WOMEN AT THE NEXUS OF POVERTY AND VIOLENCE: HOW UNIQUE IS THEIR DISADVANTAGE?

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A common assumption in the literature on domestic violence[1] is that women who are poor are more likely to experience violence than women who are not poor (Ellsberg et al., 1999; Heise, 1998; Jewkes, 2002). Poverty is not necessarily seen as a causal factor, but it is generally assumed to significantly increase the risk of domestic violence. On the other hand, the association between poverty and domestic violence is unlikely to be entirely unidirectional: the perpetration and experience of such violence may contribute to aggravating, perpetuating, or even "causing," household poverty (Byrne et al., 1999). Although research adequately documenting the assumed relationships between domestic violence and poverty is limited, the very likelihood of circularity in the poverty-violence relationship suggests an urgency to understand whether and how violence and poverty are related and whether the circumstances of women caught at the nexus of poverty and violence differ from those of other women, particularly women who may also be beaten but are not poor. In particular, is there reason to expect that health outcomes for women who experience domestic violence are going to be more negative the poorer the women are, or do poverty and the experience of violence exert unrelated but mutually reinforcing effects that mark women at the nexus of poverty and violence as particularly doomed? Accordingly, two central questions are examined in this paper: How uniquely disadvantaged are women at the nexus of poverty and domestic violence, and what are the relative roles of poverty and violence in this disadvantage, if any?

Existing studies that have focused on women at the nexus of poverty and violence (Menard, 2001; Miles-Doan, 1998; Raphael, 2001) do not shed light on the cross-cultural validity of the poverty-violence relationship, nor do they permit an evaluation of the health risks of women at the nexus of poverty and violence relative to those for other women. This is largely because such research has tended to be restricted to special populations (e.g., populations in housing projects, in shelters) and is based on data from the developed world. In fact, with only a few notable exceptions, almost no research exists that examines the relative effect on women's health of being at the nexus of household poverty and domestic violence in developing countries, where the absolute and relative meaning of poverty is likely to be different from that in the developed world.

The lack of comparative studies examining the nature of the poverty-violence-health relationships is in part due to the data requirements of such an endeavor. Not only should the data include population-level information on the poverty, domestic violence, and health status of individuals, but all indicators need to be defined similarly across all the cultures to be compared. This paper begins to fill the research void in this area by using data on demographic and reproductive health, spousal violence, and a household poverty-wealth indicator from the Demographic and Health Surveys (DHS). These surveys are conducted in the developing world and typically collect nationally representative data on demographic and health indicators for women age 15-49, as well as on the characteristics of the households they live in. The household-level data permit the calculation of an asset-based wealth index that has been shown to be robust (Filmer and

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[1] While the discussion is in terms of domestic violence, it may be noted that the measure of violence used in the paper includes only violence by an intimate partner, called spousal violence in this paper.

Pritchett, 2001; Gwatkin et al., 2000). Population at the lower end of this wealth index is identified as poor and population at the upper end as wealthy. In a selected set of countries, DHS has also collected information from respondents on domestic violence, permitting an examination of the complex relationship between violence and the poverty status of the household, as well as related health and demographic outcomes. In this paper, we use the domestic violence and wealth index data to identify women who report spousal violence and belong to the poorest 20 percent of the population as being at the nexus of poverty and violence. Health disadvantage is measured in terms of four different indicators that proxy women's inability to meet their demographic and reproductive health needs: 1) having a non-live birth, 2) having a sexually transmitted infection, 3) having an unwanted birth, and 4) contraceptive discontinuation.

In this paper we use data from Cambodia, the Dominican Republic, and Haiti, where a largely identical set of questions on domestic violence were fielded as part of the DHS surveys in those countries. Despite the greater geographical proximity and the linked histories of Haiti and the Dominican Republic, all three countries are arrayed differently along the socioeconomic continuum. In fact, on many counts, Haiti appears more similar to Cambodia than to the Dominican Republic. In 1999, the Dominican Republic was economically the most advanced of the three countries, with a per capita gross domestic product (GDP) of $1,910 growing at a rate of 6.2 percent, with 64 percent of its population living in urban areas; by contrast, Cambodia had a per capita GDP of $260 growing at a rate of 2.2 percent, and only 16 percent of its population in urban areas. The corresponding values for Haiti were $460 per capita GDP with a growth rate of 1 percent and 35 percent of its population living in urban areas (World Bank, 2001). The under-five mortality rate per 1,000 live births was 47 in the Dominican Republic compared with 116 in Haiti and 143 in Cambodia. Adult female illiteracy was highest at 80 percent in Cambodia, followed by 54 percent in Haiti, and 17 percent in the Dominican Republic (World Bank, 2001). The Dominican Republic's rank on the United Nation's Human Development Index in 2001 was highest among the three, at 86. By contrast, Cambodia's rank was 121 and Haiti's was 134 (United Nations Development Programme, 2001). Thus, although the three countries included in this paper were selected because they were the only three with an identical set of questions on domestic violence, this brief comparison suggests that together they proxy a random sample of developing countries. Consequently, we expect that conclusions from this paper will be relevant to most developing countries.

Specifically, in the sections that follow, we use the data from Cambodia, the Dominican Republic, and Haiti to examine the characteristics and the reproductive health of women who live at the nexus of poverty and domestic violence and compare them with women in other violence/poverty situations. Women's reproductive health is of particular interest in this analysis, as previous studies have shown associations between poverty and domestic violence, between poverty and reproductive health (Gazmararian et al., 1996; Pebley et al., 1996), and between domestic violence and reproductive health (Moore, 1999; Plichta and Abraham, 1996; Stark and Flitcraft, 1996). Accordingly, in section 1 we review the extent to which the linkages between poverty and domestic violence are established in the literature. We also review the degree to which the relative reproductive health disadvantage for women at the nexus of poverty and violence has been empirically established. This is followed by a discussion of definitions and methodologies used in this paper (section 2). The analysis of the data begins in section 3, in which the profiles of women who have experienced domestic violence are described and compared with those of women who have never experienced such violence. This section provides a context for sections 4 and 5, where the

linkages between poverty, violence, and reproductive health are evaluated. Finally, the summary and conclusions are discussed in section 6.

1 A REVIEW OF WHAT IS KNOWN ABOUT WOMEN AT THE NEXUS OF POVERTY AND VIOLENCE

In this section of the paper, we first review the literature on the relationship of poverty to domestic violence, and then we briefly discuss the literature related to the selected health outcomes of interest examined in this paper.

1.1 The Relationship of Poverty to Domestic Violence

A common assumption in the literature is that domestic violence is more widespread among the poor. A variety of domestic violence perspectives espouse this idea, largely based on the concept that families living in impoverished conditions are subject to higher levels of stress than families not living in poverty and that as a result of experiencing high levels of stress, poor families are more prone to family violence than families that are not in impoverished conditions (Martin et al., 1999). A similar argument posits that "economically excluded" (unemployed or underemployed) men experience a specifically "male" stress due to an inability to fulfill their culturally defined roles as breadwinners. This male stress is theorized to be a contributing factor to the disproportionately high rates of domestic violence reported by poor women, especially women living in public housing (DeKeseredy and Schwartz, 2002; Raphael, 2001). However, the question of whether poverty contributes to the prevalence of domestic violence, whether violence in the home leads to or exacerbates poverty, or whether the two processes are circular and interactive is one that has only begun to be investigated by the research community (Byrne et al., 1999; Runge et al., 2001), leading to a dearth of literature on the direction or the relationship. Thus, it is by necessity that this discussion of the literature deals primarily with poverty as a risk factor, rather than as a potential outcome.

Despite the assumptions of significantly different risks for domestic violence depending on household economic situation, a critical inquiry of the empirical literature finds uneven support for even this contention: some analyses indicate that poverty is a strong predictor of violence (Ellsberg et al., 1999), whereas others find it to be an insignificant factor after controlling for other variables such as education or residence (Diop-Sidibé, 2001); further, some find that poverty has an effect on the likelihood of domestic violence in some geographic locations but not others (Johnson, 2003; Martin et al., 1999). The varying effects found for household economic status in the literature on domestic violence are not surprising given the large variability in defining household wealth, income, or (socio)economic status. Some researchers use income (Kim and Cho, 1992; Rodgers, 1994) and others have used information on assets (Diop-Sidibé, 2001; Johnson, 2003; Martin et al., 1999), with definitions and data being subject to different sets of assumptions and caveats.

Another potential source of variation in terms of defining the poverty-wealth status of households in analyses of domestic violence is the assumption of the interchangeability of the terms "economic status" and "socioeconomic status." Indicators of economic status are restricted in content to the accepted economic sources of data (e.g., income, assets, expenditures). However, some studies (Ellsberg et al., 1999; Hoffman, et al., 1994) analyze the effects of socioeconomic status on domestic violence; these studies create a composite variable in order to measure socioeconomic status, incorporating into a single metric household income, educational attainment, and prestige of occupation or sanitary conditions. Specifying a socioeconomic status indicator, rather than an

economic status indicator, increases the likelihood that the relationship between the economic status of the household and violence will be obscured by the presence of other variables, such as education, that have effects independent of wealth on the probability that a woman will experience domestic violence (Johnson, 2003).

Nonetheless, even similar definitions of wealth/poverty yield varying relationships with domestic violence. For example, Statistics Canada's National Survey on Violence against Women (Rodgers, 1994) used income as its measure of poverty (the poor being those in households with income less than $15,000 per annum) and found that the poor were twice as likely as the rest of the population to report having experienced violence in the past year (6 and 3 percent, respectively). By contrast, Kim and Cho (1992) used household disposable income in their epidemiological study of domestic violence in Korea and found only small differences in the prevalence of domestic violence by reported disposable income. Neither study controls for factors such as age, education, and residence, among others, so that the association between poverty and domestic violence in these studies remains inconclusive.

Other studies use a household wealth indicator for their analyses, based on assets data. These studies yield inconsistent results even when they use similar multivariate methodologies. For example, Diop-Sidibé (2001), in her analysis of domestic violence in Egypt, and Martin et al. (1999), in their study on domestic violence in northern India, used similarly limited wealth indicators based on simple counts of assets owned by households. The Egypt study found no relationship between ever experiencing violence and wealth, but it found a significant relationship between experiencing violence in the past year and wealth—violence was 50 percent less among women in poor households. The study in India found that poverty was significantly related to domestic violence in three out of the five districts studied. However, the very limited range of these wealth scores, as well as the fact that neither study appears to have weighted these scores by the number of household members, limits the validity of the results.

A more recent iteration of the asset-based wealth index approach is based on the work of Filmer and Pritchett (2001) and was tested extensively using a full complement of DHS surveys (Gwatkin et al., 2000). A large number of assets are statistically reduced using principal components analysis; the first principal component serves as the basis for a wealth index. Using this asset-based wealth index in a comparative analysis of domestic violence in Haiti and Nicaragua, Johnson (2003) found mixed support for a positive relationship between poverty and violence. In this paper, we use this wealth index to assign households to five different population groups along the wealth-poverty spectrum (see below).

