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April 22, 2011

Interview Interruption and Responses to Questions about Experiences of Domestic Violence
in India

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Drew University

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Abstract

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Background. There is little evidence available regarding the ways in which interruptions during sensitive interviews can affect or predict responses to physical and sexual violence-related questions. This is problematic as it is well established that interview environment can greatly influence the type of information gathered from a survey. We expect that interviews that have been interrupted (where privacy has been breached by another adult) will be associated with lower reporting of domestic violence of any kind (less severe and severe physical violence, or sexual violence).

Objectives. To identify the incidence of interruption among currently married Indian women during the domestic violence interview and explore the relationship between interview interruption and the reporting of physical and sexual spousal violence among currently married Indian women.

Methods. Using the Domestic Violence module from the NFHS-3, a sample of 65,610 currently married women aged 15-49 was used to compare reported acts of physical and sexual violence between women who had been interrupted during their interview and women who had not been interrupted during their interview. Logistic regression and multinomial logistic regression analyses were conducted to identify these associations.

Results. Interviews interrupted by women are more likely to result in positive responses to severe violence questions (OR 1.311) and sexual violence questions (OR 1.269), while interviews interrupted by men are more likely to result in positive responses only to sexual violence questions (OR 1.305). Neither male- nor female-interrupted interviews were significantly associated with less severe violence in the models.

Conclusions. Contrary to our expectations, findings suggest that interruptions by both males and females lead to greater reporting of domestic violence. Also, female interruptions seem to be more predictive of severe physical violence than male interruptions, while both male and female interruptions are similarly predictive of sexual violence. The mechanisms explaining these findings are unclear, thus highlighting the need for further research on the topic of interview environment and its impact on response patterns and on global estimates of domestic violence prevalence.

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Introduction and Rationale

A recent World Report on Violence and Health released information showing that intimate partner violence (that is, violence perpetrated by a husband or intimate male partner, often referred to as spousal, marital, or domestic violence)¹ is among the most prevalent varieties of violence against women. Intimate partners, often in the context of an abusive relationship, commit 40-70% of homicides of women worldwide, and intimate partner violence has been shown to be a cause of roughly 16% of maternal deaths in some parts of India[1].

Besides physical assault, intimate partner abuse may involve psychological, sexual, and emotional abuse, each of which may have numerous immediate and long-term effects on a woman's health and wellbeing[2]. The physical consequences of abuse vary widely in terms of type and severity, are influenced heavily by a number of individual and social factors, and can include health problems such as injury, chronic pain, and gastrointestinal and gynecological signs (including sexually transmitted diseases)[2]. However, the psychological and emotional consequences of abuse are often as severe as the physical consequences. The experience of long-term or continual abuse often wears away women's self-esteem and intensifies their susceptibility to an array of mental health problems, including depression and anxiety, chronic fatigue, nightmares, eating disorders, post-traumatic stress disorder, suicide, alcohol and drug abuse[2].

¹ Although studies have been known to differentiate between these terms, they will be used interchangeably throughout this paper to describe any violence perpetrated by a husband or intimate partner against a female.

Given the sensitive nature of the subject along with the ethical issues present in conducting violence-related research, domestic violence is widely underreported and generally poorly understood. One of the most comprehensive studies on the subject of domestic violence are the Demographic and Health Surveys (DHS) which include a domestic violence module conforming to World Health Organization (WHO) guidelines for conducting research of this nature. Given that the DHS is, in many contexts, our only source of information on the subject of domestic violence, it is important that we understand the factors that affect the reliability of the data it collects.

There have been a number of studies that examine the effect of interview environment on response patterns [3,4,5,], but there is a gap in the literature examining the impact of interview interruption on responses. We expect that interview interruption will lead to less reporting of physical and sexual violence, although in any case, understanding the extent to which the presence of other individuals affects the way respondents answer questions will be important for two reasons. Firstly, it will provide insight to DHS implementers that may affect the way in which they conduct interviews in the future. Secondly, it will allow practitioners to better interpret the information they gather from the DHS from different areas, which will, in theory, affect the way they design interventions and policies.

