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Not Just a Private Matter:

Acceptance and Prevalence of Intimate Partner Violence Against Women in India

by

Adnan A. Mir Syed

A thesis submitted in partial satisfaction of the requirements for the degree of

Master of Science

in

Health and Medical Sciences

in the

Graduate Division

of the

University of California, Berkeley

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Spring 2016

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Acknowledgements

I am deeply grateful to my thesis committee for their wisdom and guidance throughout the writing process, members of my thesis working group for their generous feedback, Rehan Syed for his technical assistance, Donna L. Doane for her comments and edits, the researchers involved in the collection and cleaning of the data analyzed in this paper, and to my family members and friends for their unwavering support. This work was funded in part by the Helen Marguerite Schoeneman Scholarship.

Abstract

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Intimate partner violence against women (IPVAW) remains a key public health challenge in India, with extensive research demonstrating high rates of both acceptance and lifetime prevalence of IPVAW. This study analyzes patterns of IPVAW acceptance and lifetime prevalence by state as well as aims to identify changes between 1998-99 and 2005-06 using National Family Health Survey data. It also aims to explore factors associated with IPVAW acceptance and prevalence using logistic regression models. Results show a small drop in IPVAW acceptance rates among married women from 51% to 49% (p<0.001), but a rise in lifetime prevalence from 19% to 31% over the time period, with individual states showing substantial variability in patterns of change. Logistic regression demonstrated that IPVAW acceptance and prevalence did not always have the same associated factors: examples include women in rural compared to urban residences having greater odds of accepting IPVAW (OR=1.25, p<0.001) but reduced odds of experiencing IPVAW (OR=0.90, p<0.05), and husbands with higher education compared to those with no education having reduced odds of accepting IPVAW (OR=0.52, p<0.001) but nearly the same odds of perpetrating IPVAW. Moreover, it was found that women who work and those earning the same or more than their husbands have greater odds of experiencing IPVAW than those who earn less, after controlling for other factors (OR=1.43, p<0.001). Recommendations include viewing IPVAW acceptance and prevalence as separate entities with distinct covariates; examining state-level rather than solely national statistics; and designing interventions for empowerment that involve men as well as women.

Paper 1: Literature Review of Intimate Partner Violence Against Women in India

IPVAW in the Context of Public Health

Introduction

Though intimate partner violence against women (IPVAW) has long been recognized as a tremendous justice and health challenge globally, substantial political and scientific discourse on the subject has been a relatively recent phenomenon. Early feminist efforts to ban the right of a husband to beat his wife in the United States can be traced back as early as the nineteenth century (Siegel, 1996), resulting in a change of laws by the 1870s, effectively rescinding the common-law principle that a husband had the right to "physically chastise an errant wife" (Calvert, 1974). However, it was not until the late 1970s and 1980s that the UN and many nations, including the United States, openly acknowledged and began responding to violence against women (VAW, including IPVAW) as a critical issue of justice (Sacco, 2014). This was accompanied by a growth in research on these concerns, particularly in the more industrialized countries (Morrison, Ellsberg, & Bott, 2007).

Since then, violence against women, including IPVAW, has increasingly been recognized as a key public health issue that is highly prevalent in every region of the world (García-Moreno et al., 2013). The past two decades have seen a corresponding shift in focus toward combining rights-based interventions with attempts to change both men's and women's attitudes toward VAW and IPVAW through the efforts of numerous local, national and international organizations.

Due in part to these continuing efforts, there appears to be a growing awareness of violence against women as socially unacceptable behavior from the point of view of international organizations and governments alike. This is particularly true of rape, sexual harassment and other forms of violence that take place outside the home. However, an awareness of and response to VAW in the *domestic* sphere has been much more uneven, with some countries recognizing the severity and importance of the problem, and others continuing to consider IPVAW as a "private" issue (Youngs, 2003). As noted regarding the findings of UN Women's 2011 "Progress of the World's Women: In Pursuit of Justice" report, domestic violence is outlawed in 125 countries, but "around the world 603 million women live in countries where domestic violence is not considered a crime and more than 2.6 billion live in countries where marital rape is not a criminal offence" (Provost, 2011). Although authorities, including public health authorities, usually see both partner- and non-partner violence against women as equally serious, in some countries key decision-makers continue to see forms of intimate partner violence (e.g., forced sex in marriage) as a "private affair," resulting in a lack of legislation or, in many cases, nonenforcement of the legislation that exists. This has led to a gap between public health efforts on the one hand and actions taken by important parts of the population on the other, with the latter viewing what takes place in the home as not a matter of public concern.

Nonetheless, it is notable that in the wake of campaigns against both VAW and IPVAW in countries across the world, a number of studies do indicate a change over time in attitudes toward and prevalence of IPVAW. However, there remains uncertainty regarding the direction of IPVAW acceptance in many countries at the sub-national level, with evidence of a diversity of attitudes between distinct communities within countries – some communities more accepting of IPVAW, as discussed above, and others more likely to enforce laws against it with a recognition of IPVAW as a public human rights issue, and not just a private concern. Furthermore, the social

and demographic factors that may have contributed to changes (or lack thereof) in attitudes toward IPVAW remain poorly understood in many countries, particularly those with a wide range of distinct communities and cultures.

India is one such country that includes a wide range of communities and cultures, with reportedly widely varying attitudes toward IPVAW. In India, following the very brutal gang rape of a young woman in Delhi in December 2012 and a series of subsequent high-profile rape cases, VAW has been recognized as a national concern with widespread protests in different parts of the country. However, the same recognition has not always been given to IPVAW in India – in other words, what happens in the home has generally not been given the same importance or recognition as violence in the "public domain." As stated in the introduction to a report on domestic violence in India:

What is unmistakable about these campaigns is that they often have focused on those acts of violence that either occurred in or had impact upon the public space. Thus, while the subordination of women in the private sphere was the implicit theoretical framework for many of the activists, the public-private divide still continued in practice. State responses to violence such as passing the amendment 498A to the Dowry Act of 1983, establishing All Women Police Stations, or setting up family counseling cells, marked the beginning of attempts to provide some options outside the family to women facing domestic violence. However, except for sensational cases, the insidious everyday violence experienced by huge numbers of women has remained hidden in the private domain. (Visaria, Mitra, Poonacha, & Pandey, 1999, p. 3)

Defining IPVAW

Violence against women, including intimate partner violence against women, has increasingly come to be recognized as a significant issue of justice since "the early 1970s, in part because of the re-emergence of the women's movement" (Tjaden & Thoennes, 2000). Historically, much emphasis has been placed on physical, rather than emotional, psychological or economic forms of violence against women. Terms such as "domestic violence," "wife beating," "wife battering," and "spousal abuse," as well as "perpetrator" for the individual carrying out the violence, were used to convey the criminality of this form of violence against women. Apart from the legal (criminality) side, however, the public health community also became involved in dealing with the complex health dimensions of this serious problem, and in recent decades the issue of violence against women has come to be framed as a key public health challenge that includes both physical and non-physical forms of violence.

In order to understand the evolving discussion of VAW and IPVAW, it is important to first specify what is meant by these terms. Definitions of VAW and IPVAW often vary between authors and institutions. These definitions may specify the perpetrator of violence, the victim of violence, or both.

Violence against women is a term that specifies the victim (object) of violence. Article 1 of the United Nations Declaration on Elimination of Violence Against Women (United Nations General Assembly, 1993) presents what has become one of the more widely used definitions of violence against women. In this document, VAW is defined as "any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether

occurring in public or in private life." Thus, VAW identifies the victim of violence as a woman and acknowledges the significance of her gender as a component of that violence.

Other definitions of violence often specify the *perpetrator* or *setting* of violence. One of the broadest definitions used by the World Health Organization to deal with violence is that of *interpersonal violence*, which is divided into (i) family and intimate partner violence and (ii) community violence (WHO Violence Prevention Alliance, 2015). The category of family and intimate partner violence is also often referred to as *domestic violence*. Though many use the term *domestic violence* to mean partner violence, domestic violence more accurately refers to any violence conducted in the setting of cohabitation and therefore may also include child abuse, elder abuse, or perpetration by any member of the household (e.g., an in-law or other family member). This definition can pertain to anyone irrespective of gender, in contrast to definitions of violence against women.

Intimate partner violence (IPV) is specifically used to indicate any act of violence carried out by a current or former partner and is often considered a subset of domestic violence (though it can include perpetrators who live outside of the victim's household). Within the definition IPV used by the Centers for Disease Control and Prevention, four categories are identified: (i) physical violence, (ii) sexual violence, (iii) threats of violence, and (iv) psychological/emotional violence, including economic violence (Saltzman, Fanslow, McMahon, & Shelley, 1999). As discussed in a 2003 CDC publication, "Intimate partner violence – or IPV – is violence committed by a spouse, ex-spouse, or current or former boyfriend or girlfriend. It occurs among both heterosexual and same-sex couples and is often a repeated offense. Both men and women are victims of IPV, but the literature indicates that women are much more likely than men to suffer physical, and probably psychological, injuries from IPV" (National Center for Injury Prevention and Control, 2003). Understanding these multiple forms of violence is crucial when discussing IPVAW, as social attitudes may vary based on the form of violence. For instance, some communities may largely reject physical forms of IPVAW while still accepting sexual forms (as is often the case in India regarding marital rape). Although they are some of the most common forms of abuse between partners, psychological/emotional violence and threats of violence may be particularly subtle and therefore less explicitly rejected. One study of women in León, Nicaragua found that out of 360 women, only six women experienced solely sexual or physical abuse, whereas 258 women experienced abuse that was partially or wholly psychological (Ellsberg, Peña, Herrera, Liljestrand, & Winkvist, 2000).

Because women appear to suffer disproportionately from intimate partner violence, some may specifically refer to IPVAW as its own distinct entity and thereby acknowledge the significance of gender norms and dynamics that influence such patterns of abuse. IPVAW can be seen as the overlapping subset of both intimate partner violence (which defines the perpetrator) and violence against women (which defines the victim). Many variations on the categories used to classify different forms of IPVAW can be found – for example, the WHO (World Health Organization, 2012) uses physical abuse, sexual abuse, emotional abuse, and controlling behaviors – but nearly all emphasize the significance of non-physical forms of violence against women in addition to physical violence. Key to these definitions is the recognition of gender dynamics as central to understanding IPVAW, and how each form of violence may be associated with its own gender norms and treatment. Acknowledgement of these potentially distinct patterns of IPVAW is therefore crucial to the appropriate design of needed interventions.

IPVAW as a Global Health Concern

As discussed above, in recent years the development of standardized definitions (with small differences across organizations) has afforded researchers the ability to compare across countries and regions. Though greater recognition of the worldwide scope of the problem came in the wake of a number of key studies published around the turn of the century, including those by Heise, Raikes, Watts, and Zwi (1994) and Watts and Zimmerman (2002), it was not until the last decade that more comprehensive analyses became possible. The WHO Multi-country Study on Women's Health and Domestic Violence against Women (Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008) was notable for its integration of multiple studies into clear depictions of the health burdens associated with VAW and IPVAW.

A more recent publication by the WHO underlined these concerns, reporting that approximately 35% of all women worldwide experience one or both of these two types of violence (partner and non-partner, but particularly IPVAW), and that 38% of all women who were murdered during 2012 were murdered by their intimate partners (García-Moreno et al., 2013). The UN also noted that women aged 15-44 face a higher risk of rape and intimate partner violence than "cancer, car accidents, war and malaria" (United Nations Secretary-General's UNiTE Campaign, 2009). Moreover, according to a UN Women report developed in conjunction with the 2013 WHO study cited above, it is reported that in some countries "up to 70 per cent of women have experienced physical and/or sexual violence in their lifetime from an intimate partner" (UN Women, 2014, p. 1) – i.e., very high percentages across the world, even without including psychological and other forms of IPVAW.

IPVAW prevalence appears to vary by region, though there is notably no region in the world with low levels of IPVAW. According to a study by Devries et al. (2013), South Asia has a higher prevalence than most other regions. Of 21 regions identified worldwide, South Asia was found to have an IPVAW prevalence of 41.73% (95% CI: 36.28-47.19) among ever-partnered women. Only a few other regions had comparable prevalence: Andean Latin America had lower prevalence at 40.63% (95% CI: 34.81-46.45), West Sub-Saharan Africa had higher prevalence at 41.75%(95% CI: 32.90, 50.60), and Central Sub-Saharan Africa was an outlier with an extremely high reported prevalence of 65.64% (95% CI: 53.57-77.71). The study derived these rates through an analysis of 81 countries, using a number of databases including the WHO Multi-Country Study on Women's Health and Domestic Violence, the International Violence Against Women Surveys, Gender, Culture and Alcohol: An International Study, and Demographic and Health Surveys to 2009, among other sources. These high prevalence rates highlight the significant health burden of IPVAW as a worldwide phenomenon.

The health consequences of VAW and IPVAW have been discussed extensively in the public health literature since the 1990s and early 2000s, including in the survey of studies made by Campbell (2002) and Krug, Dahlberg, Mercy, Zwi, and Lozano (2002). These reviews found that VAW has been connected to numerous fatal (homicide, suicide, maternal mortality, AIDS-related) and non-fatal outcomes, with both physiological and psychological dimensions. Non-fatal outcomes include sequelae related to physical health (such as injury, functional impairment, and disability), chronic conditions (including chronic pain, gastrointestinal disorders, and fibromyalgia), mental health problems (post-traumatic stress, depression, anxiety, sexual dysfunction, low self-esteem), negative health behaviors (smoking, alcohol and drug use, physical inactivity, overeating), and reproductive health issues (unwanted pregnancy, STIs/HIV, unsafe abortions, and numerous gynecological disorders). These negative health consequences have been consistently observed across numerous studies; this is seen, for example, in

Campbell's review of studies conducted in the US and Canada between 1985 and 1998, with a few international comparisons made and a total of 39 studies cited, indicating a consistent pattern of negative health effects (Campbell, 2002). Moreover, according to a twenty-year study conducted in the United States during the 1980s and 1990s, exposure to domestic violence between parents has been shown to have severe and lasting multi-generational effects, conferring the greatest risk of receiving partner violence and the second highest risk for perpetrating partner violence (Ehrensaft et al., 2003).

Finally, it has been emphasized in recent years that the health burdens resulting from this violence rival and often exceed those of more commonly accepted public health priorities (García-Moreno & Watts, 2011). As García-Moreno and Watts note:

In Mexico City, for example, rape and intimate partner violence against women was estimated to be the third most important cause of morbidity and mortality, accounting for 5.6% of all disability-adjusted life years lost [Ascencio, 1999]. In Victoria, Australia, partner violence accounted for 7.9% of the overall disease burden among women of reproductive age and was a larger risk to health than factors such as raised blood pressure, tobacco use and increased body weight [Vos et al., 2006].

García-Moreno and Watts also point out that since their WHO Multi-country Study on Women's Health and Domestic Violence against Women was published in 2005 (García-Moreno, Jansen, Watts, Ellsberg, & Heise, 2005), studies of IPVAW have increased fourfold from 80 in 2005 to more than 300 in 2008, with data on IPVAW from more than 90 countries and a "growing body of evidence about the range of negative health and development consequences of this violence." This rapid growth of studies throughout the world has helped demonstrate not only that VAW and IPVAW are core public health concerns, but also the importance of prioritizing a wide range of coordinated interventions to ameliorate their severe and persistent health burdens.

An indication of such recognition of IPVAW's significance is reflected in the World Bank's 2014 summary of recent findings regarding IPVAW as part of their much larger study entitled Voice and Agency: Empowering women and girls for shared prosperity (The World Bank, 2014). This overview compares different parts of the world in terms of reported prevalence of IPVAW by region; costs of IPVAW on the individual, family and economy-wide level; the most frequently observed individual-level risk factors (e.g., a family history of violence and attitudes of acceptance of wife beating); protective factors (e.g., education and wealth, and increased access to income – but this is complicated, especially in India and other parts of South Asia, as will be discussed below); and the influence of the community environment, norms, and aggravating conditions (e.g., an environment of armed conflict). The report also reviews responses from different parts of the world that appear to help, which is useful in relating findings on a national or sub-national level to the more general international context. This amount of attention paid to IPVAW worldwide in recent years presents a striking contrast with the scarcity of literature focusing on IPVAW before the late 1970s and 1980s, particularly outside of industrialized country contexts. The recognition of the importance of IPVAW may have come relatively late (i.e., only in recent decades), but it is now clearly seen not only as a human rights issue, but also as a key public health concern.