Thus, evidence of the influence of household economic status on the likelihood of violence is not always upheld by the literature: results are inconsistent and often based on nonrobust indicators of the household wealth-poverty status, and suggest great variability across regions.

1.2 Linkages Between Poverty, Domestic Violence, and Selected Reproductive Health Outcomes

Much literature exists that links violence to adverse health outcomes. While some of this does control for the socioeconomic status of the household, there is little research that attempts to establish whether women who are at the nexus of poverty and violence are more disadvantaged than women who are poor but have not experienced spousal abuse, or those who have experienced abuse but are not poor. The four reproductive health-related outcomes considered here are 1) ever having

had a non-live birth (either a miscarriage, an abortion, or a stillbirth), 2) having had a sexually transmitted infection (STI) in the 12 months preceding the survey, 3) having a birth that was not wanted at all, and 4) contraceptive discontinuation (having ever used contraception but not currently using it). The latter two outcomes reflect women's ability to prevent unwanted pregnancies and are thus only indirect proxies of women's reproductive health. Research suggests that all of these four outcomes have significant associations with the experience of violence by women.

1.2.1 Having a Non-live Birth and Violence

Abusive spousal behavior can threaten a pregnancy in many ways. Direct risks to the viability of a pregnancy include physical trauma to the abdomen, due to violence, or intentional abortion to preclude an unwanted birth. Jejeebhoy (1998) found that women in Uttar Pradesh, India, who had ever been beaten by their husband were almost twice as likely to experience a fetal death, even after controlling for a variety of social, economic, and demographic factors; Leung et al. (2001) failed to show significant differences in pregnancy outcome by experience of domestic violence, but this analysis was limited to bivariate methods. Indirect risks to the viability of the fetus that have been associated with domestic violence include increased levels of stress, as well as delays in seeking antenatal care (Newberger et al., 1992; Taggart and Mattson, 1995).

1.2.2 Sexually Transmitted Infections and Violence

Many empirical studies indicate that women who have experienced spousal violence are more likely to suffer a range of gynecological problems, including STIs (Augenbraun et al., 2001; Plichta and Abraham, 1996; Schei, 1991). Recent reports from communities hard-hit by HIV/AIDS also point to an association between experience of violence and acquisition of HIV: Maman et al. (2001) found that, when controlling for confounding variables, HIV-positive women had a larger number of physically violent partners in their lifetimes than did HIV-negative women. They also found that HIV-positive women were more than twice as likely as HIV-negative women to report current experience of violence and report greater frequency of violent events. Violence is likely to be both a contributing factor to contracting an STI, as well as an outcome of the disclosure of an STI to a partner (Zierler et al., 1996).

1.2.3 Unintended Pregnancies and Violence

Unintended pregnancy and sporadic use of contraception are interrelated outcomes; both are positively associated with domestic violence in the literature (Campbell et al., 1995; Gazmararian et al., 2000). In a small study (n=165), Wingood and DiClemente (1997) found that women in abusive relationships were much less likely to use condoms than nonabused women and were more likely to experience further abuse if they attempted to discuss condom use with their partners. Goodwin et al. (2000), using population-based data obtained from the Pregnancy Risk Assessment Monitoring System found that women with unintended pregnancies had 2.5 times the risk of experiencing physical abuse compared with women whose pregnancies were intended, after controlling for demographic and other potentially confounding factors. Goodwin et al. also provide some insight into the reproductive health of women who are at the nexus of poverty and violence: they found that although women on Medicaid were significantly more likely to experience abuse, the association between unwanted pregnancy and abuse was stronger for women not on Medicaid than for women who were.

A fairly detailed review of the literature suggests that while women at the nexus of poverty and violence are often believed to be particularly disadvantaged with respect to their reproductive health, there is almost no empirical analysis of the relationship and, when there is, the results do not necessarily conform to expectations (Goodwin et al., 2000).

2   DATA, DEFINITIONS AND METHODOLOGY

2.1   Data

This study uses data from DHS surveys conducted in Cambodia and Haiti in 2000 and in Dominican Republic in 2002. In the three countries, all women age 15-49 in the sample households were eligible to be interviewed. A subsample of the households in the DHS survey was selected for the domestic violence module. In keeping with the ethical guidelines provided by the World Health Organization (1991) on the conduct of domestic violence research, special training was provided for this component of the survey. In addition, two mechanisms were used to protect the security of women: Within each household, only one randomly selected eligible woman received the module, and the module was not implemented if privacy could not be obtained. Weights were constructed to make the data on violence nationally representative.[2] Since this paper examines spousal violence, the effective sample includes only women who have ever been married (Table 2.1).

Table 2.1 Sample size

Number of women age 15-49 in selected households, number in domestic violence subsample, and number of ever-married women with information on domestic violence, DHS surveys in Cambodia (2000), Dominican Republic (2002), and Haiti (2000)

Country	Total sample	Domestic violence subsample	Ever-married women with information on domestic violence
Cambodia	15,351	2,403	2,403
Dominican Republic	23,384	8,746	6,807
Haiti	10,159	3,389	2,347

2.2   Definitions

The two variables central to the discussion in this paper are domestic violence and the poverty-wealth status of the household to which the respondent belongs. Accordingly, the definitions of these variables are discussed in some detail.

2.2.1   Domestic Violence

Domestic violence is defined here as violence experienced by women at the hands of their current or earlier spouse(s). Ever-married women are women who are or have been legally married or are living together or have lived together with a man as if married. Accordingly, the terms "spouse" or "husband" include male partners who are not legally the husband of the respondent. The measure of spousal violence does not include emotional violence reported by women and is restricted to physical or sexual violence.

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[2] Sample and weighting details are given in national-level reports available from ORC Macro, Calverton, Maryland, or on the Internet at www.measuredhs.com.

The spousal violence indicator used in this paper is derived from responses given by ever-married women to three different sets of questions on violence. The first set is based on a modified and greatly shortened Conflict Tactics Scale (CTS) used by Straus (1990) and asks women whether their current or last husband ever did the following:

- Push you, shake you, or throw something at you?

- Slap you or twist your arm?

- Punch you with his fist or with something that could hurt you?

- Kick you or drag you?

- Try to strangle you or burn you?

- Threaten you with a knife, gun, or other type of weapon?

- Attack you with a knife, gun, or other type of weapon?

- Physically force you to have sexual intercourse even when you did not want to?

- Force you to perform types of other sexual acts you did not want to?

Women could answer "yes" or "no" to each item, and in cases when the answer was a "yes," women were asked about the frequency of the act in the 12 months preceding the survey.

Although it is the most commonly used quantitative measure of domestic violence, the original CTS has been criticized on several grounds (DeKeseredy and Schwartz, 1998). The modified CTS in use here accounts for the two major criticisms by including questions on sexual violence and by not assuming that violence takes place only in circumstances characterized by conflict. Further the literature on the CTS has emphasized that that physical trauma is but one component of the damage sustained by an abused spouse (see brief review in Gordon 2000). Accordingly, the violence measure used here does not weight violence that has resulted in injury more than violence with no reported injuries.

In addition to the modified CTS, women were asked whether they had experienced violence at the hands of anyone other than their current or last husband, with the question, "From the time you were 15 years old, has anyone other than your (current/last) husband hit, slapped, kicked, or done anything else to hurt you physically?" Women who responded "yes" to this question were asked about the person(s) who had done this and the frequency of such violence during the 12 months preceding the survey. A similar question was used to measure violence during pregnancy. Frequency of abuse in the past 12 months was assessed; however, the operationalized definition of violence in this paper does not account for frequency of violence.

In this paper a woman is counted as having experienced spousal violence if she says "yes" to either one or more of the modified CTS questions, if she reports that a previous husband was violent since she was 15, or if she reports violence during a pregnancy perpetrated by a current or past husband. If any of the violence took place in the 12 months preceding the survey, she is counted as having experienced recent violence.

The prevalence of spousal violence among ever-married women is high in all three countries, ranging from 17 percent in Cambodia to 29 percent in Haiti, with the prevalence in the Dominican Republic being in the middle at 22 percent (Table 2.2). Most women who report ever experiencing spousal violence in Cambodia and Haiti also report experiencing it in the 12 months preceding the survey (88 and 73 percent). In the Dominican Republic, however, only about one in two women who have ever experienced spousal violence report recent violence. These data suggest that, typically, between one in five and one in three ever-married women report any experience of violence by a spouse, but that the proportion of women who have experienced violence recently among those who have ever experienced violence may vary dramatically between countries. This paper does not examine the conditions that facilitate a cessation of violence; however, it can be speculated that the ability to end a violent relationship will be of great importance. This ability will be affected by several factors, including the legality and ease of divorce, a woman's economic independence and access to financial resources to support her children, if any, and the social respect given to women who have divorced their husbands.

Table 2.2 Experience of spousal violence			
Percentage of ever-married women who reported experiencing spousal violence ever, in the 12 months preceding the survey, and never, DHS surveys in Cambodia (2000), Dominican Republic (2002), and Haiti (2000)			
Experience of spousal violence	Cambodia	Dominican Republic	Haiti
Ever experienced spousal violence	17.4	22.3	28.8
Experienced spousal violence in past year	15.4	11.0	21.0
Never experienced spousal violence	82.6	77.7	71.2
Number of women	2,403	6,807	2,347
Among those who have ever experienced spousal violence, percentage who experienced it in the past year	87.8	49.3	72.8

The question of whether the DHS violence estimates underestimate the true extent of violence experienced by women remains despite the many precautions put in place during fieldwork. DeKeseredy and Schwartz (1998) note that while all victimization surveys have a certain amount of underreporting, it is assumed that surveys that incorporate questions on intimate violence are particularly susceptible to this shortcoming. DeKeseredy and Schwartz (1998) and others (Ellsberg et al., 2000) advocate that longer, more probing questions be asked following the short, simple measures embodied in the CTS. It is therefore reassuring that, for Cambodia at least, there is independent corroboration of the prevalence of violence estimated by DHS. The 1996 Household Survey of Domestic Violence in Cambodia (Ministry of Women's Affairs and Project Against Violence, 1996) estimated that one in every six (16 percent) women in Cambodia was physically abused by her husband and more than one in ten men reported abusing their wives.

2.2.2 The Poverty-Wealth Measure

In addition to measuring violence, this paper rests critically on the ability to estimate the poverty/wealth status of the households in a uniform and comparable manner. The wealth index used here is one recently developed and tested in a large number of countries with regard to inequities in household income, use of health services, and health outcomes (Gwatkin et al., 2000). It is an indicator of wealth that is consistent with, though different from, expenditure and income

measures (Rutstein, 1999). It is best interpreted as an indicator of a household's permanent income status.

