to June 2011 and the survey used a stratified, multi-stage, cluster sample design. Eligible men were ages 18 – 49 years living in 65 rural villages and 50 *moholla* (the smallest urban administrative unit). Two communities were excluded from all analyses because there were no married junior men in the sample collected. Using 2008 data from icddr, b’s HDS (icddr, b, 2012b), 50 villages were considered adequate for attaining the desired sample number (1000-1200). Villages (the primary sampling unit) were stratified according to large, medium, and small population size, and were

selected with probability proportional to size sampling. A fixed number of 30 interviews were planned in each cluster. Field experience showed that none of the selected clusters had 30 households with eligible males aged 18-49 in the year 2011, and an additional 15 clusters were added to achieve the desired sample size. All households in each cluster were approached for an interview. Urban mohollas were stratified by population size using 2011 Census data collected by the Bangladesh Bureau of Statistics (icddr, b, 2012a), and one enumeration area (with an average 120 households) was selected from each moholla, using simple random sampling. Twenty households then were randomly selected from each enumeration area. Regardless of site, households were sampled to account for men's lesser availability and higher refusal rate compared to women (NIPORT, 2009). One eligible man was interviewed per household. Overall 2,400 men completed the interview. Cases with missing data on both marital status and age were dropped (N=18). Individual response rates were 73% in Dhaka and 93% in Matlab (Yount, James-Hawkins, et al., 2016). Of the 2,400 men who completed interviews, 1,497 were married and thus were included in our analysis. Of the 1,497 married men, 927, ages 35-49, were classified as "senior men" and used to generate the community norms measures used in the analysis (see below). The remaining 570 "junior men," ages 18 to 34, comprised our final analytic sample (Figure 2).

[Figure 2]

**Data collected.** Details regarding ethical permissions for the original study were reported elsewhere (Naved, Huque, Farah, & Shuvra, 2011). The questionnaire had eight modules on: demographics and employment, childhood experiences, attitudes about gender relations, health and well-being, intimate relations, fatherhood, policies, and illicit behavior. Male interviewers were trained on gender issues and gender-based violence, how to minimize distress among respondents, and the use of personal digital assistants (PDAs), which were used to collect sensitive data (Naved, et al., 2011). Interviews were conducted face-to-face in men's homes.

**Level-1 Outcomes.** Married Men were split into junior men (ages 18-34) and senior men (ages 35-49). Two outcomes were measured for junior men for this analysis. One outcome for a *junior man's more equitable attitudes about gender* was created from eight items. Each item was measured on a four-point Likert

scale capturing the level of agreement-disagreement with attitudes privileging men over women (1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree). These items come from the Gender Equitable Men (GEM) scale, which has been validated previously with young men in Brazil (Pulerwitz & Barker, 2008), and a scale developed by the South African Research Council (Jewkes, Sikweyiya, Morrell, & Dunkle, 2011) to measure individual attitudes about gender. Alpha for the eight items was modest but acceptable at 0.71 (Nunnally & Bernstein, 1994; see Table 1 for items). The second outcome for a *junior married man's engagement in controlling behavior* was created from eight items each measured on a four-point Likert scale capturing the level of agreement-disagreement with their use of controlling behavior in their current marriage (4=strongly agree, 3=agree, 2=disagree, 1=strongly disagree) with higher scores indicating more use of controlling behavior. These items come from the Sexual Relationship Power Scale (SRPS) (Pulerwitz, Gortmaker, & DeJong, 2000), which has been validated previously with young men in South Africa (Dunkle et al., 2004). Alpha for the eight items was acceptable at 0.72.

For both outcomes, we dichotomized the response to agree/disagree because “strong” agreement or disagreement was rarely reported. We summed the dichotomized items because scholars advise against a straight sum of Likert-type items, given the unknown cognitive distance between options on an ordinal scale (Coste, Fermanian, & Venot, 1995). For the gender-equitable attitudes items, the 0-1 items were summed to create a count of the number with which each man disagreed, ranging from 0 (disagreeing with no items) to 8 (disagreeing with all items) and higher scores indicated more gender-equitable attitudes. For the use of controlling behavior outcome, 0-1 items were summed to create a count of the number of items a man agreed he had used in his current marriage, ranging from 0 (agreeing with no items) to 8 (agreeing with all items), and higher scores indicated more use of controlling behavior.

**Level-1 and Level-2 Exposure Variables.** The main exposure variables were community gender norms among senior men and a junior man's exposure to violence in childhood. The measure for *community gender norms among senior men* was created from the same eight items that were used to capture a junior married man's more gender-equitable attitudes. However, for the community-level measure we used data from 927 senior men in the sampled communities. This allowed us to construct our community-level variables from a

sample that did not overlap with the sample for whom the outcome was observed, thus we argue that the community measures were exogenous to the outcome (Sampson & Groves, 1989). The median age for first marriage for men in Bangladesh is 24 years (NIPORT, 2013); in our analyses, married men between 35 and 49 years old represent senior men. By the age of 34 almost all men in Bangladesh are married, have children (Ball & Wahedi, 2010), and have been the head of household for many years. Results obtained from the sensitivity analyses using different age criteria to represent senior men were not significantly different from those presented here. Using the sample of senior men, aggregated to the community level, we conducted random split-half exploratory (EFA) and confirmatory (CFA) factor analyses. Factor loadings (0.38–0.70) and fit statistics (RMSEA = 0.07; CFI = 0.93; TLI = 0.90) for the full-sample CFA suggested that a uni-dimensional scale had an adequate fit to the data (Appendix A). The community-level measure was summed in the same manner as the level-1 measure of gender attitudes. Alpha was acceptable at 0.72.

The measure for a *junior married man's childhood exposure to violence* was dichotomized and summed from participant's responses to seven items about how often the man either witnessed or experienced violence before the age of 18 (1 = never, 2 = sometimes, 3 = often, 4 = very often; see Table 1 for included items). Items were adapted from the Childhood Trauma Questionnaire – Brief Screening Version to represent violence perpetrated in the home and by family members (Bernstein et al., 2003). The scale was validated using EFA and CFA factor analyses in random split-half samples. The full-sample CFA had high factor loadings (0.52 – 0.81) and acceptable fit statistics (RMSEA = 0.08; CFI = 0.95; TLI = 0.93), supporting a unidimensional scale (Appendix A). Once we confirmed the structure of the scale, the community-level measure of the 7 exposure to violence items were dichotomized (agree/disagree) and summed to represent community level exposure to violence among junior men. Alpha for the seven items was acceptable at 0.72. We also computed a cross-level interaction term between senior men's gender norms and junior men's exposure to violence to see if the level of gender equity in a community moderated the association of exposure to violence with each of our two outcomes.

**Covariates.** We considered control variables that, based on prior research and theory, were expected to be related to the outcomes and main explanatory variables. The final controls included at the individual



level were a junior man's completed grades of schooling (Johnson & Das, 2008; Naved & Persson, 2005), entered as a continuous variable ranging from 0 to 22 grades, and whether his marriage involved a dowry (Naved & Persson, 2005; Naved & Persson, 2010), entered as a dichotomous variable (1 = yes, 0 = no). To address potential correlation between use of controlling behavior and physical IPV, thus isolating the impact of our exposure variables on controlling behavior, we also included junior men's perpetration of physical IPV as a covariate.

The three community-level control variables included in the final model were the community aggregate mean count of junior men's exposure to violence in childhood to reintroduce the mean to the model, allowing us to appropriately estimate the variation in exposure to violence in childhood among junior men (Enders & Tofghi, 2007). We also added senior men's completed community mean grades of schooling (Johnson & Das, 2008), to control for a strong likely correlate of senior men's community gender norms (Jewkes, Levin, & Penn-Kekana, 2003). Finally, we controlled for mean community level engagement in physical IPV to control for norms about violence within the community, and to allow us to evaluate the impact of the two exposure variables on the use of coercive control net of physical IPV perpetration.

### **Analysis Plan**

Descriptive exploratory analyses using statistical and visual methods assessed the location (e.g., mean, median), spread (e.g., variability across communities), distribution (e.g., normal, skew), and extent of missingness for each variable. Bivariate associations between our main variables also were examined. Multilevel models were used to test three hypotheses for each of our two outcomes. We used multilevel Poisson regression models, which are appropriate for models with exposure variables at both the individual and community levels and count outcomes (Goldstein, 2011; Raudenbush & Bryk, 2002). Our first set of models assessed the direct and interactive associations of senior men's community gender norms and a junior man's exposure to violence in childhood with his gender equitable attitudes (Table 4). The second set of models assessed the direct and interactive associations of senior men's community gender norms and a junior man's exposure to violence in childhood with his use of controlling behavior in marriage (Table 5). We used Stata 14.0 software for all analyses (STATA Corp, 2015).