Micro-oriented, Macro-oriented and Multidimensional Approaches to IPVAW

As indicated above, given the high prevalence and serious health consequences of IPVAW, a growing body of literature has emerged in the hopes of identifying and understanding the many causes of intimate partner violence against women. Characterizing the factors

influencing IPVAW has been key in informing recommendations or interventions at multiple levels, from the individual to societal.

As argued by Jasinski (2001), approaches to IPVAW can be classified as primarily "micro-oriented" or "macro-oriented." Micro-oriented approaches are individual-centered, focusing primarily on psychological and interpersonal determinants. For Jasinski, micro-oriented approaches to IPVAW include social learning theory (the experience of and exposure to violence); psychopathology, psychological, and physiological explanations (personality disorders, mental illness, and violence as tied to men who see women as their sexual and reproductive "property"); and resource theory and exchange theory (associated with men's means of maintaining dominance in the family and society). In contrast, macro-oriented approaches focus on gender norms (whether patriarchal or feminist perspectives), cultural attitudes and practices (e.g., the cultural acceptance of violence), a subcultural of violence, and structural stress (including such factors as class, education and income) that influence IPVAW at the population level.

The interaction of micro- and macro-oriented approaches has been discussed widely, and Jasinski also suggests that for some cases, e.g., the case of low-income and marginalized men and women living in poverty, *multidimensional theories* may be most appropriate, combining elements of an understanding of the macro context together with the micro influences on IPVAW. One such theory is the "economic exclusion/male peer support" model of DeKeseredy and Schwartz (2011), which examines the interaction of stresses associated with the social and economic exclusion of marginalized men (e.g., impoverished men in housing estates) with the social support given by abusive peers, resulting in low-income women becoming their targets.

Another example would be the ecological models that attempt to include four levels of analysis: the macrosystem (broad social factors), the exosystem (social networks connecting intimate relationships to the broader culture), the microsystem (the relationship in which violence occurs), and the ontogenic level (important influences in an individual's background), e.g., as discussed in Brownridge (2009) and Dutton (2006). This type of analysis has also been extended to five levels, to include a mesosystem regarding the nearby environment (e.g., home, school) that influences behavior, with the analysis tied in part to Bronfenbrenner's ecological systems theory (Bronfenbrenner, 1977). However, as argued by DeKeseredy and Schwartz (2011, pp. 14-15), "any ecological model is extremely difficult, if not impossible, to test in its entirety" and, even if well understood, would be very expensive to implement.

Given these challenges, studies have often emphasized the need for different levels of analysis, depending on the questions asked. These levels can vary from an analysis of a "cultural community," as in a study of domestic violence in certain parts of rural Appalachia (Gagné, 1992), to a national level focus – e.g., a study of risk factors for domestic violence through a cross-sectional study of South Africa (Jewkes, Levin, & Penn-Kekana, 2002). Moreover, many international studies have attempted to identify common demographic factors in multiple countries through comparisons of national-level data, e.g., by comparing patterns of IPVAW in two countries such as Zambia and Kenya (Lawoko, 2008), or across a large number of countries, as for example the well-known study of 17 sub-Saharan African countries (Uthman, Lawoko, & Moradi, 2009).

Studies such as these, carried out on either a relatively local or national level, have contributed greatly to the current understanding of trends regarding IPVAW. However, as will be discussed below, a *sub-national approach* is likely a useful compromise in scope (more general than the local but not as general as the national level), and may be necessary to better understand

changes in attitudes and behavior regarding IPVAW, in complex and culturally diverse countries such as India.

Association of Attitudes Toward IPVAW and its Prevalence

Attitudes Closely Associated with Prevalence of IPVAW

A number of studies have been carried out in recent years that attempt to relate attitudes toward IPVAW to its prevalence in particular contexts, using either a small group focus (e.g., employing a relatively small survey of attitudes) or a national or comparative international (multi-country) set of large-scale surveys. Motivating the study of attitudes has been strong evidence that attitudinal acceptance of intimate partner violence is associated with the incidence of violence within intimate relationships, based on studies that have looked at various aspects of gender role attitudes and VAW incidence. There is considerable evidence that boys' and men's adherence to traditional and misogynistic attitudes regarding gender roles is associated with violence against women, especially sexual violence (Anderson, Simpson-Taylor, & Herrmann, 2004; Heise, 1998; Murnen, Wright, & Kaluzny, 2002; O'Neil & Harway, 1997). Additionally, men's explicit acceptance of IPVAW was found to be strongly associated (OR = 4.54 95% CI: 3.03-6.81) with their use of violence against partners within the past 10 years in Cape Town, South Africa (Abrahams, Jewkes, Laubscher, & Hoffman, 2006).

Numerous studies have explored further the potential risk of IPVAW as predicted by an acceptance of IPVAW specifically in the context of male domination (Faramarzi, Esmailzadeh, & Mosavi, 2005; Jewkes, 2002). This line of research has attempted to specifically connect rigid patriarchal norms and ideologies to prevalence of IPVAW. Notably, one study using data from Nepal showed that men's attitudes were linked to lifetime perpetration of physical IPVAW (OR = 2.81, 95% CI: 1.36–4.91), but women's attitudes were not (Yoshikawa, Shakya, Poudel, & Jimba, 2014). An important component of this association appears to be deteriorating economic prospects for portions of the male population. It is argued that this economic change has brought with it an increase in depression, substance abuse, and men's acceptance and perpetration of IPVAW in recent years.

Here, it is important to note that surveys on attitudes toward IPVAW may sometimes not be as nuanced as one would like. For example, attitudes may vary depending on the type of IPVAW: a study in Bangladesh indicated that although many men and women were against physical forms of violence, they may be more accepting of forced sex within marriage and emotional abuse (Doneys, Mitra, Nazmul, & Mohiuddin, 2013). A separate case study conducted in Bangladesh argued for the importance of careful qualitative studies that capture the complexities of changing attitudes and their connection with behavior, which may than enable the construction of survey questions designed to pick up such differences (Schuler, Islam, & Rottach, 2010). Moreover, it is important to keep in mind that even though survey questions on attitudes may be difficult for a man to answer truthfully if his private views deviate from social (e.g., patriarchal) norms, it may be even more difficult for a woman who is in a dependent and vulnerable position. A man with more education and exposure to the "outside" world may also know more about what he is expected to answer than a woman who has less education and exposure.

Finally, as is well recognized, serious underreporting of prevalence makes the proposition of connecting changes in attitudes with changes in prevalence more problematic. However, the

studies noted above, among others, indicate that such connections can be made, although often more in broad outlines than in precise relationships.

The strengthening of the argument regarding a connection between attitudes and prevalence has given support for interventions that change attitudes toward IPVAW. A cluster randomized trial in rural South African communities has shown encouraging results, with evidence that changes in attitudes may have led or contributed to a reduction in IPVAW prevalence (Pronyk et al., 2006). However, the generalizability of these findings remains in question, as there remains a dearth of high-quality evaluations of interventions including those attempting to change attitudes to IPVAW (Morrison et al., 2007). These shortcomings highlight the need for the further characterization of the factors influencing attitudes towards IPVAW as well as improved evaluation of interventions designed to address these factors.

Factors Associated with of Attitudes Toward IPVAW

While it has long been suggested that differences in cultural and social norms may influence IPVAW prevalence, recent qualitative and quantitative research has helped identify some of these cultural beliefs across different regions (Flood & Pease, 2009). For example, the sentiment that "a man has a right to assert power over a woman and is socially superior" has been found in several areas of India, Nigeria, and Ghana; that "a man has a right to 'correct' or discipline female behavior" has been found in India, Nigeria and China; and that "physical violence is an acceptable way to resolve conflicts within a relationship" was commonly heard in studies in South Africa and China (World Health Organization, 2009). From these and similar research findings, the WHO study argues that "traditional beliefs that men have a right to control or discipline women through physical means makes women vulnerable to violence by intimate partners and places girls at risk of sexual abuse" (p. 4). In this way, local cultural attitudes have been linked to acceptance of IPVAW perpetration. This has also been reflected in studies following individuals who have migrated to cultures with different views, with evidence of cultural influence on attitudes toward IPVAW as well as changes in attitudes following acculturation, as in a study of intimate partner homicide examining the "original" attitudes tied to Ethiopian culture and complex changes that take place after immigration to Israel (Wallach, Weingram, & Avitan, 2010). However, it is important to note that cultural attitudes may not necessarily coincide with individuals' attitudes and beliefs, and that individuals' interpretations of cultural norms may vary more widely than expected (World Health Organization, 2009). More specifically, there is evidence that local village or community-level attitudes influence but do not wholly determine individual perspectives, which may also be influenced by such factors as the individual's experiences and exposure, as noted in a study based on 2008 Nigerian Demographic and Health Survey data (Uthman, Moradi, & Lawoko, 2011).

A number of studies dealing with attitudes toward IPVAW have also attempted to account for the fact that women's and men's attitudes toward IPVAW may differ markedly within a given context. For example, Uthman, Lawoko, and Moradi (2010) argue that the often-large disparities by sex in attitudes toward IPVAW are due to greater societal variables, including such variables as adult male and female literacy and the relative acceptance of polygamy as a "normal" practice (with lower rates of literacy and a greater acceptance of polygamy associated with a greater acceptance of IPVAW). Other studies comparing attitudes of men and women have emphasized the importance of very local variables such as those found in conflict, post-conflict or otherwise highly vulnerable settings such as refugee camps (Khawaja, Linos, & El-Roueiheb, 2007).

Many national surveys have demonstrated that *women* may often condone IPVAW, an in some instances at greater rates than men. For instance, in one survey of Afghanistan conducted in 2010-11, 92% of women said it was acceptable for the husband to beat his wife in at least some circumstances, an attitude that may have been partly explained by the low level of education women generally have been able to receive in the country (Clifton, 2012). Even though women condoning wife beating may appear counter-intuitive, a high level of IPVAW acceptance by women – in some cases, with women condoning IPVAW more than men – has been found in many countries. This trend is not universal, however: for example, men's acceptance of IPVAW is far greater than women's in Russia, a country in which only one-third of men feel that violence against women in their country remains a serious problem (Stickley, Kislitsyna, Timofeeva, & Vågerö, 2008).

The growing interest in *women's* attitudes toward IPVAW has led to the development of a number of country- or region-specific theoretical frameworks attempting to identify predictive factors in recent years. As an example, a study of Turkish women's attitudes revealed several key predictive factors of women's acceptance of IPVAW, including patriarchal ideologies (sometimes associated with the payment of a bride-price to the bride's family) as well as such demographic factors as rural residence, large household, lack of wealth, illiteracy (lack of education), and younger age at marriage (Marshall & Furr, 2010). However, it should be kept in mind that, as discussed above, women's responses to survey questions of this nature may or may not always reflect their true views, particularly when they are in highly vulnerable positions (as in certain contexts in Afghanistan and Turkey). Issues of empowerment and disempowerment are complex, as will be discussed below, but reports of women's as well as men's stated acceptance of IPVAW have to be treated carefully in view of the social context and ability of the individual to answer from their own point of view, which in itself may be complicated.

In addition to these studies of women's attitudes, other studies have attempted to find factors associated with *men's* attitudes toward IPVAW. For example, one recent multi-country study of men's attitudes in the Asia-Pacific region identified numerous factors including inequitable gender attitudes (AOR = 1.42, 95% CI: 1.20-1.68), childhood experiences of violence against one's mother (AOR = 1.48, 95% CI: 1.29-1.70), and the enactment of harmful forms of masculinity such as controlling behavior (AOR = 1.74, 95% CI: 1.38-2.20) as key drivers of violence acceptance and perpetration (Fulu et al., 2013). In association with this multicountry survey, a qualitative study of men's attitudes and determinants drawn from life histories has been conducted in selected countries, including Bangladesh (Doneys et al., 2013). Of note, a man's personal experience of violence and his witnessing of IPVAW within his own family were identified as strongly associated with IPVAW perpetration in both the quantitative and qualitative findings of these Asia-Pacific studies. This is consistent with previous longitudinal research on the intergenerational transmission of partner violence conducted in the US and UK (Ehrensaft et al., 2003; Lussier, Farrington, & Moffitt, 2009).

Changes in Attitudes Toward IPVAW in Recent Decades

There is growing evidence that sizeable changes in attitudes toward VAW and IPVAW are occurring in recent years, in part as a result of media coverage and awareness-raising efforts (Pierotti, 2013). Since the 1990s, and particularly in the last decade, national and international organizations – including UN agencies, international non-governmental organizations (INGOs), local NGOs, and others – have adopted violence against women as a key concern. Media attention in particular countries has also been directed toward violence against women in the

wake of specific well-known cases of domestic and non-intimate partner violence. A notable example of this is the heightened awareness of violence against women on college campuses and sports circles in countries such as the United States. In addition, the brutal gang rape of a paramedical student in Delhi in December 2012 and subsequent well-publicized rape cases in India have led to increased media attention and newly-passed laws, due in part to very large-scale and frequent protests against such exceptionally tragic and apparently increasing number of cases of violence against women. However, many regard these responses as insufficient. For instance, Section 375 of the Indian Penal Code outlaws rape with the notable exception that "sexual intercourse by a man with his own wife, the wife not being under 15 years of age, is not rape" (Rath, 2007). As such, what many would consider instances of marital rape are not recognized as legal offences in India.

Notable studies tracking changes in attitudes include the UNICEF-supported studies of changing women's attitudes toward domestic violence in seven select countries (UNICEF, 2007). These draw from the Multiple Indicator Cluster Surveys (MICS) datasets and suggest a small but consistent drop in acceptance of IPVAW between 2000 and 2005 in all countries surveyed except Cambodia (e.g., in India acceptance rates among women and girls, aged 15-49, surveyed declined from 56 to 54% between 2000 and 2005, whereas in Cambodia the number increased from 35 to 55% in the same time period).

A more recent study of changing attitudes by Pierotti (2013) examines trends in women's attitudes in particular in 26 low- and middle-income countries, based on Demographic and Health Survey (DHS) data. Despite concerns regarding the comparability of the surveys used (the years surveyed varied greatly by the country), Pierotti argues that in most of the countries for which data was available women increasingly have rejected IPVAW. Using national-level data, she found that in 12 of the 26 countries there was more than a 10% increase in the rate of rejection of IPVAW, with a statistically significant change at α = .05 in all countries. However, it should be noted that in India (again, using national-level data) the increase was only a slight 1.60%; moreover, the change was negative in three countries – Indonesia, Jordan and Madagascar – with changes of -4.98%, -3.12% and -4.26% respectively. She attributes the overall positive trend to greater global discussion and awareness of the issue, though her results excluded many covariates found to be associated with attitudes toward IPVAW in previously cited studies.

Pierotti's study provides a notable contribution in making the case that campaigns against IPVAW appear to have impacted at least stated attitudes: acceptance of IPVAW appears to have generally lessened over time on the national level in the countries surveyed. The exceptions were the three countries where (on the national level at least) attitudes appear to have worsened over time in spite of greater awareness and media attention (Pierotti, 2013, p. 253).

These findings certainly tell an important part of the story regarding changing attitudes. However, because attitudes regarding IPVAW are often associated with particular "communities" (defined both geographically and culturally) within national boundaries, in some cases it may be useful to go beyond national averages to explore changes in attitudes on a *sub-national* basis. For instance, do all parts of Indonesia, Jordan and Madagascar show increasing acceptance of IPVAW (i.e., have attitudes throughout the country worsened over time), or are there different patterns in different regions within each country? Answering these questions could provide better insights into causes as well as help target more appropriate interventions.