This wealth index is constructed using household asset data (including country-specific assets) and principle components analysis. The asset information was collected through the DHS household questionnaire and concerns household ownership of a number of consumer items, ranging from a television to a bicycle or car, as well as dwelling characteristics, such as type of drinking water available, sanitation facilities used, roofing, and flooring.

Each asset was assigned a weight (factor score) generated through principle components analysis, and the resulting asset scores were standardized in relation to a standard normal distribution with a mean of zero and a standard deviation of one (Gwatkin et al., 2000). Each household was then assigned a score for each asset, and the scores were summed by household. The sample was then divided into population quintiles; each quintile was designated a rank, from one (poorest) to five (wealthiest), and individuals were ranked according to the total score of the household in which they live.

A caveat in the use of this measure is that the indicator, like other measures of household wealth, does not permit analysis of within-household distributions of wealth. This caveat is particularly important in the context of the possible circularity of the poverty-violence relationship. Since the index rating that attaches to the individual woman comes from the household, the relative economic status of the women (separate from the household) cannot be determined. If, for example, a woman belongs to a wealthy household, but spousal violence is preventing her from holding a well-paying job, then the negative impact of violence on her own economic status is unlikely to be captured by this variable. No attempt is made in this paper to determine causality for any associations found between violence and poverty.

2.3   Methodology

Two different methodologies are used in this paper, each driven by the specific question that needs to be answered. In trying to identify differences between women at the nexus of poverty and violence and other women, differences in the means for different groups are tested for significance. Multivariate logistic regression techniques are used in the analysis of the linkages between poverty, violence, and the four reproductive and demographic health variables. Bivariate techniques are preferred for comparisons because the question to be answered is whether poor women who are subject to violence are uniquely different in their characteristics from other women, particularly women who are also poor but have not experienced spousal violence and those who are not poor but have experienced spousal violence. Multivariate techniques were deemed to be more appropriate in trying to determine whether women at the nexus of poverty and violence are more disadvantaged than other women in terms of their reproductive health. In this case, we want to ensure that the effect of being poor and experiencing violence is a net measurement separate from other variables that are known to affect each health variable considered.

The variables used to describe women and as controls in the regressions include the following.

Household characteristics. Other than wealth, urban-rural residence and residence in a nuclear family are defined. A woman who lives alone or lives with a spouse with or without children is counted as living in a nuclear family.

Individual characteristics. The characteristics defined include women's current age (measured in years), their current marital status and number of times married, their age at first marriage (used both as a grouped or continuous variable), women's parity (either in terms of their number of living children or number of children ever born), their education (both grouped by level or number of years of education), and their employment status (whether they are currently doing any work other than their housework). Several of these variables are considered to be relevant because of their linkages to women's empowerment, access to knowledge, and other resources. Education has been shown to be a source of empowerment for women, facilitating their ability to gather and assimilate information, to manipulate aspects of their circumstances within a modern world, and to interact effectively with modern institutions (Caldwell, 1986; Kishor, 2000; however, see Malhotra and Mather, 1997).

A woman who marries at a later age has likely had the opportunity to pursue higher education or to be employed, either of which also may cultivate a greater sense of autonomy (Mason, 1987). Although this variable is highly significant in bivariate analyses, there is only mixed support for its association with ever experience of violence in multivariate analyses (Johnson, 2003; Martin et al., 1999). Similarly, women who work are often assumed to be more empowered economically and, by extension, socially, vis-à-vis their male partners, and thus may be less likely to experience domestic violence. However, if employment confers empowerment, it may be dependent on the cultural context; the argument may not apply uniformly across settings (Malhotra and Mather, 1997), and it has inconsistent associations with the likelihood of violence across countries (Johnson, 2003). Age is included here because several anthropological and empirical studies undertaken in disparate cultures (Fernandez, 1997 [India]; Johnson, 2003 [Nicaragua and Haiti]; McCluskey, 2001 [Belize]) find that age is negatively associated with the experience of violence. Some of these studies suggest that as women's age increases, their social status also increases, and they become less vulnerable to acts of domestic violence. High fertility has been associated with domestic violence both as a potentially causal factor (Martin et al., 1999, who found little support for this contention) as well as an outcome of violence (Campbell et al., 1995).

Another variable included in individual characteristics is whether a woman's father beat her mother. Several studies have found that when either a husband or a wife has a family history of violence (i.e., that the parents of a husband or wife had incidents of domestic violence), the risk of domestic violence in the union of the index wife and husband increases significantly (Kalmuss, 1984; Seltzer and Kalmuss, 1988). There is no indicator of whether a woman's father-in-law beat her mother-in-law available in these data sets.

Characteristics of women's marriages and husbands. Interspousal age and educational differences are used to describe a woman's marriage, and the husband's age, education, and frequency with which he is drunk are selected husbands' characteristics. Information on husband's age is collected only for current husbands, and the information on husband's education is collected only for current or last husbands for women who were formerly married. Thus, among women who have been married more than once, the husbands who beat them may not necessarily be the ones whose characteristics are being reflected in these measures.

There is uneven support for men's education as a risk factor for experience of domestic violence. While one study found that husbands with less education were more likely to report hitting their wives compared with husbands with more education (Martin et al., 1999), others did not find any effect (Hoffman et al., 1994; Johnson, 2003). Increased frequency of drunken episodes on the

part of husbands or male partners has been associated with increased likelihood of committing acts of intimate violence in several studies (Heise, 1998; Johnson, 2003). While the empirical evidence supports the contention that alcohol consumption is a significant determinant of domestic violence, there still remains some question as to the pathways by which the alcohol use functions.

3 PROFILES OF WOMEN ACCORDING TO THEIR EXPERIENCE OF SPOUSAL VIOLENCE

Before discussing the linkages between spousal violence and poverty, it is important to determine whether women who report spousal violence differ in specific ways from women who have not experienced spousal violence. This discussion also provides a context in which the experience of violence by some and not other women can be viewed. Accordingly, Table 3.1 compares the profiles of women who report experiencing spousal violence ever, in the past one year, and never. The descriptors include those that describe women's household situation and their individual characteristics, as well as the characteristics of their marriages and of their husbands. The latter two are included because the type of violence being examined is spousal violence and the sample is restricted to ever-married women.

Table 3.1 shows that the individual and circumstantial profiles of women who experience violence are not very different from the corresponding profiles for women who have not experienced spousal violence. Women who have ever experienced spousal violence differ significantly from women who have not experienced spousal violence only in that they appear to be of higher parity, to be more likely to have had fathers who beat their mothers, and to have husbands who are frequently drunk. Also, the mean spousal age difference (husband's age minus wife's age) is lower among women who report spousal violence than among those who have never experienced spousal violence. In particular, women who have husbands who are younger than them are overrepresented among women who have ever experienced violence.

Another consistent descriptor of women who have ever experienced spousal violence is that they are significantly less likely than women who do not report such violence to be currently married and are more likely to have been married more than once. This result must be carefully interpreted, however, since spousal violence can be an important factor in the disruption of marriages. In this sample of ever-married women, spousal violence is likely to be a "cause" of the current marital status of women and not a result.

The educational profiles of women themselves and those of their husbands also differ significantly between women who have experienced violence and those who have not in all countries, but the direction of the relationship is not consistent between countries. In Cambodia and the Dominican Republic, women who have experienced violence are more likely than women who have not to be overrepresented among women with no education and underrepresented among women with secondary or higher education, and to have husbands with less education. In Haiti, however, the reverse appears to be true: Women who have experienced spousal violence are more educated and are more likely to have husbands with more education, compared with women who have never experienced spousal violence. A similarly reversed profile is observed in Haiti when compared with Cambodia and the Dominican Republic with regard to the spousal educational difference (husband's number of years of education minus wife's number of years of education). In Cambodia and the Dominican Republic, the mean spousal educational difference (in years) is larger among women who have never experienced spousal violence than among women who have experienced such violence, whereas in Haiti, the opposite is true.

Table 3.1 Characteristics of ever-married women who have and have not experienced spousal violence

Characteristics of ever-married women who have experienced any spousal violence ever, in the past year, and never, DHS surveys in Cambodia (2000), Dominican Republic (2002), and Haiti (2000)

| | Experienced violence by spouse | | | | | | | | |
| | Cambodia | | | Dominican Republic | | | Haiti | | |
Characteristic	Ever	Past year	Never	Ever	Past year	Never	Ever	Past year	Never
Household characteristic									
Percent rural	85.0	85.4	83.6	29.9	28.2	33.7	60.8	67.1	60.6
Percent living in nuclear family	68.3	67.2	61.0	57.5	60.7	59.7	47.6	47.7	40.6
Respondent's characteristic									
Mean age (years)	35.0	34.7	34.2	31.9	29.6	32.2	33.4	30.9	33.2
Current marital status									
Percent currently married	81.2	83.2	87.6	65.6	71.2	80.8	76.3	83.7	88.7
and married only once	71.2	74.0	81.9	32.4	40.0	55.9	46.3	53.0	57.8
and married more than once	10.0	9.2	5.6	33.2	31.2	24.8	30.0	30.7	30.8
Percent formerly married	18.8	16.8	12.4	34.4	28.8	19.2	23.7	16.3	11.3
Percent married more than once	14.3	12.7	6.6	49.8	44.9	32.6	47.1	40.6	35.4
Age at first marriage									
<15 years	3.6	3.5	3.2	22.7	25.6	14.5	7.3	8.9	6.2
15-19 years	55.2	54.1	55.5	56.1	55.5	50.9	50.5	49.4	49.0
20-24	31.4	32.2	31.3	16.3	15.3	24.4	34.7	34.6	30.6
25+	9.8	10.3	10.0	4.9	3.6	10.2	7.6	7.1	14.1
Mean age at first marriage	19.6	19.7	19.5	17.2	16.9	18.7	19.2	19.0	19.8
Number of children ever born									
None	2.9	2.7	7.9	5.8	7.5	9.0	8.4	9.7	8.9
1-2	24.8	25.4	29.3	37.4	37.2	41.8	27.9	33.9	34.9
3-4	28.6	28.9	28.8	39.3	39.7	34.7	20.0	22.3	24.4
5+	43.8	43.0	33.9	17.6	15.6	14.5	43.7	34.1	31.8
Mean number of children ever born	4.3	4.3	3.8	3.0	2.9	2.7	4.0	3.5	3.7
Education									
No education	37.1	36.2	29.7	5.0	4.5	5.1	35.4	35.3	43.4
Primary only	54.0	55.1	56.7	56.5	59.7	49.2	44.0	46.9	41.0
Secondary or higher	8.8	8.6	13.6	38.5	35.7	45.7	20.6	17.8	15.7
Mean number of years of education	2.4	2.4	5.2	7.4	7.3	8.2	3.2	2.9	2.8
Percent currently employed	83.5	82.7	84.9	58.69	55.4	50.1	68.6	63.9	64.0
Mother beaten by father									
Yes	18.6	20.1	9.3	21.0	25.3	10.5	16.0	19.5	11.2
No	66.8	65.8	78.9	76.1	71.0	87.3	70.4	69.2	78.2
Don't know	14.6	14.1	11.8	2.9	3.8	2.9	13.6	11.4	10.6
Marriage characteristic									
Spousal age difference									
Wife older than spouse	24.1	24.1	18.4	22.0	20.8	14.1	21.0	18.3	15.1
Wife 0-4 years younger	50.0	50.5	51.0	34.2	36.6	35.3	33.9	35.6	32.1
Wife 5-9 years younger	19.0	19.1	21.1	20.9	21.5	27.3	22.6	22.9	30.1
Wife 10-14 years younger	4.5	4.0	6.2	12.3	12.5	12.0	12.8	13.4	11.7
Wife 15+ years younger	2.4	2.3	3.2	10.5	8.7	11.2	9.7	9.8	11.0
Mean spousal age difference	2.4	2.4	3.1	4.9	4.9	5.6	4.3	5.2	5.8
Spousal education difference									
Both have no education	12.9	12.4	9.1	2.3	2.4	2.7	16.5	17.6	25.0
At least one has some edeucation									
Wife has more education	20.4	21.3	14.6	12.7	13.9	9.7	17.3	12.9	18.2
Spouses have the same education	12.2	13.0	15.4	2.3	2.8	2.8	3.7	4.2	6.9
Husband has more education	54.5	53.3	60.9	82.8	80.9	84.8	62.4	65.3	49.9
Mean difference (years)	1.6	1.6	1.9	5.0	4.8	5.4	2.2	2.3	1.7