Let  $\eta_{jk}$  denote the log rate of reporting more gender-equitable attitudes or controlling behavior by participant  $j$  in community  $k$ . The model for each of the two outcomes could be represented by:

$$\eta_{jk} = \gamma_{00} + \gamma_{01} \text{CommNorm}_k + \gamma_{10} \text{Expousre}_{jk} + \gamma_{11} \text{Exposure}_{jk} * \text{CommNorm}_k + \sum_{q=2}^4 \gamma_{0q} \text{Lv}2 \text{cov}_q + \sum_{p=2}^4 \gamma_{p0} \text{Lv}1 \text{cov}_p + v_{0k}. \quad (1)$$

where  $\text{CommNorm}_k$  represents the gender norms among senior men in community  $k$ ,  $\text{Exposure}_{jk}$  denotes exposure to violence in childhood for junior men  $j$  in community  $k$ , and their interaction effects are captured by  $\text{Exposure}_{jk} * \text{CommNorm}_k$ .  $\text{Lv}2 \text{cov}_q$  is the  $q$ th level-2 covariate, where  $q = 2, \dots, 4$ ,  $\text{Lv}1 \text{cov}_p$  is the  $p$ th level-1 covariate, where  $p = 2, \dots, 4$ , and  $v_{0k}$  is the error term for community  $k$ . The error term is assumed to be normally distributed with a mean of zero and variance  $\tau$ . Three additional level-1 and level-2 covariates confounding at both levels. To assess  $H_{1a-c}$  &  $H_{2a-c}$ , we tested the statistical significance associated for the following coefficients: community-level gender norms ( $\gamma_{01}$ ); exposure to violence as a child ( $\gamma_{10}$ ); and the cross-level interaction ( $\gamma_{11}$ ).

Due to our limited number of participants and communities, we did not include all available controls at the individual and the community levels. A sensitivity analyses of our findings to the inclusion of these alternative covariates showed that the results were robust to inclusion of different controls (Appendices B & C). The other individual level controls that we considered were a younger man's use of alcohol, his religion, steady employment throughout the year, age, home ownership, and ownership of a TV, total number of children, spousal age, and the presence of an important male in their lives when they were children. The community-level controls considered were the proportion of senior men who owned their own home, and whether the community was urban or rural.

## Results

### Junior Married Men

**Use of controlling behavior.** Most junior men agreed that they used most of the controlling behavior items. The items most often reported were “when I want sex I expect my partner to agree” (85% agreed) and “I have more to say than she does about important decisions that affect us” (81% agreed). In

contrast, junior men least often reported that they would get angry if their wife asked them to use a condom (15% agreed; Table 1). Across communities, junior men living in the bottom three quartiles of gender equitable communities (GEC) tended to report use of controlling behavior more often than their counterparts in the top quartile of GEC. For example, only 69% of junior men in the top quartile of GEC agreed that they “have more say” than their wives when it comes to important decisions that affect them both, while 86% of men in the bottom three quartiles of GEC agreed. When asked if they “always have to know where my partner is,” 60% of junior men in the top quartile of GEC agreed, compared to 75% of junior men in the bottom three quartiles of GEC. Finally, junior men in the top quartile of GEC agreed with fewer controlling behavior items, on average, than did junior men in the bottom three quartiles of GEC (Table 2).

[Table 1]

**Attitudes about gender.** Overall, junior men agreed with an average of 5.7 of 8 items representing negative gender attitudes. Men most agreed that “a woman should obey her husband” (93% agreed) and that “a woman’s most important role is to take care of and cook for her family” (87% agreed). Junior men least often agreed that it is a “woman’s responsibility to prevent pregnancy” (49% agreed) (Table 1). Compared to junior men living in the bottom three quartiles of GEC, those living in the top quartile of GEC more often reported gender-equitable attitudes on all but one attitudinal item (Table 2).

[Table 2]

**Exposure to violence in childhood.** Exposure to violence in childhood was common among junior men. The most common forms of violence reported by junior men living in all communities regardless of gender-equity, were being insulted or humiliated by family in front of others, and being told they were lazy, weak, or stupid as a child (Table 1). Overall, 74% reported either witnessing or experiencing some form of violence in childhood, and such exposure did not generally differ for junior men by the gender equity of the communities they lived in as adults. The only exceptions were “being beaten at home by a belt, stick, or hard object” and “being beaten so hard it left a mark or a bruise,” for which junior men living in the top quartile of GEC reported lower rates than junior men living in the bottom three quartiles of GEC (Table 2).

**Demographic characteristics.** Overall, junior men had an average of 6.9 grades of schooling, were predominantly Muslim, and most reported steady work throughout the year. Alcohol consumption was low, with few junior men reporting any consumption at all. While a majority of junior men owned a television, fewer reported owning their own home. Less than a quarter of junior men reported that a dowry was involved in their marriage, and their mean number of living children was just over one. Finally, junior men were 28.6 years old, on average, and their wives were 22.9 years old, on average (Table 1). Junior men living in the top quartile of GEC, compared to those in the bottom three quartiles of GEC, had more schooling, and were more likely to have steady work throughout the year, to own a TV, and to consume alcohol. Junior men in the top quartile of GEC were less likely than their counterparts to own their own home and to have a marriage involving a dowry. Junior men in the top quartile of GEC had fewer children and older wives, on average, than did junior men living in the bottom three quartiles of GEC. There were no differences in the average age or religious affiliation of junior men across communities (Table 2).

### **Characteristics of Communities**

On average, senior men made up 63% of the sample across communities. Across communities, senior men reported agreement with 4.3 of the 8 controlling behavior statements. Across communities, just over half of senior men owned their own home (mean proportion, 57%) and they had an average of 2.5 living children. The average mean count of agreement with gender equitable statements at the community level was 5.84 (out of 8 possible), and the average mean count of use of controlling behaviors in marriage at the community level was 4.25 (out of 8 possible; Table 3).

[Table 3]

### **Multilevel Poisson Models of a Junior Man's More Equitable Attitudes about Gender**

The unconditional multilevel Poisson model with a random intercept showed some variation across communities in the log rate of reporting more gender-equitable attitudes (Table 4, Model 1). Under conditions of normality, we would expect 95% of the village log event rates to fall between 0.41 and 1.19. Junior men in communities with more gender-equitable norms among senior men had a higher log rate of reporting more gender-equitable attitudes ( $H_{1a}$ ; Table 4, Model 2). That is, the estimated rate of endorsing

gender-equitable attitudes was 27% higher ( $100 * (\exp\{0.24\} - 1)\%$ ) for each standard deviation increase in community level gender equity. Junior men in communities with less gender equitable norms reported more exposure to childhood violence ( $H_{1b}$ ; Table 4, Model 3). That is, the rate of endorsing gender-equitable attitudes was 5% lower ( $\exp\{-0.05\} = 0.95$ ) for each standard deviation increase in childhood exposure to violence. A significant cross-level interaction between community-level gender equitable norms and individual level childhood violence suggested exposure to violence had a stronger and significant negative association with men's gender equitable attitudes in communities with low gender equity as compared to communities with the mean or high gender equity ( $H_{1c}$ ; Table 4, Model 4). Specifically, the estimates of these relationships, or simple slopes, in log of expected counts was 0.032 in a community with a mean level of gender equitable norms ( $p = 0.242$ , n.s.), and 0.032 in a community with 1 standard deviation (SD) above the mean ( $p = 0.239$ , n.s.). The slope was -0.054 in a community one SD below the mean ( $p = 0.048$ ). When community- and individual-level controls were added, the positive relationship between the log rate of gender-equitable attitudes and childhood exposure to violence was no longer significant, but the interaction effect, although slightly reduced, remained significant ( $H_{1a-1c}$  net of controls; Table 4, Model 5).