A sub-national focus of this sort – larger than a very localized population, but below the national level – is particularly useful in countries such as those of South and Southeast Asia

where gender dynamics tend to vary greatly across different regions within the same country. In Myanmar, for example, the relatively gender-equal culture of the Delta Region is said to be notably different from areas within the country that are characterized by more pronounced gender hierarchies, as in many of the border states in which such ethnic groups as the Chin, Shan, Kachin and other sub-national cultures comprise the majority of the population (Minoletti, 2014). In a similar way, the gender dynamics of specific ethnic groups (e.g., the Garo population) in the northern part of Bangladesh differentiate this region from the sub-national patterns found in other parts of the country (Dey, Resurreccion, & Doneys, 2013). In Indonesia, Elmhirst (2000) notes that local cultures in different parts of the archipelago are said to have distinctly different attitudes toward gender relations; this would appear to make it likely that quite different responses to IPVAW would be found in such localities as Aceh and Bali, even within the same national context. A similar pattern of diversity is true of different localities and ethnic communities in Vietnam, Lao PDR, and many other countries in Southeast Asia (Long, Hung, Truitt, Mai, & Anh, 2000; Schenk-Sandbergen, 2012). These distinct gender patterns within each country caution against making overly broad generalizations on the national level. Such findings provide a strong argument for why a sub-national approach may be necessary in explaining both the underlying drivers and changes over time regarding attitudes toward and prevalence of IPVAW in countries such as these.

Studies of IPVAW in India: Variations within the Country

Characterizing Attitudes Toward IPVAW in India using NFHS data

India is known to be a complex country characterized by widely-varying gender patterns within the national boundaries, as is true of other South and Southeast Asian countries (Arora, 2012). It is therefore difficult to talk about "the Indian woman" or "the Indian man" given that there are such diverse cultural communities within a single nation-state.

For many researchers, the National Family Health Surveys in India have been particularly useful as a means to study attitudes toward IPVAW in recent years. The first National Family Health Survey was conducted in 1992-93 (NFHS-1), followed by the NFHS-2 in 1998-99 and the NFHS-3 in 2005-06; the NFHS-4 is being conducted in 2014-15. All have some similarities to the DHS questions administered in other country surveys, but the NFHS questions have been designed to fit the Indian context, and recent surveys include expanded sets of questions about attitudes toward and experience of domestic violence and IPVAW.

Although many notable studies have focused on findings at the national level using NFHS data, a large number of studies of IPVAW in India have chosen to follow a sub-national approach, often dividing the country into sub-regions (typically into North, Central, Eastern, Northeast, West and Southern regions), and also making state-by-state or within-state comparisons. As an example, Madan (2013) employs National Family Health Survey (NFHS)-3 regional data (using the six regions noted above) as well as state-level data to describe factors associated with attitudes toward IPVAW in India. He explains his use of regional as well as state-level data, and urban-rural comparisons, in this way (pp. 31-32):

Northern states such as Uttar Pradesh and Punjab can be described as more patriarchal and "traditional" states, whereas states in the South, such as Kerala and Tamil Nadu can be relatively termed as more egalitarian and educated [Mayer, 2006]. Correspondingly, within each state, there is an increasing disparity between the experiences of those who

live in rural areas and those who live in the major cities, as industrialization and modernization change the face of India.

Using the same NFHS-3 dataset, Kishor and Gupta (2009) explore different indicators of women's empowerment in India, including attitudes toward IPVAW and data on spousal violence, on a national, state-level and regional basis (again, using the six regions cited above). The data are rich with information regarding not only attitudes and demographic factors (age at marriage, educational attainment, income data, use of substances, and others), but also provide substantial information on risk factors and prevalence on a national as well as sub-national – state-level and regional – basis. They note that on a national basis, "About two in five currently married women have ever experienced spousal violence in their current marriage, and among them, at least two-thirds experienced violence in the past year," citing such factors as higher education and wealth associated with lower physical, sexual and emotional abuse, and husband's consumption of alcohol and [his] having a mother who has beaten by her spouse as the greatest risk factors for all three types of abuse (p. 128). However, they show that, using a *state-by-state* analysis, women's and men's agreement with wife-beating ranges, for women, from 28% in Himachal Pradesh to 90% in Manipur, and for men from 23% in Uttarakhand to 85% in Manipur (p. 76-77).

Here it is important to note that although regional comparisons are sometimes made, as in the Madan and Kishor and Gupta studies using six designated regions, these regional definitions do not always represent explicit cultural or historical similarities between each region's constituent states, and a wide variation in attitudes and prevalence of IPVAW can be found between states within each region. For this reason a state-by-state approach is preferred in some studies, given the significant variations and even contradictory patterns that can be found within these regional groupings.

Other notable studies using NFHS-3 data have considered religion as well as other community-based influences on the prevalence of IPVAW in different parts of India. Dalal and Lindqvist (2012), for example, present data indicating that scheduled castes (Indian designations for historically disadvantaged groups) and Muslim women were most likely to experience IPVAW, and that a woman's poor economic background, working status (working, as opposed to non-working) and husband's controlling behavior were associated with greater IPVAW. However, it is important to note that, as with previously discussed factors, the circumstances of different religious groups and communities vary significantly across different geographical parts of India and therefore general inferences should be made with caution.

In a separate but complementary study using NFHS-3 data, Kimuna, Djamba, Ciciurkaite, and Cherukuri (2012) found that important factors associated with a *lower* risk of physical and sexual violence included urban residence, household wealth, being Christian, the wife's (higher) age at marriage, and the wife's (higher) education. In contrast, they found that women who were employed and/or had husbands who drank alcohol faced a greater risk of both physical, and sexual violence. Nonetheless, they again found significant geographical differences and emphasized the need to address *community-based* gender roles and cultural norms when approaching problems of IPVAW, rather than trying to generalize from their results.

Empowerment and the Importance of Relative Status Between Husband and Wife

Women's empowerment, through increased education, income, political participation and other indicators, has been shown to have positive effects on reducing violence against women in many country contexts. Jewkes (2002), for example, cites a large number of studies that indicate

that women's high educational attainment was associated with low levels of violence. However, this relationship is complicated and appears to vary according to such factors as income status and also, critically, socio-cultural contexts, among other influencing factors. (Regarding income status, for example, Jewkes notes [p. 1]: "The relation between intimate partner violence and female education, however, is complex. In the USA and South Africa the relation has an inverted U-shape, with protection at lowest and highest educational levels.")

Given that India is such a diverse country, it appears that women's empowerment is likely to have both positive and negative effects on IPVAW, depending on the local context and the way in which empowerment is achieved. On the cautionary side, one key finding from numerous studies using the NFHS datasets was the surprising one indicating that women's empowerment could potentially worsen their experience of IPVAW. For example, Ackerson, Kawachi, Barbeau, and Subramanian (2008) found an increase in IPVAW to be associated not only with lower levels of women's education and lower community literacy rates, as expected, but also with the occurrence of a woman's educational level being greater than her husband's educational level in certain contexts. The implication is that education of individual women independent of other interventions may potentially *worsen* rates of IPVAW. In a separate study using the same dataset, Boyle, Georgiades, Cullen, and Racine (2009) stressed that although there is wide variance between communities, in general a woman's relatively high level of acceptance of IPVAW will tend to work against the protective influence of a higher education.

In addition to education, it appears that higher employment may be a risk factor for IPVAW, particularly when such employment raises a woman's status above that of her husband. Dalal (2011) found that, from a study of 124,385 ever-married women, working women suffered more emotional violence than did non-working women (18% vs. 12%), more of the "less severe" form of physical violence (37% vs. 27%), more of the "more severe" form of physical violence (14% vs. 8%), and more sexual violence (10% vs. 8%). Weitzman (2014) expands upon this by demonstrating that women who had a higher educational attainment, income or earnings than their spouses faced more frequent and severe violence than was true of women with lower status than their husbands.

It appears that just as education is not enough, economic empowerment through working for monetary earnings is also not enough to combat abuse. In fact, in the rigidly patriarchal contexts found in many states in India, these forms of "empowerment" may actually compound a woman's problems in the absence of a community-based approach that addresses patriarchal behavior and cultural norms (Dalal, 2011). As Simister and Mehta (2010) argue, "there is evidence that some gender-based violence is a male response to increasingly 'modern' attitudes among Indian women."

Further studies using community-focused and state-by-state approaches to IPVAW and women's empowerment appear to be important as a means to sort out these complex interrelationships, given that in some contexts empowerment-related initiatives can have very positive effects on reducing IPVAW, but in other contexts may have to be carried out carefully, with men fully engaged in the effort. This is a key area that requires both quantitative and qualitative research to try to identify when women's empowerment efforts are able to help reduce IPVAW, and when they need to be done differently (e.g., with an explicit focus on men's employment and education as well as women's), in order to have the desired effect on the reduction of IPVAW.

Findings from Studies using Non-NFHS Data

In addition to the studies discussed previously using NFHS data, a large number of studies have used their own surveys to target more specific populations. This has been particularly valuable in studying the effects of community-level experiences, such as witnessing violence at home or in the community, on perpetration of IPVAW. Though such studies have been more restricted in geographic scope, they have often attempted to better control for cultural continuity in the area studied.

For example, Koenig, Stephenson, Ahmed, Jejeebhoy, and Campbell (2006) surveyed men in the state of Uttar Pradesh, a state recognized as having strong patriarchal norms and behavior. They found that childlessness, economic pressure, intergenerational transmission of violence, and a community environment of violent crime were associated with physical and sexual violence, community-level norms were associated only with physical violence, and a higher socioeconomic status was protective against physical but not sexual violence. Here again, they found that it was very important to recognize not just individual-level experiences, but also the contextual drivers of IPVAW.

Martin et al. (2002) also focused on intergenerational transmission of violence in northern India, and found that witnessing violence was a significant risk factor for perpetrating IPVAW. One-third of the men surveyed (out of a total of 6902 men) had seen parent-to-parent violence as a child and were much more likely to try to use physical and/or sexual violence to control their wives, in sharp contrast with those from non-violent homes.

Finally, Babu and Kar (2009) studied rates of IPVAW among states in eastern India and demonstrated that even within this geographic zone, physical violence against women varied significantly between each state. Similarly, factors such as residence (urban or rural), age and occupation of the women, and monthly household income differed greatly between states.

Changes in Indian Legislation on IPVAW

In part due to the growing research on and awareness of IPVAW in the country, some notable steps have been made toward official acknowledgement and condemnation of violence within the home. Perhaps the most important of these has been the passage of the Protection of Women From Domestic Violence Act 2005, which "formally recognizes a woman's right to protection from violence at home and addresses verbal, emotional and economic abuse as well as physical and sexual abuse" (Roy, 2012). However, in a discussion regarding developments since the passage of this act, Professor Roop Rekha Verma (former Vice Chancellor of Lucknow University) pointed out that "on the path towards the protection of women rights the judicial system constitutes a bottleneck, especially when it comes to domestic violence: in the name of saving the family and family members, the attitude of the judicial system has also been very negative towards the law" (Singh, 2013).

Given that the actual operation of the judicial system – including local police, judges, lawyers and others – often reflects local attitudes, it is not surprising that the implementation of this act has varied significantly by state. Additionally, the existence of the aforementioned exception in the Indian Penal Code has meant that many of India's courts continue to rule that marital rape is not a criminal offense. India's Supreme Court stated in early 2015, when refusing to take up a case dealing with marital rape: "You are espousing a personal cause and not a public cause... This is an individual case" (Sinha, 2015). Thus, even if a woman is willing to bring a case against her husband (itself often a socially unacceptable act), there continues to be almost no legal avenue through which she may seek justice.

This dire state of affairs is all the greater motivation for further research and advocacy regarding IPVAW in India. In general, there have been relatively few high-profile campaigns in India against IPVAW as compared to those against "public" violence against women, particularly rape perpetrated by non-intimate partners. This is not to imply that such projects do not exist: several widely communicated campaigns have recently focused on domestic violence, and IPVAW in particular. These include, for example, the "Bell Bajao (Ring the Bell)" campaign to engage men in efforts to stem domestic violence (Ramadurai, 2013), well as the "abused goddesses" campaign with images of Hindu goddesses depicted as victims of spousal abuse (Kohli, 2013). Though these efforts have helped draw attention to this critical issue, much remains to be done if IPVAW is to become both legally and socially unacceptable in India.

Summary of Main Arguments

This literature review has aimed to make the following key points regarding IPVAW in India:

- 1. Intimate partner violence against women (IPVAW) has historically been seen as belonging to the private sphere, but increasingly is being recognized as a key global justice and public health challenge.
- 2. IPVAW may include physical, sexual, and emotional/psychological violence, as well as threats of violence. The experience of such violence may have severe fatal and non-fatal health consequences, with health burdens often exceeding those of more commonly accepted health priorities.
- 3. Numerous approaches to conceptualizing IPVAW exist, though most acknowledge that it is a highly complex issue with factors across multiple levels, ranging from the most "micro" levels (individual) to the "macro" levels (societal). Though IPVAW prevalence remains high globally, it appears that on average acceptance of IPVAW is falling in low- and middle-income countries. However, there remains much heterogeneity between countries and within countries.
- 4. India's rates and acceptance of IPVAW are high but vary greatly by state, with women's acceptance ranging from 28% in Himachal Pradesh to 90% in Manipur (and comparable ranges in men's acceptance).
- 5. Though efforts to further Indian women's empowerment are crucially needed and will have very positive effects overall, rises in women's status relative to their husband's may precipitate further IPVAW in certain social contexts.
- 6. Despite the passing of the Protection of Women from Domestic Violence Act of 2005, exceptions to the Indian Penal Code continue to allow marital rape (a sexual form of IPVAW) to be legal.
- 7. Though efforts such as the "Bell Bajao (Ring the Bell)" and "abused goddesses" campaigns are an important step toward increased awareness and change in IPVAW, significant work remains if IPVAW is to become legally and socially unacceptable in India.
- 8. Understanding attitudes toward IPVAW is valuable, as attitudes often predict prevalence. Thus, interventions to change attitudes may lessen rates of IPVAW.
- 9. There is a scarcity of studies that have tracked changes in attitudes toward IPVAW over time in India and attempted to examine how such changes in attitudes may predict prevalence.

In light of these points, there is a notable opportunity to better characterize changes in IPVAW attitudes and prevalence within India, particularly at the state level given the degree of heterogeneity within the country. Identifying sub-national trends may prove valuable in informing proactive interventions targeted toward states with worsening IPVAW, even in states with relatively low IPVAW compared to many other Indian states. Novel context-specific campaigns for women's empowerment will undoubtedly play a central role in engendering change. However, existing literature suggests that a rise in a wife's status relative to their husband's may be associated with increased experience of IPVAW in certain Indian contexts. Thus, such research should also attempt to identify in which states this counterintuitive association is found, so that valuable empowerment efforts can anticipate such unintended outcomes in specific states and actively work to engage both men and women in social change. Given the high rates of IPVAW in much of India, even a modest reduction through research and campaigns may bring about a substantial improvement in health and wellbeing in the women, families, and communities affected, and potentially for generations to come.

Paper 2: Acceptance and Prevalence of Intimate Partner Violence Against Women in India

Introduction

Since the late 1970s and 1980s, violence against women (VAW) – including intimate partner violence against women (IPVAW) – has increasingly been recognized as a significant public health concern that is highly prevalent in every region of the world (García-Moreno et al., 2013). The past two decades have seen a corresponding shift in focus toward combining rights-based interventions with attempts to change both men's and women's attitudes toward IPVAW, and thus prevalence rates, through the efforts of numerous local, national and international organizations.

Due in part to these continuing efforts, there appears to be a growing awareness of violence against women as socially unacceptable behavior from the point of view of international organizations and governments alike. This is particularly true of rape and other forms of violence that take place outside the home; however, an awareness of and response to VAW in the *domestic* sphere has been much more uneven, with some countries recognizing the severity and importance of the problem, and others continuing to consider IPVAW as a "private" matter (Youngs, 2003).

