Associations of marital violence with different forms of contraception: Cross-sectional findings from South Asia

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Abstract

Objective—To assess associations between marital violence and type of contraception among women in South Asia.

Methods—Cross-sectional analyses were conducted using marital violence data collected during the most recent Demographic and Health Surveys from Bangladesh (n = 3665), India (n = 56 357), and Nepal (n = 3037). Data were pooled to assess associations of marital violence (physical or sexual) with modern contraception use (current spacing or sterilization).

Results—Sexual marital violence was associated with both modern spacing contraception (adjusted odds ratio [AOR] 1.30; 95% confidence interval [CI], 1.13–1.49) and sterilization (AOR 0.79; 95% CI, 0.70–0.88). Sexual violence was reported more often by pill users (9.8% vs 5.5% for non-users) but less often by condom users (4.5% vs 5.8% for non-users).

Conclusion—Sexual marital violence might increase use of contraception that need not require husband involvement (pill) but decrease use of methods that require his cooperation (condom) or support for mobility, funds, or time (sterilization).

Keywords

Contraception use; Domestic violence; Intimate partner violence; Sexual violence, Family planning; South Asia

1. Introduction

A study published in 2010 estimated that 40% of women in South Asia had experienced physical and/or sexual marital violence [1]. Global evidence suggests that such violence affects women's reproductive control and contraceptive practices [2–4]. Actions taken by

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male partners to prevent women from implementing family planning measures have been implicated in increased risk of unplanned and unwanted pregnancies and induced abortion among women in South Asia who report marital violence [5–10]. Complicating this picture are findings from India that demonstrate associations between marital violence and non-use of contraception [5,6,11], and contrasting findings from Bangladesh that document an association between marital violence and increased use of contraception [12]. Research from Nepal found no appreciable association between marital violence and contraception, possibly owing to an inadequate sample size [13].

These dissimilar findings, which were recorded at the national level, might be attributable to the different forms of contraception that predominate in each country; namely, injections in Nepal, the contraceptive pill in Bangladesh, and female sterilization in India [14–165]. Regional, rather than country-specific, analysis could, therefore, offer some insight, given the overlap of key predictors of contraceptive use across South Asia. Such predictors include gendered risks (e.g. early marriage of girls and a preference for sons) and social inequities (e.g. rural residence, poverty, and low education) [14–16]. Such pooled regional analysis would also allow for large samples through which to explore differences in associations of marital violence with spacing contraception (modern contraceptives that allow a woman to delay or space pregnancy; for example, the pill, IUD) versus limiting contraception (or permanent contraception, which prevents further pregnancies from occurring; for example, female sterilization).

Analysis of associations with spacing versus limiting contraception is currently lacking; however, this aspect is important to consider because motivations differ for these forms of contraception. Multi-country analyses, including research conducted in South Asia, suggest that women who report spousal violence are also more likely to report high parity [2,14–17], which suggests that they might be less likely to use limiting forms of contraception. Research from East Africa found that men who held an accepting attitude toward marital violence also desired a large number of children [18]. Such attitudes in the context of marital violence might affect women's acquisition of limiting forms of contraception (e.g. sterilization). Simultaneously, however, the high rates of unwanted pregnancy [19] and induced abortion [20] observed among women experiencing spousal violence suggest that such women might actually wish to avert a pregnancy. In this context, female-controlled contraceptive methods, such as the pill, might offer greater opportunity for covert use by women contending with marital violence, while still allowing them the opportunity to achieve their husband's expected fertility goals.

The aim of the present study was to provide insight into the potentially different associations between marital violence and spacing versus limiting forms of contraception in South Asia, through the analysis of data collected from married women not currently pregnant at the time of survey in Bangladesh, India, and Nepal.

2. Methods

Cross-sectional analyses were conducted using the most recent Demographic and Health Survey (DHS) data from Bangladesh (2007), India (2005–2006), and Nepal (2011) [14–16].

The analysis was conducted at the University of California, San Diego, between November 2013 and November 2014. Ethical approval for the DHS design and implementation was provided by ICF International (Fairfax, VA, USA) and the respective host country. All DHS participants provided informed consent prior to their participation. The institutional review board of the University of California, San Diego, USA, approved the present study.

The DHS data from Bangladesh, India, and Nepal were used for present study because they were the only countries in South Asia for which both physical and sexual marital violence measures were available [14–16]. The DHS are nationally representative, two-stage, stratified sample surveys on population health and fertility conducted among women of reproductive age [21]. Response rates were greater than 94% in all three countries included in the present study. The sample for analysis was restricted to currently married women who had completed the domestic violence module; were not pregnant at the time of interview; and had provided responses for all dependent and independent variables assessed. The total cohort size was 63 059; the breakdown by country was Bangladesh (n = 3665), India (n = 56 357), and Nepal (n = 3037).