Purpose of the study

[The experience] that most affected me was with a girl my age, maybe 22 years old...She told me all about how her husband beat her while she was washing clothes in the back patio. Her mother-in-law would spy on her and tell her son things so that he would punish her. She was very afraid, and her voice trembled as she spoke, but she

really wanted to tell me about her tragedy. She kept looking over to where her mother-in-law was watching us. She asked me for help and I told her about the Women's Police Station. When her mother-in-law got up to go to the latrine, I quickly gave her a copy of the pamphlet and she hid it. She thanked me when I left and I ended up crying in the street because I couldn't stand to see such a young girl being so mistreated...
Nicaraguan interviewer[6].

The preceding quotation, from a qualitative study by Ellsberg et al., illuminates that achieving privacy in some households (particularly in those where domestic violence is a problem) can be a challenge, which we believe, based on previous evidence, may lead to under-reporting of violence. This paper seeks to understand the relationship between these kinds of intrusions (where interview privacy is compromised) and the reporting of violence among Indian women in an effort to bridge the aforementioned gap in the literature. Questions about domestic and intimate partner violence, inherently sensitive, can be a major source of prevarication (or falsification) bias, especially considering the physical and psychological harm that can come to respondents living with abusive partners. Many women may be hesitant to report experiences of domestic violence for fear of potential consequences should their partner learn about their involvement in the study[7].

In accordance with WHO guidelines, DHS interviewers are instructed to conduct the Domestic Violence module only when complete privacy is possible[8]. However, spontaneous interruptions can occur; these include any physical intrusion by an adult, male or female, during the private domestic violence interview. When domestic violence interviews are interrupted, it is standard practice for DHS interviewers to record the occurrence of the interruption[8]. These "interruption variables" form the basis of this study. Using these "interruption variables," this

paper will attempt to determine the degree to which interview interruption alters the response patterns to questions about experiences of physical and sexual violence. The objectives of this study are:

1. Quantify the incidence of interruption among currently married Indian women during the domestic violence interview.
2. Determine the relationship between interview interruption and the reporting of physical and sexual spousal violence among currently married Indian women.
 - a. Distinguish between male- and female-interrupted interviews to identify their respective relationships with the reporting of physical and sexual violence.

Review of the Literature

Intimate Partner Violence and Domestic Violence in India

Intimate partner abuse is typically part of a pattern of abusive behavior also known as “wife-beating”, “battering”, or “domestic violence.” Besides physical assault, intimate partner abuse may involve psychological abuse, which includes continual belittling, intimidation, humiliation and coercive sex, along with controlling behaviors such as isolating a woman from family and friends, monitoring her movements and restricting her access to resources and services[7].

According to a 2010 study by Dalal and Lindqvist, the prevalence of lifetime experiences of violence among Indian women, as reported in the NFHS-3, were substantial: less severe physical violence, 31%; severe physical violence, 10%; sexual violence, 8%; and emotional violence, 14%. This study also identified several predictors for domestic violence; women of scheduled castes and Muslim religion were most often exposed to domestic violence, and women’s poorer economic status, employment status, and husband’s controlling behavior were also associated with domestic violence[9]. A similar study conducted in Eastern India by Babu and Kar (2008) found slightly higher prevalence of domestic violence: physical violence (16.1%), psychological violence (52.3%), sexual violence (25.4%), with over 56% of female respondents reporting any form of violence[10]. This study also found that education and income were inversely related to violence reporting (less education and lower wealth quintiles were associated with higher reporting) while higher age and urban residence were positively associated with increased violence

reporting[10].

Violence and Health

The physical consequences of abuse vary widely in terms of type and severity, and are influenced heavily by a number of individual and social factors. Injury, chronic pain, sexually transmitted diseases and HIV, and other gynecological symptoms are among the physical consequences of domestic violence[2]. Furthermore, the experience of long-term or continual abuse often wears away women's self-esteem and intensifies their susceptibility to an array of mental health problems, including depression and anxiety, chronic fatigue, nightmares, eating disorders, post-traumatic stress disorder, suicide, alcohol and drug abuse. Studies have shown that 16% of maternal deaths in Maharashtra (India) between 1993 and 1995 were caused by domestic violence[1].

A 2008 longitudinal study by Chowdhury and Patel in North Goa, India, showed an association between violence and a spectrum of self-reported gynecological complaints, as well as low Body Mass Index, depression, and attempted suicide in their cross-sectional data; longitudinal analyses confirmed associations for sexually transmitted infections and attempted suicide[11]. Sexual abuse including forced intercourse during marriage and refusal to use condoms puts women at risk of unwanted pregnancies, HIV/AIDS and STIs and also damages women's mental health[12].