Even where violence against women has been recognized as a national concern – as in India in recent years, following the very brutal gang rape of a young woman in Delhi in December 2012 – what happens in the home has generally not been given the same importance or recognition as violence in the "public sphere." As stated in the introduction to a report on domestic violence in India:

What is unmistakable about these campaigns is that they often have focused on those acts of violence that either occurred in or had impact upon the public space. Thus, while the subordination of women in the private sphere was the implicit theoretical framework for many of the activists, the public-private divide still continued in practice. State responses to violence such as passing the amendment 498A to the Dowry Act of 1983, establishing All Women Police Stations, or setting up family counseling cells, marked the beginning of attempts to provide some options outside the family to women facing domestic violence. However, except for sensational cases, the insidious everyday violence experienced by huge numbers of women has remained hidden in the private domain. (Visaria et al., 1999)

India is by no means the exceptional case regarding this view of the "private domain." According to the findings of UN Women's 2011 "Progress of the World's Women: In Pursuit of Justice" report, although domestic violence is outlawed in 125 countries, "around the world 603 million women live in countries where domestic violence is not considered a crime and more than 2.6 billion live in countries where marital rape is not a criminal offence" (Provost, 2011).

Still, it is notable that in the wake of campaigns against both VAW and IPVAW in countries across the world, a number of studies do indicate a change over time in attitudes toward and prevalence of IPVAW (Pierotti, 2013; The World Bank, 2014; Tjaden & Thoennes, 2000), although with mixed results. Pierotti's study of 26 low- and middle-income countries, for example, concluded that acceptance of IPVAW appears to have improved by varying degrees in all but three countries (the exceptions being Indonesia, Jordan and Madagascar, where attitudes

were reported to have worsened). However, the validity of comparisons across countries may be of concern – for instance, the years in which different countries were surveyed varied greatly between countries in this study. Moreover, there remains uncertainty regarding the direction of IPVAW acceptance and prevalence in many countries at the sub-national level, with evidence of a diversity of attitudes and behaviors between distinct communities within countries (Dey et al., 2013; Madan, 2013). Furthermore, the social and demographic factors that are associated with attitudes toward and prevalence of IPVAW remain inconsistently characterized in many countries, particularly those with a wide range of distinct communities and cultures (Schenk-Sandbergen, 2012).

Given such a context, the following analysis aims to complement the existing literature by first providing state-level changes in IPVAW acceptance and lifetime prevalence rates in India. It further aims to provide support for the covariates identified in previous studies by using statistical models with consistent adjustments to enable the comparison of factors associated with IPVAW acceptance to those associated with IPVAW prevalence. Lastly, this study aims to identify factors with notably different associations between IPVAW acceptance and prevalence. Identification of factors with similar associations to both IPVAW acceptance and prevalence, as well as those with differing associations, may prove valuable in shaping both policies and interventions given that many campaigns aim to reduce acceptance of IPVAW with the goal of thereby also reducing IPVAW prevalence.

Background

In order to understand the evolving discussion of VAW and IPVAW, it is important to first specify what is meant by these terms and why these forms of violence are so important to the field of public health. Definitions of VAW and IPVAW often vary between authors and institutions. One of the broadest definitions used by the World Health Organization to deal with violence is that of *interpersonal violence*, which is divided into (i) family and intimate partner violence (including IPVAW as a subset) and (ii) community violence (WHO Violence Prevention Alliance, 2015). Within the definition of *intimate partner violence* used by the Centers for Disease Control and Prevention, four categories are identified: physical violence, sexual violence, threats of violence, and psychological/emotional violence, including economic violence (Saltzman et al., 1999). This definition can pertain to anyone irrespective of gender, in contrast to definitions of violence against women. Lastly, *domestic violence* is a commonly used term that specifies any form of violence that occurs within the home and may be perpetrated by non-partners (such as other family members), though in practice the term is sometimes interchangeably with intimate partner violence.

IPVAW as a Global Health Concern

Intimate partner violence against women is specifically any act of gender-based violence against women carried out by a current or former partner. As discussed in a 2003 CDC publication:

Intimate partner violence – or IPV – is violence committed by a spouse, ex-spouse, or current or former boyfriend or girlfriend. It occurs among both heterosexual and same-sex couples and is often a repeated offense. Both men and women are victims of IPV, but the literature indicates that women are much more likely than men to suffer physical, and

probably psychological, injuries from IPV. (National Center for Injury Prevention and Control, 2003)

In the past, consolidating VAW and IPVAW data from numerous sources posed a significant barrier to larger analyses on the topic. The development of standardized definitions, as discussed above, has recently afforded researchers the ability to compare across countries and regions. Greater recognition of the worldwide scope of the problem came in the wake of research published in the late 1990s and early 2000s; this included such key studies as that carried out by Heise et al. (1994) with its focus on the relative neglect of violence against women as a public health issue particularly in developing countries, and by Watts and Zimmerman (2002), which discussed the magnitude of prevalence of violence against women in a global context where underreporting is a major concern. However, given the substantial problems of comparing across countries, it was not until several years later that more comprehensive analyses became possible, including the WHO Multi-country Study on Women's Health and Domestic Violence against Women (Ellsberg et al., 2008), which was notable for its integration of multiple studies into clear depictions of the health burdens associated with VAW and IPVAW.

Taking this further, a more recent publication by the WHO reports that approximately 35% of all women worldwide experience one or both of these two types of violence (particularly IPVAW), and that 38% of all women who were murdered during 2012 were murdered by their intimate partners (García-Moreno et al., 2013). Women aged 15-44 face a higher risk of rape and intimate partner violence "than from cancer, car accidents, war and malaria" (United Nations Secretary-General's UNiTE Campaign, 2009). Moreover, according to a UN Women report developed in conjunction with the 2013 WHO study cited above, it is reported that in some countries "up to 70 per cent of women have experienced physical and/or sexual violence in their lifetime from an intimate partner" (UN Women, 2014) – i.e., very high lifetime prevalence, even without including psychological and other important forms of IPVAW.

These and similar studies have established the central importance of recognizing IPVAW and other forms of violence against women as a global public health concern, with wide-ranging and significant health consequences. (A list of health consequences from IPVAW is available in Table A1 in the Appendix.) Many of these health consequences associated with VAW and IPVAW have been consistently observed across numerous studies (Campbell, 2002) and are often severe and lasting with multi-generational effects (Ehrensaft et al., 2003). It is estimated that the health burdens resulting from this violence rival and often exceed those of more commonly accepted public health priorities (García-Moreno & Watts, 2011). These studies have helped demonstrate not only that VAW and IPVAW are core public health concerns, but also the importance of prioritizing a wide range of coordinated interventions to ameliorate their severe and persistent health burdens.

Factors Associated with Attitudes and Prevalence of IPVAW

A number of studies have been carried out in recent years that attempt to relate attitudes toward IPVAW to its prevalence in particular contexts, using either a small group focus (e.g., a group of sampled men or women) or a national or comparative international (multi-country) framework. Motivating the study of attitudes has been strong evidence that attitudinal acceptance of intimate partner violence is associated with the incidence of violence within intimate relationships, based on multiple studies that have looked at various aspects of gender role attitudes and VAW incidence (Flood & Pease, 2009). There is considerable evidence that boys' and men's adherence to traditional and misogynistic attitudes regarding gender roles is

associated with violence against women, especially sexual violence (Anderson et al., 2004; Heise, 1998; Murnen et al., 2002; O'Neil & Harway, 1997). Additionally, men's explicit acceptance of IPVAW was found to be strongly associated with IPVAW prevalence in findings from research carried out in South Africa (Abrahams et al., 2006).

Numerous studies have explored further the potential risk of IPVAW as predicted by an acceptance of IPVAW specifically in the context of male domination (Faramarzi et al., 2005; Jewkes, 2002). An important component of this association appears to be deteriorating economic prospects for portions of the male population; it is argued that this economic change has brought with it an increase in depression, substance abuse, and men's acceptance and perpetration of IPVAW in recent years.

Given the importance of identifying factors influencing both attitudes toward and prevalence of IPVAW in different contexts, and the relationship between the two, a number of studies have examined men's and women's attitudes and their experience of IPVAW to identify what might be the key determinants and areas of possible intervention. While it has long been suggested that differences in cultural and social norms may influence IPVAW prevalence, recent qualitative and quantitative research has helped identify some of these cultural beliefs across different regions (Flood & Pease, 2009). For example, the sentiment that "a man has a right to assert power over a woman and is socially superior" has been found in several areas of India, Nigeria, and Ghana (World Health Organization, 2009). Additionally, the belief that "physical violence is an acceptable way to resolve conflicts within a relationship" was commonly heard in studies in South Africa and China. In this way, local cultural attitudes have been linked to acceptance of IPVAW perpetration.

However, it is important to note that cultural attitudes may not necessarily coincide with individual's attitudes and beliefs, and that norms often vary widely (World Health Organization, 2009). More specifically, there is evidence that local village or community-level attitudes influence but do not wholly determine individual perspectives (Uthman et al., 2011).

A notable result from many national surveys has been the extent to which women may state that they condone IPVAW. For instance, in one survey of Afghanistan conducted in 2010-11, 92% of women said it was acceptable for the husband to beat his wife in at least some circumstances, an attitude that may have been partly explained by the low level of education women generally have been able to receive in the country (Clifton, 2012), as indicated by a female literacy rate of 12% and the fact that "among school age children, 38 per cent (4.2 million in real numbers) do not have access to schools, most of which are girls" (UN Women, 2013). Even though women condoning wife beating may appear counter-intuitive, a high level of IPVAW acceptance by women – in some cases, with women condoning IPVAW more than men – has been found in many countries. This trend is not universal, however: for example, men's acceptance of IPVAW is far greater than women's in Russia, a country in which only one-third of men (as opposed to 53% of women) feel that violence against women in their country remains a serious problem (Stickley et al., 2008).

A number of recent studies have attempted to find factors associated with *men's* attitudes toward IPVAW. For example, one multi-country study of men's attitudes in the Asia-Pacific region identified gender inequality, childhood experiences of violence, and the enactment of "harmful forms of masculinity" (such as ideas of masculinity that include strongly controlling and dominating behavior) as factors closely linked to violence acceptance and perpetration (Fulu et al., 2013). In association with this multi-country survey, a qualitative study of men's attitudes and determinants drawn from life histories has been conducted in selected countries, including

Bangladesh (Doneys et al., 2013). Of note, a man's personal experience of violence and his witnessing of IPVAW within his own family were identified as strongly associated with IPVAW perpetration in both the quantitative and qualitative findings of these Asia-Pacific studies. This is consistent with previous longitudinal research on the intergenerational transmission of partner violence conducted in the US and UK (Ehrensaft et al., 2003; Lussier et al., 2009).

Other studies have also attempted to identify predictive factors regarding *women's* attitudes toward IPVAW. As an example, a study of Turkish women's attitudes revealed several key predictive factors including patriarchal ideologies as well as demographic factors such as residence, lack of wealth, education, and younger age at marriage (Marshall & Furr, 2010).

There are also studies that suggest that sizeable changes in attitudes toward VAW and IPVAW are occurring in recent years, in part as a result of media coverage and awareness-raising efforts (Pierotti, 2013). Since the 1990s, and particularly in the last decade, national and international organizations – including UN agencies, international non-governmental organizations (INGOs), local NGOs, and others – have adopted violence against women as a key concern. Media attention in particular countries has also been directed toward violence against women in the wake of specific well-known cases of domestic and non-intimate partner violence. A key example of this is the heightened awareness of violence against women on college campuses and sports circles in countries such as the US.

In addition, as noted above, the brutal gang rape of a paramedical student in Delhi in December 2012 and subsequent well-publicized rape cases in India have led to increased media attention and newly-passed laws, due in part to very large-scale and frequent protests against such exceptionally tragic and apparently increasing numbers of cases of violence against women. However, many regard these responses as insufficient: as an example, the laws in India still permit marital rape (Biswas, 2013), and as noted above violence "hidden in the private domain" has not received the same kind of attention even in India in spite of the activism and concern over rape and violence against women outside of the family context. Thus, it is unclear to what extent media attention has had an impact on attitudes toward and prevalence of IPVAW.

Characterizing Acceptance and Prevalence of IPVAW in India

India, as is true of many other countries in the Asia-Pacific region, is known to be a complex country characterized by widely varying gender patterns within the national boundaries (Arora, 2012). It is therefore difficult to talk about "the Indian woman" or "the Indian man" given that there are such diverse cultural communities within a single nation-state.

For many researchers, the National Family Health Surveys in India have been particularly useful as a means to study attitudes toward IPVAW in recent years. The first National Family Health Survey was conducted in 1992-93 (NFHS-1). This was followed by the NFHS-2 in 1998-99, the NFHS-3 in 2005-06, and the NFHS-4 in 2015-16. (The complete results of the latter survey have not yet been released; some findings from the first phase of the survey were made available in late January 2016, but because of the delay in the NFHS-4's release dates it was not possible to include this survey's data in the present study.)

It is important to note that all of the National Family Health Surveys of India have similarities to the DHS questions administered in other country surveys; however, the NFHS questions have been designed to fit the Indian context, and in some cases there are differences between questions asked across the four surveys. Notably, more recent surveys have included increasingly expanded questions about attitudes toward and experience of domestic violence and IPVAW.

Although many studies have focused on findings at the national level using NFHS data, a large number of studies of IPVAW in India have chosen to follow a sub-national approach, often dividing the country into sub-regions (typically into North, Central, Eastern, Northeast, West and Southern regions), and also making state-by-state or within-state comparisons. As an example, Madan (2013) employs National Family Health Survey (NFHS)-3 regional data (using the six regions noted above) as well as state-level data to describe factors associated with attitudes toward IPVAW in India. He explains his use of regional as well as state-level data, and urban-rural comparisons, in this way (pp. 31-32):

Northern states such as Uttar Pradesh and Punjab can be described as more patriarchal and "traditional" states, whereas states in the south, such as Kerala and Tamil Nadu can be relatively termed as more egalitarian and educated [Mayer, 2006]. Correspondingly, within each state, there is an increasing disparity between the experiences of those who live in rural areas and those who live in the major cities, as industrialization and modernization change the face of India. (Madan, 2013)

Here it is important to note that although regional comparisons (i.e., the six regions referred to above) are sometimes made, as in the Madan (2013) and Kishor and Gupta (2009) studies, these regional definitions do not always represent explicit cultural or historical similarities between each region's constituent states. For example, a study by Babu and Kar (2009) in four states in the eastern India found that even within this geographic region physical violence against women varied significantly from one state to another, and in fact a wide variation in attitudes and prevalence of IPVAW can be found not only between states but also within states. These significant variations and even contradictory patterns may make broad generalizations at the national level, and to some extent even at the regional level, problematic.

These studies provide important insights into some of the determinants of attitudes toward and prevalence of IPVAW in India. Though some research has summarized changes in IPVAW patterns at the national level (Pierotti, 2013), there has been a notable scarcity of studies that have compared changes in rates of IPVAW acceptance and prevalence at the state level within India. Furthermore, many studies identifying important factors associated with IPVAW have used non-NFHS data focusing on specific populations within India whose findings may not be representative of the greater population. Many valuable studies using nationally representative NFHS data have been inconsistent in the covariates they analyze, the controls employed (specifically state-level and language effects), and several have identified what appear to be important factors using descriptive statistics but have not conducted formal hypothesis testing or used multivariate models. Additionally, only some of these studies have included husband's characteristics as covariates for IPVAW acceptance and lifetime experience.

This paper thus aims to contribute to the research on IPVAW in India by describing prevailing acceptance and prevalence of IPVAW in different locations and different segments of Indian society. It also aims to better describe the demographic and social factors that influence these differences in attitudes and behavior, and thereby inform interventions that are most effective for different populations within a complex country such as India.

Methodology

Data

This study used two National Family Health Survey (NFHS) datasets: the NFHS-2 collected in 1998-99 (International Institute for Population Sciences (IIPS) & ORC Macro, 2000) and the NFHS-3 collected in 2005-06 (International Institute for Population Sciences (IIPS) & Macro International, 2007). As noted above, the NFHS datasets are versions of USAID's Demographic and Health Surveys (DHS) adapted for use in India. These surveys are intended to be nationally representative cross-sectional surveys focusing on basic demographic and health outcomes, with optional modules focusing on additional areas of health such as maternal health, HIV knowledge, and child labor. This study uses data from the core demographic questions as well as the domestic violence and women's status modules included in the NFHS-2 and NFHS-3 surveys. The NFHS sampling methods involved stratification by region and urban/rural setting from which primary sampling units (PSUs) were selected, and then choosing randomly sampled households with individuals between the ages of 15-49 within each PSU. Both datasets provide sampling weights for statistical adjustment.