[Table 3]

### **Multilevel Poisson Models of a Junior Man's Engagement in Controlling Behavior**

The unconditional multilevel Poisson model with a random intercept showed little variation across communities in the log rate of agreement with attitude statements about controlling behavior (Table 5, Model 1). This lack of variation suggests that the relative contributions of the predictive effects of individual covariates are much larger than those at the community level. Under conditions of normality, we would expect 95% of the village log event rates to fall between 1.27 and 1.61. Junior men in communities in the top quartile of gender-equitable norms among senior men had a lower log rate of engagement in controlling behavior ( $H_{2a}$ ; Table 5, Model 2). That is, one would expect the rate of engagement in controlling behavior in more gender-equitable communities to be lower by 11% ( $100 * (\exp\{-0.12\} - 1)$ ) compared to the rate of engagement in controlling behavior in less gender-equitable communities. However, exposure to violence in childhood at the individual level was only marginally related to the log rate of engagement in controlling

behavior ( $H_{2b}$ ; Table 5, Model 3). The cross-level interaction effect was not significant ( $H_{2c}$ ; Table 5, Model 4). The estimates were essentially unchanged by the addition of controls at the community and individual levels ( $H_{2a-2c}$  net of controls; Table 5, Model 5).

[Table 4]

### **Discussion**

This paper used data from men in Bangladesh to investigate the relationships between community gender norms and a man's exposure to violence in childhood with his gender attitudes and his use of controlling behavior in marriage. Our results partially supported our hypotheses. First, we found that more gender-equitable community norms among senior men both predicted a junior man's more gender-equitable attitudes ( $H_{1a}$ ), and his engagement in controlling behavior ( $H_{2a}$ ), and the relationship held when controls were added to the models. Importantly, community level gender norms were associated with increases in controlling behavior ( $H_{2a}$ ) even when both senior men's norms of physical IPV and junior men's actual engagement in physical IPV were accounted for. Given this, we conclude that community-level gender norms are correlated with controlling behavior in ways that go above and beyond their known association with physical IPV (Yount, James-Hawkins, et al., 2016). These results suggest the importance of community gender norms in shaping attitudes about both gender and engagement in controlling behavior for junior men.

Contrary to expectation, net of controls a man's exposure to violence in childhood was not associated with either his gender attitudes ( $H_{1b}$ ) or his engagement in controlling behavior ( $H_{2b}$ ). This finding suggests that, although a man's childhood exposure to violence has been related to his perpetration of physical and sexual IPV (Anderson & Kras, 2007; Cyr et al., 2013; Yount, Higgins, et al., 2016; Yount et al., 2014), this exposure may not be predictive of attitudes about gender or engagement in controlling behavior among young married men in Bangladesh. However, this also could be a result of the specific items used in the exposure to violence scale in this survey. While one item has clear gender implications and is likely related to our gendered outcomes, the other items in the scale were related more directly to the boy's experience of violence and may have conveyed the more diffuse idea that parents have control over their children, or the generalized idea of violence as a way to control those who are subordinate to you within the social structure,

rather than specifically working to form attitudes about gender and male use of control over women. Nonetheless, our findings suggest that violence in childhood operates more strongly as a social norm in communities than as an individual-level exposure on these specific outcomes. Hypothesis 1<sub>c</sub> was supported while hypothesis 2<sub>c</sub> was not. While more equitable community gender norms did mitigate the effect of childhood exposure to violence on gender attitudes (H<sub>1c</sub>), it did not do so for his engagement in controlling behavior (H<sub>2c</sub>). This suggests that while women's status and roles within customarily patriarchal societies may be undergoing a change in the direction of gender equality, violence as a way to exert control over those subordinate to you is still highly normalized and likely internalized by men, thus functioning similarly both in men who have a high exposure to violence in childhood, and men who have a low exposure to violence in childhood.

Our research fills important gaps that exist in the literature on controlling behavior, despite a known connection between controlling behavior and physical and sexual IPV (Day & Bowen, 2015; Naved, 2013; Robertson & Murachver, 2011). Previous research has shown that women who experience coercive control and other forms of psychological violence have worse outcomes than women never exposed to violence, even without the occurrence of physical or sexual IPV (Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008), confirming the need to examine the impact of coercive control above and beyond that of other forms of IPV. Moreover, global research on controlling behavior and IPV has focused on women's exposure, not men's perpetration. Thus, studies of community norms in multilevel analyses of IPV using data from South Asia generally aggregate women's rather than *men's* responses to measure community norms (Naved & Persson, 2005; VanderEnde, Yount, Dynes, & Sibley, 2012). In fact, almost no research has systematically explored the measurement of community gender norms using data from men rather than from women (VanderEnde et al., 2012; VanderEnde, Amin & Naved, 2014), despite the known influence that senior men have within South Asian communities, and a need to engage men in efforts to reduce violent and controlling behavior toward women. An exception to this gap is recent research on men's perpetration of physical IPV in Bangladesh, in which a community norms measure was constructed using data from senior men (Yount, James-Hawkins, et al., 2016).

## **Limitations**

Some limitations of this analysis are notable. First, given the cross-sectional and observational nature of our data, we were unable to test the pathways by which community norms influence engagement in controlling behavior. One pathway may be through inequitable attitudes about gender. To begin to explore this possibility, we estimated two models, one showing the influence of norms on gender attitudes and one showing the influence of norms on use of controlling behavior. Our results suggest that this pathway warrants further study with longitudinal data. Second, we were limited by a small sample size of junior men, which required judicious use of control variables. Thus, the possibility of uncontrolled confounding remains, and limits the conclusions we can draw from our analyses. Replicating our analysis in larger samples would allow for the concurrent inclusion of other control variables. However, we estimated sensitivity models with a wide range of controls and found that our results were robust to controls included. Third, the survey relied on self-report, and as such, men's responses were subject to social desirability bias and to recall bias, especially for the more sensitive behaviors. However, the fact that men do not usually report lower levels of physical IPV than women (Hindin et al., 2008; NIPORT, 2009) suggests that such bias was probably not greater than in studies of women. Fourth, while the norms held by adult women may also have some associations with junior men's norms, we were unable to include them in our analyses, as the survey focused on men exclusively. However, work with women in Bangladesh has shown that women are more likely than men, especially in low-income contexts, to justify IPV as appropriate due to the idea of latent power, which suggests that older women in a community may be more likely to uphold the status quo out of fear of retribution should they voice an opinion different from that of men in the community at large (Yount, et al., 2013; Komter, 1989). Based on this work, we suggest that it is possible that our measure of community gender norms may be more favorable to women than would a survey fielded with both men and women in Bangladesh. Lastly, it may also be that there is some reciprocity between older and younger men's gender beliefs with younger men's beliefs working to change how older men behave. We believe that this may be a fruitful direction for future research in this area.

## **Research Implications**



Our findings provide the foundation for other important studies. In the gender-attitudes model, individual-level schooling was significant net of controls, suggesting that more completed grades of schooling may contribute to more gender-equitable attitudes, although the reverse relationship may also be true. The average completed grades of schooling at the community level also was marginally significant in the same direction, suggesting that this relationship holds at the community level, although it is perhaps less strong. The significance of individual level schooling also supports previous findings that completed grades of schooling and gender equity are related to one another at the individual level (McDonald, 2013). Our results support previous findings that higher schooling attainment may be an effective way to favorably influence a junior man's attitudes about gender equity (Pulerwitz & Barker, 2008). While the reciprocal relationship may also exist at the community level – with communities with more gender equity also valuing and supporting more schooling among the residents - either direction supports the increase of gender equity within communities as a strategy to reduce rates of coercive control in marriage. The fact that the association of a junior man's exposure to violence in childhood with his engagement in controlling behavior in this sample was only marginally significant suggests that controlling behavior may, in fact, be conceptually distinct from other forms of IPV, as has been suggested by some researchers (Próspero, 2008). Our results also suggest that men's engagement in coercive control in marriage is so pervasive that violence in childhood does not distinguish men's use of controlling behavior. Thus, changing norms at the community level will be needed to change men's engagement in controlling behavior (Yount et al., 2015; Yount, Miedema, et al., 2016; Yount et al., 2014).

### **Clinical and Policy Implications**

In line with previous findings for men's physical IPV perpetration in Bangladesh (Yount, James-Hawkins, et al., 2016), community norms among senior men appear to be related to a junior man's attitudes about gender and engagement in controlling behavior in marriage. These results suggest that more equitable gender norms among senior men may influence junior men's engagement in controlling behavior and potentially his perpetration of IPV as well, either directly by social enforcement or through social sanctions (Counts, Brown, & Campbell, 1999). However, while interventions to mitigate the effects of exposure to

violence in childhood may be successful on reducing physical and sexual IPV (Antai, 2011), it is less clear how such interventions will affect the use of coercive control in a context where men's privilege and control in marriage are deeply rooted and widespread (Kandiyoti, 1988). We also note that gender equity and urbanicity may be entwined, as it has been found that gender inequitable issues such as child marriage (Crandall, et al., 2016), and male involvement in women's reproductive health issues such as contraceptive use (Haryanto, 2015), are more endemic in rural areas. Thus, future research should work toward disentangling the concept of gender equity from that of urbanicity in order to facilitate appropriate policies and programs in different areas of Bangladesh.