Continued …

Table 3.1 (continued)

| | Experienced violence by spouse | | | | | | | | |
| | Cambodia | | | Dominican Republic | | | Haiti | | |
Characteristic	Ever	Past year	Never	Ever	Past year	Never	Ever	Past year	Never
Husband's characteristic									
Mean age	36.7	36.7	36.7	36.6	34.8	38.1	36.8	36.0	38.9
Level of education									
No education	21.2	21.4	13.7	10.0	11.7	7.1	20.9	22.8	30.9
Primary only	57.7	57.8	54.5	0.0	0.0	0.2	44.2	44.5	39.7
Secondary or higher	21.2	20.8	31.8	90.0	88.3	92.7	34.9	32.8	29.4
Mean number of years of education	4.0	4.0	5.0	12.1	11.9	12.9	5.5	5.4	4.5
Drunk frequently	32.9	33.9	7.4	27.2	35.1	6.7	10.7	5.5	1.7
Number of women	420	369	1,983	1,519	749	5,287	676	492	1,670

Note: Shading indicates association is not significant at p<0.05.
[1] Refers only to age of current husband; available only for currently married women.
[2] Refers to education of current husband for currently married women and last husband for formerly married women.

Most other characteristics appear to distinguish women who have experienced violence from those who have not in some, but not all, countries. For example, in Haiti and the Dominican Republic only, the age at first marriage among women who report spousal violence is significantly lower on average than among women who do not report such violence. In particular, women who married at age 25 and above are at least twice as likely to be found in both countries among women who report no violence than among those who do.

Rural-urban residence fails to distinguish between women according to their experience of spousal violence in both Cambodia and Haiti. However, in the Dominican Republic, women who have never experienced spousal violence are more likely to be living in rural areas than women who have experienced spousal violence. Notably, in Haiti, rural residence is associated with women being more likely to report spousal violence in the past year. One possible explanation for this could be that rural women are less able than urban women to access social, legal, and economic resources necessary to leave violent relationships. Residence in a nuclear family provides a context for greater spousal violence in Cambodia and Haiti, but not in the Dominican Republic. A woman's current employment status does not distinguish her in terms of whether she has experienced violence or not in Cambodia, but in the Dominican Republic and Haiti, women who have experienced spousal violence are more likely than those who have not to be employed. No direction of causality can be inferred here since this result is consistent both with the possibility that a women's employment could lead to the experience of violence, as well as the possibility that experience of violence may result in the need for financial independence within or as a result of the violent relationship.

4   THE POVERTY-VIOLENCE ASSOCIATION: IS THERE ANY?

The discussion in the previous section reveals that very few factors consistently distinguish women who have experienced spousal violence in all three countries. Variables such as education, and circumstances such as having a spouse of a similar age and education, often considered empowering for women (Mason, 1987), do not have a consistently similar relationship to the likelihood of experiencing spousal violence. An examination of the association between spousal violence and the wealth index (Table 4.1) also reveals that the likelihood of spousal violence does not necessarily bear the oft assumed monotonically negative association with increasing wealth.

The cross-tabulations of the wealth index and the likelihood of having experienced spousal violence (ever or in the past one year) yielded only one consistent result across all countries, namely, that the associations are statistically significant. Beyond that, the direction and strength of the association is different in each country. In Cambodia alone, women in the poorest quintile are more likely than women in the other quintiles to have ever or recently experienced violence. Even in Cambodia, however, the likelihood of spousal violence declines with wealth only from the first to the third quintile. The likelihood of experiencing violence does not vary at all between the top three quintiles. In the Dominican Republic, by contrast, only women in the wealthiest quintile have a significantly reduced likelihood of experiencing spousal violence; a similar proportion of women in the first quintile (the poorest 20 percent of the population) through the fourth quintile report experiencing spousal violence. In Haiti, the association between the experience of spousal violence and the wealth index takes the shape of an inverted U, with women in the third quintile being the most likely to have experienced spousal violence.

Not only is wealth status of the household not consistently related to the likelihood that a woman experiences violence, wealth does not necessarily serve to facilitate the ending of violence (Table 4.1). If wealth were in fact enabling women to, for example, leave a violent relationship (one way in which violence can be ended), then the proportion of women who report violence in the past one year among those who have ever experienced spousal violence should decline with wealth. However, Table 4.1 shows that this proportion does not vary consistently with wealth. Only in the Dominican Republic does this proportion decline more or less steadily with wealth.

Table 4.1 Spousal violence by wealth quintile

Percentage of ever-married women who have ever experienced spousal violence, experienced spousal violence in the past year, and never experienced spousal violence, by wealth quintile of the household in which they reside, DHS surveys in Cambodia (2000), Dominican Republic (2002), and Haiti (2000)

Occurrence of spousal violence	Wealth quintile				
	First (poorest)	Second	Third	Fourth	Fifth (wealthiest)
CAMBODIA					
Ever	24.4	18.6	15.1	14.4	14.4
Past year	22.2	16.4	12.2	13.4	12.5
Never	75.6	81.4	84.9	85.6	85.6
Number of women	486	499	499	432	487
Percent who experienced violence in the past year among those who have ever experienced violence	90.8	88.2	81.3	93.5	87.1
DOMINICAN REPUBLIC					
Ever	23.8	24.6	25.1	22.1	16.3
Past year	12.7	13.3	12.6	10.1	6.7
Never	76.2	75.4	74.9	77.9	83.7
Number of women	1,059	1,473	1,420	1,442	1,413
Percent who experienced violence in the past year among those who have ever experienced violence	53.6	54.1	50.2	45.8	40.9
HAITI					
Ever	28.9	26.6	35.2	26.7	26.8
Past year	20.3	22.7	29.7	18.9	14.0
Never	71.1	73.4	64.8	73.3	73.2
Number of women	463	432	455	513	484
Percent who experienced violence in the past year among those who have ever experienced violence	70.1	85.2	84.4	70.8	52.3

At a minimum, this discussion suggests that women who are the poorest, both absolutely and relative to others in the population (which is what being in the first quintile of the wealth index implies), are not necessarily the ones who have the highest prevalence of spousal violence. This still leaves open the question of whether women who are poor and are subject to spousal violence differ in significant ways from other women. Although women who are poor may not necessarily be the ones most likely to experience violence, women who are poor and experience violence may nonetheless be particularly disadvantaged in terms of their backgrounds and reproductive health. The rest of the paper addresses this issue using the variable reflecting ever experience of violence by women rather than just the experience of violence in the past year. (Ever experience of violence includes any recent experience.) This choice is based on the belief that the association of violence and current poverty status is more likely to result from a long-term history of violence than from just the current experience of violence. In a few cases, the only reported experience of violence may have occurred in the past year, however. For these women, ever experience of violence would be the same as current experience; thus, for them, the association will not be measuring long-term effects. The results should be interpreted as capturing mainly, but not entirely, the long-term effects of spousal violence.

5   WOMEN AT THE NEXUS OF VIOLENCE AND POVERTY: ARE THEY UNIQUE IN THEIR DISADVANTAGE?

The situation of women who are at the nexus of poverty and spousal violence is examined first by comparing their household, individual, spousal, and marital characteristics with women who are not poor and/or have not experienced violence and second by determining the extent to which these women, in particular, are disadvantaged with regard to specific reproductive health variables.

5.1   Do Women at the Nexus of Poverty and Violence Differ in Significant Ways from Other Women?

The purpose of this exercise is to describe the characteristics of women who have experienced spousal violence and are poor, and then compare them with three other groups of women: women who are poor but have never experienced spousal violence, women who have experienced spousal violence but are not poor, and women who are not poor and have not experienced spousal violence. For this exercise, women who live in households that belong to the first wealth quintile are designated as "poor"; women living in households belonging to any other wealth quintile except the first are designated as "not poor." As mentioned before, the lowest wealth quintile identifies households that both have the lowest absolute level of wealth and, by virtue of their location in the ranking of households on wealth, are also relatively the poorest. Restricting the concept of "poor" to the very poorest allows us to see more starkly the effect of being both poor and subject to violence.

Table 5.1 shows the mean values for the same characteristics that were discussed in Table 3.1. To determine whether means are different between the different categories of women, we evaluated statistical significance for two pairs of groups of women: women in each category of violence who are poor are compared with women in the same category of violence who are not poor (vertical pairs with gray shading in Table 5.1 are *not* significantly different), and women who have ever experienced spousal violence are compared with women who have never experienced spousal violence, holding constant the wealth group (in Table 5.1, italicized and underlined horizontal pairs *are* significantly different). Only differences significant with a probability of five percent or less are identified.