NFHS-2 (1998-99). This dataset is based upon the DHS-III survey and was conducted in the period of November 1998 – December 1990. The sample consisted of 89,199 ever-married women aged 15-49. Never-married women as well as women outside of this age range were excluded from the survey, and there were no male respondents.

NFHS-3 (2005-06). This dataset is based upon the DHS-V survey and was conducted in the period of November 2005 – August 2006. The sample consisted of 124,385 women aged 15-49, including both ever-married and never-married women. In addition to this, 74,369 men aged 15-54 of any marital status were also surveyed.

Outcome and Covariate Measures

Outcomes of interest included acceptance of justifications for IPVAW and lifetime prevalence of IPVAW. Covariates of interest included demographic characteristics, attitudes and media access, economic circumstances, as well as additional exposures highlighted in the literature such as alcohol use and childhood experience of parents engaged in IPVAW. The following sections describe the coding of these variables.

Outcome Variables. Acceptance of IPVAW is constructed from responses to the question: "Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations?"

Both the NFHS-2 and NFHS-3 present the following shared scenarios as options: 1) if she goes out without telling him, 2) if she neglects the house or the children, 3) if she argues with him, and 4) if she doesn't cook the food properly. In addition, the NFHS-2 presents the following scenarios: 5a) if she is suspected of being unfaithful, and 5b) if her family does not give expected money. The NFHS-3 excludes these two extra scenarios and instead asks: 6) if she refuses sex.

Consistent with existing research using these questions, this study dichotomized respondent's answers to 0: rejects all scenarios justifying IPVAW and 1: accepts one or more scenarios. Only the four shared scenarios were used for initial descriptive analysis of the NFHS-2 and NFHS-3 to enable comparison between surveys. However, the subsequent analyses modeling factors associated with IPVAW acceptance and prevalence using only the NFHS-3 dataset also included the scenario "if she refuses sex," as sexual violence is an important component of IPVAW.

Lifetime prevalence of IPVAW was derived from different questions on the NFHS-2 and NFHS-3 surveys. For the NFHS-2 survey, lifetime experience of IPVAW was coded as 1 for women who said they had been physically beaten at least once since the age of 15 and that at least one perpetrator was their husband, and 0 for women who had not been beaten or had been beaten by a perpetrator other than their husband. For the NFHS-3 survey, respondents were asked "Does/did your (last) husband do any of the following things to you?" and given numerous scenarios depicting examples of physical, sexual, and emotional violence. Because the NFHS-2 only includes questions regarding physical violence, responses were dichotomized into 1: have experienced at least one form of physical violence perpetrated by husband and 0: never experienced physical violence, for the initial descriptive analysis of the two surveys to enable comparison. However, the subsequent analyses modeling factors associated with IPVAW acceptance and prevalence using only the NFHS-3 dataset included sexual and emotional forms of violence as qualifying for having experienced IPVAW.

Covariates. In addition to comparing outcomes between the NFHS-2 and NFHS-3 surveys, multivariate models were run using only NFHS-3 data due to omission of numerous covariates of interest in the NFHS-2 survey. As such, the following measures were constructed solely from the NFHS-3 (2005-06) survey questions to be used in these multivariate models.

Demographic characteristics were coded into the following: age (continuous), residence (urban, rural), religion (Hindu, Muslim, Christian, other), education (none, primary only, secondary only, higher), social status (scheduled caste, scheduled tribe, "other backward class," none of the above), and state of residence (all 29 states). (The scheduled caste, scheduled tribe and "other backward class" categories indicate historically disadvantaged groups. In a general sense, only the first is defined by the traditional caste hierarchy, but official lists of included socially disadvantaged groups vary by state and result in a complicated structure of social hierarchies and status.) Language spoken was used as a control. Specific caste was excluded as a control due to the large number of castes identified and risk of over-fitting the data. Literacy was considered as a covariate, but was excluded due to close correlation with education.

Three forms of media access were included in the analysis: reading the newspaper, listening to the radio, and watching television. These variables were each dichotomized into 0: accessed less than once per week and 1: accessed at least once per week. Unlike some previous studies that have combined all three forms of media into a single dichotomous "media access" variable, each form of media access was kept as a separate factor variable due to concern that access to certain forms of media, such as having regular access to television and newspapers, are likely correlated with household wealth.

Covariates representing economic circumstances included a household wealth index based on owned assets (constructed by the NFHS with DHS methodology using principal component analysis and coded as proportions presented as quintiles from poorest to richest), respondent's job (does not work, manual labor, agricultural labor, or clerical/sales/professional work), and wife's earnings compared to her husband's (earns less than her husband vs. earns the same or more than her husband).

Additional exposures of interest identified in the literature that were available in the dataset included husband's alcohol use (does not drink, drinks but never drunk, drinks and is sometimes drunk), witnessing IPVAW perpetrated by father against mother (has not witnessed, has witnessed, does not know if witnessed), and whether the couple had a male child (has male child, has only female children, has no children).

Analytic Plan

This study's analysis was structured to meet three goals. The first stage of analysis aimed to describe rates of acceptance of IPVAW and prevalence of experienced IPVAW in India by state. The second stage of analysis examined factors associated with acceptance of IPVAW by both men and women. The third stage of analysis examined factors associated with women's lifetime experience of IPVAW. This section includes a description of the dataset used as well as the hypotheses and models employed for each stage of analysis.

Three core analyses were conducted: an initial analysis of IPVAW acceptance and prevalence rates by state for both the NFHS-2 and NFHS-3 datasets with calculated change over time, a subsequent analysis of factors associated with IPVAW acceptance for the NFHS-3 dataset, and a final analysis of the factors associated with IPVAW lifetime prevalence for the NFHS-3 dataset. A schematic clarifying the outcomes of interest and datasets used in Analysis 2 and Analysis 3 can be found in Table A2 (Appendix).

Several of the analyses for factors associated with IPVAW prevalence and acceptance included women's relatives' earnings as a covariate, and it should be noted that data for this variable was missing in a large portion of the NFHS-3 (2005-06) sample. Models using complete-case analysis with women's earnings as a covariate resulted in greatly reduced sample sizes compared to models excluding this variable (a model of women's experience of violence with an N=28,667 without women's earnings was reduced to having an N=8536 when women's earnings were included). To allow inclusion of women's relative earnings in these select models, respondents with missing data were considered to earn less than their husbands for the purposes of this analysis. The use of multiple imputation to correct for this missing data produced very similar results, though findings using multiple imputation are not presented in this paper due to concerns regarding the imputation of such a large fraction of the data.

Analysis 1: IPVAW acceptance and lifetime prevalence in married respondents. Previous DHS publications have shown IPVAW acceptance and prevalence rates in India for the NFHS-3 (2005-06) survey, using a definition of IPVAW that includes physical and sexual forms of violence. This study's initial work expands this definition of IPVAW to also include forms of emotional violence.

Women's rates of IPVAW acceptance were calculated as the proportion of married women who accepted at least one justification for IPVAW over the total number of married women who responded to the survey question (adjusted with sampling weights). An equivalent analysis was conducted for married men's acceptance rates of IPVAW. Only scenarios of justification shared in both the NFHS-2 and NFHS-3 surveys were included in this analysis to allow for demonstration of change in women's acceptance rates between 1998-99 and 2005-06. Adjusted Wald tests were used to assess the significance of changes at both the national level as well as the state level. Changes in men's acceptance rates could not be calculated because the NFHS-2 survey sample consisted solely of women.

Two analyses were conducted for lifetime prevalence of IPVAW: one for solely physical forms of violence and another for physical, sexual, and emotional forms and violence. Lifetime prevalence of physical forms of IPVAW was calculated as the proportion of women who had ever been the victim of at least one act of physical violence perpetrated by their husband over the total number of women who responded to this question in the survey's domestic violence module (adjusted with the module's sampling weights). Due to the lack of data regarding sexual and emotional forms of IPVAW in the NFHS-2 survey, it was only possible to calculate changes in

lifetime prevalence rates of physical forms of IPVAW between 1998-99 and 2005-06. Adjusted Wald tests were again used to assess the significance of changes at the national and state level.

A second analysis was conducted for lifetime prevalence of physical, sexual, and emotional forms of IPVAW in only the 2005-06 NFHS-3 data. This analysis calculated the proportion of women who had ever been the victim of at least one act of physical, sexual, or emotional form of violence over the total number of women who had responded to these questions in the survey's domestic violence module (again adjusted with the module's sampling weights). The lifetime prevalence of physical, sexual, and emotional forms of IPVAW in 2005-06 was not compared to 1998-99 NFHS-2 data due to lack of equivalent questions in the latter survey.

It should be noted that two Indian states bifurcated between the dates that these surveys were conducted. Data from the NFHS-2 survey has been recoded to match the updated state boundaries used in NFHS-3 to enable comparison between surveys. Changes in states' names and the formation of new states (notably that of Telangana in 2014) since the NFHS-3 was conducted are not reflected in this paper's results.

Analysis 2: Factors Associated with IPVAW acceptance. The multivariate relationship between the aforementioned covariates and acceptance of justifications for IPVAW was explored using NFHS-3 data for both men and women. IPVAW acceptance was defined as agreeing with any of the justifications for spousal violence presented in the NFHS-3 survey, rather than solely the justifications shared between the NFHS-2 and NFHS-3 surveys as was done in Analysis 1. A series of three logistic regression models were used to test IPVAW acceptance in women, and three equivalent models were used to explore IPVAW acceptance in men. All models controlled for state of residence and language spoken.

For women's acceptance of justifications of IPVAW, Model 1 used women's Individual Recode data, allowing only the female respondent's own data to be used as covariates. The benefit of this model is that it includes a large sample of respondents, at the cost of excluding key variables such as the respondent's husband's acceptance of IPVAW. Model 2 uses Couples Recode data where wives' responses are matched to those of their husbands'. This allows for use of both a respondent's and their spouse's data as covariates, at the cost of excluding many respondents whose spouses were not surveyed. Model 3 is identical to Model 2, but includes the effects of wife's earnings compared to her husband's as a covariate.

For men's acceptance of justifications of IPVAW, three equivalent models were used. Model 4 used men's Individual Recode data, which was notably more limited than women's Individual Recode data. This is because women's questionnaires included questions regarding their husband's status, including education and employment. Men's questionnaires did not include equivalent questions regarding the respondents' wives. Model 5 uses Couples Recode data to allow use of respondents' wives' data as covariates of the husband's acceptance of IPVAW, at the cost of a reduced sample size. Model 6 is identical to Model 5 but includes wife's earnings compared to her husband's as a covariate.

Analysis 3: Factors Associated with IPVAW lifetime prevalence. The multivariate relationship between covariates and lifetime experience of IPVAW by married women was tested using NFHS-3 data. A series of three logistic regression models were used in a manner similar to those employed in Analysis 2, again controlling for state of residence and language spoken.

Model 7 uses married women's Individual Recode data to examine the association between the respondent's own characteristics and her experience of at least one instance of IPVAW perpetrated by her husband since the age of 15. Model 8 uses Couples Recode data to

also include the husband's characteristics as covariates of a married woman having experienced IPVAW. Lastly, Model 9 is identical to Model 8 but includes wife's earnings compared to those of her husband as a covariate for modeling lifetime experience of IPVAW.

Results

Analysis 1: IPVAW acceptance and lifetime prevalence in married respondents

For the NFHS-2 survey of 1998-99, approximately 50.8% of married women accepted one or more justifications for IPVAW. This weighted percent does not reflect the great variety in acceptance rates by state: the lowest reported rate of IPVAW acceptance at this time was Punjab at 10.6%, and the highest reported rate was Nagaland at 95.7%. Rates of IPVAW acceptance by married women fell to 49.0% in the NFHS-3 2005-06 survey, depicting a small but significant change in acceptance rates (p < 0.001). By 2005-06, the lowest rate of married women's acceptance of IPVAW by state was Himachal Pradesh at 22.9%, and the highest rate was Manipur at 80.3%. While national rates of IPVAW acceptance by women fell on average, some states showed a dramatic decrease in women's IPVAW acceptance while others demonstrated a notable increase in acceptance. Meghalaya, Chhattisgarh, Madhya Pradesh, and Maharashtra were among the states experiencing the greatest decrease in IPVAW acceptance rates by women. In contrast, Punjab, Haryana, and Gujarat showed the largest increase in IPVAW acceptance. State-level IPVAW acceptance rates by married women in 1998-99 and 2005-06, as well as the change between these two periods and their associated p-values, can be seen in Table 1. Maps depicting these data can be seen in Figure 1.

Rates of men's acceptance of IPVAW were only available for the 2005-06 period. Nationally, 40.6% of married men accepted at least one justification for IPVAW. At the state level, the lowest rate of men's acceptance was Uttaranchal at 16.2% and the highest was Sikkim at 67.7%. Maps of state-level IPVAW acceptance rates by married men are shown in Figure 2.

Lifetime prevalence of physical forms of IPVAW shows similar variation by state, as can be seen in Table 1. In 1998-99, an average of 18.9% of married women said they were beaten by their husbands since the age of 15. In this period, reported physical IPVAW lifetime prevalence was lowest in Meghalaya at 2.8% and greatest in Tamil Nadu at 36.9%. By 2005-06, the national average physical IPVAW lifetime prevalence was reported to be 31.2%, with the lowest rate in Himachal Pradesh at 6.0% and the highest in Bihar at 56.1%. With the exception of the states of Jammu & Kashmir and Karnataka, all states showed a rise in IPVAW lifetime prevalence between the 1998-99 and 2005-06 period. However, most states with the highest reported IPVAW lifetime prevalence in the 1998-99 period continued to have the highest prevalence in the 2005-06 period. State-level physical IPVAW lifetime prevalence rates for both periods, as well as the change between periods, are shown in Figure 3. Expansion of the definition of IPVAW lifetime prevalence to include acts of sexual and emotional violence for the 2005-06 data showed national average prevalence rates of 35.5%. State-level rates of IPVAW lifetime prevalence including physical, sexual, and emotional forms of violence are shown in Figure 4.

Analysis 2: Factors associated with IPVAW acceptance

Full results for the logistic regression models used to assess association between covariates and acceptance of one or more justifications of IPVAW can be seen in Table 3 (women's acceptance) and Table 4 (men's acceptance). Given the similar findings between models for each outcome

variable, only results for models including women's relative earnings (Model 3 and Model 6) are discussed below unless noted otherwise.

Factors Associated with Married Women's Acceptance of IPVAW. Living in a rural setting showed increased odds of married women accepting at least one justification of IPVAW compared to those who lived in urban settings (OR=1.24, p<0.001).

The role of religion differed by model: Model 1 using the Individual Recode showed that Muslim respondents had higher odds of accepting IPVAW than Hindu respondents (OR=1.26, p<0.001) while Christian respondents had lower odds than Hindu respondents (OR=0.86, p<0.01). However, Models 2 and 3 did not show a significant difference between Muslim and Hindu respondents.

Greater education was associated with much lower odds of IPVAW acceptance in women, particularly if a woman had achieved higher education (OR=0.40, p<0.001). Reading the newspaper was also associated with lower odds of IPVAW acceptance in married women (OR=0.85, p<0.001), though other forms of media access were not.

Having greater wealth was associated with dramatically reduced odds of IPVAW acceptance, with the richest quintile of respondents having nearly half the odds as the poorest quintile (OR=0.54, p<0.001). Female respondents' employment in clerical/sales/professional occupations was associated with reduced acceptance compared to those who did not work (OR=0.87, p<0.01), while those employed in manual labor were more likely to accept IPVAW (OR=1.12, p<0.05). A woman's earnings compared to her husband's had no significant association with her acceptance of IPVAW.

Characteristics of respondents' husbands were inconsistently associated with differences in their wives' acceptance of IPVAW, with many results having wide confidence intervals. Notably, a degree of concordance in attitudes was seen within couples: women whose husbands accepted at least one justification of IPVAW were similarly more likely to accept IPVAW compared to those whose husbands fully rejected IPVAW (OR=1.24, p<0.001).

A woman's childhood experience of her father beating her mother was an important factor associated with IPVAW acceptance. Women who had witnessed IPVAW perpetrated by their fathers against their mothers had higher odds of accepting IPVAW than those who did not (OR=1.29, p<0.001), and even women who were unsure of witnessing IPVAW in the family had higher odds of acceptance (OR=1.21, p<0.001).

