

Marital violence and women's reproductive health care in Uttar Pradesh, India

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Abstract:

Objective: Although the impact of marital violence on women's reproductive health is recognized globally, there is little research on how women's experience of and justification of marital violence in developing country settings is linked to sexually transmitted infection (STI) symptom reporting, and seeking care for the symptoms. **Method:** This study analyzes data on 9,639 currently married women from India's 2006–2007 National Family Health Survey-3 from the Central/Northern Indian state of Uttar Pradesh. The likelihood of currently married women's reporting STIs or symptoms, and the likelihood of seeking care for these, are analyzed using multivariate logistic regression techniques. **Results:** Currently married women's experience of physical, sexual, and emotional marital violence in the last 12 months was significantly associated with greater likelihood of reporting a STI or symptom (odds ratio [OR], 1.364 [95% confidence interval (CI), 1.171–1.588] for physical violence; OR, 1.649 [95% CI, 1.323–2.054] for sexual violence; OR, 1.273 [95% CI, 1.117–1.450] for emotional violence). Experience of physical violence (OR, 0.728; 95% CI, 0.533–0.994) and acceptance of any justification for physical violence (OR, 0.590; 95% CI, 0.458–0.760) were significantly associated with decreased chance of seeking care, controlling for other factors. **Conclusion:** This study suggests that experiencing marital violence may have a negative impact on multiple aspects of women's reproductive health, including increased self-report of STI symptoms. Moreover, marital physical violence and accepting justification for such violence are associated with decreased chance of seeking care. Thus, policies and programs to promote reproductive health should incorporate decreasing gender-based violence, and overcoming underlying societal gender inequality.

Keywords: Uttar Pradesh | India | reproductive health | sexually transmitted infections | violence against women

Article:

Introduction

The impact of gender-based violence (especially marital or intimate partner violence) on women's reproductive health has long been recognized (Moore, 1999, Heise and Ellsberg, 2001, García-Moreno and Stöckl, 2009). Such violence is an important manifestation of gender inequality, which is a significant barrier to meeting global reproductive health goals because it is directly linked to women's access to health care and health outcomes (Berer, 2005). Gender-based violence is perhaps "the most important structural issue" for prevention of HIV (Steinbrook, 2007, p. 1090). Thus, it is critically important to understand the links between marital or partner violence and women's reproductive health and their capacity to seek reproductive health care. These associations have been less studied in developing countries, although in more developed countries the associations have been better established.

Women experiencing violence are more likely to engage in risky sexual behaviors, and less likely to use condoms (Wingood & DiClemente, 1997) or contraception (Chan & Martin, 2009). They seem more likely to report gynecologic morbidity, pelvic pain, and pelvic inflammatory disease (Heise et al., 1999; Stephenson, Koenig, & Ahmed, 2006b). However, the link between partner violence and seeking reproductive health care (other than for violence-related injuries) has been much less examined (Campbell, 2002). The coercive behaviors that are part of intimate partner violence might lessen women's ability to seek any health care (McCloskey et al., 2007, Nicolaides, 2007), even prenatal care (Dietz et al., 1997). Less research focuses on other possibilities, such as seeking health care for STIs. Further, the link between women's own attitudes about violence, and their reproductive health status and health care seeking have rarely been studied.

In developing countries women's experiences of violence appear linked to access to prenatal care, still birth, reporting a sexually transmitted infection (STI), and attempted suicide (Chowdhary and Patel, 2008, Kishor and Johnson, 2004, Kishor and Johnson, 2006, Stephenson et al., 2006a), but treatment seeking for STIs has been less studied (Sudha, Morrison, & Zhu, 2007). The present study expands this literature by examining links among women's reports of marital violence and their justification of marital physical violence, with their reports of STI symptoms and seeking care (i.e., treatment for the symptoms) in the Central/Northern Indian state of Uttar Pradesh (UP).

Socioeconomic and Health Context

Significant proportions of Indian women (e.g., 40% of rural women) report symptoms consistent with STIs (Rani & Bonu, 2003). But India (like other regions) has a 'culture of silence' on women's reproductive ill health (Dixon-Mueller & Wasserheit, 1991). Symptom reporting and treatment seeking are reduced by lack of awareness of normal physical states, embarrassment, dearth of female health providers, and stigma (Bang et al., 1989, Prasad et al., 2005). In rural India, few symptomatic women (about 30.9%) seek treatment (Rani & Bonu, 2003). This substantial disparity has implications for women's reproductive health including fertility, STIs, and HIV (Prasad et al., 2005).