Table 5.1 Characteristics of ever-married women by experience of spousal violence and wealth status

Among ever-married women who are poor (first wealth quintile) and who are not poor (wealth quintiles two through five), percentage who have ever experienced spousal violence by background characteristics, DHS surveys in Cambodia (2000), Dominican Republic (2002), and Haiti (2000)

		Experience of spousal violence					
		Cambodia		Dominican Republic		Haiti	
Characteristics	Wealth status	Never	Ever	Never	Ever	Never	Ever
Household characteristics							
Percent in rural areas	Poor	95.6	92.9	*72.1*	*63.3*	98.1	98.0
	Not poor	80.9	81.7	*26.8*	*23.2*	51.4	51.6
Percent in nuclear family	Poor	72.4	79.9	68.7	64.0	*52.6*	*64.8*
	Not poor	58.4	63.9	58.1	56.2	*37.7*	*43.4*
Respondent's characteristics							
Mean age (years)	Poor	33.1	32.9	31.2	31.1	34.3	35.0
	Not poor	*34.4*	*35.8*	*33.0*	*32.0*	32.9	33.0
Percent currently married	Poor	81.0	78.9	*86.5*	*73.5*	*93.2*	*86.2*
	Not poor	*89.1*	*82.2*	*79.7*	*64.1*	*87.6*	*73.9*
Percent married more than once[1]	Poor	*6.5*	*12.2*	*35.6*	*56.0*	38.5	46.7
	Not poor	*6.5*	*15.2*	*32.1*	*48.5*	*34.6*	*47.3*
Mean age at first marriage	Poor	19.9	19.4	*16.9*	*16.0*	19.1	19.4
	Not poor	19.4	19.7	*19.0*	*17.4*	*20.0*	*19.2*
Mean number of children ever born	Poor	3.5	4.1	*3.6*	*4.0*	4.9	5.3
	Not poor	*3.8*	*4.4*	*2.6*	*2.8*	3.4	3.7
Mean number of years of education	Poor	1.7	1.5	4.4	4.2	0.7	0.9
	Not poor	*3.3*	*2.7*	*8.9*	*8.0*	*3.3*	*3.8*
Percent currently employed	Poor	87.1	81.7	*32.1*	*39.4*	*57.9*	*69.0*
	Not poor	84.4	84.3	*53.4*	*62.7*	*65.4*	*68.5*
Percent who know father beat mother	Poor	11.8	15.8	*10.5*	*19.9*	*9.4*	*19.4*
	Not poor	*8.7*	*19.8*	*10.6*	*21.2*	*11.6*	*15.1*
Marriage characteristics							
Mean spousal age difference[1]	Poor	2.5	2.2	*6.9*	*4.6*	*5.9*	*-0.3*
	Not poor	3.2	2.5	5.4	5.0	5.8	5.6
Mean difference in spousal education (years)[2]	Poor	1.6	1.2	6.2	5.7	0.8	1.2
	Not poor	2.0	1.8	*5.3*	*4.8*	*1.9*	*2.4*
Husband's characteristics							
Mean age[1]	Poor	34.3	34.8	*38.0*	*35.7*	*40.5*	*34.9*
	Not poor	37.2	37.4	*38.2*	*36.8*	*38.4*	*37.3*
Mean number of years of education[2]	Poor	3.3	2.8	10.5	10.0	*1.5*	*2.2*
	Not poor	*5.3*	*4.5*	*13.4*	*12.6*	*5.2*	*6.3*
Percent drunk frequently	Poor	*10.6*	*39.7*	*8.1*	*31.0*	*2.8*	*7.9*
	Not poor	*6.7*	*30.4*	*6.4*	*26.5*	*1.5*	*11.3*

[1] Refers to current husband's age only; not available for women not currently married.
[2] Refers only to education of current husband for currently married women and last husband for formerly married women.
Significance: a) Contrast between "poor" and "not poor" women within each category of violence: unshaded pairs are significant at p<.05; shaded pairs are not significant at p<.05; b) Contrast between women who have "ever experienced spousal violence" and who have "never experienced spousal violence" within each wealth category ("poor" and "not poor"): Pairs that are bold, underlined, and italicized are significant at p<.05; pairs that are not bold, underlined, and italicized are not significant at p>.05.

Many characteristics vary significantly between poor and not-poor women who have experienced spousal violence. Specifically, women who have ever experienced spousal violence and are poor are much more likely to live in rural areas, to live in nuclear families, to have on average much less education themselves, and to have husbands with less education in all three countries, compared with women who have also experienced spousal violence but are not poor. In the Dominican Republic and Haiti only, poor women who have ever experienced spousal violence are more likely to be currently married and of higher parity. In the Dominican Republic alone, they are more likely to be married more than once, to have been first married at a younger age, and to be

currently employed. In Haiti alone, they are on average older than their husbands than women who have also experienced spousal violence but are not poor. Notably, these women also differ significantly in terms of their mean age, the mean age of their husbands, and interspousal educational difference in some countries; however, the direction of variation is not the same across the countries. Importantly, however, with only one exception (namely, interspousal age difference in Haiti), in all other cases *the variation in the corresponding descriptors for poor and not-poor women is equally significant for women who have never experienced violence.* This suggests that the distinctions between poor and not-poor women who have experienced spousal violence are being driven not by the experience of violence but by overall differences between the characteristics of poor women and women who are not poor.

Women who are poor and have experienced violence can also be compared with women who are poor but have never experienced violence. This comparison also yields mixed results across countries. For example, in the Dominican Republic alone, rural residence distinguishes poor women who have never experienced violence from those who have ever experienced violence, and nuclear family structure is much more common among poor women in Haiti who have ever experienced violence than among those who have never done so. However, both of these distinctions also mark women who are not poor. In terms of other characteristics as well, women who are poor *and have experienced violence* are either no different from women who are poor *and have never experienced violence*, or if they are significantly different, then the difference is equally valid for women who are not poor. For example, a higher proportion of women who have experienced spousal violence have been married more than once in Cambodia and the Dominican Republic, compared with women who have never experienced spousal violence, but this is true irrespective of whether women are poor or not poor. The percentages of women whose fathers beat their mothers and whose husbands are frequently drunk are also higher among women who report spousal violence than among those who do not, but again, this is equally true for poor women as well as women who are not poor.

These comparisons suggest that women who are at the nexus of violence and poverty are not unique: if poverty marks them, it similarly marks women who have never experienced spousal violence, and if the experience of spousal violence distinguishes them, it similarly distinguishes those who are not poor. Of importance, however, is an often overlooked fact evident in Table 5.1. The experience of spousal violence distinguishes women who are not poor even *when it does not distinguish women who are poor.* For example, in all three countries, among women who are not poor, women who have ever experienced spousal violence differ significantly from women who have never experienced spousal violence, in terms of their education and the education of their husbands. This is so despite the fact that poor women who have experienced spousal violence do not significantly differ in these respects from poor women who have never experienced spousal violence. Additional significant variation by violence status only among not-poor women is observed for other variables in some, though not all, countries. For example, in Cambodia, even though the likelihood of the father beating the mother does not vary between poor women who have never experienced violence and those who have, it does vary significantly for women who are not poor. Similarly, the mean spousal educational difference is much higher in Haiti and much lower in the Dominican Republic for women who have experienced violence than for women who have not, but only for women who are not poor.

5.2 Do Women at the Nexus of Poverty and Violence Differ Significantly from Other Women in Terms of Selected Demographic and Reproductive Health Outcomes?

In this final phase of the investigation of the relative disadvantage, if any, of women at the nexus of poverty and violence, we examine whether women who are poor and have ever experienced spousal violence are at a significantly higher risk than other women of having each of the following direct outcomes (1 and 2) and indirect reproductive health outcomes (3 and 4):

1. **Ever having had a pregnancy that did not end in a live birth.** This outcome is defined only for women who have ever had a birth (alive or stillborn) or reported a terminated pregnancy. Women were asked whether they had ever had a pregnancy that did not end in a live birth (i.e., ended in miscarriage or abortion or was a stillbirth). In defining this variable, we do not differentiate between the three outcomes since it is not clear to what extent women themselves will have the language to correctly differentiate between these three outcomes and, more importantly, all three outcomes can be expected to be positively associated with domestic violence.

2. **Having had a sexually transmitted infection in the 12-month period preceding the survey.** This variable is based on all ever-married women in the sample and derives from self-reports. In all three countries, women were asked a similar combination of questions to determine whether they had an STI in the past year. In most countries, this combination included a direct question (In the past 12 months, have you had a sexually transmitted disease?) as well as questions on possible symptoms (Sometimes women can have a genital sore or ulcer. In the past 12 months have you had a genital sore or ulcer?). If women said "yes" to one or more of these questions, they are counted as having had an STI in the past 12 months.

3. **Having had an unwanted birth in the five years preceding the survey.** Women with a live birth in the five years preceding the survey were asked whether, at the time they became pregnant with their last birth, they had wanted a child then, later, or not at all. This variable includes women who did not want another child at all at the time they first became pregnant with their last live-born child. Only women who had a birth in the five years preceding the survey are included.

4. **Discontinuing the use of a modern contraceptive method.** Women were asked whether they had ever used a modern contraceptive method and whether they were currently using one. A woman is counted as having currently discontinued the use of a modern contraceptive method if she had ever used one, but was not currently using one. This variable compares women who have discontinued use of a modern contraceptive method with women who have never used a modern method and those who are currently using a modern method. While the variable has many limitations, it does provide a snapshot of whether use is sporadic or not. Notably, for all three countries, women's experience of violence did not significantly affect current use of contraception in bivariate analyses.

Table 5.2 shows how each of these dependent variables varies by women's experience of spousal violence. At the bivariate level, all outcomes are more likely to occur if women have ever experienced violence than if they have not, with the single exception of the "wantedness" of the last birth in Haiti.

Table 5.2 Spousal violence and selected health and demographic variables

Percentage of ever-married women who have experienced selected health and demographic variables by their experience with spousal violence (ever/never), DHS surveys in Cambodia (2000), Dominican Republic (2002), and Haiti (2000)

Women's experience with spousal violence	Percentage who ever had a pregnancy that did not end in a live birth[1]	Percentage who reported having had an STI in the last 12 months[3]	Percentage whose last birth was not wanted[2]	Percentage who discontinued use of a modern contraceptive method[3]
CAMBODIA				
Ever	26.9	6.9	32.0	20.3
Never	19.8	2.8	24.4	12.1
Total	21.1	3.5	25.9	13.5
Number of women	2,249	2,380	1,288	2,402
DOMINICAN REPUBLIC				
Ever	40.8	3.7	24.4	28.8
Never	24.8	1.0	13.0	22.6
Total	28.5	1.6	15.6	24.0
Number of women	6,354	6,803	2,900	6,807
HAITI				
Ever	24.5	18.2	31.3	33.0
Never	17.1	10.3	33.9	19.5
Total	19.3	12.6	33.2	23.4
Number of women	2,165	2,346	1,355	2,345

[1] Only women who have ever had a birth (live birth or still birth) or reported a terminated pregnancy
[2] Only women who have had a birth in the past five years
[3] All ever-married women except those with missing information on the dependent variable
Significance: Shaded pairs are not significant at p<.05.

The focus of this paper is not, however, on determining whether women who have experienced violence have worse health outcomes than women who have not experienced violence, important as this question is; it is on whether women at the nexus of violence and poverty are worse off than other women, particularly other women who have experienced violence but are not poor and those who have not experienced violence but are poor. Accordingly, in Tables 5.3-5.6, we present, for each dependent variable, the regression results for five different combinations of the wealth index and the ever-experience of spousal violence variable: Model 1 includes only the violence variable, Model 2 includes only the wealth index, and Model 3 includes both. These models tell us whether violence and wealth are independently associated with the dependent variable, both with and without the other variable of interest.