Given our findings, a renewed effort at community level interventions directed toward gender equality in these communities likely will work to reduce men's use of controlling behavior in marriage, with addressing the fundamental gender inequality in Bangladesh likely to be the best pathway toward this goal. Although women's economic empowerment in combination with gender sensitization through group sessions has shown promising results in reducing IPV among group members (Gupta et al., 2013; Pronyk et al., 2006) evidence on effective interventions for changing social norms is limited. However, community mobilization aimed at addressing ideals and practices linked to masculinity endorsing power and control seem to be effective in changing social norms (Abramsky et al., 2014; Wagman et al., 2015). Similar interventions need to be designed and tested for addressing gender inequitable and violence condoning social norms nurturing male use of controlling behavior in Bangladesh. If such intervention turns out to be effective, priorities may be set based on the level of gender inequitable attitudes in certain geographic areas using the periodic National Violence against Women Survey data.

Evidence to date shows that it is easier to change attitudes of young men and boys than those of older men (Verma et al., 2006). Researchers have shown that patriarchal and hegemonic masculine ideals are entrenched among older adolescents in Bangladesh (Naved, et al., 2017). Therefore, we argue that even if community mobilization does not effectively change attitudes of the senior men, change among younger adolescent men and boys would be a beneficial investment for the future generations. Thus, it is important to work with younger children to have a community-wide impact on social norm change in the future.

Controlling behavior in marriage is common in Bangladesh, but there is a dearth of research on its associates, and there is little research using a multilevel framework that focuses on use of controlling behavior as the *outcome*. Given the strong correlation between use of controlling behavior and physical and sexual IPV in Bangladesh and elsewhere, it is critical to examine what influences controlling behavior itself (García-Moreno, Jansen, Ellsberg, Heise, & Watts, 2005). Our results suggest that interventions that work to decrease the use of coercive control in marriage are important to efforts working to increase gender equity and reduce physical and sexual IPV in Bangladesh.

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**Figure 1.** Expected Influences of Community Gender Norms and Childhood Exposure to Violence on Men’s Gender-Equitable Attitudes and Use of Controlling Behavior in Marriage.

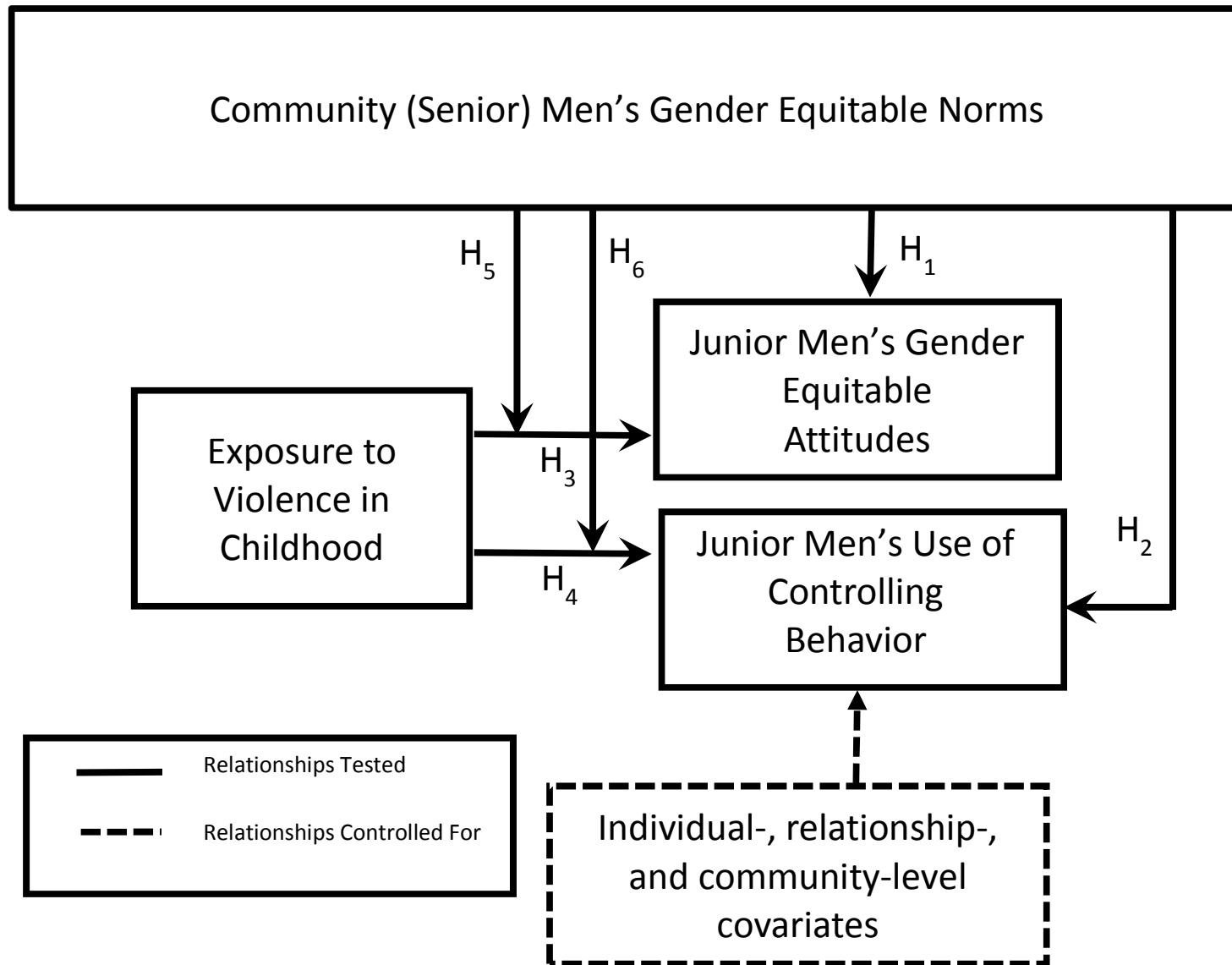


Figure 2. Sampling Frame for the Bangladesh Component of the UN Multi-Country Study of Men and Violence, Dhaka and Matlab.