UP is one of India's most populous and least developed states, with among the lowest per-capita income (Rani, 2004). UP ranks poorly on common indices of socioeconomic development (Government of India, 2001), and reveals deficits in health infrastructure (Government of India,

2007). To illustrate, UP's birth rate was 30.1 per 1,000, compared with 23.5 for all of India (Government of India, 2008). The UP's infant mortality rate is 120 per 1,000 births (vs. 60 per 1,000 births in all of India), and the maternal mortality ratio is 517 (vs. 301 for all of India; Government of India, 2009, Government of India, 2008).

UP also has entrenched gender inequality including violence against women. UP's Gender Equality Index score ranges from 0.50 to 0.59 (1.00 indicates full gender equality; Government of India, 2008). Female/male literacy rates in UP are 43%/70% versus 54%/75%, respectively, for all of India (Government of Uttar Pradesh, ND). UP is one of the few remaining regions of India where female life expectancy at birth (58.8 years) is lower than males' (59.3 years; Government of India, 2008). Northern Indian kinship patterns prevalent in UP may be detrimental to the status of women, because they are based on village- and kin-exogamous marriage. This separates women from the support of natal kin and treats married women as outsiders until they prove themselves by bearing sons (Dyson & Moore 1983). Health care decisions for family members are usually made by senior women, and junior women are less likely to be able to participate in the process. Women in UP seem to have less personal autonomy, earning power, control over money, freedom of mobility, and participation in household decision making.

The prevalence of marital violence in India is substantial. Marriage is near universal and about 35% of women aged 15 to 49 years report marital physical or sexual violence (38% in UP). Further, 54% of married women in India (47% in UP) believe that it is justifiable for a husband to beat his wife (International Institute for Population Sciences [IIPS] & Macro International, 2007). Studies on marital violence in UP suggest it may be a "normative and tolerated element of society" (Stephenson et al., 2006a, p. 77). Physical and sexual abuse in UP were widespread and correlated, and overwhelmingly perpetrated by men on their wives (Martin et al., 1999a, Martin et al., 2002, Khan et al., 1996; Jejeebhoy & Cook, 1997).

Research Question

In this context, we examine whether UP women's experience of marital violence, and the attitudes justifying it, are associated with their reports of STI and seeking care. We expect that women who experienced aspects of marital violence, and those who accepted any justification for marital physical violence, will be more likely to report STI symptoms and less likely to seek care.

Methods

Data and Measures

We used data from India's Third National Family Health Survey (2005–2006), a cross-sectional, community-based survey that used a systematic, multistage, stratified, random sample of households in urban and rural sampling domains to cover over 99% of the population in all 29 major states and Union Territories of India (IIPS & Macro International, 2007). We used data from the state of UP, comprising 12,183 women aged 15 to 49, of whom 9,639 were currently married and 395 were formerly married (the remainder are unmarried). Because many key

questions were asked only of currently married women, we restrict the analyses to them. However, these comprise the majority of the women (approximately 80%). Our study is thus an examination of marital violence (among the most common forms of domestic violence faced by women).

India's National Family Health Surveys are designed to provide national and state estimates of important demographic, socioeconomic, and health topics. Questions are designed using internationally standardized questions (customized for local conditions) to facilitate intra- and inter-national comparisons. For the domestic violence related section of the questionnaire, the questions are based on a shortened and modified version of the Conflict Tactics Scale (Straus, 1990). This scale is an effective measure of domestic violence, and can be adapted to diverse cultural contexts. Moreover, the questions ask about specific acts (e.g., slapping, kicking, twisting arm) that can be reported more objectively by women experiencing them, irrespective of whether or not the acts are viewed as violent in the local context. Broad and potentially ambiguous terms such as "abuse" or "violence" were avoided in survey design, and also in interviewer training. This approach also allows measurement of multiple modes of violence, to estimate its severity (IIPS & Macro International, 2007).