However, even if wealth and violence have independent net effects, these models do not isolate and inform about the situation of women who are at the nexus of poverty and violence. To do this, two additional models are run. The first (Model 4) includes a four-category variable that divides the sample of ever-married women into the following groups: women who have ever experienced spousal violence and are poor (in the first wealth quintile); women who have never experienced spousal and are not poor (in any wealth quintile except the first); women who have ever experienced spousal violence and are not poor; and women who have never experienced spousal violence and are not poor. The second model (Model 5) divides the sample into six groups: The first five are groups of women who have ever experienced spousal violence categorized separately by their wealth index value, and the last group includes all women who have never experienced spousal

violence. This last model goes further than Model 4 and asks whether there is reason to expect that the experience of spousal violence has a differing impact for women at different levels of the poverty-wealth spectrum.

All models include control variables gleaned as relevant from the literature for each dependent variable (the discussion of this literature is beyond the scope of this paper). Control variables common to the four reproductive outcomes are age of the respondent, number of years of education, whether she is regularly exposed to any media (television, radio, or newspapers/ magazines), whether she is currently employed, whether she lives in a nuclear or nonnuclear family, and whether she lives in a rural or urban area.

In addition, regression models for the likelihood of having a non-live birth also control for women's current marital status (currently married or not), their number of living children, and the number of children who have ever died. Regression models for the likelihood of having had an STI also include the number of children ever born; a categorical variable that groups women into those who are currently married to their first husband, currently married but not to their first husband, and not currently married; and a categorical variable that measures whether the woman's husband is frequently drunk. Regression models for having an unwanted birth also control for women's current marital status (currently married or not), total number of living children, and total number of children who have ever died. The regression models for contraceptive discontinuation also include controls for the number of children ever born and current marital status.

Tables 5.3 through 5.6 present the odds ratios estimated from logistic regressions of all control variables and the violence and poverty variables of interest, on the likelihood of women experiencing each of the four specified direct and indirect reproductive health outcomes. Only the odds ratios for the different violence and wealth combinations are shown, to keep the focus on the questions at hand. The direction of association and significance of all control variables included in the models is given in Appendix Table A.

5.2.1   Likelihood of Having Had a Pregnancy that Resulted in a Non-live Birth

In all three countries, women who have experienced spousal violence are significantly more likely to have experienced a non-live birth than are women who have never experienced spousal violence with and without a control for household wealth status (Table 5.3). The household wealth status does not have a significant independent effect on this outcome in any country (Models 1 through 3). Model 4 shows that with regard to the likelihood of experiencing a non-live birth, women who are poor and have experienced spousal violence (the reference group) are no different from women who are not poor and have also experienced spousal violence, but are significantly different from poor and not-poor women who have never experienced violence. In all countries, the odds of having a non-live birth for both poor and not-poor women who have not experienced spousal violence are only about 0.6 those for women who have experienced spousal violence. Thus, Model 4 suggests that it is not being at the nexus of poverty and violence that puts women at a greater risk of having a non-live birth in their reproductive years, but having ever experienced spousal violence. Exploring further the relationship of violence to the dependent variable controlling for wealth (Model 5), we see slightly differing patterns in the three countries. In Cambodia, among women who have ever experienced spousal violence, those in the first through fourth wealth quintiles do not have significantly different risks of experiencing a non-live birth, but women in the wealthiest quintile are significantly less likely than their poorer counterparts to experience a non-live birth. In

Table 5.3 Logistic regression for ever having had a live birth

Odds ratios of ever having had a pregnancy that did not result in a live birth among women who have ever had a live birth, a still birth, or a terminated pregnancy

Independent variables	Model 1	Model 2	Model 3	Model 4	Model 5
CAMBODIA					
Ever experienced violence by husband: Ref. cat**.:** Never experienced spousal violence					
Ever experienced spousal violence	1.54***	-	1.53***	-	-
Wealth quintile: Ref. cat.: First quintile (Poor)					
2nd quintile	-	0.92	0.93	-	-
3rd quintile	-	0.89	0.92	-	-
4th quintile	-	0.92	0.95	-	-
Fifth quintile (Richest)		0.96	0.99	-	-
Poverty/violence interaction 1: Ref. cat.: Poor and has experienced spousal violence				***	
Poor but never experienced spousal violence	-	-	-	0.64*	-
Not poor and experienced spousal violence	-	-	-	0.92	-
Not poor and never experienced spousal violence	-	-	-	0.60**	-
Poverty/violence interaction 2: Ref. cat.: Poor and has experienced spousal violence					***
Experienced spousal violence and in 2nd quintile	-	-	-	-	1.02
Experienced spousal violence and in 3rd quintile	-	-	-	-	1.38
Experienced spousal violence and in 4th quintile	-	-	-	-	0.89
Experienced spousal violence and in 5th quintile	-	-	-	-	0.43**
Never experienced spousal violence	-	-	-	-	0.61**
DOMINICAN REPUBLIC					
Ever experienced violence by husband: Ref. cat**.:** Never experienced spousal violence					
Ever experienced spousal violence	1.91***	-	1.91***	-	-
Wealth quintile: Ref. cat.: First quintile (Poor)					
2nd quintile	-	1.12	1.11	-	-
3rd quintile	-	1.03	1.04	-	-
4th quintile	-	1.05	1.06	-	-
Fifth quintile (Richest)		1.00	1.03	-	-
Poverty/violence interaction 1: Ref. cat.: Poor and has experienced spousal violence				***	
Poor but never experienced spousal violence	-	-	-	0.57***	-
Not poor and experienced spousal violence	-	-	-	1.17	-
Not poor and never experienced spousal violence	-	-	-	0.59***	-
Poverty/violence interaction 2: Ref. cat.: Poor and has experienced spousal violence					***
Experienced spousal violence and in 2nd quintile	-	-	-	-	1.38**
Experienced spousal violence and in 3rd quintile	-	-	-	-	1.03
Experienced spousal violence and in 4th quintile	-	-	-	-	0.93
Experienced spousal violence and in 5th quintile	-	-	-	-	1.12
Never experienced spousal violence	-	-	-	-	0.58**
HAITI					
Ever experienced violence by husband: Ref. cat**.:** Never experienced spousal violence					
Ever experienced spousal violence	1.27**	-	1.29**		
Wealth quintile: Ref. cat.: First quintile (Poor)				-	
2nd quintile		1.13	1.21		
3rd quintile	-	0.93	0.92	-	
4th quintile	-	1.05	1.07	-	
Fifth quintile (Richest)	-	1.58	1.63*	-	
Poverty/violence interaction 1: Ref. cat.: Poor and has experienced spousal violence					
Poor but never experienced spousal violence	-	-	-	0.60**	
Not poor and experienced spousal violence	-	-	-	0.82	
Not poor and never experienced spousal violence	-	-	-	0.70*	
Poverty/violence interaction 2: Ref. cat.: Poor and has experienced spousal violence					**
Experienced spousal violence and in 2nd quintile	-	-	-	-	1.04
Experienced spousal violence and in 3rd quintile	-	-	-	-	0.57*
Experienced spousal violence and in 4th quintile	-	-	-	-	0.71
Experienced spousal violence and in 5th quintile	-	-	-	-	1.09
Never experienced spousal violence	-	-	-	-	0.66**

Note: Models for all countries include a constant term and the following dummy variables: regular exposure to any media, currently married, living in a nuclear family, rural residence, and currently employed, and the following continuous variables: number of living children, number of children who have died, current age, and number of years of education.
* p<.10; **p<.05; ***p<.001

the Dominican Republic, by comparison, among women who have ever experienced spousal violence, the ones in the second quintile are significantly more likely than their counterparts in any other quintile to have experienced pregnancy loss. In Haiti, women in the third quintile are the exception among those who have ever experienced spousal violence: They are only about half as likely as their counterparts in other wealth quintiles to have a non-live birth. While the exceptions of Model 5 need investigation, they do suggest that at least in one country (the Dominican Republic), even among women who have ever experienced violence, women who are *not* the poorest are at higher risk than women who are the poorest.

5.2.2   Likelihood of Having Had an STI in the Past 12 Months

The results for the risk of having had an STI are very similar to those for having had a non-live birth (Table 5.4). The experience of violence makes it almost twice as likely in all three countries that women have had an STI, and this effect is not diminished in any way in any of the models. The wealth status of the household does not have an overall significant effect in any country on the likelihood that women have an STI, although, interestingly, in Cambodia, the data suggest that the risk increases with wealth, whereas in the Dominican Republic they suggest that it diminishes with wealth.

5.2.3   Likelihood of Having an Unwanted Birth

The risk of having an unwanted birth, and spousal violence and poverty, have different relationships with one another in the three countries (Table 5.5). In Cambodia and the Dominican Republic, the risk that the last birth a woman had was unwanted is higher if the woman has experienced spousal violence, with or without a control for wealth (Models 1 through 3). However, in Haiti, this risk varies by wealth but not by violence status. Women in the third and fourth wealth quintiles are more likely than other women, even controlling for violence, to have an unwanted pregnancy. In Cambodia, Model 4 suggests that women who are poor and experience spousal violence are, in fact, significantly more likely to have had an unwanted last birth than any other group of women. The more detailed view (Model 5) reveals that there is one other group of women who have a similar risk of an unwanted birth as the women at the nexus of poverty and violence: women who are in the fourth wealth quintile who have experienced violence. Thus, women in the poorest quintile who have experienced spousal violence are not unique in their higher risk of an unwanted birth. In Dominican Republic, by contrast, women who are poor and have experienced spousal violence are not different in terms of their risk of having had an unwanted pregnancy from those who are not poor and have experienced violence, but they do have a significantly higher risk than women who have never experienced violence, irrespective of whether these women are poor or not poor. Model 5 also bears out this result. In the Dominican Republic, wealth does not affect the much higher risk of having an unwanted birth that women who have experienced spousal violence have, compared with women who have never experienced spousal violence. The results of Models 4 and 5 for Haiti provide a contrast to those for Cambodia and the Dominican Republic. In Haiti, women who are not poor are more likely to have had an unwanted birth, particularly if they have also experienced violence. Among the not-poor women who have experienced spousal violence, it is women in the second, third, and fourth quintiles who have the greatest likelihood of having had an unwanted birth. Overall, however, in all three countries, the results suggest that the risk of having an unwanted birth is not uniquely high only for women who are at the nexus of poverty and violence.