Laws about IPV in India

Provisions of law dealing with domestic violence

In 1983, domestic violence was recognized as a criminal offense by the introduction of section 498-A into the Indian Penal Code. This section deals with cruelty by a husband or his family towards a married woman. This law addresses four types of abuse:

1. Conduct that is likely to drive a woman to suicide,
2. Conduct which is likely to cause grave injury to the life, limb, or health of the woman
3. Harassment with the purpose of forcing the woman or her relatives to give some property, or
4. Harassment because the woman or her relatives is unable to yield to demands for more money or does not give some property[13].

For perpetrator of any of the aforementioned types of violence, punishment can include imprisonment for up to three years as well as a fine. The victim herself need not bring forth charges; any relative may file a complaint on behalf of the victim. However, as with many laws of this nature, there are a number of factors that diminish its effectiveness. These policies tend not to be enforced uniformly across regions or communities, and furthermore many women are not even aware that they have legal rights relating to domestic violence[13].

Constituting cruelty in Indian Courts

1. Continual denial of food or drink,
2. Insistence on perverse sexual conduct,
3. Regularly locking a woman out of the place of residence,

4. Denying the woman access to children or abusing children in the woman's presence (considered a form of mental torture),
5. Physical violence,
6. Taunting or belittling the woman with the intention of causing mental distress,
7. Confining the woman at home, limiting social interaction,
8. Threatening divorce unless dowry is given[13].

Marital Rape

Currently, India does not have a law or policy that covers, or even defines, marital rape. Thus, even if a woman's husband forces sexual intercourse without her consent, he cannot be prosecuted for rape[13].

Ethical Guidelines for Collecting DV and IPV Data

Documenting the prevalence or incidence of gender-based violence is an extremely difficult and sensitive task that poses many ethical dilemmas to the researcher. The task is rendered particularly difficult owing to the reluctance of women to report violence or abuse. However, some progress has been made in recent years.

For the most part, researching domestic violence is comparable to researching other sensitive topics, given that there are common concerns related to confidentiality, disclosure, and informed consent[14]. The additional caveat to conducting domestic violence research, however, is the potentially dangerous nature of the subject matter; the health and safety of respondents may be at risk. In 1999, the World Health Organization (WHO) published safety and ethics guidelines

specifically related to conducting gender-based violence research, which includes domestic violence research[15], as outlined below:

1. The safety of respondents and the research team is paramount and should infuse all project decisions.
2. Prevalence studies need to be methodologically sound and to build upon current research experience about how to minimize the underreporting of abuse.
3. Protecting confidentiality is essential to ensure both women's safety and data quality.
4. All research team members should be carefully selected and receive specialized training and ongoing support.
5. The study design must include a number of actions aimed at reducing any possible distress caused to the participants by the research.
6. Fieldworkers should be trained to refer women requesting assistance to available sources of support. Where few resources exist, it may be necessary for the study to create short-term support mechanisms.
7. Researchers and donors have an ethical obligation to help ensure that their findings are properly interpreted and used to advance policy and intervention development.
8. Violence questions should be incorporated into surveys designed for other purposes only when ethical and methodological requirements can be met.

As stated above, the most pressing ethical issue in conducting domestic violence research is minimizing harm. There is an additional list of recommendations that deal specifically with this concern[15].

- Interview only one woman per household.
- Don't inform the wider community that the survey includes questions on violence.
- Don't interview men about violence in the same households or clusters where women have been asked about violence.
- Interviews should be conducted in complete privacy.
- Dummy questionnaires may be used if others enter the room during the interview.
- Candy and games may be used to distract children during interviews.
- Use of self-response questionnaires for some portions of the interview may be useful for literate populations.
- Train interviewers to recognize and deal with a respondent's distress during the interview.
- End the interview on a positive note that emphasizes a woman's strengths.