All eligible women in the household were interviewed with a larger questionnaire on health and reproductive experiences. Interviews were conducted by intensively trained interviewers, matched to the gender of the respondent to promote rapport. In view of the sensitive nature of violence, specific protections for participants were built into the study design. First, only one woman from each household was randomly selected to answer questions on a module relating to household relations (including aspects of violence), although multiple women in that household may have been eligible. Second, in addition to the overall informed consent procedure at the start of the larger interview, women interviewed about domestic violence were given further information on the nature of the violence-related questions, and further assured of confidentiality. Third, interviewers were instructed to ensure that no others were present to enable privacy for women to answer questions candidly. For UP state, the questionnaire was available in English and Hindi (the main language of the state; IIPS & Macro International, 2007).

Questions on violence included measures of controlling behavior, emotional abuse, physical abuse, and sexual abuse. Women were asked whether their husband was: "a. jealous or angry if you (talk/talked) to other men; b. frequently (accuses/accused) you of being unfaithful; c. (does/did) not permit you to meet your female friends; d. (tries/tried) to limit your contact with your family; e. (insists/insisted) on knowing where you (are/were) at all times. f. (does/did) not trust you with any money." Answer categories included whether the experience had occurred within the last 12 months. Women answering 'yes' to whether any one of these had occurred in the last 12 months were coded 1, and the others (no or don't know) were coded 0, for a measure of husband's controlling behavior in the last 12 months.

Women were asked: "(Does/did) your husband ever: a. Say or do something to humiliate you in front of others?; b. Threaten to hurt or harm you or someone close to you?; and c. Insult you or make you feel bad about yourself?" Women answering 'yes' to any of these occurring in the last 12 months were coded 1 and the rest 0, for a measure of emotional abuse in the last 12 months.

After preliminary analyses indicated that these variables related similarly to the dependent variable, the response on emotional abuse was combined with that on controlling behavior (women coded 1 if they had experienced either, and 0 if not).

Women were asked whether their husband had: “ever do[ne] any of the following things to you: Slap you? b. Twist your arm or pull your hair? c. Push you, shake you, or throw something at you? d. Punch you with his fist or with something that could hurt you? e. Kick you, drag you or beat you up? f. Try to choke you or burn you on purpose? g. Threaten or attack you with a knife, gun, or any other weapon?” Women answering “yes” to any of these occurring in the last 12 months were coded 1 and others 0, for a measure of physical abuse in the last 12 months.

Women were asked: “(Does/did) your husband ever do any of the following things to you: Physically force you to have sexual intercourse with him even when you did not want to? Force you to perform any sexual acts you did not want to?” Women answering “yes” to any of these that occurred in the last 12 months were coded 1 and others 0, for a measure of sexual abuse in the last 12 months.

Regarding justification of marital physical violence, women were asked: “In your opinion, is a husband is justified in hitting or beating his wife in the following situations: If she goes out without telling him? If she neglects the house or children? If she argues with him? If she refuses to have sex with him? If she doesn’t cook food properly? If he suspects her of being unfaithful? If she shows disrespect for her in-laws?” Women accepting one or more justifications were coded 1; those accepting none coded 0.

The study controlled for women’s demographic characteristics including age (women aged 15–24 vs. older women), and number of children borne (0 vs any); household socioeconomic characteristics including rural residence, household standard of living index (IIPS & Macro International, 2007), membership in scheduled caste/tribe/other “backward” groups as designated by the Government of India, religious affiliation, and husbands education. Women’s age was divided into two groups contrasting those aged 15 to 24 with older women. The variable on household standard of living index was provided in the original study. It divided households into three groups (low, medium, and high) based on combined score on 19 indicators, such as housing quality, type of cooking fuel, ownership of major consumer goods, and ownership of land, house, or other assets. Our analyses contrast the lowest group with the medium and high group, to highlight the most vulnerable situation.

The study also controlled for women’s education and work status. We dichotomized the measure for education because more than half the women in the sample had no schooling and the remainder had very low levels. Measures of women’s autonomy and personal empowerment comprised four variables: a) Women’s freedom of mobility and role in household decision making (grouped into one measure); b) health care decision making autonomy; c) economic autonomy; and d) whether or not a woman felt she could refuse to have sex with her husband. Each of these variables, although correlated, taps into a different aspect of women’s empowerment, do not always affect outcomes in a consistent manner, and are typically treated as distinct in prior literature. Most variables in the analyses are treated as dichotomous, first to

highlight important divisions in the variable distributions, and second to clarify their association with the dichotomous dependent variable.