The primary independent variables assessed in the present study were any occurrence of physical marital violence (assessed by seven items) or sexual marital violence (assessed by two items), ever in the current marital relationship. Other items assessed physical and sexual marital violence during the past year; these data were provided descriptively. Further details are available in the relevant DHS reports [14–16]. Current contraceptive use was set as the primary dependent variable. This variable was categorized as none and/or not modern (including traditional and folkloric methods);modern spacing (contraceptive pill, intrauterine device [IUD], injections, diaphragm, condom, implant, female condom, foam, and jelly); and sterilization (male and female).

Covariates were social equity indicators (respondent age, respondent and husband education, household wealth quintile, and urban vs rural residence) and gender equity indicators (parental marital violence [father's abuse of mother], female child marriage, position in the household, preference for a son, and actual number of living sons and daughters). These covariates were selected on the basis of previous research documenting their associations with marital violence and contraception in South Asia [5–12,22–24].

2.1. Data analysis

Data were pooled across countries, and multinomial regressions were used to assess relationships between independent variables and the contraception outcome. Models included both physical and sexual marital violence as primary independent variables. Final adjusted models included primary independent variables, fixed effects by country, and all covariates that were statistically significant (*P* < 0.05). No co-linearity for covariates was indicated for the model, based on a tolerance cutoff of 0.30. All analyses were weighted using individual weights that adjusted for country population sizes and complex survey design using SAS version 9.3 (SAS Institute, Cary, NC, USA). Given the much larger sample size for India, sensitivity analyses were conducted to determine whether the observed effects for the pooled model held true at the national level. The sensitivity analyses involved examination of multivariate models stratified by country and by comparing

multivariate models with and without India. In addition, descriptive analyses of specific types of contraceptive use (e.g. pill, condom, or IUD) by physical and sexual marital violence were conducted both for the total pooled sample and by country.

3. Results

The descriptive characteristics of the present study group and observed associations are outlined in Table 1. A history of physical or sexual marital violence ever was reported by 37.2% (unweighted n = 20 225) of the cohort; 23.3% (unweighted n = 12 966) had experienced physical or sexual marital violence during the past year. The occurrence of both physical and sexual marital violence ever was 7.8% (unweighted n = 4192), and in the past year was reported by 4.6% (unweighted n = 2543). In all, 34.9% (unweighted n = 19 051) reported physical marital violence at any time, and 10.1% (unweighted n = 5366) reported sexual marital violence at any time. Modern spacing contraceptive use was reported by 14.5% (unweighted n = 10 923) and sterilization by 37.4% (unweighted n = 22 578; male sterilization, 1.1%, unweighted n = 948).

Adjusted multinomial analyses indicated that history of sexual marital violence was associated with increased likelihood of current modern spacing contraceptive use but reduced likelihood of sterilization (Table 1). The adjusted odds ratios (AORs) were 1.30 (95% confidence interval [CI], 1.13–1.49) and 0.79 (95% CI, 0.70–0.88), respectively. Physical marital violence was not associated with either parameter. Sensitivity analyses— including Bangladesh-specific and Nepal-specific models, and the pooled multivariate model without India—did not yield similar findings to the overall model; in these analyses, neither physical nor sexual marital violence were appreciably associated with the contraception outcomes (data not shown). Small cell sizes for sexual marital violence might have affected these estimates. The results of the India-specific model were comparable to the pooled model.

Covariates in the total pooled model revealed important social equity indicators associated with the contraceptive outcomes (Table 1). Well-educated women with a high wealth index were more likely to report both spacing contraception and sterilization than poorly educated women with a low wealth index. In addition, women with well-educated husbands and those who were urban residents tended to report the use of spacing contraception. Women in the oldest age category (40–49 years) were more likely to report sterilization and less likely to report spacing contraception than women in the youngest age category (15–19 years). Son preference ideologies were associated with increased likelihood of both spacing contraception and sterilization. Although high boy and high girl parity were both associated with the use of spacing contraception and sterilization, having two or more boys demonstrated markedly greater effect sizes for these associations than were detected for two or more girls. The greatest difference was seen for sterilization: women with two or more boys were 7.5-times more likely than those with no boys to report sterilization; by contrast, women with two or more girls were only 1.6-times more likely than those with no girls to use this method of contraception. Heads of household and daughters of the heads of household were less likely than daughters-in-law to report spacing contraception or

sterilization, although wives of the heads of household were more likely than daughters-in-law to report sterilization. Early marriage was also associated with sterilization.