Problems in measuring and reporting Intimate Partner Violence

Globally, studies have shown that the prevalence of intimate partner violence varies greatly by setting. These differences are attributed not only to the variation in the amount of violence perpetrated between contexts, but also to discrepancies in research methods, definitions of violence and types of violence, sampling

techniques[16], interviewer training and skills[6], and cultural differences that influence respondents' readiness to discuss intimate experiences or sensitive topics. Furthermore, when evaluating the results of these studies it is essential to consider that the sensitivity of the subject of domestic violence renders it almost universally under-reported[17]. Therefore, it might be more accurate to think of these findings as representing the minimum levels of violence that transpire.

Interview Environment

A number of studies have been conducted to understand the impact of the interview environment on response patterns, and it has been well established that interviewer characteristics can influence both non-response and response quality. In a 1983 study, Singer et al. found that interviewers' age, the size of the interviewing assignment, and the interviewers' expectations regarding the interview can all have a significant effect on overall cooperation rates. The same study found that interviewer age and education have similar but statistically non-significant effects on item non-response[18]. A later study by Dailey and Claus (2001) examined the interplay between interviewer and respondent characteristics and the effects these might have on disclosure of physical and sexual abuse. They found that respondents were more likely to disclose physical abuse to Caucasian interviewers than to African American interviewers and more likely to disclose sexual abuse to female interviewers than to male interviewers, although matching respondents and interviewers on race, gender, and age did not increase disclosures of either sexual or physical abuse[19]. Another study conducted in 1981 by Cleary et

al. looking specifically at age and total interviewing experience of interviewers also found significant results; according to Cleary, the total interviewer effects studied accounted for up to 5% of the variance in responses during a mental health interview. Positive responses to psychological symptom scales increased with interviewer age and experience and were related to lower interviewer symptom levels. The authors suggest that interviewers who are older, have interviewing experience, and were related to low interviewer symptom levels establish a calm, pleasant atmosphere that reduces respondents' shyness to report feelings and experiences[20]. A 2002 study examining the effects of interviewer gender and age on the disclosure of sexual behavior among Latinos in California also demonstrated the existence of interviewer effects on responding, although these were only attributable to interviewer gender or age for a handful of specific topics. Men interviewed by women reported fewer sexual partners and were less likely to report sex with strangers than men interviewed by men, and were more likely to report sex with prostitutes or other men to older than to younger interviewers[21].

In addition to interviewer effects, there has been some study on interview mode and its effects on response rates. Aquilano and Lo Sciuto (1990) examined how self-reported tobacco, alcohol, marijuana, and cocaine use among 18-34-year-olds varied based on interview type. Controlling for demographic characteristics and excluding non-telephone households, the telephone survey yielded significantly lower estimates of blacks' alcohol consumption, and lifetime and recent marijuana use. Whites' alcohol consumption was slightly lower by telephone; otherwise, estimates of whites' use of the four substances were nearly identical in the two

modes. Sample coverage, respondent demographic characteristics, and racial matching did not account for the significant mode differences. Characteristics of the interview situation itself, such as provision of privacy in the self-administered format, may have influenced tendencies toward socially desirable responding to a threatening topic such as drug use[22].

In 1993, William Aquilano published another study used data from the 1987-88 National Survey of Families and Households to examine the correlates of spouse presence on responses to sensitive questions concerning marriage. His results suggest that variation in interview privacy can be a source of response effects in survey data on marriage. When spouses were present during the interview, subjective assessments of the utility of marriage were more positive, higher estimates of spouse contributions to housework were reported, and men gave lower estimates of the likelihood of marital termination. There was also some indication that spouse presence led to a greater willingness to report sensitive factual information concerning the marriage. Respondents were more likely to report cohabiting with the spouse before marriage if the spouse were present, and self-reported levels of marital conflict were higher[5].

METHODS

Data

This study is based on data from the India NFHS-3, a national health and demographic survey conducted between 2005-2006 in all of India's 29 states. Conducted by the International Institute for Population Sciences and Macro International, the NFHS (referred to as the Demographic and Health Survey [DHS] in other national contexts) is routinely carried out in developing countries to gather population-based estimates of important health issues and health-related risk behaviors. A stratified, multi-stage cluster sampling strategy was employed to create a nationally representative household-based sample. PSU selection probability was proportional to population size. Household enumeration conducted within each PSU provided the sampling frame for systematic household selection. This sampling strategy yielded 131,596 eligible female respondents (aged 15-49 years) of which 124,385 completed the survey for a response rate of 95%^[23].