Three program-related variables were included: 1) Respondent's media exposure: Whether or not she read a newspaper/magazine or listened to the radio or watched TV once a week, or went to the cinema once a month; 2) the woman's level of knowledge of HIV/AIDS: Whether or not she had heard of the disease called AIDS and mentioned at least one correct way of preventing HIV infection; and 3) If the woman had contact with a health worker for any reason (including family planning, immunization, health care for a child, family member or self, health checkup for self or growth monitoring of child) in the last 3 months.

Dependent variables focused on 1) STI symptom reporting and 2) seeking care (i.e., treatment). Regarding symptoms, first, women who had heard of sexually transmitted diseases other than AIDS were asked: "During the last 12 months, have you had a disease which you got through sexual contact?" Women who had not heard of other STDs were asked, "During the last 12 months, have you had a bad smelling abnormal genital discharge?" and "During the last 12 months have you had a genital sore or ulcer?" Women who had heard of AIDS were also asked the latter two questions. Women answering "yes" to any of the questions are coded 1; the remainder are 0.

We analyzed women's self-reported STIs and symptoms despite the lack of corroboration by physicians' diagnosis or laboratory tests. In South Asia, women's self-reports can underestimate actual prevalence of STIs because of their lack of knowledge of symptoms or the asymptomatic nature of the disease (Mayank et al., 2001, Bhatia et al., 1997) or can overstate disease compared with clinical diagnoses (Hawkes et al., 1999), or because in diverse cultural contexts such symptoms might stand for other physical or psychological complaints (Basu, 2006). However, although emerging research supports combining laboratory and physician tests with a standardized checklist of self-reported measures (Prasad et al., 2005), analyses of self-reported symptoms give a voice to women's own concerns and can clarify associations with a variety of risk factors and treatment behaviors (Boonmongkon et al., 2001, Jejeebhoy et al., 2003).

For seeking care, women who reported an STI or at least one symptom were asked, "The last time you had [PROBLEM], did you seek any kind of advice or treatment?" Care from any source—a public or private sector medical doctor or nurse, auxiliary nurse midwife/lay health worker, male health worker or supervisor, *anganwadi* (village development) worker, accredited health activist, village health guide, compounder/pharmacist, non-Western medical practitioner (*vaid*, *hakim*, homeopath), traditional birth attendant, traditional healer, or any other type of health worker—was coded 1; if not, 0.

Analyses

We used logistic regression techniques to examine the likelihood of currently married women 1) reporting STI or symptom and 2) seeking care among women reporting at least one symptom. The first regression included independent variables focusing on experience and attitudes toward marital violence, and controlled for women's demographic characteristics, household socioeconomic characteristics, personal socioeconomic characteristics, and

autonomy/empowerment. The second regression included all the independent variables in the first analysis, as well as program-related variables.

Our analyses focus on the impact of indicators of violence experienced by currently married women on the two outcomes of reporting an STI symptom and seeking care. We expect that women who report experiencing marital physical, psychological, or sexual violence, or who accept any justification for marital violence, will be more likely to report an STI symptom, and be less likely to seek care. Although marital physical, emotional, sexual violence, and attitudes toward violence may all be considered aspects of gender-based violence, we examine how each of these factors influences the dependent variables, especially to highlight the role of women's attitudes toward violence, which has been less examined.

Results

Sample Description

Table 1 shows that almost 15% of currently married women in UP aged 15 to 49 reported having an STI or one related symptom in the past 12 months. Among those with at least one symptom, only just more than one third sought care. Table 2 shows that over 40% of women reported ever experiencing marital physical abuse, with almost 20% in the last 12 months. About 9% reported ever experiencing forced sex, and about 6% in the last 12 months. More than one third reported experiencing at least one controlling behavior by their husband and 15% reported emotional abuse by their husband (>10% in the last 12 months). Almost one half accepted at least one justification for wife beating. In results not presented a table, the bivariate Pearson correlation between women reporting physical violence by husband in the last 12 months, and sexual violence, is 0.32; that between physical and emotional violence in the last 12 months is 0.40; and between sexual and emotional violence is 0.24. The bivariate Pearson correlation between women's attitude accepting any justification for wife beating, and experiencing physical violence is 0.09; between attitude and emotional violence is 0.13; and attitude and sexual violence is 0.05.