To offer further insight, descriptive data on the type of contraceptives used by history of sexual marital violence were reviewed (Table 2). Women who had experienced sexual marital violence were more likely to report pill use (9.8% [507/5366] vs 5.5% [3332/57 693] for non-users) but less likely to report condom use (4.5% [279/5366] vs 5.8% [4335/57 693] for non-users). Similarly, use of injection was more likely, but use of an IUD was less likely, among women who had experienced sexual marital violence; however, the prevalence of these types of birth control was low (1.7%, [1604/63 059]) in the present cohort. Similar findings were documented for physical marital violence. For traditional contraceptive methods, withdrawal was most likely to be used by women who reported sexual marital violence than those who reported no sexual marital violence (4.2% [274/5366] vs 2.7% [2118/57 693]). Country-specific analyses showed similar associations between marital violence and condom use; however, associations between marital violence and other forms of contraception were not consistent across countries. A greater likelihood of pill use among women reporting sexual marital violence was seen for Bangladesh and India, but not for Nepal. A lower likelihood of sterilization among women reporting sexual marital violence was seen for India, but not for Bangladesh or Nepal, with Nepal showing higher likelihood of sterilization among women with such a history. These divergent findings by country might in part be attributable to variation in cell sizes, as predominant forms of contraception were not the same in each country. In Bangladesh, the predominant forms of contraception were the pill (30.0% [1086/3665]), injections (7.7% [295/3665]), and female sterilization (5.9% [200/3665]). In India, they were female sterilization (39.8% [21 031/56 357]) and condoms (5.8% 4233/56 357). In Nepal, they were female sterilization (14.5% [399/3037]), injections (10.7% [357/3037]), male sterilization (9.5% 290/3037), and condoms (5.1% 175/3037).

4. Discussion

The present study revealed that sexual marital violence affected one in 10 women in a cohort from South Asia. Such sexual marital violence was associated with an increased likelihood of spacing contraceptive use but a reduced likelihood of sterilization. These findings clarified previous research that documented a positive association between marital violence and contraceptive use (particularly oral contraceptives) [12], but a negative association where sterilization was the predominant means of birth control [5,6,11]. Contrary to prior studies [5–7,11,12], physical marital violence was not associated with contraceptive use in the present study, possibly owing to the model adjusting for sexual marital violence. Previous research from India found that an association of physical marital violence with contraception was apparent only in situations where there was also sexual marital violence; however, the prevalence of sexual marital violence alone was too rare in that study to provide a reliable estimate [11]. The present findings suggested that sexual marital violence could affect contraceptive use to a greater extent than physical marital violence, and that women who experienced sexual marital violence might have an increased tendency to access reproductive health services, perhaps based on greater perceived risk for unintended pregnancy. Such findings are consistent with other research indicating greater likelihood of

use of female-controlled contraception [12,25–28] among women experiencing male partner violence.

Findings of a reduced likelihood of sterilization among women with a history of sexual marital violence require further analysis. Spacing contraception might feel a safer or more manageable option for women in the context of marital violence, which has been linked with a desire for a large number of children among men [18]. In the country-specific sensitivity analyses for both Bangladesh and Nepal, no association between marital violence and sterilization was observed. Country-specific considerations of differences in access and motivations for sterilization might offer some insight into this observation. In contrast to the conflicting findings seen for sterilization, the data for condom use in the present study indicated low use of this method in the context of marital violence, across both pooled and country-specific models. These findings reinforced prior research documenting that abusive male partners are less likely to use condoms with their wives [2,29].

The descriptive analyses indicated that sexual marital violence was associated with an increased likelihood of pill utilization among the present study cohort. South Asian women experiencing sexual marital violence might have more reproductive control via contraceptives not easily subject to their husband's knowledge, approval, or assistance. A similar finding has been reported from Jordan [28]. However, other issues could have been at play given that withdrawal—a traditional form of contraception within the man's control —was also more likely to be reported by the women with a history of sexual marital violence in the present study. Additional research, including qualitative studies, is needed to understand the contraceptive decision-making and practices of women experiencing sexual violence in marriage. Very low use of the pill (India and Nepal), contraceptive injection (India and Bangladesh) and other forms of effective spacing contraception such as IUDs and implants (all three countries) could potentially obscure full understanding of the observed associations between marital violence and contraception. Nonetheless, there is a clear need for sustainable interventions centered on reproductive health care to identify and assist women experiencing sexual marital violence.

Other gender equity issues were also associated with contraceptive use in the region. Son preference ideology was associated with increased use of contraceptives, and a greater effect of multiple boys versus multiple girls on contraceptive practices was observed, in agreement with other studies from South Asia [30–34]. Such an effect might be contributing to the sex ratio imbalance prevalent in the region [35, 36]. Although supporting women and families to use contraception should be a part of family planning programs, inadvertent reduction of the relative numbers of girls to boys might require more careful consideration in the context of South Asia.