Belonging to a scheduled caste was associated with higher odds of IPVAW acceptance. Those who did not belong to a historically disadvantaged group (i.e., "higher" castes and other groups apart from scheduled castes, scheduled tribes and "other backward class") were significantly less likely to accept IPVAW than those who belonged to a scheduled caste (OR=0.87, p<0.01). Notably, those who belonged to a scheduled tribe were also less likely to accept IPVAW than those who belonged to a scheduled caste (OR=0.80, p<0.001), despite both groups having historically experienced discrimination or being otherwise disadvantaged.

Factors Associated with Married Men's Acceptance of IPVAW. On average, men's age was inversely associated with acceptance of IPVAW (OR=0.86 per 10 years of age, p<0.001).

Men living in a rural setting had increased odds of accepting at least one justification of IPVAW compared to those who lived in urban settings (OR=1.15, p<0.001).

In contrast to models predicting women's acceptance of IPVAW, findings regarding religion were consistent across models for married men's acceptance. For men, respondents who were Muslim had higher odds of accepting IPVAW than those who were Hindu (OR=1.24,

p<0.001). Respondents who were Christian or of other religions were not found to have significantly different odds compared to those who were Hindu.

Greater education was associated with much lower odds of IPVAW acceptance in married men, particularly if a man had achieved higher education compared to those who had completed no formal education (OR=0.52, p<0.001). Regarding media access, reading the newspaper was also associated with lower odds of IPVAW acceptance in men (OR=0.86, p<0.001), though access to radio or television programs were not.

Increased wealth was associated with greatly reduced odds of men's IPVAW acceptance, with the richest quintile of respondents having less than half the odds as the poorest quintile (OR=0.42, p<0.001). Employment in agricultural jobs was associated with higher odds of IPVAW acceptance in Model 4 using Individual Recode data, but this association was not significant in subsequent Models 5 and 6 using Couples Recode data. A woman's earnings compared to her husband's had no significant association with her husband's acceptance of IPVAW. Men who became drunk had moderately higher odds of accepting IPVAW compared to those who did not drink (OR=1.13, p<0.001).

Many characteristics of respondents' wives had significant associations with their husbands' acceptance of IPVAW. Men who were married to more educated women had much lower odds of accepting IPVAW, with the strongest effect in women who had completed higher education compared to those who had no education (OR=0.54, p<0.001). A degree of concordance in attitudes was again seen within couples: men whose wives accepted at least one justification of IPVAW were similarly more likely to accept IPVAW compared to those whose wives fully rejected IPVAW (OR=1.22, p<0.001).

Belonging to a scheduled caste was associated with higher odds of IPVAW acceptance. Men who did not belong to a historically disadvantaged group were significantly less likely to accept IPVAW than those who belonged to a scheduled caste (OR=0.80, p<0.01). Similar to the association seen in women's acceptance of IPVAW, men who belonged to a scheduled tribe were also less likely to accept IPVAW than those who belonged to a scheduled caste (OR=0.86, p<0.01).

Analysis 3: Factors Associated with IPVAW lifetime prevalence

Full results for the logistic regression models used to assess association between married women's factors and IPVAW lifetime prevalence can be seen in Table 5. Given the similar findings between models for each outcome variable, only results for Model 9 are discussed below unless noted otherwise.

On average, older women had slightly higher odds of experiencing IPVAW than younger respondents according to Individual Recode data (OR=1.05, p<0.01). Married women who lived in rural residences had lower odds of experiencing IPVAW than those living in urban settings (OR=0.90, p<0.05).

Religion also appeared to be an important factor: Muslim women had much higher odds of experiencing IPVAW than Hindu women (OR=1.49, p<0.001). Some models also showed that Christian women had slightly higher odds of experiencing IPVAW than Hindu women, though this effect was not significant in Model 9 with the inclusion of women's relative earnings as a covariate.

Greater education for women was associated with lower odds of their experiencing IPVAW, particularly if they were able to complete a form of higher education (OR=0.57, p<0.001). Women married to husbands who completed secondary or higher education also had

lower odds of experiencing IPVAW according to Model 7 using Individual Recode data, but these findings were not significant in Models 8 and 9 using Couples Recode data.

Greater wealth was associated with lower odds of married women experiencing IPVAW, with the richest quintile of respondents having less than 2/3 the odds of the poorest quintile (OR=0.62, p<0.001).

All forms of women's employment were associated with notably higher odds of experiencing IPVAW compared to women who did not work, with the highest odds seen in women working in agricultural occupations (OR=1.29, p<0.001). In contrast, women whose husbands were employed in manual labor or clerical/sales/professional work had lower odds of experiencing IPVAW compared to women whose husbands were unemployed according to Model 7's Individual Recode Data, though these effects were not significant in Models 8 and 9 using Couples Recode data. Expanding upon this, women who earned the same or more than their husbands were found to have higher odds of experiencing IPVAW compared to those who earned less than their husbands (OR=1.43, p<0.01).

Both women's and men's attitudes toward IPVAW were important factors: women's acceptance of at least one justification for IPVAW was associated with higher odds of experiencing violence (OR=1.52, p<0.001), and their husband's acceptance of IPVAW justifications was similarly associated with higher odds of their wives' lifetime experience of it (OR=1.23, p<0.001).

For media access predicting a woman's experience of IPVAW, newspaper access appeared most important for women and radio access was most important for their husbands. Women who read the newspaper regularly had lower odds of experiencing IPVAW (OR=0.86, p<0.01), as did women whose husbands listened to the radio regularly (OR=0.92, p<0.05). No other form of media access was found to be significant for men or women.

Husbands' use of alcohol appeared to be a critical factor in their wives' lifetime experience of IPVAW. Women whose husbands used alcohol but were never drunk had higher odds of experiencing IPVAW (OR=1.70, p<0.001) compared to those whose husbands did not drink. Additionally, women whose husbands were noted to sometimes become drunk had much greater odds of experiencing IPVAW (OR=2.52, p<0.001).

Married women who witnessed their father beating their mother were at much higher odds of having experienced IPVAW themselves (OR=2.75, p<0.001). Even women who said they were unsure of whether they had witnessed such violence between their parents were at higher odds than those who had not witnessed any violence (OR=1.86, p<0.001).

Approximately 77% of couples had at least one male child, 14% had at only female children, and only 9% had no children. On average, women with only female children had reduced odds of experiencing IPVAW compared to those with at least one male child (OR=0.85, p<0.001), and women with no children had even lower odds of experiencing IPVAW (OR=0.52, p<0.001). Stratification by 5-year age groups showed this direction of association for nearly all age groups, and there were no age groups in which having only female or no children was significantly associated with higher odds of experiencing IPVAW.

Caste again appeared to be an important factor. Married women who did not belong to a historically discriminated against or otherwise disadvantaged class had lower odds of experiencing IPVAW than those who belonged to a scheduled caste (OR=0.79, p<0.001). In addition, women who belonged to scheduled tribes or "other backward class" had similarly reduced odds of experiencing IPVAW compared to those belonging to a scheduled caste, despite these groups all experiencing historical discrimination or being otherwise disadvantaged.

Discussion

Changes in IPVAW Patterns between 1998-99 and 2005-06

The fall in Indian married women's acceptance rates of IPVAW by 1.8 percentage points (from 50.8% to 49.0% with p<0.001) between 1998-99 and 2005-06 is consistent with estimates from previous studies, but this national estimate does not reflect the great variation in change by state. For instance, women's acceptance of IPVAW fell by nearly half in Chhattisgarh while acceptance rates approximately tripled in Punjab over the same period. As such, examination of trends in IPVAW acceptance at solely the national level – as has been done in some previous studies and reports – may be misleading. The notable heterogeneity between states in India makes summarizing trends by regions (such as North, Central, Eastern, Northeast, West and Southern regions used in the literature) equally unsatisfactory in describing patterns of change in IPVAW acceptance.

Nonetheless, some geographic patterns are visible in the data: the contiguous states of Madhya Pradesh, Maharashtra, and Chhattisgarh all demonstrated large falls in women's IPVAW acceptance. The contiguous states of Meghalaya and Assam also showed notable reductions in women's IPVAW acceptance, a change that was not seen in other states in eastern India. On the other hand, even though the two states with the greatest rise in IPVAW acceptance – Punjab and Haryana – are also contiguous states in northwest India, other states in the region – such as Himachal Pradesh – did not have similar changes in IPVAW acceptance. Future research regarding within-state and between-state differences of contiguous states may help identify possible cultural patterns regarding IPVAW acceptance that span multiple states, but it is clear that many states within close geographic proximity may have very different patterns in IPVAW acceptance and prevalence.

Though 40.6% of married men accepted at least one justification for IPVAW nationally, average rates of men's IPVAW acceptance varied greatly by state. In general, states with high levels of acceptance by women also tended to have high levels of acceptance by men. Women were *more* likely to accept IPVAW than men in most states, with the only exceptions being the states of Rajasthan, Bihar, Sikkim, Chhattisgarh, Madhya Pradesh, and Gujarat. Why women may condone IPVAW more than men is not well understood and may be for different reasons depending on the context, but it is possible that women experience many of the factors associated with greater IPVAW acceptance – such as lower educational attainment, reduced media access, and lower rate of having more skilled or professional employment. Additionally, in very patriarchal contexts it may be that men with more education and who are more exposed to outside ideas about IPVAW may tend to answer questions about acceptance more "correctly" than women who have less education and exposure to outside norms. Ultimately, the reasons for this discrepancy in attitudes between men and women within India remains unclear and will require detailed future study if it is hoped to be changed.

According to the 2005-06 data, lifetime prevalence of physical, sexual, and emotional forms of IPVAW was similarly varied by state; the geographic distribution of high-prevalence and low-prevalence states again did not follow many commonly used regional definitions. For instance, Arunachal Pradesh and Manipur had very high levels of lifetime IPVAW prevalence, but many other states in eastern India did not. In fact, the nearby states of Nagaland and Meghalaya were among the states with the lowest reported lifetime prevalence of IPVAW.

As can be seen in Table 1, lifetime prevalence of physical forms of IPVAW was seen to rise from 18.8% to 31.2% across India between 1998-99 and 2005-06 (p<0.001). In fact, a

significant increase in lifetime prevalence was observed in all but four states. However, when interpreting these changes it should be noted that there were considerable differences in wording used between the NFHS-2 and NFHS-3 that may render these rates less comparable. The NFHS-3 survey explicitly asked women whether they have been beaten by their husband and included multiple examples of abuse. In contrast, NFHS-2 first asked respondents if they had been ever been beaten (without specifying multiple examples of abuse) and, if the response was yes, then subsequently asked if their husband was the perpetrator. Given the high rates of IPVAW acceptance in many parts of India, it is possible that some respondents in the 1998-99 survey may not have conceptualized acts of physical intimate partner violence as qualifying as an example of being beaten and therefore may have underreported their experience of violence. As such, it is possible that the results presented overestimate the increase in IPVAW lifetime prevalence between 1998-99 and 2005-06.

In discussing changes in IPVAW acceptance and prevalence in this time period, it is important to acknowledge the introduction of India's influential Protection of Women from Domestic Violence Act 2005, which brought a nationally-recognized definition of "domestic violence" including both physical as well as sexual, emotional, and economic abuse. However, this act was put into effect in October 2006, and therefore was only in effect after all data collection for the NFHS-3 survey was completed. Additionally, it primarily served as a civil law with few provisions to enact criminal penalties to perpetrators. It is therefore unlikely that this hugely important act contributed to the changes in IPVAW acceptance and prevalence seen between 1998-99 and 2005-06 outside of the ongoing growth in awareness and discussion of domestic violence that contributed to the formation of this act.

Factors Associated with IPVAW Acceptance and Prevalence

Many of this study's results are consistent with findings from previous studies in India (including those using NFHS and non-NFHS data) and other developing nations that examined factors associated with IPVAW attitudes and prevalence (Dalal & Lindqvist, 2012; Kimuna et al., 2012; Kishor & Gupta, 2009; Koenig et al., 2006). Examples of this include higher IPVAW acceptance among women being associated with living in a rural setting, being Muslim (compared to Hindu), having less education, less wealth, being employed in manual or agricultural labor (or not being employed at all), having a husband who drinks alcohol and becomes drunk, witnessing one's father beat their mother, and belonging to a scheduled caste. Though many previous studies primarily looked at women's factors, this study's findings highlight that a husband's acceptance of IPVAW is also associated with greater acceptance by his wife. Lastly, though some previous studies highlight any form of regular media access as being associated with less IPVAW acceptance, the present results suggest only newspaper access is associated with lower IPVAW acceptance by women. Factors associated with married men's acceptance of IPVAW are similar, with the exception of age associated with reduced IPVAW acceptance and employment not being significantly associated. Again, this study's inclusion of respondents' wives' characteristics reiterated that a respondent has greater odds of accepting IPVAW if their spouse does as well. This may reflect shared cultural values among those marrying, or a shift toward a partner's values upon marriage. Future endeavors to map out changes in women's acceptance from before to after marriage would be informative in this regard.

Regarding lifetime prevalence of IPVAW, it is consistent with much of the literature that women who have experienced IPVAW have many of the same risk factors as those who accept

IPVAW: they tend to be less educated, more accepting of IPVAW and have husbands more accepting of IPVAW, are poorer, are married to husbands who use alcohol, have witnessed their father beat their mother, and belong to a scheduled caste. (It is again worth keeping in mind in this context that women's rates of IPVAW acceptance are reportedly higher than men's in most states in India.) Earlier studies by Kishor and Gupta (2009), Dalal and Lindqvist (2012), and Kimuna et al. (2012) had similarly highlighted the importance of these risk factors in their own analyses using NFHS data; moreover, some of these determinants were highlighted as well in more location-specific studies using non-NFHS data carried out by Ackerson et al. (2008), Martin et al. (2002), and Koenig et al. (2006).

Importantly, however, on certain points this study's results stand in contrast to the findings of earlier studies. Among other results, it was discovered that women who live in rural settings appear to have *lower* odds of experiencing IPVAW than do women in urban settings, despite having higher odds of accepting it. This stands in contrast to the findings of Kimuna et al. (2012), which concluded that urban residence lowered the risk of physical and sexual violence. It is possible that more recent changes in IPVAW dynamics in urban settings, as well as rural-to-urban migration patterns, may have contributed to this difference, and further research would be valuable in clarifying this discrepancy in findings.

Additionally, this study found that the importance of different forms of media access may differ between men and women when it comes to IPVAW lifetime prevalence: women with access to newspapers have lower odds of experiencing IPVAW, whereas a husband's access to the radio (though not the newspaper) is associated with his lower odds of his wife experiencing IPVAW. Notably, these findings were significant after controlling for other measures of SES, suggesting that this effect is not solely due to greater access in better-off families. Certain forms of media access may therefore be valuable in reducing IPVAW prevalence, perhaps through exposure to broader norms and social discourse. Furthermore, these results support the examination of each form of media access separately, rather than treating these factors as a single dichotomous variable (as was done in some earlier studies).

Another finding that is inconsistent with previous studies is the result that women with at least one male child have greater odds of experiencing IPVAW than those with only female children, and much greater odds than those with no children. This stands in contrast to the findings of Koenig et al. (2006), using non-NFHS data, which found childlessness to be associated with physical and sexual violence in a survey of men in the state of Uttar Pradesh. In the present study, the relationship is consistent (though occasionally insignificant) across different age groups of couples, though it is possible that the association may vary between states (as Uttar Pradesh may be an exception to the average national effect). Given that 77% of couples had at least one male child, and that many couples with multiple children had a final child that was male, one possible explanation for this unexpected finding is that women in more patriarchal contexts may be pressured to continue having children until they give birth to a male child. Approximately 61% of women with only female or no children tended to have achieved secondary education or higher, while only 44% of women with at least one male child had done so. Additionally, 68% of women with only female or no children belonged to the highest and second highest wealth quintiles. It therefore may be that women who are wealthier and more educated also experience greater ability to make decisions regarding childbearing (and less IPVAW), and perhaps are under less pressure to have male children (in contrast to a more patriarchal household). However, this is another area that will need much more detailed research

and analysis, with a particular focus on younger women who are still of child-bearing age to see if they experience higher odds of IPVAW compared to women of other ages.