Table 1. Self-Reported Sexually Transmitted Infection (STI) Symptoms in the Last 12 Months, and Treatment-Seeking, Among Currently Married Women Aged 15 to 49 in UP State, India

STI Symptoms and Treatment Seeking	<i>n</i> (%)
Women reporting STI	286 (3.0%)
Women reporting genital sore	140 (1.5%)
Women reporting genital discharge	1,299 (13.5%)
Women reporting any symptom	1,407 (14.6%)
Women seeking treatment (among those reporting any symptoms)	515 (37%)
Total	9,632

Table 3 shows that about one quarter of the currently married women were younger than age 25. Most were rural residents and had at least one child. About one quarter were in households with the lowest standard of living index category; almost two thirds had no education (about 11% of their husbands had no education), and more than one quarter were currently working. Most were Hindu and belonged to scheduled castes/tribes/other backward classes as designated by the Government of India. Most took part in financial decision making or had money or bank accounts of their own. Most also participated in household decision making, and in decisions on

their own health care. The majority felt justified refusing sex with their husbands for all of the reasons mentioned. About 46% had exposure to radio. Only about 15% had heard of AIDS and knew at least one correct way to prevent HIV infection. About half had seen a health worker for any reason in the last 3 months.

Table 2. Women Reporting Physical, Emotional, and Sexual Violence

Physical, Emotional, and Sexual Violence Among Currently Married Women Aged 15–49	<i>n</i> (%)
Women ever reporting physical abuse	3,990 (41.4%)
Women reporting physical abuse in last 12 months	1907 (19.8%)
Women ever reporting forced sex	882 (9.2%)
Women reporting forced sex in last 12 months	618 (6.4%)
Women who report ≥ 1 controlling behavior by their husband	3,516 (36.5%)
Women reporting ≥ 1 form of emotional abuse by their spouse	1,542 (15%)
Women reporting ≥ 1 form of emotional abuse by their spouse in the last 12 months	1,007 (10.5%)
Women accepting ≥ 1 justifications for wife beating	4604 (47.8%)
Total <i>n</i>	9,639

Table 3. Demographic and Socioeconomic Characteristics of Currently Married UP Women Aged 15–49

Demographic and Socioeconomic Characteristics	<i>n</i> (%)
Women in the lowest standard of living index category (compared with medium and high)	2,232 (25.8%)
Women aged 15–24	2,739 (28.4%)
Women who have borne ≥ 1 children	8,681 (90.1%)
Women who are rural residents	7,406 (76.8%)
Women with no education	6,102 (63.3%)
Women reporting their husbands had no education	1,141 (11.8%)
Women currently working	2,968 (28%)
Women who are Hindu	7,863 (81.7%)
Women of scheduled caste/scheduled tribe/other backward classes background	7,303 (71.9%)
Women who have either own bank account or money for own use or who participate in money-related decision making	7,944 (82.4%)
Women who participate in decisions on their own health care	6,220 (65.8%)
Women who participate in other household decision making including their freedom to go out	7,284 (75.6%)
Women who saw a health care provider for any reason in the last 3 months	4,887 (50.6%)
Women saying they can refuse sex if husband has STI, is unfaithful, if they are tired/not in the mood	7,674 (79.6%)
Women with media exposure ≥ 1 time per week	4,452 (46.2%)
Women who have heard of AIDS and know ≥ 1 way to prevent HIV infection	1,448 (15%)
Total <i>n</i>	9,639

Multivariate Analyses

Table 4, Table 5 present logistic regression coefficients for the analyses. Table 4 shows that currently married women who experienced any aspect of marital violence (physical, sexual, and emotional) in the last 12 months were more likely to report STI symptoms (OR for physical violence, 1.364 [95% CI, 1.171–1.588]; OR for sexual violence, 1.649 [95% CI, 1.323–2.054]; OR for emotional violence, 1.273 [95% CI, 1.117–1.450]). There was no impact of accepting justifications for wife beating. Rural residents were more likely (OR, 1.205; 95% CI, 1.026–1.414), and Hindus less likely, to report (OR, 0.728; 95% CI, 0.625–0.847). Women who felt

justified in refusing sex with their husbands were less likely to report STIs (OR, 0.643; 95% CI, 0.559–0.741).