Limitations of the present study included restriction of the regional analysis to just three countries with data not collected within the same timeframe; consequently, the results of pooled analyses might not be consistent with nation-specific findings. Disproportionate representation of India in the pooled data potentially skewed the findings. Sensitivity analyses were conducted to address this issue, but the country-specific multivariate models for Bangladesh and Nepal, as well as the multivariate model without India, offered unstable

estimates owing to inadequate power, which inhibited the ability to make valid conclusions at the country level. The India-specific model provided results comparable to the pooled model but, as noted above, this effect might reflect disproportionate representation. Pooled regional analyses did, however, allow adequate power to explore effects that were insufficiently powered for analysis at the country-level, particularly for sexual marital violence. Confirmation of the findings at the national level requires additional data from the region, possibly across multiple years.

The differing time periods for the DHS assessments represented a further limitation of the present study. The measure of marital violence included all experiences of violence from the current spouse, whereas assessments of contraception largely related to current behavior. Consequently, it was not possible to discern how differing timing of marital violence affected contraceptive use. No variable was available to assess current desire to become pregnant, an important predictor of contraceptive use among women. Covariates were designed to adjust for social inequities but indicators of access to health care were not available in the DHS datasets. Multivariate analyses could not be conducted for each form of contraception owing to small cell sizes; however, more robust analyses might be possible when multi-year data with marital violence measures become available for these countries. Finally, DHS data are susceptible to social desirability and recall biases and are cross-sectional in nature; thus, causal relationships could not be inferred in the present study.

5. Conclusion

The present regional analysis found that marital sexual violence affected one in ten women and decreased the likelihood of sterilization and condom use, the leading means of modern contraception in South Asia. By contrast, marital sexual violence was associated with increased likelihood of oral contraceptive pill use, which can be used surreptitiously by affected women. The results support the need to prioritize improved access to contraceptive services and choices in South Asia, and to address marital violence within the context of reproductive health care services.

Acknowledgments

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Table 1

Descriptive characteristics and associations between marital violence and current contraceptive use among women in South Asia (n = 63059).[a,b,c]

Characteristic	Total sample		Current contraceptive use Frequencies[d]			Association analyses			
			No current modern contraception[e]	Modern spacing contraception	Sterilization	Modern spacing contraception	Modern spacing contraception	Sterilization	Sterilization
	Unweighted sample size	Prevalence (95% CI)	Distribution	Distribution	Distribution	OR (95% CI)[f]	AOR (95% CI)[g]	OR (95% CI)[f]	AOR (95% CI)[g]
Study cohort overview	63 059	-	48.1 (47.4–48.9)	14.5 (14.0–15.0)	37.4 (36.7–38.1)	-	-	-	-
Physical marital violence									
Never	44 008	65.1 (64.3–65.9)	48.6 (47.8–49.5)	14.9 (14.3–15.5)	36.5 (35.6–37.3)	1.00	1.00	1.00	1.00
Ever	19 051	34.9 (34.1–35.7)	47.2 (46.0–48.4)	13.7 (12.9–14.5)	39.0 (37.8–40.3)	**0.81 (0.75–0.88)**	1.04 (0.94–1.14)	**1.17 (1.10–1.25)**	0.99 (0.92–1.07)
Sexual marital violence									
Never	57 693	89.9 (89.4–90.3)	47.7 (47.0–48.5)	14.1 (13.7–14.6)	38.2 (37.4–38.9)	1.00	1.00	1.00	1.00
Ever	5366	10.1 (9.7–10.6)	51.9 (49.9–53.8)	17.6 (16.1–19.1)	30.5 (28.7–32.4)	0.98 (0.87–1.10)	**1.30 (1.13–1.49)**	**0.79 (0.72–0.87)**	**0.79 (0.70–0.88)**
Age, y									
15–19	2727	7.0 (6.7–7.4)	85.6 (83.7–87.4)	13.2 (11.4–15.0)	1.2 (0.7–1.7)	1.00	1.00	1.00	1.00
20–24	9387	16.9 (16.4–17.3)	66.4 (65.0–67.8)	19.3 (18.1–20.4)	14.4 (13.4–15.4)	**2.14 (1.81–2.53)**	1.14 (0.95–1.37)	**14.43 (9.27–22.46)**	**7.67 (4.94–11.89)**
25–29	13 746	19.8 (19.4–20.3)	46.6 (45.2–47.9)	19.7 (18.6–20.8)	33.7 (32.4–35.0)	**3.17 (2.69–3.74)**	**1.26 (1.04–1.52)**	**47.90 (31.05–73.88)**	**18.48 (11.97–28.53)**
30–39	24 330	34.1 (33.6–34.6)	36.4 (35.4–37.4)	15.1 (14.4–15.9)	48.5 (47.4–49.6)	**3.00 (2.55–3.53)**	1.02 (0.84–1.24)	**89.29 (57.79–137.97)**	**27.88 (17.99–43.20)**
40–49	12 869	22.2 (21.6–22.7)	41.8 (40.4–43.2)	5.6 (5.0–6.2)	52.6 (51.2–54.0)	0.91 (0.75–1.09)	**0.27 (0.21–0.33)**	**86.44 (55.95–133.53)**	**23.08 (14.85–35.87)**
Education									
None	23 789	44.9 (44.0–45.8)	51.4 (50.3–52.6)	7.7 (7.1–8.2)	40.9 (39.7–42.0)	1.00	1.00	1.00	1.00
Primary	10 315	16.7 (16.2–17.1)	44.5 (43.1–46.0)	14.3 (13.4–15.3)	41.1 (39.7–42.6)	**1.73 (1.54–1.94)**	**1.50 (1.33–1.70)**	**1.28 (1.19–1.39)**	**1.57 (1.44–1.72)**
Secondary or higher	28 955	38.4 (37.6–39.3)	45.8 (44.8–46.8)	22.5 (21.7–23.3)	31.7 (30.7–32.6)	**3.42 (3.13–3.73)**	**2.07 (1.83–2.33)**	**0.86 (0.80–0.92)**	**1.36 (1.24–1.49)**