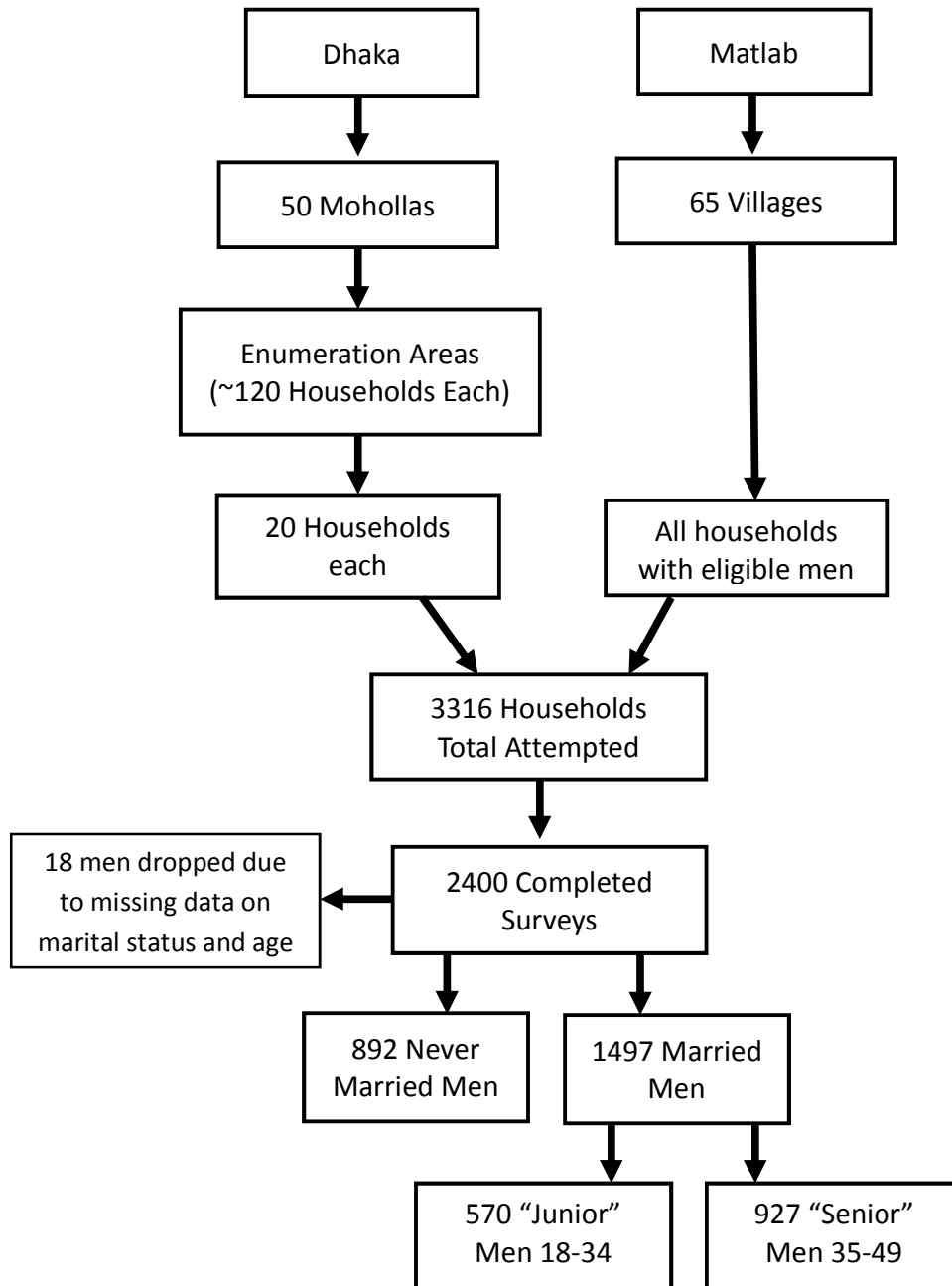


Table 1. Married Junior Men (Ages 18 – 34 Years, N=570) and Senior Men (Ages 35 – 49 Years, N=927), Urban Dhaka and Rural Matlab, Bangladesh, 2011

	JUNIOR MEN (N=570)			SENIOR MEN (N=927)			p <sup>b</sup>
	Mean	SD	Range	Mean	SD	Range	
<b>Controlling Behavior (agree=1, disagree=0)</b>							
When I want sex I expect my partner to agree	.85	.36	0-1	.84	.36	0-1	
If my partner asked me to use a condom, I would get angry	.15	.36	0-1	.19	.39	0-1	†
I won't let my partner wear certain things	.71	.45	0-1	.69	.46	0-1	
I have more to say than she does about important decisions that affect us	.81	.39	0-1	.80	.40	0-1	
I tell my partner who she can spend time with	.65	.48	0-1	.63	.48	0-1	
When my partner wears things to make her look beautiful I think she may be trying to attract other men	.19	.39	0-1	.17	.37	0-1	
I always have to know where my partner is most of the time <sup>a</sup>	.71	.46	0-1	.69	.46	0-1	
I like to let her know she isn't the only partner I could have	.18	.39	0-1	.19	.39	0-1	
Count of types of Controlling Behavior agreed with	4.25	1.89	0-8	4.19	1.90	0-8	
<b>Gender-Inequitable Attitudes (agree=1, disagree=0)</b>							
Women's most important role take care of/cook for family	.87	.34	0-1	.90	.31	0-1	
Men need sex more than women do	.75	.43	0-1	.79	.41	0-1	
There are times when woman deserves to be beaten	.65	.48	0-1	.61	.49	0-1	
It's a woman's responsibility to avoid pregnancy	.49	.50	0-1	.54	.50	0-1	†
A woman should tolerate violence to keep family together	.60	.49	0-1	.65	.48	0-1	†
If someone insults you, you will defend your reputation with force if necessary	.69	.46	0-1	.68	.47	0-1	
You think that a woman should obey her husband	.93	.25	0-1	.93	.26	0-1	
You think a man should have final say in all family matters	.68	.47	0-1	.74	.44	0-1	*
Count of Gender-Inequitable items agreed with	5.66	2.00	0-8	5.84	1.95	0-8	
<b>Childhood Exposure to Violence (yes=1, no=0)</b>							
Insulted or humiliated by family in front of others	.41	.49	0-1	.37	.48	0-1	†
Told lazy/weak/stupid by family as child	.39	.49	0-1	.34	.47	0-1	*
One or both parents were too drunk to care for you	.37	.48	0-1	.34	.47	0-1	
Saw/heard mother being beaten	.32	.47	0-1	.27	.44	0-1	*
Was touched/someone made you touch buttocks/genitals	.30	.46	0-1	.24	.43	0-1	*
Beaten at home by belt/stick/hard object	.15	.35	0-1	.34	.13	0-1	
Beaten at home so hard left mark or bruise	.04	.18	0-1	.03	.17	0-1	
No violence exposure in childhood	.29	.45	0-1	.31	.46	0-1	

Witnessed or experienced violence in childhood	.71	.45	0-1	.69	.46	0-1	
Witnessed and experienced violence in childhood	.32	.47	0-1	.27	.44	0-1	*
<b>Demographic Characteristics</b>							
Grades of schooling, mean	6.92	4.86	0-22	6.06	5.36	0-22	**
Religion Islam (ref: other)	.90	.30	0-1	.85	.35	0-1	*
Steady Work throughout year (ref: no)	.89	.31	0-1	.86	.35	0-1	†
Frequency of alcohol consumption (ref: none)	.07	.25	0-1	.04	.19	0-1	*
Own home (ref: no)	.37	.48	0-1	.57	.49	0-1	***
Own TV (ref: no)	.59	.49	0-1	.59	.49	0-1	
Marriage involved dowry (ref: no)	.23	.42	0-1	.22	.42	0-1	
Number of living children, mean	1.16	.96	0-1	2.55	1.24	0-1	***
Age in years, mean	28.63	3.65	18-34	41.35	4.26	35-49	***
Spouse's age in years, mean	22.94	3.63	15-33	31.82	5.45	15-47	***

<sup>a</sup>We recognize that this statement is internally inconsistent, however we are reporting it as it was used in data collection. <sup>b</sup> p-value is for comparison of junior men and senior men. Note: †  $p < 0.10$ . \*  $p < 0.05$ . \*\*  $p < 0.01$ . \*\*\*  $p < .001$

Table 2. Married Junior Men (Ages 18 – 34 Years, N=570) and Senior Men (Ages 35 – 49 Years, N=927) in the top quartile of gender equitable communities versus the bottom three quartiles of gender equitable communities (GEC), Urban Dhaka and Rural Matlab, Bangladesh, 2011

	JUNIOR MEN (N=570)							SENIOR MEN (N=927)						
	Top Quartile of GEC (N=152 Men in 28 communities)			Bottom 3 Quartiles of GEC (N=418 Men in 84 communities)				Top Quartile of GEC (N=214 Men in 28 communities)			Bottom 3 Quartiles of GEC (N=713 Men in 84 communities)			
	Mean	<i>SD</i>	Range	Mean	<i>SD</i>	Range	<i>p</i> <sup>b</sup>	Mean	<i>SD</i>	Range	Mean	<i>SD</i>	Range	<i>p</i> <sup>b</sup>
<b>Controlling Behavior (agree=1, disagree=0)</b>														
When I want sex I expect my partner to agree	.82	.38	0-1	.85	.35	0-1		.77	.41	0-1	.87	.34	0-1	**
If my partner asked me to use a condom, I would get angry	.09	.29	0-1	.17	.38	0-1	*	.09	.29	0-1	.22	.41	0-1	***
I won't let my partner wear certain things	.71	.46	0-1	.71	.45	0-1		.64	.48	0-1	.70	.46	0-1	†
I have more to say than she does about important decisions that affect us	.66	.48	0-1	.86	.34	0-1	***	.62	.49	0-1	.85	.36	0-1	***
I tell my partner who she can spend time with	.49	.50	0-1	.71	.46	0-1	***	.47	.50	0-1	.68	.47	0-1	***
When my partner wears things to make her look beautiful I think she may be trying to attract other men	.16	.37	0-1	.20	.40	0-1		.08	.27	0-1	.19	.39	0-1	***
I always have to know where my partner is most of the time <sup>a</sup>	.61	.49	0-1	.74	.44	0-1	**	.56	.50	0-1	.72	.45	0-1	***
I like to let her know she isn't the only partner I could have	.14	.35	0-1	.20	.40	0-1		.08	.28	0-1	.22	.42	0-1	***
Count of types of Controlling Behavior agreed with	3.69	1.92	0-8	4.45	1.84	0-8	***	3.31	1.79	0-8	4.45	1.85	0-8	***
<b>Gender-Inequitable Attitudes (agree=1, disagree=0)</b>														
Women's most important role take care of/cook for family	.80	.40	0-1	.89	.31	0-1	**	.76	.43	0-1	.94	.24	0-1	***
Men need sex more than women do	.65	.48	0-1	.79	.41	0-1	**	.64	.48	0-1	.84	.37	0-1	***
There are times when woman deserves to be beaten	.51	.50	0-1	.70	.46	0-1	***	.46	.50	0-1	.66	.47	0-1	***
It's a woman's responsibility to avoid pregnancy	.36	.48	0-1	.54	.50	0-1	***	.22	.41	0-1	.64	.48	0-1	***
A woman should tolerate violence to keep family together	.45	.50	0-1	.65	.48	0-1	***	.39	.49	0-1	.72	.45	0-1	***
If someone insults you, you will defend your reputation with force if necessary	.68	.47	0-1	.69	.46	0-1		.56	.50	0-1	.72	.45	0-1	***