Table 4. Logistic Regression Results for the Impact of Marital Violence on the Likelihood of Reporting STI Symptoms Among Currently Married Women Aged 15–49 Years

	<i>p</i> -Value	Odds Ratio	95% CI
Experienced physical violence in the last 12 months	.000	1.364	1.171–1.588
Experienced sexual violence in the last 12 months	.000	1.649	1.323–2.054
Experienced emotional violence or controlling behavior	.000	1.273	1.117–1.450
Accepts any justification for wife beating	.531	1.041	0.919–1.179
Age 15–24 (younger age group)	.807	.981	0.839–1.146
≥1 children ever borne	.094	1.244	0.964–1.606
Rural resident	.023	1.205	1.026–1.414
Currently employed	.431	.946	0.824–1.086
No education	.473	1.054	0.913–1.217
Husband has no education	.618	1.047	0.875–1.253
Hindu	.000	.728	0.625–0.847
Lower standard of living index category	.460	1.055	0.915–1.215
Agrees with all reasons for refusing husband sex	.000	.643	0.559–0.741
Has own money resources or financial autonomy	.848	.983	0.826–1.170
Participates in decision making on own health	.090	1.133	0.981–1.308
Participates in other family decision making and freedom of movement	.983	.998	0.835–1.193

–2 Log likelihood chi-square.
7037.515(a).

Table 5. Logistic Regression Results for the Impact of Marital Violence on the Likelihood of Seeking Treatment for STI Symptoms (Among Currently Married Women Aged 15–49 With ≥1 Symptom)

	<i>p</i> -Value	Odds Ratio	95% CI
Experienced physical violence in the last 12 months	.046	.728	0.533–0.994
Experienced sexual violence in the last 12 months	.947	1.015	0.651–1.583
Experienced emotional violence or controlling behavior	.639	.939	0.724–1.220
Accepts any justification for wife beating	.000	.590	0.458–0.760
Age 15–24 (younger age group)	.041	.711	0.512–0.986
≥1 children ever borne	.003	2.552	1.378–4.727
Rural resident	.003	.618	0.447–0.853
Currently employed	.001	1.596	1.215–2.097
No education	.220	.827	0.611–1.120
Husband has no education	.226	1.248	0.872–1.787
Hindu	.492	.898	0.661–1.220
Lower standard of living index category	.003	.644	0.480–0.864
Agrees with all reasons for refusing husband sex	.749	.954	0.716–1.272
Has own money resources or financial autonomy	.085	1.374	0.957–1.974
Participates in decision making on own health	.001	.590	0.433–0.803
Participates in other family decision making and freedom of movement	.079	1.391	0.962–2.010
Has media exposure	.047	1.322	1.004–1.739
Has heard of AIDS and knows ≥1 way to prevent HIV	.074	1.432	0.966–2.124
Saw a health care worker in the last 3 months for any reason	.009	1.415	1.091–1.835

–2 Log likelihood chi-square.
1523.633(a).

Table 5 shows that, among currently married women with at least one symptom, women who reported marital physical violence in the last 12 months were less likely to seek care (OR, 0.728; 95% CI, 0.533–0.994), as were those who accepted any justification for wife beating (OR, 0.590; 95% CI, 0.458–0.760). Women who had borne at least one child (OR, 2.552; 95% CI, 1.378–4.727) or who were currently employed (OR, 1.596; 95% CI, 1.215–2.097) were more likely to seek care. Younger women (OR, 0.711; 95% CI, 0.512–0.986), rural residents (OR, 0.618; 95% CI, 0.447–0.853) and those in the lower standard of living index group (OR, 0.644; 95% CI, 0.480–0.864) were less likely. Those who participated in health care decision making were, contrary to expectation, less likely to do so (OR, 0.590; 95% CI, 0.433–0.803). Women with their own resources or financial autonomy did not seem significantly more likely. Women with some media exposure (OR, 1.322; 95% CI, 1.004–1.739) and those who had recent contact with a health worker (OR, 1.415; 95% CI, 1.091–1.835) were more likely to seek care.