Characteristic	Total sample		Current contraceptive use Frequencies[d]			Association analyses			
	Unweighted sample size	Prevalence (95% CI)	No current modern contraception[e] Distribution	Modern spacing contraception Distribution	Sterilization Distribution	Modern spacing contraception OR (95% CI)[f]	Modern spacing contraception AOR (95% CI)[g]	Sterilization OR (95% CI)[f]	Sterilization AOR (95% CI)[g]
Spousal education									
None	13 956	26.8 (26.0–27.5)	52.3 (50.9–53.7)	9.3 (8.6–10.0)	38.4 (37.0–39.8)	1.00	1.00	1.00	1.00
Primary	10 462	17.2 (16.7–17.7)	45.3 (43.7–46.8)	13.0 (12.1–14.0)	41.7 (40.2–43.2)	**1.53 (1.36–1.73)**	**1.18 (1.04–1.35)**	**1.29 (1.18–1.40)**	**1.22 (1.11–1.34)**
Secondary or higher	38 641	56.0 (55.1–56.9)	47.0 (46.2–47.9)	17.4 (16.8–18.1)	35.6 (34.7–36.4)	**2.66 (2.41–2.93)**	**1.15 (1.02–1.30)**	0.95 (0.88–1.02)	0.93 (0.85–1.03)
Wealth quintile									
Poorest	8619	18.2 (17.5–19.0)	61.2 (59.6–62.8)	8.3 (7.4–9.1)	30.5 (29.0–32.1)	1.00	1.00	1.00	1.00
Poorer	9833	19.3 (18.7–19.8)	52.6 (51.1–54.0)	9.9 (9.1–10.8)	37.5 (36.0–38.9)	**1.40 (1.22–1.60)**	**1.30 (1.13–1.51)**	**1.43 (1.31–1.57)**	**1.54 (1.38–1.72)**
Middle	12 001	19.8 (19.2–20.4)	47.4 (45.9–48.9)	10.8 (9.9–11.6)	41.8 (40.4–43.3)	**1.69 (1.46–1.94)**	**1.47 (1.26–1.71)**	**1.77 (1.61–1.95)**	**2.06 (1.82–2.33)**
Richer	14 409	20.7 (20.0–21.4)	42.4 (41.0–43.9)	15.2 (14.2–16.3)	42.4 (40.9–43.8)	**2.71 (2.35–3.11)**	**1.90 (1.62–2.24)**	**1.99 (1.80–2.20)**	**2.38 (2.08–2.71)**
Richest	18 197	22.0 (21.2–22.8)	39.5 (38.2–40.7)	26.3 (25.2–27.4)	34.2 (32.9–35.6)	**5.47 (4.83–6.20)**	**3.22 (2.69–3.84)**	**1.68 (1.52–1.86)**	**2.01 (1.72–2.36)**
Residence									
Rural	35 472	69.3 (68.6–69.9)	51.3 (50.4–52.2)	11.5 (11.0–12.1)	37.2 (36.3–38.1)	1.00	1.00	1.00	1.00
Urban	27 587	30.7 (30.1–31.4)	41.0 (39.8–42.2)	21.1 (20.2–22.1)	37.9 (36.7–39.1)	**2.64 (2.43–2.87)**	**1.42 (1.28–1.58)**	**1.21 (1.13–1.30)**	0.95 (0.86–1.05)
Parental marital violence									
No	51 565	79.6 (78.9–80.3)	48.6 (47.8–49.4)	14.8 (14.3–15.3)	36.6 (35.8–37.4)	1.00	1.00	1.00	1.00
Yes	11 494	20.4 (19.7–21.1)	46.4 (44.9–47.9)	13.2 (12.3–14.1)	40.4 (38.9–41.8)	**0.85 (0.78–0.93)**	1.01 (0.92–1.12)	**1.20 (1.12–1.29)**	**1.36 (1.25–1.48)**
Age at marriage, y									
<15	11 303	23.1 (22.5–23.7)	45.0 (43.6–46.4)	13.2 (12.4–14.1)	41.7 (40.4–43.1)	1.00	1.00	1.00	1.00
15–17	21 251	38.2 (37.6–38.8)	48.4 (47.3–49.5)	12.2 (11.6–12.9)	39.4 (38.3–40.5)	**1.17 (1.06–1.30)**	1.02 (0.91–1.14)	**0.77 (0.72–0.83)**	**0.80 (0.73–0.87)**
18	30 505	38.7 (38.0–39.5)	49.8 (48.8–50.7)	17.5 (16.7–18.2)	32.8 (31.8–33.7)	**1.96 (1.77–2.17)**	**1.24 (1.10–1.40)**	**0.59 (0.55–0.64)**	**0.55 (0.51–0.61)**