Finally, an important consideration regarding the experience of IPVAW was noted in a study by Weitzman (2014), which found generally that women who had a higher educational attainment, income, or earnings than their spouse faced more frequent and severe violence than was true of women with lower status than their husband. Building on this insight, in the present study's models the addition of a woman's earnings compared to her husband's as a covariate is notable in that it finds that women who earn the same or more than their husband are more likely to experience IPVAW than those who earn less, *even when controlling for the other factors* representing education, employment, wealth, type of residence, and caste. In addition to this, women who are employed – regardless of field (i.e., in agriculture, manual labor, or clerical/sales/professional employment) – have higher odds of experiencing IPVAW than those who do not work. This relationship is not seen with husband's employment status. This analysis therefore strongly supports previous suggestions that women's employment and income may in fact put them at greater risk of IPVAW.

These findings regarding economic empowerment are consistent with the analysis of education and IPVAW in India conducted by Ackerson et al. (2008), also using NFHS-3 data. IPVAW was found to be associated not only with lower levels of women's education and lower community literacy rates, but also with the occurrence of a woman's educational level being greater than her husband's educational level. The implication is that education of individual women, independent of other factors, may potentially worsen rates of IPVAW. Focusing on the education of women alone therefore may not be the answer; as with economic empowerment, when the education or earnings of women meet or exceed (or perhaps even rise toward) that of their husbands, they may be particularly vulnerable to IPVAW. Even so, it is important to consider that women having completed secondary or higher education have greatly reduced odds of experiencing IPVAW, and that 90% of women in this study had a lower educational attainment than their husband. Interventions promoting education and employment therefore remain absolutely critical, but it appears that campaigns should involve both women and men (thus avoiding the perception of "favoring women" and focusing on women alone) if they are to also minimize acceptance and perpetration of IPVAW.

Given the potential for campaigns aimed at women's empowerment to actually worsen IPVAW, further research on this matter using future releases of NFHS data as well as non-NFHS data will be crucial. A better understanding of these dynamics is needed to inform policies and interventions and mitigate the violence that may result from increases in a woman's educational and economic achievements in the absence of a supportive policy environment, particularly in a context of existing or new male unemployment or underemployment.

Further research will also be needed using NFHS and non-NHFS data to address such serious problems as the underreporting of IPVAW acceptance and experience and the fact that survey questions have tended to emphasize sexual and physical violence, with minimal questions on emotional/psychological violence and threats of violence in spite of the crucial importance of the latter forms of violence. Moreover, because the NFHS-3 (2005-6) dataset is becoming increasingly dated, it is hoped that the new NFHS-4 (2015-16) survey will be able to help address the limitations of the earlier surveys and allow a more detailed analysis of changes over time regarding acceptance and prevalence of IPVAW. This research should then help motivate the implementation of stronger laws and their enforcement as well as aid in the design of more effective interventions.

Many related questions regarding IPVAW may benefit as well from using both NFHS and non-NFHS data in the future as questions are further modified and expanded. For example, it would be helpful to have more detailed investigations into differences across socioeconomic classes or generational changes regarding forms of IPVAW experienced (e.g., changes such as increases or decreases in the experience of physical/sexual vs. emotional/threat-related forms of IPVAW). It would also be valuable to investigate questions regarding coeducational vs. sex-segregated experiences in education (particularly during teenage years), workplaces, and other venues and their potential association with the acceptance and perpetration of IPVAW. Moreover, an expanded study of men's factors in large surveys may help complement more localized and qualitative research on factors influencing men's decisions to engage or not engage in IPVAW (while keeping in mind that factors associated with their expressed attitudes toward IPVAW may differ from those associated with their actual behavior). Given the varied and complex social structures in families across India, it will remain important for studies on IPVAW to increasingly consider characteristics of household members and the surrounding community in addition to respondents' own factors.

Policy Implications

The present study has identified a number of factors that have different associations with IPVAW acceptance than they do with lifetime prevalence. These should be recognized and kept in mind when designing interventions, as simple generalizations may not hold (e.g., the idea that urban residence protects against IPVAW, given exposure to more "modern" ideas in cities and towns, or that women's economic empowerment will raise their status and protect them against IPVAW). Some of these differences include the following:

- i. Women residing in rural areas have greater odds of accepting IPVAW but reduced odds of having experienced it.
- ii. Women in clerical/sales/professional employment have reduced odds of accepting IPVAW, and those in manual labor have greater odds of accepting IPVAW, but *all* women who are employed have greater odds of having experienced IPVAW than those who do not work.
- iii. Women who earn the same or more than their husbands do not have greater odds of accepting IPVAW than those who earn less, but have greater odds of having experienced it.
- iv. Regarding husbands, secondary and higher education is associated with much lower odds of accepting IPVAW but is associated with only moderate or insignificant reductions in actually having perpetrated IPVAW (with no effect seen in the Couples Recode data); in fact, those with only a primary education have the same odds of accepting IPVAW and greater odds of perpetrating it compared to those with no education at all.
- v. Only husbands who are identified as becoming drunk have greater odds of accepting IPVAW, but all men who drink whether they become drunk or not have increased odds of perpetrating it.
- vi. Women belonging to a scheduled caste have greater odds of having experienced IPVAW than women belonging to a scheduled tribe or "other backwards class," suggesting there may be something about the pattern or history of discrimination in each case that contributes to IPVAW outside of being economically disadvantaged.

vii. Though women have slightly greater odds of having experienced IPVAW as they age, likely due to being at risk for violence over more years, men tend to become less accepting of IPVAW as they age; this is in contrast to perceptions that younger generations are less accepting of IPVAW and highlights the importance of interventions in younger age groups.

With regard to policy implications, there is also a need to examine IPVAW-related factors in the context of heterogeneous rates of acceptance and prevalence by state (as opposed to using national-level generalizations). Future analyses that further compare IPVAW patterns and trends on a state level will help indicate which states need the most interventions. Additionally, future studies using sub-state analyses are also needed in view of the diversity of populations and patterns of IPVAW even within states. However, for general policy-making purposes a state-level analysis should remain useful, given that state governments are often the policy-making and implementing authorities that could be directly involved in approving and promoting interventions.

Regarding women's economic and educational empowerment, there are many states in India in which a notable proportion of women is found to earn more than their husbands (though still the minority, as seen in Figure 5: the state with the highest proportion is Mizoram, with 25% of women earning more than their husbands). It will be useful to track which states see increases in women's earnings relative to their husbands'; here, extra precautions must be taken to ensure that there will be no rise in IPVAW, especially if the state already has high or rising IPVAW prevalence rates.

The idea that an increase in women's educational attainment and economic empowerment may result in a greater experience of IPVAW may be counterintuitive to those unfamiliar with the social contexts in countries such as India. A recent survey found that Nordic and Western European respondents in particular disagreed that "it is likely to cause problems if a woman earns more money than her husband," but this was not found to be true of most of the developing countries surveyed (Blood, 2015; YouGov, 2015). This warns that those designing interventions – particularly if they come from a different social context – will have to be knowledgeable about potential risks as well as benefits to ensure that the interventions are carefully designed and carried out in a way that truly leads to women's empowerment. As noted above, focusing on both men's and women's employment, education and training programs – together with regular and ongoing (gender) awareness-related interventions, and implementations of laws in a regular and consistent manner – will be needed in order to gain both men's and women's acceptance of new roles and achievements. These interventions should be also carried out in a way that involves well-recognized local, state and national authorities, influential figures, and key institutions clearly committed to putting an end to violence against women, including IPVAW.

Finally, the public health community can play key roles in interventions. For example, although the findings regarding childlessness and having all female children in this study do not indicate a higher risk of IPVAW, the evidence (from NHFS and non-NFHS data) is mixed and is likely to vary from state to state; even within a state, in different population groups the association of IPVAW with practices favoring strong son preference (e.g., as indicated in gender-biased sex selection) could require explicit educational efforts and interventions by health care providers. Furthermore, IPVAW remains a very sensitive subject for most respondents and therefore data may be inconsistent or missing. As such, the paucity of data or inconsistencies

across datasets should elicit increased awareness and concern for, rather than dismissal of, IPVAW as a public health priority needing greater research and intervention.

Given the many health consequences of IPVAW, concerted interventions have the potential to slow the lasting inter-generational effects and ameliorate the deep physical, psychological, economic, and social traumas that involve not only women directly, but also children, perpetrators, and the entire family and community where such violent behavior prevails. Further analysis of determinants of both acceptance and prevalence of IPVAW is valuable in informing local health care providers what to look for, and how to respond, to this enormous but historically under-prioritized public health concern.

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Tables

Table 1

IPVAW Lifetime Prevalence and Proportion of Women That Accept IPVAW in Indian States

State	ite IPVAW Lifetime Prevalence (%)			Proportion of Women That Accept IPVAW (%)				
	1998-99 (n = 90,296)	2005-06 (n = 64,115)	Percent change	p-value	1998-99 (n = 89,827)	2005-06 (n = 82,215)	Percent change	p-value
All India	18.9	31.2	65.2	< 0.0001	50.8	49.0	-3.5	< 0.0001
Andhra Pradesh	21.2	35.0	65.5	< 0.0001	76.1	71.9	-5.5	0.0001
Arunachal Pradesh	19.5	37.6	92.7	< 0.0001	50.5	61.0	20.9	0.0168
Assam	13.8	36.7	165.7	< 0.0001	64.3	37.7	-41.3	< 0.0001
Bihar	26.3	56.1	113.5	< 0.0001	40.2	47.5	18.3	< 0.0001
Chhattisgarh	16.9	29.2	73.1	0.0662	54.8	24.8	-54.8	< 0.0001
Delhi	9.9	16.2	63.5	< 0.0001	16.7	24.2	44.3	< 0.0001
Goa	13.7	16.5	20.5	< 0.0001	53.7	34.1	-36.6	< 0.0001
Gujarat	8.9	25.7	188.8	< 0.0001	29.5	50.9	72.8	< 0.0001
Haryana	10.9	25.5	134.1	< 0.0001	18.0	41.2	129.3	< 0.0001
Himachal Pradesh	4.0	6.00	50.9	< 0.0001	15.1	22.9	51.5	< 0.0001
Jammu and Kashmir	15.5	11.5	-26.3	0.0004	71.8	59.5	-17.1	< 0.0001
Jharkhand	20.0	34.7	73.9	< 0.0001	29.7	43.6	46.8	0.0005
Karnataka	19.9	19.6	-1.6	0.7405	50.0	59.7	19.4	< 0.0001
Kerala	7.6	15.3	100.7	< 0.0001	58.6	57.9	-1.3	0.6151

Madhya Pradesh	21.3	44.1	107.1	< 0.0001	69.1	39.5	-42.9	0.3686
Maharashtra	17.0	30.6	80.2	< 0.0001	72.9	44.8	-38.6	< 0.0001
Manipur	8.7	40.7	367.6	< 0.0001	90.6	80.3	-11.4	< 0.0001
Meghalaya	2.8	12.7	347.4	< 0.0001	87.0	54.00	-37.9	< 0.0001
Mizoram	11.3	22.0	95.4	< 0.0001	83.6	72.9	-12.8	< 0.0001
Nagaland	12.7	14.0	10.3	0.0042	95.7	72.1	-24.7	0.3614
Orissa	23.1	33.5	45.2	< 0.0001	46.0	53.2	15.6	< 0.0001
Punjab	11.6	24.4	110.3	< 0.0001	10.6	42.3	299.9	0.0063
Rajasthan	9.9	40.3	308.0	< 0.0001	42.2	48.9	16.1	< 0.0001
Sikkim	7.00	14.8	112.3	< 0.0001	61.2	62.8	2.5	0.0178
Tamil Nadu	36.9	41.9	13.5	< 0.0001	71.4	64.5	-9.7	< 0.0001
Tripura	11.7	41.0	251.1	< 0.0001	34.2	48.3	41.3	0.0028
Uttar Pradesh	19.4	41.2	112.8	< 0.0001	49.5	39.0	-21.1	< 0.0001
Uttaranchal	21.1	27.3	29.4	< 0.0001	48.9	41.6	-15.0	< 0.0001
West Bengal	15.7	32.7	108.2	< 0.0001	21.6	34.8	61.1	< 0.0001

Note: IPVAW lifetime prevalence percent is defined as the proportion of women who have ever experienced any form of physical intimate partner violence perpetrated by their husband. Women's acceptance of IPVAW is defined as the proportion of married women who agree to at least one justification of IPVAW. The reported p-values represent difference in proportion results from adjusted Wald tests.

Table 2

Bivariate Analysis of Models' Covariates

	V24																								1.000
	V23																							1.000	-0.529
	V22																						1.000).293	-0.259 -
	V21																					1.000	-0.179	-0.364 -0.293	-0.322 -(
	V20																				1.000	-0.010 1	-0.005 -0	-0.010 -0	0.022 -0
	V19																			1.000	-0.019	0- 60.0	0.004 -0	0.028 -0	-0.087 0
	V18																		1.000	0.018 1	0.004 -0	0.001 0	-0.028 0	0.026 0	-0.008 -0
	V17																	1.000	-0.002	0.120 0	-0.033 0	0.079 0	0.127 -0		-0.106 -0
	V16																1.000	-0.120	-0.018 -0	-0.110 0	0.082 -0	-0.103 0	-0.081 0	-0.050 -0.047	0.195 -0
8,715)	V15															1.000	-0.114 1	0.109 -0	-0.034 -0	0.048 -0	-0.045 0	0.032 -0	0.126 -0	0.011 -0	-0.127 0
Kendall's Tau-b Correlation Coefficient $(n = 28,715)$	V14														1.000	0.004	0.274 -0	-0.084 0	0.011 -0	-0.072 0	0.016 -0	-0.082 0	0.001 0	-0.041 0	0.110 -0
oefficie	V13													1.000	0.228	-0.186 0.	0.474 0.	-0.097 -0.	-0.016 0.	-0.117 -0.	0.053 0.	-0.135 -0.	-0.154 0.		0.254 0.
lation C	V12												1.000	0.517 1.	0.142 0.	-0.137 -0.	0.322 0.	-0.010 -0.	0.022 -0.	-0.049 -0.	0.057 0.	-0.048 -0.	-0.153 -0.	-0.001 -0.031	0.149 0.
b Correl	V111 V											1.000	0.191 1.	0.129 0	0.055 0.	0.008 -0.	0.145 0.	-0.004 -0.0	-0.014 0.	-0.019 -0.	0.040 0.0	-0.025 -0.	-0.047 -0.		0.074 0.
l's Tau-	V10 V										00									14 -0.0		02 -0.0	59 -0.0	67 -0.018	
Kendall	V 8V									00	1.000	73 0.220	06 0.349	24 0.447	42 0.228	21 -0.054	48 0.406	080.0- 86	12 -0.014	15 -0.114	40 0.082	28 -0.102	73 -0.059	54 -0.067	24 0.195
	V 8V								00	5 1.000	0.542	0.173	27 0.406	4 0.524	7 0.242	121.0-121	3 0.548	860.0- 81	2 -0.012	3 -0.115	0.140	88 -0.128	7 -0.073	3 -0.064	4 0.224
								0	2 1.000	3 0.035	2 0.040	2 -0.004	1 0.027	3 0.054	3 0.017	2 -0.004	6 0.023	9 0.038	0 -0.032	0 0.003	4 -0.003	2 0.088	6 0.057	0 -0.123	3 0.014
	5 V7						0	5 1.000	3 -0.062	3 0.07.	3 0.032	1 -0.012	7 -0.03	1 -0.00	0.05	4 0.082	4 0.036	4 0.059	2 -0.04(2 -0.02	2 -0.00	3 -0.092	9 0.520	5 -0.13(5 -0.163
	9.0					_	1.000	-0.106	-0.068	-0.083	-0.053	-0.031	-0.037	0.011	-0.070	-0.134	-0.104	-0.154	0.022	-0.012	-0.022	-0.128	-0.119	0.025	0.165
	V5					1.000	-0.626	-0.565	-0.363	-0.005	-0.001	0.033	0.035	-0.030	0.008	0.045	0.041	0.056	0.025	0.020	0.020	0.115	-0.292	0.125	-0.017
	V4				1.000	0.056	-0.118	0.049	-0.007	-0.326	-0.303	-0.050	-0.386	-0.509	-0.093	0.174	-0.258	0.026	-0.004	0.053	-0.045	0.036	0.169	0.010	-0.160
	V3			1.000	-0.041	0.005	-0.039	0.025	0.020	-0.040	0.068	0.027	0.021	0.097	0.074	0.113	0.001	0.021	-0.087	-0.014	-0.270	-0.039	-0.017	-0.008	0.053
	V2		1.000	-0.054	0.139	-0.048	0.014	0.074	-0.026	-0.158	-0.145	-0.044	-0.1111	-0.193	-0.077	0.063	-0.178	0.085	0.014	0.079	-0.009	0.028	0.081	0.047	-0.129
	V1	1.000	0.176	-0.014	0.159	-0.024	-0.040	0.087	-0.012	-0.157	-0.151	-0.012	-0.081	-0.179	-0.073	0.073	-0.135	0.087	0.026	0.100	-0.016	0.046	0.073	0.048	-0.140
	'	V1	V2	V3	V4	V5	9/	77	8/	60	V10	V111	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24

Note: Variables represented are married women's acceptance of IPVAW (V1), husband's acceptance of IPVAW (V2), age (V3), type of residence (V4), Hindu religion (V5), Muslim religion (V6), Christian religion (V7), other religion (V8), educational attainment (V9), reads newspapers (V10), listens to radio (V11), difference between couple (V18), whether wife witnessed her father beat her mother (V19), having a male child (V20), belonging to a scheduled caste (V21), watches TV (V12), wealth index (V13), husband's job (V14), wife's job (V15), partner's educational attainment (V16), husband's alcohol use (V17), age belonging to a scheduled tribe (V22), belonging to any other "backward class" (V23), and not belonging to a scheduled or "backward" class (V24).