Trained research assistants asked participants, who were recruited in their homes, if they would be willing to participate in a national study on health, and subsequently obtained written informed consent. Participants were read a standard informed consent document, which denoted that they were being requested to take part in a national health study, that their participation was voluntary, and that they had the choice to withdraw at any time. Consistent with protocol, prospective participants were granted an opportunity to have questions answered prior to consent and were additionally given contact information for the local human

subjects committee in case of any later questions. Additional information pertaining to data collection and management procedures are available online[24].

Sample

The analytic sample for this study was limited to female participants who were systematically selected to complete the NFHS-3 IPV survey module. Although the overall sampling strategy allowed for multiple female participants per household, a separate systematic procedure selected a single female participant (aged 15 years or older) to complete the IPV assessment. This stipulation was intended to prevent risk to any individual that may have arisen from consequent discussion of the survey interview among participating household members. Survey interviewers were trained to administer the module only when privacy could be ensured, however some interviews were interrupted by unforeseen intrusions of the husband/partner, other adult males, and/or adult females. These interruptions were noted on the questionnaire and form the basis for this study. Of the total 124,385 female survey participants, 84,268 (68%) were selected for, and 83,703 (99%) completed the IPV module. For the purposes of this analysis, only currently married women were included, for a total sample size of 65,610.

Measures

Trained interviewers administered questionnaires verbally in either English or in the main language of the state, based on the preferences of household members. Demographic information including age, place of residence, and education were assessed using single items. A relative index of household wealth was calculated

based on interviewer-observed assets, including ownership of goods and dwelling characteristics; individuals were ranked based on their household score and divided into quintiles, where 1 represented the poorest 20% and 5 represented the wealthiest 20% of households. Data concerning race/ethnicity were not collected.

The DHS Domestic Violence Module included in the NFHS-3 employed a modification of the Conflict Tactics Scale that was developed in accordance with World Health Organization (WHO) recommendations for population-based IPV surveillance[15]. Physical IPV was assessed via 6 items pertaining to lifetime incidence of violence from a woman's current husband, which were then categorized into "less severe" and "severe" groups for analysis. Less severe physical IPV was determined by a positive response to any one or more of the following experiences at the hands of a husband or partner:

- Push you, shake you, or throw something at you
- Slap you
- Punch you with a fist or something harmful
- Kick, drag, or beat you up.

Severe physical IPV was determined by a positive response to any one or more of the following experiences, again, at the hands of a husband or partner:

- Try to choke or burn you on purpose
- Threaten or attack you with a knife, gun, or any other weapon.

Sexual IPV was indicated by a positive response to any one of the following experiences at the hands of a husband/partner:

- Physically forced you to have sex with him even when you did not want to
- Forced you to perform any sexual acts that you did not want to.

Variables

Outcome indicators. The analysis included numerous measures related to experience of domestic violence. To measure physical and sexual violence, we looked at positive responses to questions in the DV module. Physical violence was categorized into “less severe” and “more severe” categories based on definitions prescribed in the DHS report. Sexual violence refers to any experience of forced sexual acts, which is coded dichotomously, where a “0” indicates no sexual violence and a “1” indicates any experience of sexual violence as previously defined.. Further analysis also includes any physical violence, which includes only women who reported both less severe and severe acts of violence. The physical violence outcome was coded as a multinomial variable, with no violence coded as “0”, less severe violence only as “1” and severe violence (and those who reported both severe and less severe) as “2”.

Independent variables. We defined an interrupted interview as any DV interview that was interrupted by another adult. In the NFHS-3, types of interruptions are distinguished by the characteristics of the interrupter: husband/partner, other adult male, adult female. We examined interruptions by any adult male (combining husband/partner and “other”) and interruptions by any adult female (already defined in the data), both of which were coded as yes/no variables. This was done to alleviate any issues related to misclassification of adult males, since there was no explanation in the survey regarding how it was verified that the interrupter was a husband/partner as opposed to any other adult male.