Characteristic	Total sample		Current contraceptive use Frequencies[d]			Association analyses			
	Unweighted sample size	Prevalence (95% CI)	No current modern contraception[e] Distribution	Modern spacing contraception Distribution	Sterilization Distribution	Modern spacing contraception OR (95% CI)[f]	Modern spacing contraception AOR (95% CI)[g]	Sterilization OR (95% CI)[f]	Sterilization AOR (95% CI)[g]
Relationship to household head									
Daughter-in-law	9789	18.4 (17.8–18.9)	58.0 (56.5–59.6)	20.0 (18.8–21.2)	21.9 (20.6–23.3)	1.00	1.00	1.00	1.00
Head	3310	4.8 (4.5–5.1)	61.6 (58.8–64.4)	5.9 (4.8–7.0)	32.5 (29.7–35.3)	0.22 (0.18–0.28)	0.24 (0.19–0.32)	1.53 (1.32–1.78)	0.65 (0.55–0.77)
Wife	46 046	66.4 (65.7–67.1)	41.4 (40.6–42.2)	13.7 (13.2–14.2)	44.9 (44.0–45.8)	0.81 (0.74–0.88)	1.00 (0.90–1.10)	3.06 (2.81–3.32)	1.50 (1.36–1.64)
Daughter	2353	6.3 (5.9–6.6)	72.4 (69.9–74.9)	12.3 (10.5–14.1)	15.3 (13.3–17.2)	0.42 (0.34–0.51)	0.48 (0.39–0.59)	0.59 (0.50–0.71)	0.77 (0.64–0.93)
Other	1561	4.2 (3.9–4.5)	59.8 (56.2–63.4)	15.7 (12.8–18.5)	24.5 (21.5–27.5)	0.66 (0.52–0.84)	0.71 (0.55–0.91)	1.14 (0.95–1.37)	0.87 (0.71–1.07)
Son preference									
Yes	13 655	23.9 (23.3–24.5)	53.1 (51.7–54.5)	10.3 (9.5–11.0)	36.6 (35.2–38.0)	1.00	1.00	1.00	1.00
No	49 404	76.1 (75.5–76.7)	46.6 (45.8–47.3)	15.8 (15.3–16.4)	37.6 (36.9–38.4)	1.58 (1.44–1.73)	1.23 (1.11–1.37)	1.22 (1.14–1.31)	1.65 (1.53–1.78)
Living sons									
0	14 222	23.5 (23.0–24.1)	75.4 (74.3–76.5)	13.8 (12.9–14.6)	10.9 (10.1–11.6)	1.00	1.00	1.00	1.00
1	24 042	36.8 (36.2–37.4)	44.8 (43.8–45.9)	18.6 (17.8–19.4)	36.6 (35.5–37.6)	2.25 (2.06–2.46)	2.54 (2.31–2.79)	5.69 (5.22–6.21)	3.85 (3.53–4.21)
2	24 795	39.7 (39.0–40.3)	35.0 (33.9–36.2)	11.1 (10.5–11.7)	53.9 (52.7–55.1)	1.62 (1.47–1.79)	3.22 (2.87–3.62)	11.02 (10.03–12.10)	7.52 (6.79–8.33)
Living daughters									
0	19 922	30.5 (30.0–31.1)	59.9 (58.8–60.9)	14.5 (13.8–15.3)	25.6 (24.7–26.5)	1.00	1.00	1.00	1.00
1	24 275	36.7 (36.2–37.3)	41.4 (40.4–42.5)	16.3 (15.6–17.0)	42.3 (41.2–43.3)	1.58 (1.45–1.71)	1.77 (1.62–1.95)	2.41 (2.27–2.56)	1.99 (1.86–2.13)
2	18 862	32.8 (32.2–33.3)	44.7 (43.5–45.9)	12.4 (11.7–13.2)	42.9 (41.6–44.1)	1.09 (1.00–1.20)	1.89 (1.70–2.11)	2.28 (2.13–2.45)	1.58 (1.44–1.72)