Table 3

Factors Associated with Married Women's Acceptance of IPVAW (Odds Ratios)

Covariate	Model 1 (<i>n</i> = 61,230)	Model 2 (n = 28,715)	Model 3 (n = 28,481)
Wife's earnings compared to her			
husband's			(h = = =)
Less than husband Same or more than husband			(base) 0.95
Hughand's assentance of IDVAW			
Husband's acceptance of IPVAW Accepts no justifications		(base)	(base)
Accepts some justifications		1.24***	1.24***
Wife's age (unit: 10 years)	0.99	1.01	1.00
Residence			
Urban	(base)	(base)	(base)
Rural	1.19***	1.24***	1.25***
Daligion			
Religion Hindu	(base)	(base)	(base)
Muslim	1.26***	1.10	1.11
Christian	0.86**	0.77**	0.78**
Other	1.01	1.06	1.07
Wife's Education			
No education	(base)	(base)	(base)
Primary	0.94**	0.93	0.93
Secondary	0.74***	0.76***	0.76***
Higher	0.35***	0.40***	0.40***
Wife's media access			
(at least once per week)			
Read newspaper	0.89***	0.85***	0.85***
Listen to radio	0.99	0.94	0.95
Watch television	0.97	1.00	1.00
Couple's wealth index			
Poorest	(base)	(base)	(base)
Poorer	0.87***	0.90*	0.91*
Middle	0.81***	0.84**	0.83***
Richer	0.71***	0.80***	0.79***
Richest	0.53***	0.55***	0.54***
Wife's job			
Does not work	(base)	(base)	(base)
Manual labor	1.08*	1.12*	1.12*
Agricultural	1.03	1.04	1.03
Clerical/sales/professional	0.88***	0.87**	0.87**

Husband's job			
Does not work	(base)	(base)	(base)
Manual labor	0.90	0.76*	0.74*
Agricultural	0.99	0.85	0.83
Clerical/sales/professional	0.87*	0.79*	0.78*
Husband's education			
No education	(base)	(base)	(base)
Primary	0.93*	0.96	0.96
Secondary	1.02	1.11*	1.11*
Higher	0.94	1.07	1.07
Does husband become drunk?			
Does not drink	(base)	(base)	(base)
Drinks but never drunk	0.95	0.92	0.93
Sometimes drunk	1.09**	1.09*	1.09*
Did wife ever witness her father			
beating her mother?			
No	(base)	(base)	(base)
Yes	1.38***	1.29***	1.29***
Don't know	1.23***	1.21***	1.21***
Does the couple have at least on	e		
male child?			
Yes	(base)	(base)	(base)
Only female children	0.96	1.01	1.01
No children	1.00	0.99	1.00
Caste of couple			
Scheduled caste	(base)	(base)	(base)
Scheduled tribe	0.82***	0.81**	0.80***
"Other backward class"	0.93*	0.94	0.93
None of the above	0.85***	0.87**	0.87**

Note: *p < .05. **p < .01. ***p < .001. Media access describes using a media source at least once per week compared to baseline of less than once per week. Adjusted for state of residence and language spoken.

Table 4

Factors Associated with Married Men's Acceptance of IPVAW (Odds Ratios)

Covariate	Model 4 $(n = 42,933)$	Model 5 $(n = 28,667)$	Model 6 (n = 28,536)
Wife's earnings compared to her husband's Less than husband Same or more than husband			(base) 1.05
Wife's acceptance of IPVAW Accepts no justifications Accepts some justifications		(base) 1.22***	(base) 1.22***
Wife's Education No education Primary Secondary Higher		(base) 0.91* 0.82*** 0.55***	(base) 0.92* 0.82*** 0.54***
Wife's job Does not work Manual labor Agricultural Clerical/sales/professional		(base) 0.95 0.84*** 0.95	(base) 0.94 0.84*** 0.94
Does husband become drunk? Does not drink Drinks but never drunk Sometimes drunk		(base) 1.00 1.12***	(base) 1.00 1.13***
Does the couple have at least one male child? Yes Only female children No children		(base) 1.06 0.99	(base) 1.06 0.99
Husband's age (unit: 10 years)	0.85***	0.87***	0.86***
Residence Urban Rural	(base) 1.15***	(base) 1.14***	(base) 1.15***
Religion Hindu Muslim Christian Other	(base) 1.21*** 0.87 0.91	(base) 1.22*** 1.07 1.03	(base) 1.24*** 1.08 1.02
Husband's education No education Primary Secondary Higher	(base) 0.96 0.76*** 0.42***	(base) 0.93 0.80*** 0.51***	(base) 0.94 0.80*** 0.52***

Husband's media access				
(at least once per week)				
Read newspaper	0.83***	0.87***	0.86***	
Listen to radio	1.05*	1.01	1.01	
Watch television	1.08**	1.03	1.04	
Couple's wealth index				
Poorest	(base)	(base)	(base)	
Poorer	0.91**	0.90**	0.89**	
Middle	0.75***	0.72***	0.72***	
Richer	0.58***	0.58***	0.58***	
Richest	0.38***	0.42***	0.42***	
Husband's job				
Does not work	(base)	(base)	(base)	
Manual labor	1.08	1.00	1.00	
Agricultural	1.30**	1.27	1.27	
Clerical/sales/professional	1.08	1.02	1.02	
Caste of couple				
Scheduled caste	(base)	(base)	(base)	
Scheduled tribe	0.92	0.87*	0.86**	
"Other backward class"	0.95	0.95	0.94	
None of the above	0.80***	0.80***	0.80***	

Note: *p < .05. **p < .01. ***p < .001. Media access describes using a media source at least once per week compared to baseline of less than once per week. Adjusted for state of residence and language spoken.

Table 5

Factors Associated with Married Women Experiencing IPVAW (Odds Ratios)

Covariate	Model 7 (n = 61,217)	Model 8 $(n = 28,667)$	Model 9 $(n = 28,433)$
Wife's earnings compared to her husband's Less than husband Same or more than husband			(base) 1.43***
Husband's acceptance of IPVAW Accepts no justifications Accepts some justifications		(base) 1.23***	(base) 1.23***
Husband's media access (at least once per week) Read newspaper Listen to radio Watch television		(base) 0.97 0.92* 0.98	(base) 0.97 0.92* 0.98
Wife's age (unit: 10 years)	1.04**	1.05*	1.05*
Residence Urban Rural	(base) 0.88***	(base) 0.90*	(base) 0.90*
Religion Hindu Muslim Christian Other	(base) 1.50*** 1.15* 0.97	(base) 1.49*** 1.17* 0.97	(base) 1.49*** 1.17 0.98
Wife's education No education Primary Secondary Higher	(base) 1.04 0.87*** 0.54***	(base) 1.01 0.90* 0.57***	(base) 1.02 0.91* 0.57***
Wife's acceptance of IPVAW Accepts no justifications Accepts some justifications	(base) 1.53***	(base) 1.52***	(base) 1.52***
Wife's media access (at least once per week) Read newspaper Listen to radio Watch television	0.85*** 1.00 1.02	0.86** 1.00 0.96	0.86** 1.00 0.96
Couple's wealth index Poorest Poorer Middle Richer Richest	(base) 1.02 0.90** 0.81*** 0.59***	(base) 1.02 0.93 0.90 0.62***	(base) 1.02 0.92 0.89 0.62***

Wife's job			
Does not work	(base)	(base)	(base)
Manual labor	1.31***	1.27***	1.24***
Agricultural	1.25***	1.32***	1.29***
Clerical/sales/professional	1.34***	1.27***	1.19**
Husband's job			
Does not work	(base)	(base)	(base)
Manual labor	0.84*	0.83	0.94
Agricultural	0.87	0.81	0.91
Clerical/sales/professional	0.82*	0.83	0.95
Husband's education			
No education	(base)	(base)	(base)
Primary	1.08*	1.15**	1.15**
Secondary	0.93**	0.99	0.99
Higher	0.85**	0.92	0.92
Does husband become drunk?			
Does not drink	(base)	(base)	(base)
Drinks but never drunk	1.81***	1.67***	1.70***
Sometimes drunk	2.56***	2.53***	2.52***
Did wife ever witness her father beating her mother?			
No	(base)	(base)	(base)
Yes	2.77***	2.74***	2.75***
Don't know	1.87***	1.84***	1.86***
Does the couple have at least one male child?			
Yes	(base)	(base)	(base)
Only female children	0.86***	0.85***	0.85***
No children	0.57***	0.52***	0.52***
Caste of couple			
Scheduled caste	(base)	(base)	(base)
Scheduled tribe	0.81***	0.74***	0.74***
"Other backward class"	0.83***	0.77***	0.77***
None of the above	0.82***	0.80***	0.79***

Note: *p < .05. **p < .01. ***p < .001. Media access describes using a media source at least once per week compared to baseline of less than once per week. Adjusted for state of residence and language spoken.



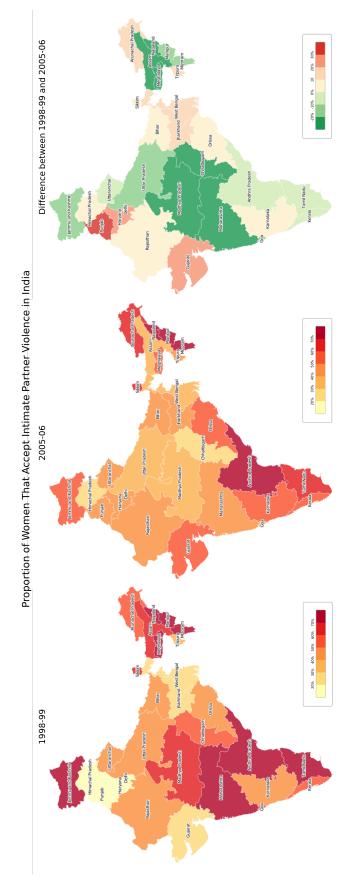


Figure 1. Proportion of married women who accept at least one justification for intimate partner violence against women in Indian states for 1998-99 and 2005-06.

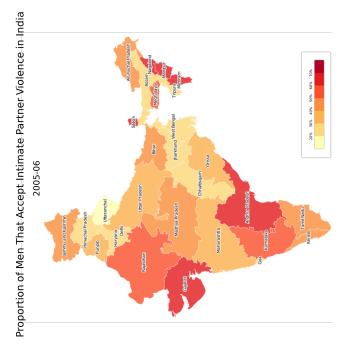


Figure 2. Proportion of married men who accept at least one justification for intimate partner violence against women in Indian states for 1998-99 and 2005-06.

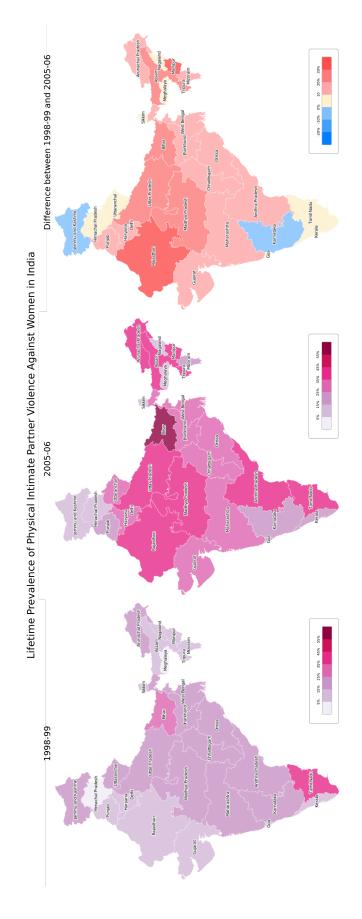


Figure 3. Proportion of married women who have experienced physical forms of intimate partner violence in Indian states for 1998-99 and 2005-06.

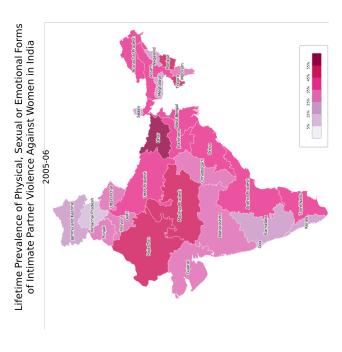


Figure 4. Proportion of married women who have experienced physical, sexual, or emotional forms intimate partner violence against women in Indian states for 2005-06.

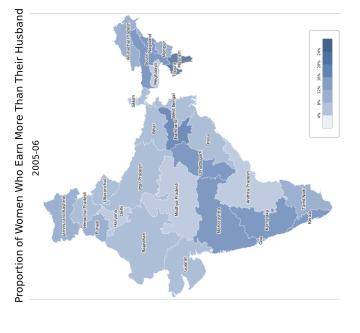


Figure 5. Proportion of married women who earn more than their husbands in 2005-06.

Appendix

Table A1

Health consequences of IPVAW

Fatality of Outcome		Health Outcomes			
	Physical	Sexual and Reproductive	Psychological and Behavioral		
	Abdominal or thoracic injuries	Gynecological disorders	Alcohol and drug abuse Depression and anxiety		
	Bruises and welts	Infertility	Eating and sleep disorders		
	Chronic pain syndromes	Pelvic inflammatory disease	Feelings of shame and guilt		
	Disability Fibromyalgia	Pregnancy complications	Phobias and panic disorder		
	Fractures	including miscarriage	Physical inactivity		
Nonfatal	Gastrointestinal	Sexual dysfunction	Poor self-esteem		
	disorders Irritable bowel syndrome	Sexually transmitted diseases, including HIV/AIDS	Post-traumatic stress disorder		
	Lacerations and	Unsafe abortion	Psychosomatic disorders Smoking		
	abrasions	Unwanted	C		
	Ocular damage	pregnancy	Suicidal behavior and self-harm		
	Reduced physical functioning		Unsafe sexual behavior		
Fatal	Homicide	Maternal mortality AIDS-related mortality	Suicide		

Note: List adapted from Campbell (2002) and Krug et al. (2002).

Table A2

Logistic Regression Models Used in Analysis 2 and Analysis 3

Outcome Measure	Data Used				
	Individual Recode	Couples Recode	Couples Recode with Women's Earnings		
Married women's acceptance of IPVAW	Model 1	Model 2	Model 3		
Husbands' acceptance of IPVAW	Model 4	Model 5	Model 6		
Married women's lifetime experience of IPVAW	Model 7	Model 8	Model 9		