Discussion

We examined whether currently married women who 1) experienced aspects of marital violence and 2) accepted any justification of marital physical violence would be more likely to report STI symptoms and be less likely to seek care (treatment for the symptoms) in UP state. UP is among the least developed states in India, with inadequate primary health coverage and low status of women, including widespread gender-based violence. In this setting, our results suggest that experiencing aspects of marital violence is associated with increased chance of women reporting STIs, and experiencing and justifying physical violence lower chances of seeking care. These results echo findings in the Southern Indian state of Kerala, which is characterized by more efficient public services (including health coverage) and high female literacy (Sudha et al., 2007).

Our findings support arguments that partner physical, sexual, and emotional violence affect women's reproductive health through increased risk of STIs (Heise et al., 1999; Hussain & Khan, 2008), and likely through decreased power to negotiate self-protective behaviors (Moore, 1999). This might also apply to women's ability to seek care for STI symptoms, especially in settings characterized by stigma about sexuality and STIs. Although our study could not examine men, in India male violence against women is associated with men's poor sexual health, RTI symptoms, and male extramarital sex (Verma and Collumbien, 2003, Martin et al., 1999b, Silverman et al., 2007). Our study could only examine male education and occupation, neither of which affected the outcomes after controlling for household socioeconomic status.

Our results thus support broadening the scope of analyses of how gender-based violence affects women's reproductive health, to include how women's experience and acceptance of marital violence affects their STI symptoms and seeking care.

Pathways by which women's acceptance of marital violence affect their reproductive health and seeking care have received scant attention, especially in developing countries. Although attitudes toward violence against women have been studied, their link with women's reproductive health or health-seeking behaviors have received less attention. Because women's acceptance of physical violence seems to be associated with a lesser chance of seeking care, attitudes need greater inclusion into analyses and interventions on gender-based violence and reproductive

health. Possible pathways include lowered self-esteem and autonomy to determine key areas of their lives, including access to health care. Indicators of women's autonomy in this study bore inconsistent relationships with reporting STI symptoms and seeking care. For example, health-care-related autonomy was associated with lower chances of seeking care, controlling for other factors. This is contrary to expectation, but may be in accord with reports that dimensions of women's empowerment bore a U-shaped association with maternal health indicators (IIPS & ORC Macro 2007b). These results further underscore that women's status and autonomy in India are subject to complex and multidimensional factors, which vary in meaning and impact across different situations and regions, and thus cannot be assumed to operate in a predictable or consistent way (Gupta & Yesudian, 2006). However, our study could not explore other potential pathways by which experiencing or justifying marital violence could affect reproductive health, such as the link between violence and poorer mental health (including depression and suicide attempts; Chowdhary & Patel, 2008), which may affect care-seeking behaviors.

In our study, women who currently worked had increased chances of seeking care. Studies across South Asia suggest that women's earnings and economic independence have a mixed association with domestic violence (Verma and Collumbien, 2003, Koenig et al., 2003, Koenig et al., 2006). Our results suggest that household resources and women's work both play a role in promoting women's health care seeking. However, women's literacy played no significant role in their likelihood of seeking care, controlling for household socioeconomic status and female autonomy. These results support arguments that while women's education is necessary as a human right and a developmental input, it is not sufficient to enable them to seek care in the absence of resources or services.

In this vein, variables with program relevance seemed to be associated with an increased chance of seeking care. Women who had recent media exposure as well as those contact with a health care worker in the last 3 months had a greater chance of seeking care. These indicate potential avenues by which women's awareness of symptoms and the need for seeking timely assistance can be heightened. This could be accomplished through media campaigns or sensitization by health workers.

Holistic Advocacy and Action Imperative

These results highlight that efforts to improve women's reproductive health and access to health care must coordinate with initiatives to improve women's status, reduce gender-based violence, and transform underlying societal gender inequality. "The role of gender-based violence in fueling the HIV pandemic is now undeniable" (Dunkle & Jewkes, 2007, p. 173), and health policies and programs should "increase recognition of IPV as a critically important target in the global fight against HIV/AIDS" (Silverman, Decker, Saggurti, Balaiah, & Raj, 2008, p. 709).