Abbreviations: AOR, adjusted odds ratio; CI, confidence interval; OR, odds ratio.

[a]Values given as number or percentage (95% CI), unless otherwise indicated.

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[b] The present analysis included married women aged 15–49 years who were not pregnant at the time of completing the Demographic and Health Survey. The breakdown by country was as follows: Bangladesh (n = 3665), India (n = 56 357), and Nepal (n = 3037).

[c] Multinomial regression analyses were used to conduct ORs and AORs, with 95% confidence intervals to determine significance. Significant effects are noted by bolding in text.

[d] Row percentages presented.

[e] Reference category.

[f] Adjusted for country fixed effects.

[g] Adjusted for country fixed effects and all variables shown in the column.

Table 2

Descriptive characteristics on contraceptive method for total sample and by history of physical and sexual marital violence, among currently married, not currently pregnant women aged 15–49 years in South Asia (n = 63 059; Bangladesh n = 3665, India n = 56 357, Nepal n = 3037).[a,b]

Contraceptive method	Total sample	No physical marital violence	Physical marital violence	No sexual marital violence	Sexual marital violence
None	39.5 (38.8–40.2)	39.7 (38.8–40.5)	39.2 (38.1–40.4)	39.3 (38.5–40.0)	41.7 (39.6–43.4)
Pill	5.9 (5.8–6.2)	5.3 (5.0–5.7)	6.9 (6.4–7.5)	5.5 (5.1–5.8)	9.8 (8.6–11.0)
IUD	1.9 (1.7–2.0)	2.2 (2.0–2.4)	1.3 (1.0–1.6)	1.9 (1.8–2.1)	1.2 (0.8–1.6)
Injections	0.9 (0.8–1.1)	0.7 (0.6–0.8)	1.4 (1.2–1.6)	0.9 (0.7–1.0)	1.8 (1.3–2.2)
Condom	5.7 (5.4–5.9)	6.6 (6.2–6.9)	3.9 (3.5–4.3)	5.8 (5.5–6.1)	4.5 (3.7–5.3)
Female Sterilization	36.3 (35.6–37.0)	35.5 (34.6–36.3)	37.9 (36.7–39.1)	37.1 (36.3–37.8)	29.5 (27.7–31.3)
Male sterilization	1.1 (0.9–1.2)	1.0 (0.9–1.1)	1.1 (0.9–1.4)	1.1 (0.9–1.2)	1.1 (0.7–1.4)
Periodic abstinence	5.4 (5.1–5.7)	5.6 (5.2–6.0)	5.0 (4.5–5.5)	5.4 (5.1–5.7)	5.3 (4.4–6.3)
Withdrawal	2.9 (2.6–3.1)	3.1 (2.8–3.3)	2.5 (2.1–2.8)	2.7 (2.5–2.9)	4.2 (3.4–5.0)
Bangladesh					
None	39.6 (37.5–41.7)	43.7 (40.8–46.6)	35.2 (32.3–38.0)	40.1 (37.8–42.4)	36.9 (31.9–41.8)
Pill	30.0 (27.9–32.0)	28.5 (25.8–31.2)	31.5 (28.5–34.4)	28.9 (26.8–31.0)	34.7 (30.4–39.1)
IUD	1.1 (0.60–1.7)	0.5 (0.2–0.8)	1.8 (0.8–2.8)	1.1 (0.5–1.7)	1.2 (0.1–2.3)
Injections	7.7 (6.5–8.9)	6.3 (4.8–7.7)	9.2 (7.7–10.7)	7.7 (6.4–8.9)	7.8 (5.3–10.3)
Condom	4.7 (3.9–5.5)	6.3 (5.0–7.5)	3.0 (2.1–3.9)	5.0 (4.1–5.8)	3.4 (1.8–5.1)
Female Sterilization	5.9 (4.8–7.0)	4.2 (3.1–5.3)	7.6 (5.6–9.7)	5.9 (4.7–7.2)	5.7 (3.8–7.5)
Male sterilization	0.6 (0.3–0.9)	0.3 (0.0–0.6)	1.0 (0.5–1.5)	0.6 (0.2–0.9)	1.0 (0.2–1.9)
Periodic abstinence	5.7 (4.8–6.6)	5.3 (4.1–6.5)	6.9 (4.8–7.3)	5.9 (4.9–7.0)	4.4 (2.6–6.2)
Withdrawal	3.4 (2.6–4.1)	3.6 (2.6–4.7)	3.1 (2.1–4.1)	3.4 (2.6–4.2)	3.2 (1.6–4.8)
India					
None	39.4 (38.7–40.2)	39.2 (38.4–40.1)	39.8 (38.6–41.0)	39.1 (38.3–39.9)	42.7 (40.4–44.9)
Pill	3.4 (3.1–3.6)	3.5 (3.2–3.7)	3.3 (2.9–3.7)	3.2 (3.0–3.5)	4.9 (4.0–5.7)
IUD	2.0 (1.8–2.1)	2.3 (2.1–2.5)	1.2 (0.9–1.5)	2.0 (1.8–2.2)	1.2 (0.8–1.6)
Injections	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.0–0.2)	0.1 (0.1–0.1)	0.4 (0.1–0.7)
Condom	5.8 (5.5–6.1)	6.6 (6.2–7.0)	4.1 (3.7–4.5)	5.9 (5.5–6.2)	4.8 (3.8–5.7)
Female sterilization	39.8 (39.0–40.6)	38.3 (37.4–39.2)	42.6 (41.3–44.0)	40.3 (39.5–41.1)	34.3 (32.3–36.4)
Male sterilization	1.0 (0.9–1.2)	1.0 (0.8–1.1)	1.1 (0.8–1.4)	1.0 (0.9–1.2)	1.0 (0.6–1.4)