You think that a woman should obey her husband	.87	.34	0-1	.95	.21	0-1	**	.85	.36	0-1	.96	.21	0-1	***
You think a man should have final say in all family matters	.57	.50	0-1	.72	.45	0-1	**	.49	.50	0-1	.81	.39	0-1	***
Count of Gender-Inequitable items agreed with	4.89	2.16	0-8	5.94	1.86	0-8	***	4.35	2.11	0-8	6.28	1.66	0-8	***
<b>Childhood Exposure to Violence (yes=1, no=0)</b>														
Insulted or humiliated by family in front of others	.40	.49	0-1	.42	.49	0-1		.35	.48	0-1	.38	.49	0-1	
Told lazy/weak/stupid by family as child	.40	.49	0-1	.39	.49	0-1		.37	.48	0-1	.33	.47	0-1	
One or both parents were too drunk to care for you	.34	.48	0-1	.38	.49	0-1		.30	.46	0-1	.35	.48	0-1	
Saw/heard mother being beaten	.28	.45	0-1	.33	.47	0-1		.25	.44	0-1	.27	.45	0-1	
Was touched/someone made you touch buttocks/genitals	.28	.45	0-1	.30	.46	0-1		.28	.45	0-1	.23	.42	0-1	
Beaten at home by belt/stick/hard object	.09	.29	0-1	.17	.37	0-1	*	.09	.29	0-1	.14	.35	0-1	
Beaten at home so hard left mark or bruise	.02	.14	0-1	.04	.20	0-1		.01	.12	0-1	.04	.19	0-1	†
No violence exposure in childhood	.27	.45	0-1	.30	.46	0-1		.32	.47	0-1	.30	.46	0-1	
Witnessed or experienced violence in childhood	.73	.45	0-1	.70	.46	0-1		.68	.47	0-1	.70	.46	0-1	
Witnessed and experienced violence in childhood	.28	.45	0-1	.33	.47	0-1		.25	.44	0-1	.27	.45	0-1	
<b>Demographic Characteristics</b>														
Grades of schooling, mean	9.68	5.20	0-18	5.91	4.31	0-22	***	9.68	5.93	0-22	4.98	4.66	0-18	***
Religion Islam (ref: other)	.93	.26	0-1	.89	.32	0-1		.96	.20	0-1	.82	.38	0-1	***
Steady Work throughout year (ref: no)	.99	.11	0-1	.86	.35	0-1	***	.99	.12	0-1	.82	.38	0-1	***
Frequency of alcohol consumption (ref: none)	.12	.32	0-1	.05	.21	0-1	**	.08	.28	0-1	.02	.15	0-1	***
Own home (ref: no)	.20	.40	0-1	.43	.50	0-1	***	.25	.43	0-1	.67	.47	0-1	***
Own TV (ref: no)	.70	.46	0-1	.56	.50	0-1	**	.81	.39	0-1	.52	.50	0-1	***
Marriage involved dowry (ref: no)	.11	.31	0-1	.27	.44	0-1	***	.07	.25	0-1	.27	.45	0-1	***
Number of living children, mean	.96	.84	0-4	1.23	.99	0-5	**	2.14	1.10	0-7	2.67	1.26	0-13	***
Age in years, mean	28.57	3.41	18-34	28.66	3.73	18-34		40.89	4.10	35-49	41.48	4.30	35-49	†
Spouse's age in years, mean	23.41	3.57	16-31	22.78	3.64	15-33	†	32.49	5.55	15-47	31.62	5.40	17-49	*

<sup>a</sup>We recognize that this statement is internally inconsistent, however we are reporting it as it was used in data collection. <sup>b</sup> p-value is for comparison of top quartile of gender equitable communities with bottom three quartiles. Note: † p < 0.10. \* p < 0.05. \*\* p < 0.01. \*\*\* p < .001

Table 3. Characteristics of Senior Men (married, 35 – 49 years) in Sampled Communities (N=112), Urban Dhaka and Rural Matlab, Bangladesh, 2011

	Mean ( <i>SD</i> )	Range
A. Mean proportion who own a home	.57 (.36)	0 to 1
B. Mean grades of schooling	6.15 (3.33)	0.67 to 14.20
C. Mean proportion reporting Islam as religion	0.88 (.26)	0 to 1
D. Mean proportion reporting steady work throughout year	0.86 (0.19)	0 to 1
E. Mean proportion reporting any alcohol use	0.04 (0.08)	0 to .40
F. Mean number of children reported	2.52 (0.56)	1 to 4.16
G. Mean proportion reporting dowry involved in marriage	0.21 (0.21)	0 to .89
H. Mean proportion who own a TV	0.59 (0.28)	0 to 1
I. Mean count of agreement with controlling behavior statements	4.25 (1.20)	1.10 to 7.67
J. Mean count of agreement with gender-equitable statements	5.84 (1.03)	0.29 to 5.20

Note: †  $p < 0.10$ . \*  $p < 0.05$ . \*\*  $p < 0.01$ . \*\*\*  $p < .001$



Table 4. Multilevel Poisson Models for the Log Rate of Agreement with Gender-Equitable Men (GEM) Statements, Junior Married Men 18–34 Years (N = 570), Urban Dhaka and Rural Matlab, Bangladesh, 2011

	Model 1	Model 2 (H1 <sub>a</sub> )	Model 3 (H1 <sub>b</sub> )	Model 4 (H1 <sub>c</sub> )	Model 5 (H1 <sub>a-c</sub> )
Gender-Equitable Attitudes (higher=more equitable attitudes)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)
Intercept ( $\hat{\gamma}_{00}$ )	0.80 (0.05)***	0.82 (0.04)***	0.80 (0.05)***	0.82 (0.04)***	0.63 (.06)***
<b>Community-Level Variables</b>					
Senior Men's Gender Norms count <sup>a,b</sup> ( $\hat{\gamma}_{01}$ )		0.24 (0.04)***		0.24 (0.03)***	0.17 (0.05)***
Senior Men's Grades of Schooling <sup>a,b</sup> ( $\hat{\gamma}_{02}$ )					0.03 (0.02)†
Junior Men's Exposure to Violence count <sup>c</sup> ( $\hat{\gamma}_{03}$ )					-0.11 (0.05)*
Senior Men's Perpetration of Physical Intimate Partner Violence count <sup>a,b</sup> ( $\hat{\gamma}_{04}$ )					0.08 (0.07)
<b>Individual-Level Variables (Junior Men)</b>					
Exposure to Violence in Childhood count <sup>d</sup> ( $\hat{\gamma}_{10}$ )			-0.05 (0.02)**	-0.05 (0.02)**	-0.01 (0.02)
Perpetration of Physical Intimate Partner Violence count ( $\hat{\gamma}_{20}$ )					-0.09 (0.03)**
Grades of Schooling <sup>d</sup> ( $\hat{\gamma}_{30}$ )					0.07 (0.01)***
Marriage involved dowry <sup>d</sup> ( $\hat{\gamma}_{40}$ )					-0.13 (0.08)
<b>Cross-Level Interaction</b>					
Exposure to Violence in Childhood count <sup>d</sup> X Gender Norms count <sup>a,b,c</sup> ( $\hat{\gamma}_{11}$ )				0.05 (0.02)**	0.04 (0.02)*
<b>Random Effects</b>					
$\hat{\tau}$ (SE)	0.15 (-0.04)	0.07 (-0.02)	0.14 (-0.03)	0.06 (-0.02)	0.04 (-0.02)

<sup>a</sup> Married men 35–49 years. <sup>b</sup> Variable is grand-mean centered. <sup>c</sup> Married men 18–34 years. <sup>d</sup> Variable is group-mean centered.  
Note: † p < 0.10. \* p < 0.05. \*\* p < 0.01. \*\*\* p < .001.