Background characteristics. The analyses controlled for a number of relevant background variables (as identified in the literature)[9] including:

- Highest level of education achieved (coded categorically to include no education, primary education, secondary education, and higher; included because level of a woman's education is often linked to autonomy, family/upbringing, and culture, among other things, all of which have been associated with domestic violence reporting)
- Age (an ordinal variable coded in 5-year intervals; included to take into consideration differences in age and reporting of violence)
- Wealth quintile (an ordinal variable coded into 20% increments labeled: poorest, poorer, middle, richer, richest; included as a measure of socioeconomic status)
- Religion (a categorical variable separated into: Hindu, Muslim, and Other; included to take into consideration religious and cultural differences between respondents)
- Type of residence (dichotomous variable, coded as urban/rural; included to factor in the role of residence type in violence reporting)
- Number of children (originally a continuous variable, this was coded into three groups: none, 1-2, 3 or more; included to take into account the social and physical differences that might arise from having no children vs. many children).

Statistical Analysis

Statistical analysis was conducted using STATA 11.0. Alpha was set to 0.05 and all observations coded as "missing" for variables in the analysis were systematically

removed from the analysis. After dropping missing values and also any woman not currently married, the final sample size in the study was 65,610. All models have been adjusted to be nationally representative.

Univariate analysis: Socio-demographic characteristics and key independent variables were examined for correlations and distributions, and measured using proportions, means, and linearized standard error (SE). A correlation matrix was generated to determine whether any of the input variables were directly associated with one another; we found no significant correlations.

Bivariate analysis: Odds ratios were calculated to determine the extent of the associations between our key independent variables and our outcomes of interest.

Multivariate analysis: Two separate logistic regression analyses were conducted to ascertain the relationship between interview interruption and physical and sexual violence, after adjustment for differences in background characteristics. All models control for the set of control variables. logistic regression was used to examine the relationship between sexual violence and interruptions, and multinomial logistic regression was used to ascertain the relationship between three levels of physical violence (none, less severe, and severe) and interruption. In the latter analysis, “none” (indicating no reported experiences of physical violence) was used as the reference group.

Results

Univariate analysis

Our sample consists of a nationally representative sample of currently married women between 15-49 years of age. The study population was approximately 82% Hindu and nearly 13% Muslim.. Less than 10% of the population was child-less about 46% of the population reported between one and two children and the remaining 45% reported three or more. Approximately 48% of the population received no formal education, but 31% had reached secondary level. Finally, about 69% of the population is from rural areas, compared to 31% from urban areas.

In the domestic violence module, an adult female interrupted approximately 2.5% of interviews and an adult male interrupted 1.5% of interviews (Table 1).

Approximately 35% of women reported ever experiencing some form of “less severe” violence, while 1.14% reported ever experiencing some form of “severe” violence. Because women who reported severe violence also reported severe violence, we distinguished the women who only reported “less severe” violence (23.9%). About 10% of respondents reported experiences of sexual violence (Table 2).

Bivariate analysis

There was an association between interrupted interviews and domestic violence outcomes (Table 3). In particular, interviews interrupted by an adult

female were most strongly associated with all forms of domestic violence.

Respondents who were interrupted by another adult female were almost 25% more likely to report only ever experiencing acts of “less severe” violence (95% CI 1.064, 1.464) and 53% more likely to report ever experiencing any acts of “severe” violence than respondents who were not interrupted (95% CI 1.222, 1.924).

Respondents who were interrupted by another adult female were 53% more likely to have reported experiences of sexual violence than those who were not interrupted (95% CI 1.205, 1.931).

Interruptions by an adult male are also associated with domestic violence outcomes, particularly in the reporting of “severe” violence (OR 1.298, 95% CI 1.010, 1.668) and sexual violence (OR= 1.517, 95% CI 1.179, 1.951). The odds ratio for male-interrupted interviews and only ever experiencing less severe violence (1.188) is non-significant (95% CI 0.984, 1.433)(Table 3).

Multivariate analysis

Neither male nor female interruptions were significantly associated with less severe violence reports once other variables were included in the model. However, female-interrupted interviews were significantly independently associated with the reporting of severe violence rather than “no violence” (OR 1.311, 95% CI 1.037, 1.658). In other words, respondents who were interrupted during their interview by an adult female were 31% more likely to have reported an experience of severe violence than they were to have reported no violence at all. (Table 4).

The logistic regression model for sexual violence reports showed more universally significant results: both female- and male-interruptions were significant (OR 1.269, 95% CI 1.003, 1.607 and OR 1.305, 95% CI 1.002, 1.699; respectively). To clarify, respondents who were interrupted by an adult female or an adult male were 27% and 31% more likely, respectively, to have reported an experience of sexual violence than they were to have reported no violence at all (Table 5).