Table 5.4 Logistic regression for having an STI in the past 12 months

Odds ratios of having a sexually transmitted infection (STI) or a symptom of an STI in the 12 months preceding the survey, all ever-married women

Independent variables	Model 1	Model 2	Model 3	Model 4	Model 5
CAMBODIA					
Ever experienced violence by husband: Ref. cat**.**: Never experienced spousal violence					
Ever experienced spousal violence	1.80**	-	1.78**	-	-
Wealth quintile: Ref. cat**.**: First quintile (Poor)					
2nd quintile	-	1.25	0.81	-	-
3rd quintile	-	0.73	0.61	-	-
4th quintile	-	1.48	1.21	-	-
Fifth quintile (Richest)	-	2.24*	1.83	-	-
Poverty/violence interaction 1: Ref. cat.: Poor and has experienced spousal violence					
Poor but never experienced spousal violence	-	-	-	0.42*	-
Not poor and experienced spousal violence	-	-	-	0.72	-
Not poor and never experienced spousal violence	-	-	-	0.45*	-
Poverty/violence interaction 2: Ref. cat.: Poor and has experienced spousal violence					
Experienced spousal violence and in 2nd quintile	-	-	-	-	0.58
Experienced spousal violence and in 3rd quintile	-	-	-	-	0.74
Experienced spousal violence and in 4th quintile	-	-	-	-	0.45
Experienced spousal violence and in 5th quintile	-	-	-	-	1.31
Never experienced spousal violence	-	-	-	-	0.45*
DOMINICAN REPUBLIC					
Ever experienced violence by husband: Ref. cat**.**: Never experienced spousal violence					
Ever experienced spousal violence	2.59***	-	2.59***	-	-
Wealth quintile: Ref. cat**.**: First quintile (Poor)					
2nd quintile	-	0.95	1.03	-	-
3rd quintile	-	0.67	0.69	-	-
4th quintile	-	0.59*	0.60	-	-
Fifth quintile (Richest)	-	0.67	0.72	-	-
Poverty/violence interaction 1: Ref. cat.: Poor and has experienced spousal violence				***	
Poor but never experienced spousal violence	-	-	-	0.54*	-
Not poor and experienced spousal violence	-	-	-	1.13	-
Not poor and never experienced spousal violence	-	-	-	0.38***	-
Poverty/violence interaction 2: Ref. cat.: Poor and has experienced spousal violence					***
Experienced spousal violence and in 2nd quintile	-	-	-	-	1.51
Experienced spousal violence and in 3rd quintile	-	-	-	-	0.77
Experienced spousal violence and in 4th quintile	-	-	-	-	1.14
Experienced spousal violence and in 5th quintile	-	-	-	-	1.07
Never experienced spousal violence	-	-	-	-	0.43***
HAITI					
Ever experienced violence by husband: Ref. cat**.**: Never experienced spousal violence					
Ever experienced spousal violence	1.92***	-	1.92***	-	-
Wealth quintile: Ref. cat**.**: First quintile (Poor)					
2nd quintile		0.83	1.17		-
3rd quintile	-	0.94	1.10	-	-
4th quintile	-	0.78	0.96	-	-
Fifth quintile (Richest)	-	1.06	1.35	-	-
Poverty/violence interaction 1: Ref. cat.: Poor and has experienced spousal violence				***	
Poor but never experienced spousal violence	-	-	-	0.59**	-
Not poor and experienced spousal violence	-	-	-	1.22	-
Not poor and never experienced spousal violence	-	-	-	0.62**	-
Poverty/violence interaction 2: Ref. cat.: Poor and has experienced spousal violence					***
Experienced spousal violence and in 2nd quintile	-	-	-	-	1.20
Experienced spousal violence and in 3rd quintile	-	-	-	-	1.06
Experienced spousal violence and in 4th quintile	-	-	-	-	1.17
Experienced spousal violence and in 5th quintile	-	-	-	-	2.05**
Never experienced spousal violence	-	-	-	-	0.62**

Note: Models for all countries include a constant term and the following dummy variables: regular exposure to any media, living in a nuclear family, rural residence, and currently employed, the following categorical variables: current marital status by number of times married and whether the husband is frequently, occasionally or never drunk, and the following continuous variables: number of children ever born, current age, and number of years of education.
* p<.10; **p<.05; ***p<.001

Table 5.5 Logistic regression for the last live birth being unwanted

Odds ratios of a woman's last live birth being unwanted at the time she became pregnant, women who have had a birth in the five years preceding the survey

Independent variables	Model 1	Model 2	Model 3	Model 4	Model 5
CAMBODIA					
Ever experienced violence by husband: Ref. cat**.:** Never experienced spousal violence					
Ever experienced spousal violence	1.44**	-	1.43**	-	
Wealth quintile: Ref. cat**.**: First quintile (Poor)					
2nd quintile	-	0.87	0.88	-	
3rd quintile	-	0.78	0.81	-	
4th quintile	-	0.82	0.82	-	
Fifth quintile (Richest)		0.69	0.68	-	
Poverty/violence interaction1: Ref. cat.: Poor and has experienced spousal violence				**	
Poor but never experienced spousal violence	-	-	-	0.48**	
Not poor and experienced spousal violence	-	-	-	0.55**	
Not poor and never experienced spousal violence	-	-	-	0.46***	
Poverty/violence interaction 2: Ref. cat.: Poor and has experienced spousal violence					**
Experienced spousal violence and in 2nd quintile	-	-	-	-	0.53*
Experienced spousal violence and in 3rd quintile	-	-	-	-	0.43*
Experienced spousal violence and in 4th quintile	-	-	-	-	0.96
Experienced spousal violence and in 5th quintile	-	-	-	-	0.28**
Never experienced spousal violence	-	-	-	-	0.47***
DOMINICAN REPUBLIC					
Ever experienced violence by husband: Ref. cat**.:** Never experienced spousal violence					
Ever experienced spousal violence	1.71***	-	1.70***	-	-
Wealth quintile: Ref. cat**.**: First quintile (Poor)					
2nd quintile	-	1.01	1.01	-	-
3rd quintile	-	0.93	0.95	-	-
4th quintile	-	0.79	0.80	-	-
Fifth quintile (Richest)		0.74	0.76	-	-
Poverty/violence interaction1: Ref. cat.: Poor and has experienced spousal violence				***	
Poor but never experienced spousal violence	-	-	-	0.53***	-
Not poor and experienced spousal violence	-	-	-	0.87	-
Not poor and never experienced spousal violence	-	-	-	0.54***	-
Poverty/violence interaction 2: Ref. cat.: Poor and has experienced spousal violence					***
Experienced spousal violence and in 2nd quintile	-	-	-	-	0.79
Experienced spousal violence and in 3rd quintile	-	-	-	-	1.01
Experienced spousal violence and in 4th quintile	-	-	-	-	0.91
Experienced spousal violence and in 5th quintile	-	-	-	-	0.77
Never experienced spousal violence	-	-	-	-	0.54***
HAITI					
Ever experienced violence by husband: Ref. cat**.:** Never experienced spousal violence					
Ever experienced spousal violence	1.14	-	1.16		
Wealth quintile: Ref. cat**.**: First quintile (Poor)		*	*	-	-
2nd quintile		1.20	1.20		
3rd quintile	-	1.39*	1.39*	-	-
4th quintile	-	1.92***	1.94***	-	-
Fifth quintile (Richest)	-	1.34	1.37	-	-
Poverty/violence interaction1: Ref. cat.: Poor and has experienced spousal violence				**	
Poor but never experienced spousal violence	-	-	-	1.48	-
Not poor and experienced spousal violence	-	-	-	2.23***	-
Not poor and never experienced spousal violence	-	-	-	1.61*	-
Poverty/violence interaction 2: Ref. cat.: Poor and has experienced spousal violence					**
Experienced spousal violence and in 2nd quintile	-	-	-	-	1.90**
Experienced spousal violence and in 3rd quintile	-	-	-	-	2.26**
Experienced spousal violence and in 4th quintile	-	-	-	-	3.07***
Experienced spousal violence and in 5th quintile	-	-	-	-	1.37
Never experienced spousal violence	-	-	-	-	1.57*

Note: Models for all countries include a constant term and the following dummy variables: regular exposure to any media, currently married, living in a nuclear family, rural residence, and currently employed, and the following continuous variables: number of living children, number of children who have died, current age, and number of years of education.
* p<.10; **p<.05; ***p<.001

Table 5.6 Logistic regression for discontinuing use of a modern contraceptive method

Odds ratios of having discontinued using a modern contraceptive method (ever used a modern contraceptive method but not currently using one), all ever-married women

Independent variables	Model 1	Model 2	Model 3	Model 4	Model 5
CAMBODIA					
Ever experienced violence by husband: Ref. cat**.**: Never experienced spousal violence					
Ever experienced spousal violence	1.69***	-	1.77***	-	-
Wealth quintile: Ref. cat**.**: First quintile (Poor)		***	***		
2nd quintile	-	0.62**	1.65**	-	-
3rd quintile	-	1.01	1.75**	-	-
4th quintile	-	1.33	2.27***	-	-
Fifth quintile (Richest)		1.98***	3.38***	-	-
Poverty/violence interaction 1: Ref. cat.: Poor and has experienced spousal violence				***	
Poor but never experienced spousal violence	-	-	-	0.36***	-
Not poor and experienced spousal violence	-	-	-	1.36	-
Not poor and never experienced spousal violence	-	-	-	0.86	-
Poverty/violence interaction 2: Ref. cat.: Poor and has experienced spousal violence					***
Experienced spousal violence and in 2nd quintile	-	-	-	-	0.85
Experienced spousal violence and in 3rd quintile	-	-	-	-	1.10
Experienced spousal violence and in 4th quintile	-	-	-	-	1.30
Experienced spousal violence and in 5th quintile	-	-	-	-	2.80***
Never experienced spousal violence	-	-	-	-	0.74
DOMINICAN REPUBLIC					
Ever experienced violence by husband: Ref. cat**.**: Never experienced spousal violence					
Ever experienced spousal violence	1.14*	-	1.14*	-	-
Wealth quintile: Ref. cat**.**: First quintile (Poor)					
2nd quintile	-	1.10	0.91	-	-
3rd quintile	-	1.01	0.93	-	-
4th quintile	-	1.15	1.05	-	-
Fifth quintile (Richest)	-	1.07	0.98	-	-
Poverty/violence interaction 1: Ref. cat.: Poor and has experienced spousal violence				***	
Poor but never experienced spousal violence	-	-	-	1.23	-
Not poor and experienced spousal violence	-	-	-	1.32**	-
Not poor and never experienced spousal violence	-	-	-	1.03	-
Poverty/violence interaction 2: Ref. cat.: Poor and has experienced spousal violence					**
Experienced spousal violence and in 2nd quintile	-	-	-	-	1.29
Experienced spousal violence and in 3rd quintile	-	-	-	-	1.27
Experienced spousal violence and in 4th quintile	-	-	-	-	1.63***
Experienced spousal violence and in 5th quintile	-	-	-	-	1.51*
Never experienced spousal violence	-	-	-	-	1.11
HAITI					
Ever experienced violence by husband: Ref. cat**.**: Never experienced spousal violence					
Ever experienced spousal violence	1.38***	-	1.41***		
Wealth quintile: Ref. cat**.**: First quintile (Poor)		***	***	-	
2nd quintile		0.83	1.19		
3rd quintile	-	1.19	1.42**		
4th quintile	-	1.59**	1.96***	-	
Fifth quintile (Richest)	-	2.01***	2.51***	-	
Poverty/violence interaction 1: Ref. cat.: Poor and has experienced spousal violence				***	
Poor but never experienced spousal violence	-	-	-	0.99	
Not poor and experienced spousal violence	-	-	-	1.78**	
Not poor and never experienced spousal violence	-	-	-	1.22	
Poverty/violence interaction 2: Ref. cat.: Poor and has experienced spousal violence					***
Experienced spousal violence and in 2nd quintile	-	-	-	-	1.13
Experienced spousal violence and in 3rd quintile	-	-	-	-	1.95**
Experienced spousal violence and in 4th quintile	-	-	-	-	1.79**
Experienced spousal violence and in 5th quintile	-	-	-	-	3.16***
Never experienced spousal violence	-	-	-	-	1.19