Contraceptive method	Total sample	No physical marital violence	Physical marital violence	No sexual marital violence	Sexual marital violence
Periodic abstinence	5.4 (5.1–5.8)	5.7 (5.3–6.1)	4.8 (4.3–5.4)	5.4 (5.1–5.7)	5.6 (4.5–6.7)
Withdrawal	2.8 (2.6–3.0)	3.0 (2.7–3.2)	2.4 (2.0–2.7)	2.6 (2.4–2.8)	4.4 (3.5–5.3)
Nepal					
None	46.7 (43.8–49.6)	46.9 (43.6–50.1)	46.1 (40.2–52.0)	47.8 (44.7–50.9)	39.8 (33.7–45.9)
Pill	4.1 (3.2–5.0)	4.3 (3.2–5.4)	3.3 (1.9–4.7)	4.3 (3.2–5.3)	3.0 (1.3–4.6)
IUD	1.5 (0.9–2.2)	1.5 (0.9–2.2)	1.5 (0.4–2.7)	1.4 (0.7–2.1)	2.2 (0.6–3.8)
Injections	10.7 (9.1–12.2)	10.7 (9.0–12.3)	10.6 (7.7–13.5)	10.6 (9.0–12.3)	10.9 (6.9–14.8)
Condom	5.1 (4.2–6.0)	6.1 (5.0–7.2)	1.6 (0.7–2.4)	5.4 (4.3–6.4)	3.3 (1.6–4.9)
Female sterilization	14.5 (12.2–16.8)	12.3 (10.1–14.5)	21.7 (17.3–26.2)	12.6 (10.5–14.8)	25.9 (19.8–32.1)
Male sterilization	9.5 (7.7–11.3)	9.8 (7.7–11.8)	8.7 (5.4–12.1)	10.0 (8.0–12.0)	6.5 (3.6–9.4)
Periodic abstinence	1.4 (0.9–2.0)	1.6 (0.9–2.4)	0.7 (0.1–1.4)	1.5 (0.9–2.2)	0.8 (0.0–1.7)
Withdrawal	5.4 (4.2–6.5)	5.7 (4.4–7.0)	4.3 (2.2–6.4)	5.2 (4.0–6.4)	6.3 (2.9–9.6)

Abbreviation IUD, intrauterine device.

[a] Values given as percentage (95% confidence interval).

[b] Methods reported by <1% across all assessed countries were not included in the present table. These methods included diaphragm, foam, implant, female condom, other modern methods, and other methods.