Discussion

Findings

As expected, interview interruptions were found to be quite rare; only 2.5% of NFHS-3 interviews were interrupted by an adult female, and even fewer (1.5%) were interrupted by an adult male. There also appears to be an association between interview interruption and the reporting of violence, although our findings contradict our original hypothesis, which posited that interruptions would predict lower reporting of violence. We found that female-interrupted interviews are significantly associated with higher reporting of severe physical violence, and that male- and female-interrupted interviews are significantly associated with higher reporting of sexual violence.

There are a number of possible mechanisms responsible for these results. An important distinction to make about the interpretation of these results is that our results only reflect the way violence is reported, as opposed to how often it is experienced. In other words, although women's experiences with domestic violence may be the same across groups (interrupted versus non-interrupted) our findings suggest that the way women report these experiences differs. It may be, though, that women who are interrupted are, in fact, more likely to actually experience violence, and may therefore report the most violence. This suggestion assumes, however, that women in abusive, low-autonomy households would nevertheless feel comfortable enough in a questionably private interview setting to

share their experiences; but given the widely discussed under-reporting of the subject, this seems implausible.

Another key question about these findings is about causality; we do not know whether women are reporting differently because they have been interrupted, or if they were interrupted because their experiences of domestic violence were different. Conversely, there may not be any relationship between interruptions and violence, whether experienced or reported, at all. Considering that WHO guidelines require domestic violence interviews to be conducted only when privacy can be ensured, an interviewer that proceeded with a domestic violence interview despite the lingering presence of others may have been less likely to report any resulting interruptions, fearing castigation from his/her supervisor. Given this possibility, estimates of the association between interruptions and violence reporting would inevitably be affected; if interruptions are not universally recorded, we have no way of knowing the true association between them and the reporting of domestic violence.

Strengths and Weaknesses

A major strength of this study is that it uses the NFHS-3, a highly reliable, internationally validated survey with a large sample size. Interrupted interviews are rare, and without the exceptional sample size of the NFHS-3, significant differences between groups with respect to our outcome would have been difficult, to capture. Furthermore, this study explored a novel variable (interview

interruption) that has not been the subject of much scrutiny; it begins to address a gap in our understanding of domestic violence reporting.

A notable weakness of the study is that it relies on “interruption variables”; there is little detail in the NFHS regarding the reporting of interruptions, (e.g. what constitutes an interruption, when it’s appropriate to continue an interview rather than postpone it, et cetera) so the subsequent interpretation of data surrounding this variable is limited.

Conclusions and Recommendations

We found that interviewer interruption is a significant predictor of domestic violence reporting, regardless of the mechanism responsible. More importantly, this study illustrates the need for further research into the relationship between interview privacy and domestic violence reporting, as well as further probing into the interviewer protocols for recording an interrupted interview and proceeding with the survey as opposed to cancelling the interview entirely. Clarity about these protocols will be crucial for future studies examining this topic.

Further research on the subject of interview environment and more specifically, on the reliability of reporting interruptions, may help to clarify the extent to which these issues are related to domestic violence reporting and, subsequently, on estimates of domestic violence prevalence and incidence. Finally, further study on the possible interactive effect of autonomy and interview privacy would be useful; understanding the interplay between these and other related characteristics could play an important role in helping researchers better predict

response patterns and more accurately estimate domestic violence prevalence and incidence from survey data.

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Tables

Table 1: Background Characteristics (n=65,610)

<u>Variable</u>	<u>Proportion (yes)</u>	<u>Standard Error</u>
Religion		
Hindu	0.817	0.006
Muslim	0.129	0.006
Other	0.055	0.002
Number of children		
None	0.098	0.002
1-2	0.457	0.003
3+	0.445	0.003
Age		
15-19	0.059	0.001
20-24	0.175	0.002
25-29	0.222	0.002
30-34	0.202	0.002
35-39	0.156	0.002
40-49	0.187	0.002
Education level		
No education	0.477	0.005
Primary	0.151	0.002
Secondary	0.310	0.004
Higher	0.061	0.002
Residence		
Urban	0.312	0.003
Rural	0.688	0.003
Wealth index		
Poorest	0.205	0.004
Poorer	0.203	0.003
Middle	0.198	0.003
Richer	0.196	0.003
Richest	0.197	0.004
DV Interview Interrupted by:		
Adult female	0.025	0.002
Adult male	0.015	0.001