Table 5. Multilevel Poisson Models for the Log Rate of Agreement with Controlling Behavior Statements (CBS), Junior Married Men 18–34 Years (N = 570), Urban Dhaka and Rural Matlab, Bangladesh, 2011

	Model 1	Model 2 (H2 <sub>a</sub> )	Model 3 (H2 <sub>b</sub> )	Model 4 (H2 <sub>c</sub> )	Model 5 (H2 <sub>a-c</sub> )
Controlling Behavior in Marriage (higher=more agreement with CBS)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)
Intercept ( $\hat{\gamma}_{00}$ )	1.43 (0.03)***	1.42 (0.03)***	1.43 (0.03)***	1.42 (0.03)***	1.43 (0.04)***
<b>Community-Level Variables (Senior Men)<sup>a</sup></b>					
Senior Men's Gender Norms count <sup>a,b</sup> ( $\hat{\gamma}_{01}$ )		-0.12 (0.03)***		-0.12 (0.03)***	-0.14 (0.03)***
Senior Men's Grades of Schooling <sup>a,b</sup> ( $\hat{\gamma}_{02}$ )					0.01 (0.01)
Junior Men's Exposure to Violence count <sup>b,d</sup> ( $\hat{\gamma}_{03}$ )					0.04 (0.04)
Senior Men's Perpetration of Physical Intimate Partner Violence count <sup>a,b</sup> ( $\hat{\gamma}_{04}$ )					0.02 (0.04)
<b>Individual-Level Variables (Junior Men)</b>					
Exposure to Violence in Childhood count <sup>c,d</sup> ( $\hat{\gamma}_{10}$ )			0.03 (0.01)*	0.02 (0.01)†	0.02 (0.01)†
Perpetration of Physical Intimate Partner Violence count ( $\hat{\gamma}_{20}$ )					-0.02 (0.02)
Grades of Schooling <sup>c,d</sup> ( $\hat{\gamma}_{30}$ )					-0.01 (0.01)†
Marriage Involved Dowry <sup>c,d</sup> ( $\hat{\gamma}_{40}$ )					0.04 (0.05)
<b>Cross-Level Interaction</b>					
Exposure to Violence in Childhood count <sup>c,d</sup> X Senior Men's Gender Norms count <sup>a,b</sup> ( $\hat{\gamma}_{11}$ )				-0.01 (0.01)	
<b>Random Effects</b>					
$\hat{\tau}$	0.03	0.02	0.03	0.02	0.01
(SE)	(-0.01)	(-0.01)	(-0.01)	(-0.01)	(-0.01)

<sup>a</sup> Married men 35–49 years. <sup>b</sup> Variable is a grand-mean centered. <sup>c</sup> Variable is group-mean centered. <sup>d</sup> Married men 18–34.

Note: † p < 0.10. \* p < 0.05. \*\* p < 0.01. \*\*\* p < 0.001.

Appendix A. Split-half Exploratory Factor Analysis (EFA), and Confirmatory Factor Analysis (CFA) for Community Gender Norms among Married Men 35-49 Years (N=927), and Individual Exposure to Violence among Married Men 18-34 Years (N=570), Urban Dhaka and Rural Matlab, Bangladesh 2011

Community Gender Norms Married Men 35-49 Years				Individual Exposure to Violence in Childhood Married Men 18-34 Years			
Fit Statistics	SH <sup>a</sup>		FS <sup>c</sup>	Fit Statistics	SH <sup>b</sup>		FS <sup>c</sup>
	EFA	SH CFA	CFA		EFA	SH CFA	CFA
RMSEA	0.70	0.08	0.07	RMSEA	0.08	0.09	0.08
CFI	0.94	0.93	0.93	CFI	0.95	0.95	0.95
TLI	0.92	0.91	0.90	TLI	0.93	0.93	0.93
Items:	Factor <sup>d</sup> Loading			Items: Before you reached 18:	Factor <sup>e</sup> Loading		
A woman's most important role is to take care of her home and cook for her family.	0.60			... you saw or heard my mother being beaten by her husband or boyfriend.	0.62		
Men need sex more than women do.	0.42			... you were told you were lazy or stupid or weak by someone your my family.	0.76		
It is a woman's responsibility to avoid getting pregnant.	0.64			... someone touched your buttocks or genitals or made you touch them when you did not want to.	0.81		
You think that a woman should obey her husband.	0.61			... you were insulted or humiliated by someone in your family in front of other people.	0.76		
You think that a man should have the final say in all family matters.	0.70			... you were beaten at home with a belt or stick or something else which was hard.	0.74		
There are times when a woman deserves to be beaten.	0.53			...one or both of your parents were too drunk to take care of you.	0.54		
A woman should tolerate violence in order to keep her family together.	0.62			... you were beaten so hard at home that it left a mark or bruise.	0.52		
If someone insults you, you will defend your reputation, with force if you have to.	0.38						

SH = Split-Half Sample N=285. b) SH = Split-Half Sample N=469. c) FS = Full-sample. d) Factor loadings from full-sample CFA. Factor loadings from full-sample CFA.

Appendix B. Multilevel Poisson Models for the Log Rate of Agreement with Gender-Equitable Statements, Married Men 18 – 34 Years (N = 570), Urban Dhaka and Rural Matlab, Bangladesh, 2011. Sensitivity analyses for inclusion of different control variables.

	Model 1 Alcohol Consumption (ref. none)	Model 2 Islam (ref. no)	Model 3 Steady Work During Year (ref. no)	Model 4 Owns Home (ref. no)	Model 5 Owns TV (ref. no)
Gender-Equitable Attitudes (higher=more equitable attitudes)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)
Intercept ( $\hat{\gamma}_{00}$ )	0.61 (0.06)***	0.74 (0.11)***	0.61 (0.06)***	0.61 (0.06)***	0.62 (0.06)***
<b>Community-Level Variables (Senior Men)<sup>a</sup></b>					
Senior Men's Gender Norms count <sup>a,b</sup> ( $\hat{\gamma}_{01}$ )	0.19 (0.05)***	0.18 (0.05)***	0.19 (0.05)***	0.18 (0.05)***	0.18 (0.05)***
Senior Men's Grades of Schooling <sup>a,b</sup> ( $\hat{\gamma}_{02}$ )	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)
Junior Men's Exposure to Violence count <sup>b,d</sup> ( $\hat{\gamma}_{03}$ )	-0.12 (0.06)*	-0.12 (0.06)*	-0.12 (0.06)*	-0.12 (0.06)*	-0.12 (0.06)*
Senior Men's Perpetration of Physical Intimate Partner Violence count <sup>a,b</sup> ( $\hat{\gamma}_{04}$ )	0.09 (0.07)	0.09 (0.07)	0.08 (0.07)	0.08 (0.07)	0.07 (0.07)
<b>Individual-Level Variables (Junior Men)</b>					
Exposure to Violence in Childhood count <sup>c,d</sup> ( $\hat{\gamma}_{10}$ )	-0.02 (0.02)	-0.01 (0.02)	-0.01 (0.02)	-0.01 (0.02)	-0.01 (0.02)
Perpetration of Physical Intimate Partner Violence count ( $\hat{\gamma}_{20}$ )	-0.15 (0.03)***	-0.15 (0.03)***	-0.15 (0.03)***	-0.15 (0.03)***	-0.14 (0.03)***
Control Variable <sup>c,d</sup> ( $\hat{\gamma}_{30}$ )	0.21 (0.11)*	-0.14 (0.10)	0.32 (0.12)**	-0.10 (0.07)	0.20 (0.07)**
<b>Cross-Level Interaction</b>					
Exposure to Violence in Childhood count <sup>c,d</sup> X Senior Men's Gender Norms count <sup>a,b</sup> ( $\hat{\gamma}_{11}$ )	0.04 (0.02)*	0.05 (0.02)*	0.05 (0.02)**	0.05 (0.02)**	0.04 (0.02)*
<b>Random Effects</b>					
$\hat{\tau}$ (SE)	0.05 (-0.02)	0.06 (-0.02)	0.06 (-0.02)	0.05 (-0.02)	0.05 (-0.02)

<sup>a</sup> Married men 35–49 years. <sup>b</sup> Variable is grand-mean centered. <sup>c</sup> Married men 18-34 years. <sup>d</sup> Variable is group-mean centered. Note: † p < 0.10. \* p < 0.05. \*\* p < 0.01. \*\*\* p < 0.001.