Note: Models for all countries include a constant term and the following dummy variables: regular exposure to any media, living in a nuclear family, rural residence, and currently employed, a categorical variable that combines current marital status with the number of times married, and the following continuous variables: number of children ever born, current age, and number of years of education.
* p<.10; **p<.05; ***p<.001

5.2.4   Risk of Having Discontinued Use of a Modern Contraceptive Method

In Cambodia, both experience of spousal violence and household wealth status affect the likelihood that women have discontinued use of a modern contraceptive method (Table 5.6). The risk of discontinuation is significantly higher for women who have experienced spousal violence and tends to increase with household wealth. Model 4 for Cambodia shows that the poor are more likely than the rich to discontinue contraceptive use, irrespective of whether they have experienced violence or not. Model 5 shows that the women most likely to discontinue use are, in fact, those who live in the wealthiest households and who have experienced violence. In the Dominican Republic, the experience of violence is significantly associated with a higher risk of discontinuation of modern methods (Models 1 through 3), and this is true even for women who are not poor (Model 4). Model 5 for the Dominican Republic shows that, in fact, the risk of discontinuation of contraception among women who have experienced spousal violence is higher the wealthier the household. In Haiti, both violence and wealth affect women's likelihood of discontinuing use of modern contraceptive methods: women in wealthier households and women who have experienced spousal violence are the ones most likely to have discontinued use. However, Model 4 shows that women who are not poor and have experienced violence are about twice as likely as other women, including women at the nexus of poverty and violence, to discontinue use of modern methods. This is borne out further by Model 5, which reveals that the likelihood of discontinuing increases steadily with increasing wealth among women who have experienced spousal violence. The effect of wealth here is somewhat counterintuitive. However, it should be remembered that these effects are being measured net of other factors that tend to be important for contraceptive use, namely, women's age, education, media exposure, and number of children. An argument could perhaps be made that the higher levels of discontinuation among wealthier abused women may relate to their being in a better position than poor women to access the resources needed to leave an abusive marriage. This argument would suggest that greater discontinuation of modern methods among wealthier abused women is due to the greater likelihood that they are no longer married and hence may not need contraception. However, this explanation, even if relevant, is already accounted for, given the control in the equations for current marital status. For Haiti at least, further research is needed to explain the effect of wealth. Nonetheless, it is important to note that even with respect to contraceptive discontinuation, it is largely the experience of violence, or the combination of violence and higher wealth status, rather than poverty that puts women at higher risk.

6   SUMMARY AND CONCLUSIONS

This paper used DHS data from three countries, namely, Cambodia, the Dominican Republic, and Haiti, to investigate whether women at the nexus of poverty and violence are unique in their disadvantage, both in terms of their life characteristics and situation, and in terms of selected reproductive health outcomes. We defined violence in terms of ever having experienced spousal violence and defined the wealth status of women by means of a robust, validated wealth index derived from the households in which the women live. This index divides all households into wealth quintiles so that those in the first wealth quintile belong to the poorest 20 percent of the population and those in the fifth quintile belong to the wealthiest 20 percent of the population. Women at the nexus of poverty and violence were identified as those who have ever experienced spousal violence and belong to the poorest population quintile.

In the first part of this paper, we compared women at the nexus of poverty and violence to women who were not poor but had experienced violence and to women who were poor but had

never experienced violence. Comparisons were made for several different household, individual, and marriage-level characteristics that are often argued to affect women's empowerment and risk of violence. In general, we found that women who are at the nexus of poverty and violence are in most respects not consistently different from other women who have experienced violence and other poor women. In fact, they share the disadvantages of poverty, such as low levels of education, with other women who are poor, and they share the disadvantages commonly associated with having experienced violence, such as having a husband who is frequently drunk and having a father who beat their mother, with wealthier women who have also experienced violence. In addition, in some cases, the experience of violence disadvantages women who are not poor even when it does not distinguish between women who are poor. For example, in Cambodia and the Dominican Republic, women's mean number of years of education and their husbands' mean number of years of education do not differ by the experience of spousal violence if they are poor; however, among women who are not poor in these countries, women who have experienced violence have significantly lower amounts of education and have husbands with significantly lower amounts of education than women who have not experienced violence.

In the second part of the paper, multivariate logistic regression analysis was used to determine whether women at the nexus of poverty and violence, even if not unique in their characteristics, were, nonetheless, more likely to experience selected adverse reproductive health outcomes. Four outcomes hypothesized to be related to the experience of violence were defined: ever having a non-live birth, having had an STI in the 12 months preceding the survey, having had an unwanted last birth, and having discontinued use of modern contraceptive methods. While the former are direct measures of two aspects of women's reproductive health, the latter two, by proxying women's ability to control fertility and have only the births they want, indirectly measure women's reproductive health. Regressions with all appropriate controls were run to examine 1) the independent effects of the experience of violence and the wealth status of the household on each of these dependent variables, and 2) the effect of being at the nexus of poverty and violence. The results for all three countries, though varying in some details, consistently showed that the experience of violence does make it more likely that women experience adverse health outcomes. By contrast, the effects of wealth status were not always significant, varying by outcome and country. Most important, however, the results show that there is little that is unique about women who are at the nexus of poverty and violence. For most outcomes, women at the nexus of poverty and violence were either no more disadvantaged than women who were not poor and had experienced violence, or were actually somewhat better off than women who were wealthy and had experienced violence.

Thus, despite the different ways in which the disadvantage of women at the nexus of poverty and violence was investigated in this paper, and despite the fact that this disadvantage was sought in the data for three very different countries, the most consistent findings of this paper can be summed as follows: It is the experience of violence per se that disadvantages women, whereas poverty does not uniquely disadvantage women who experience violence. In fact, for some types of reproductive health outcomes, violence negatively affects women who are "wealthy" more than it does women who are "poor." The importance of this finding—and the fact that the message is consistent across three countries—needs to be underscored. When the experience of violence adversely impacts a particular health outcome, it does so whether the woman is poor or not. For these health outcomes, the negative effect of having experienced violence extends across all economic backgrounds and is not limited to women at the nexus of poverty and violence.

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APPENDIX A

Appendix Table A Significance and direction of the logistic coefficients of control variables included in the models in Tables 5.3-5.6			
Control variables in logistic regression models	Cambodia	Dominican Republic	Haiti
Table 5.3 Likelihood of ever having had a pregnancy that did not result in a live birth			
Individual characteristics			
Age	s(+)	s(+)	s(+)
Number of years of education	ns(-)	s(-)	ns(-)
Number of living children	ns(+)	s(-)	ns(-)
Number of children dead	ns(+)	ns(+)	ns(+)
Dummy variables			
Regularly exposed to media	s(+)	ns(+)	ns(+)
Employed	ns(+)	s(+)	ns(-)
Currently married	s(+)	ns(+)	ns(+)
Household characteristics			
Rural	s(-)	ns(-)	ns(+)
Nuclear	ns(+)	ns(+)	ns(+)
Constant	s(-)	s(-)	s(-)
Table 5.4 Likelihood of having a sexually transmitted infection (STI) or a symptom of an STI			
Individual characteristics			
Age	ns(-)	ns(-)	ns(-)
Number of years of education	ns(+)/-	ns(-)	s/ns(-)
Number of children ever born	ns(-)	ns(-)	s(-)
Marital status: *Ref: Never married*			
Married once	ns(+)	ns(+)	ns(-)
Married more than once	ns(+)	ns(+)	ns(-)/(+)
Husband's drinking: *Ref: Never drunk*			
Sometimes drunk	ns(-)	s(+)/s(-)	ns(+)/(-)
Frequently drunk	ns(-)	ns(+)/s(-)	ns(+)/(-)
Dummy variables			
Regularly exposed to media	ns(+)	ns(+)	s(+)
Employed	ns(-)	s(+)	s(+)
Household characteristics			
Urban	ns(+)/(-)	ns(+)	ns(-)/(+)
Nuclear	ns(+)	ns(-)	ns(+)
Constant	s(-)	s(-)	s(-)
Table 5.5 Likelihood of a woman's last live birth being unwanted at the time the woman became pregnant			
Individual characteristics			
Age	ns(-)	s(+)	ns(+)
Number of years of education	ns(+)	s(-)	ns(-)
Number of living children	s(+)	s(+)	s(+)
Number of children dead	s(+)	s(+)	s(+)
Dummy variables			
Regularly exposed to media	s(+)	ns(+)	ns(+)/(-)
Employed	ns(+)	ns(-)	ns(-)
Currently married	ns(-)	s(-)	ns(-)
Household characteristics			
Rural	ns(+)	ns(+)/(-)	ns(+)/(-)
Nuclear	s(+)	ns(-)	ns(+)
Constant	s(-)	s(-)	s(-)
Table 5.6 Likelihood of of having discontinued using a modern contraceptive method			
Individual characteristics			
Age	s(-)	s(-)	s(-)
Number of years of education	s/ns(+)	s(+)	s(+)
Number of children ever born	s(+)	s(-)	s(+)
Marital status: *Ref: Never married*			
Married once	ns/s(+)	s(-)	ns(-)
Married more than once	s(+)	s(-)	ns(-)
Dummy variables			
Regularly exposed to media	s(+)	ns(+)	ns(+)
Employed	ns(+)	ns(-)	ns(+)
Household characteristics			
Urban	ns(+)/(-)	ns(+)	s/ns(-)
Nuclear	s(+)	s(-)	ns(-)
Constant	s(-)	s(+)	s(-)

s: Coefficient is significant at p<0.10; ns: Coefficient is not significant at p<0.10
s/ns: Coefficient is significant in some models but not others; +/-: Coefficient is positive in some models but not in others