Table 2: Experiences of Spousal Violence (n=65,588)

Experienced any:	Proportion (yes)	Standard Error
Spouse ever pushed, shoved, or threw something	0.132	0.003
Spouse ever slapped	0.343	0.004
Spouse ever punched with fist or something harmful	0.101	0.002
Spouse ever kicked or dragged	0.111	0.002
Experienced any less severe violence	0.351	0.004
Experienced only less severe violence (no severe violence)	0.239	0.003
Spouse ever tried to strangle or burn	0.018	0.001
Spouse ever threatened of attacked with knife/gun or other weapon	0.010	0.001
Experienced any severe violence (includes those who reported less severe AND severe violence)	0.114	0.002
Spouse ever physically forced sex when not wanted	0.092	0.002
Spouse ever forced other sexual acts when not wanted	0.044	0.002
Experienced any sexual violence	0.097	0.002

Table 3: Bivariate Associations between key independent variables and outcomes of interest (n=65,439)

Interrupted by:	Experienced Acts of Violence		
	Less severe only	Any Severe	Sexual
	Odds Ratio (t)	Odds Ratio (t)	Odds Ratio (t)
Adult female	1.248 (2.73)***	1.533 (3.69)***	1.525 (3.51)***
Adult male	1.188 (1.80)*	1.298 (2.04)**	1.517 (3.25)***

*p value<0.1

**p value<0.05

***p value<0.01

Table 4: Multinomial Logistic Regression Model for Physical Violence (n=65352)

	<u>Odds Ratio</u>		<u>t</u>		<u>p value</u>	
	<u>Less Severe</u>	<u>Severe</u>	<u>Less Severe</u>	<u>Severe</u>	<u>Less Severe</u>	<u>Severe</u>
Male interruption	1.083	1.100	0.74	0.71	0.457	0.479
Female Interruption	1.104	1.311	1.1	2.27	0.273	0.023**
Religion (Hindu=ref)						
Muslim	1.059	1.094	1.18	1.29	0.273	0.196
Other	1.021	1.023	0.3	0.28	0.76	0.78
# of Children (0=ref)						
1-2	1.571	1.660	8.75	6.53	0.000***	0.000***
3+	2.034	2.019	12.91	8.45	0.000***	0.000***
Age	0.985	1.043	-1.5	3.1	0.135	0.002***
Education (None=ref)						
Primary	0.892	0.893	-2.95	-2.21	0.003***	0.027**
Secondary	0.641	0.541	-11.26	-11.09	0.000***	0.000***
Higher	0.314	0.173	-12.98	-9.27	0.000***	0.000***
Residence	0.759	0.689	-5.65	-5.8	0.000***	0.000***
Wealth (Poorest=ref)						
Poorer	0.947	0.908	-1.31	-1.8	0.189	0.072
Middle	0.742	0.713	-6.65	-5.49	0.000***	0.000***
Higher	0.614	0.440	-9.3	-11.42	0.000***	0.000***
Highest	0.353	0.179	-14.92	-16.77	0.000***	0.000***

*p value<0.1

**p value<0.05

***p value<0.01

Table 5: Logistic Regression Model for Sexual Violence (n=65345)			
	<u>Odds Ratio</u>	<u>t</u>	<u>p value</u>
Male interruption	1.305	1.98	0.048**
Female Interruption	1.269	1.98	0.048**
Religion (Hindu=ref)			
Muslim	1.371	4.33	0.000***
Other	0.712	-3.5	0.000***
# of Children (0=ref)			
1-2	1.079	1.07	0.382
3+	1.268	3.06	0.002***
Age	0.916	-5.79	0.000***
Education (None=ref)			
Primary	0.986	-0.27	0.787
Secondary	0.728	-5.45	0.000***
Higher	0.32	.7.61	0.000***
Residence	1.088	0.11	0.913
Wealth (Poorest=ref)			
Poorer	0.879	-2.3	0.021**
Middle	0.724	-4.83	0.000***
Higher	0.588	-6.68	0.000***
Highest	0.406	-8.17	0.000***

*p value<0.1

**p value<0.05

***p value<0.01