Appendix B. Continued

	Model 6 Mean No. Children	Model 7 Mean Age of Spouse	Model 8 Mean Age of Respondent	Model 9 Important Male in Life (ref. no)
	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)
Gender-Equitable Attitudes (higher=more equitable attitudes)				
Intercept ( $\hat{\gamma}_{00}$ )	0.57 (0.06)***	0.65 (0.07)***	0.70 (0.08)***	0.61 (0.06)***
<b>Community-Level Variables (Senior Men)<sup>a</sup></b>				
Senior Men's Gender Norms count <sup>a,b</sup> ( $\hat{\gamma}_{01}$ )	0.19 (0.05)***	0.19 (0.05)***	0.18 (0.05)***	0.18 (0.05)***
Senior Men's Grades of Schooling <sup>a,b</sup> ( $\hat{\gamma}_{02}$ )	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)
Junior Men's Exposure to Violence count <sup>b,d</sup> ( $\hat{\gamma}_{03}$ )	-0.11 (0.06)*	-0.13 (0.06)*	-0.13 (0.06)*	-0.12 (0.06)
Senior Men's Perpetration of Physical Intimate Partner Violence count <sup>a,b</sup> ( $\hat{\gamma}_{04}$ )	0.08 (0.07)	0.08 (0.07)	0.08 (0.07)	0.08 (0.07)
<b>Individual-Level Variables (Junior Men)</b>				
Exposure to Violence in Childhood count <sup>c,d</sup> ( $\hat{\gamma}_{10}$ )	-0.02 (0.02)	-0.01 (0.02)	-0.01 (0.02)	-0.02 (0.02)
Perpetration of Physical Intimate Partner Violence count ( $\hat{\gamma}_{20}$ )	-0.13 (0.03)***	-0.15 (0.03)***	-0.15 (0.03)***	-0.14 (0.03)***
Control Variable <sup>c,d</sup> ( $\hat{\gamma}_{30}$ )	-0.07 (0.03)*	0.01 (0.01)	0.01 (0.01) †	0.16 (0.08)*
<b>Cross-Level Interaction</b>				
Exposure to Violence in Childhood count <sup>c,d</sup> X Senior Men's Gender Norms count <sup>a,b</sup> ( $\hat{\gamma}_{11}$ )	0.04 (0.02)*	0.05 (0.02)**	0.05 (0.02)**	0.04 (0.02)
<b>Random Effects</b>				
$\hat{\tau}$ (SE)	0.05 (-0.02)	0.06 (-0.02)	0.06 (-0.02)	0.05 (-0.02)

<sup>a</sup> Married men 35–49 years. <sup>b</sup> Variable is grand-mean centered. <sup>c</sup> Married men 18–34 years. <sup>d</sup> Variable is group-mean centered.  
 Note: † p < 0.10. \* p < 0.05. \*\* p < 0.01. \*\*\* p < .001.

Appendix C. Multilevel Poisson Models for the Log Rate of Agreement with Controlling Behavior Statements, Married Men 18 – 34 Years (N = 570), Urban Dhaka and Rural Matlab, Bangladesh, 2011. Sensitivity analyses for inclusion of different control variables.

	Model 1 Alcohol Consumption (ref. none)	Model 2 Islam (ref. no)	Model 3 Steady Work During Year (ref. no)	Model 4 Owns Home (ref. no)	Model 5 Owns TV (ref. no)
Controlling Behavior in Marriage (higher=more agreement with CB)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)
Intercept ( $\hat{\gamma}_{00}$ )	1.43 (0.04)***	1.29 (0.08)***	1.43 (0.04)***	1.43 (0.04)***	1.43 (0.04)***
<b>Community-Level Variables (Senior Men)<sup>a</sup></b>					
Senior Men's Gender Norms count <sup>a,b</sup> ( $\hat{\gamma}_{01}$ )	-0.13 (0.03)***	-0.13 (0.03)***	-0.13 (0.03)***	-0.13 (0.03)***	-0.14 (0.03)***
Senior Men's Grades of Schooling <sup>a,b</sup> ( $\hat{\gamma}_{02}$ )	0.01 (0.01)	0.01 (0.01)	0.02 (0.01)	0.01 (0.01)	0.02 (0.01)
Junior Men's Exposure to Violence count <sup>b,d</sup> ( $\hat{\gamma}_{03}$ )	0.04 (0.04)	0.03 (0.03)	0.04 (0.04)	0.04 (0.04)	0.03 (0.04)
Senior Men's Perpetration of Physical Intimate Partner Violence count <sup>a,b</sup> ( $\hat{\gamma}_{04}$ )	0.02 (0.04)	0.02 (0.04)	0.02 (0.04)	0.03 (0.04)	0.03 (0.04)
<b>Individual-Level Variables (Junior Men)</b>					
Exposure to Violence in Childhood count <sup>c,d</sup> ( $\hat{\gamma}_{10}$ )	0.02 (0.01) †	0.03 (0.01) †	0.02 (0.01) †	0.03 (0.01) †	0.03 (0.01) †
Perpetration of Physical Intimate Partner Violence count ( $\hat{\gamma}_{20}$ )	0.00 (0.02)	0.00 (0.02)	0.00 (0.02)	0.00 (0.02)	0.00 (0.02)
Control Variable <sup>c,d</sup> ( $\hat{\gamma}_{30}$ )	0.03 (0.09)	0.15 (0.08) †	0.01 (0.08)	0.10 (0.05) †	-0.06 (0.05)
<b>Random Effects</b>					
$\hat{\tau}$ (SE)	0.01 (-0.01)	0.01 (-0.01)	0.01 (-0.01)	0.01 (-0.01)	0.01 (-0.01)

<sup>a</sup> Married men 35–49 years. <sup>b</sup> Variable is a grand-mean centered. <sup>c</sup> Variable is group-mean centered. <sup>d</sup> Married men 18-34.

Note: † p < 0.10. \* p < 0.05. \*\* p < 0.01. \*\*\* p < .001.

Appendix C. Continued

	Model 6 Mean No. Children	Model 7 Mean Age of Spouse	Model 8 Mean Age of Respondent	Model 9 Important Male in Life (ref. no)
Controlling Behavior in Marriage (higher=more agreement with CB)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)	$\hat{\gamma}$ (SE)
Intercept ( $\hat{\gamma}_{00}$ )	1.44 (0.04)***	1.39 (0.04)***	1.45 (0.05)***	1.44 (0.04)***
<b>Community-Level Variables (Senior Men)<sup>a</sup></b>				
Senior Men's Gender Norms count <sup>a, b</sup> ( $\hat{\gamma}_{01}$ )	-0.13 (0.03)***	-0.13 (0.03)***	-0.13 (0.03)***	-0.13 (0.03)***
Senior Men's Grades of Schooling <sup>a, b</sup> ( $\hat{\gamma}_{02}$ )	0.01 (0.01)	0.02 (0.01)	0.01 (0.01)	0.02 (0.01)
Junior Men's Exposure to Violence count <sup>b, d</sup> ( $\hat{\gamma}_{03}$ )	0.04 (0.04)	0.04 (0.04)	0.04 (0.04)	0.04 (0.04)
Senior Men's Perpetration of Physical Intimate Partner Violence count <sup>a, b</sup> ( $\hat{\gamma}_{04}$ )	0.02 (0.04)	0.02 (0.04)	0.02 (0.04)	0.02 (0.04)
<b>Individual-Level Variables (Junior Men)</b>				
Exposure to Violence in Childhood count <sup>c, d</sup> ( $\hat{\gamma}_{10}$ )	0.02 (0.01) †	0.03 (0.01) †	0.02 (0.01) †	0.02 (0.01) †
Perpetration of Physical Intimate Partner Violence count ( $\hat{\gamma}_{20}$ )	0.00 (0.02)	0.00 (0.02)	0.00 (0.02)	0.00 (0.02)
Control Variable <sup>c, d</sup> ( $\hat{\gamma}_{30}$ )	0.00 (0.02)	-0.01 (0.01)	0.00 (0.01)	0.06 (0.06)
<b>Random Effects</b>				
$\hat{\tau}$ (SE)	0.01 (-0.01)	0.01 (-0.01)	0.01 (-0.01)	0.01 (-0.01)

<sup>a</sup> Married men 35–49 years. <sup>b</sup> Variable is a grand-mean centered. <sup>c</sup> Variable is group-mean centered. <sup>d</sup> Married men 18-34.

Note: † p < 0.10. \* p < 0.05. \*\* p < 0.01. \*\*\* p < .001.