In India, an active women's movement has long mobilized against gender-based violence, highlighting its systemic and multidimensional nature, including communal and caste violence, abuse of women and child laborers, honor killings, forced and/or underage marriages, female feticide, dowry deaths, domestic violence, and so on. The Report of the 1974 Commission on the Status of Women highlighted wife beating and dowry deaths, and the 1977 report on dowry deaths by the Mahila Dakshata Samiti sparked nationwide debate and protest (Bush, 1992).

These efforts led to the identification of violence against women as a societal problem, the establishment of the Delhi Police Crimes Against Women Cell in 1985, and changes in the Indian Penal Code (e.g., The Dowry Prohibition Act of 1961, amended in 1984 and 1986; changes to the Indian Evidence Act section 113a, and the Protection of Women from Domestic Violence Act, 2005). The Indian Government ratified the Women's Convention in 1993, requiring periodic reports to Committee on the Elimination of Discrimination against Women on efforts to bring laws and policies into compliance with obligations (Jejeebhoy & Cook, 1997). However, official follow through is often inadequate, reflecting paternalism, tacit protection of patriarchal family structures and women's roles and duties, and apathy engendered by corruption (Kishwar, 2000). Many state responses to domestic violence in India seem to be short term and reactive (rather than proactive), with narrow legal definitions of violence, a view of family violence as a private matter, and investigations to be buried rather than prosecuted. Lack of training for personnel across systems and underdevelopment of effective responses have created further barriers for women seeking help. Legislative changes are thus necessary, but not sufficient, to counter domestic violence in India (Ahmed-Ghosh, 2004).

Indian activists have therefore begun to develop local, community level responses to gender based violence. In some urban areas, women's organizations assist violence survivors. In rural areas, women's development projects sometimes take up this role. Examples include community courts, women's labor unions, and a women's grassroots endeavor called *Mahila Samakhya* ("Women speaking with equal voice"; Jandhyala, 2003), which focuses on empowering women to remove deep-seated barriers to female education by mobilizing them into *sanghas* (self-help groups) that address a wide variety of local development issues. Explicit incorporation of anti-violence and reproductive health efforts into the groups' agendas has been recent, and the decentralized organization means that not all regions adopt similar initiatives at the same time. The evaluation, dissemination, and replication of these activities are at early stages.

However, a recent review of domestic violence resources in several states of India by UNIFEM and the Center for Social Research (New Delhi), highlighted that existing organizations are few, under-resourced, poorly coordinated, underserved rural areas, and sidelined by police and government officials. Thus, "Violence against women is not a thrust area for most NGOs in Uttar Pradesh" (UNIFEM and Center for Social Research, New Delhi, no date). Not surprisingly therefore, in India overall about 75% of women (and a similar proportion in UP) who have experienced violence do not seek help from anyone (IIPS & Macro International, 2007). These ground realities, combined with research results such as ours, underscore the need for holistic, broad-based efforts to reduce gender inequality, including marital violence and its justification, and to promote women's access to health care that might reduce the risk of STIs including HIV/AIDS.

Limitations

One limitation of our study is that the cross-sectional data do not allow us to disentangle relationships temporally, but suggest associations to be followed up by longitudinal research. Additionally, the data are based on women's self-reports of STI symptoms and do not include clinical confirmation of diagnoses. Moreover, the analyses depends on women's self-reports of violence, and thus the information may underestimate its prevalence. However, the questionnaire

design aimed to minimize subjective interpretations of the nature of violence. The analyses are, therefore, conservative. Also, our data only permitted analyses of currently married women and cannot cast light on possible associations among other women (including those previously married). However, marriage is nearly universal in Indian society, and our study includes the majority of women sampled in UP state. Also, our study could not examine attitudes among men, or other potentially important pathways such as women's mental health. Despite these limitations, our study contributes to the evidence that aspects of violence against women pose a risk not only for gender justice and human rights, but also specifically for reproductive health, by increasing likelihood of reporting STI and decreasing chance of seeking care. Moreover, our finding that women's acceptance of justifications for abuse lowers their chances of seeking care, indicate that the scope of analyses and responses on gender-based violence need to be broadened to include not only occurrence of violence, but also societal norms on abuse. This in turn highlights that holistic gender transformative initiatives at all levels, including women's empowerment and economic autonomy programs, reproductive health promotion, and violence cessation efforts, must be coordinated and strengthened on a priority footing.

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