

## **Physical Domestic Violence and Subsequent Contraceptive Adoption in Uttar Pradesh, India**

Over the past decade, the issue of violence against women in developing countries has emerged as a growing public health concern among those concerned with women's health and empowerment. While women in developing countries are vulnerable to many forms of violence, domestic violence represents perhaps the most pervasive form. Domestic violence, defined by the World Health Organization as: "... the range of sexually, psychologically and physically coercive acts used against adult and adolescent women by current or former male intimate partners", has been shown to range from as low as 10 percent to as high as 69 percent in developing country population-based surveys. Within the arena of public health, there is now a growing recognition of the possible linkages between domestic violence and a range of adverse physical, mental, and reproductive health outcomes. Despite the high prevalence of domestic violence the linkages between the experiencing of domestic violence and reproductive health outcomes, however, remain an area little studied in developing country settings, despite a growing body of evidence from developed societies.

This study examines the impact of experiencing physical domestic violence on the subsequent adoption of contraception among married women of reproductive age (15-45) in Uttar Pradesh, India. The primary objective in this paper is to contribute to the currently limited body of empirical evidence on the reproductive health consequences of domestic violence by examining the impact of domestic violence on contraceptive behavior, and additionally, understanding the range of individual measure of domestic violence and community level measures of attitudes towards violence and gender that may shape the relationship between domestic violence and contraceptive adoption. A greater understanding of the relationship between domestic violence and contraceptive adoption has the potential to highlight the reproductive health consequences of domestic violence and to inform the targeting of public health interventions to women experiencing domestic violence.

The data set for this analysis is the 1995-96 PERFORM System of Indicators Survey (PSIS). Data were collected via seven questionnaires: individual (women aged 13-49), household, community (separate questionnaires for village and urban), private and public health facility (separate questionnaires for fixed service delivery points and individual service delivery agents) and health facility staff. The survey employed a stratified multistage cluster sample design for households and service delivery points. The Male Reproductive Health Survey (MRHS) was a companion study undertaken in five of these 28 districts to obtain detailed information on husbands' knowledge and behavior related to their wives' and their own reproductive health. The sampling frame for the MRHS was all husbands in households identified in the first stage sample in five of the original twenty-eight sampled districts, representing all five regions of Uttar Pradesh. Eligibility criteria for men included being currently married, between 15-59 years of age, and currently residing with their wife. The survey covered a wide range of issues pertaining to household socioeconomic and demographic status, contraceptive knowledge, use, and intentions, health expenditures, pre- and extra-marital sexual contact, and sexually transmitted infections. The survey also included a series of detailed questions on husbands' exposure to, and perpetration of physical violence and sexual violence, the basis for the present study. Husbands were asked whether they had ever physically hit, slapped, kicked, or tried to hurt their wife, the initial and most recent timing of such incidents, and the total number of times such violence had occurred. Husbands were also asked whether they ever had sex with their wife when she was unwilling, and if so, whether they ever physically forced their wife to have sexual relations, as well as the timing of the most recent occurrence of forced sex.

The data sets for women and their husbands were matched, producing a sample of 3, 643 couples. Data on contraceptive behavior were collected using the calendar method, collecting data on contraceptive behavior in the three years prior to the survey (June 1992 to June 1995). This 3 years period thus represents the period of exposure. The sample for analysis are women who were not using contraception and had at least one child at the start of this three year period (June 1992), resulting in a sample size of 1, 010 married women of reproductive age.

A Cox regression model is fitted to the data, with the adoption of a modern method of contraception during the 36 month exposure period representing the failure event. The model considers both individual and community level influences on the decision to adopt contraception. In this analysis the Primary Sampling Unit (PSU) is used to denote the community. The selection of individual variables is guided by previous studies of contraceptive adoption and includes: woman's level of education, husband's level of education, parity, spousal age difference, age at marriage, rural residence and an asset index acting as a proxy for the socioeconomic status of the household. The key individual variable of interest is whether the husband reports physical domestic violence towards his wife (data on domestic violence as collected only from the husband). To account for the temporal ordering of events and to prevent potential reverse causality, only physical domestic violence that occurred prior to the start of the 36 month exposure period is considered. Two aggregated indicators of community socioeconomic development considered are the proportion of households in the community which have electricity, and the mean number of years of schooling among women. A community-level measure of gender norms was created through factor analysis of husbands' responses to three individual-level attitudinal variables on gender roles and norms for women, and aggregated to the PSU level. Responses to the questions were structured on Likert scales, ranging from strongly agree to strongly disagree. Higher scores reflect more conservative norms regarding gender roles.

Twenty-seven percent of women in the sample experienced physical domestic violence. A significant negative association was found between a husband's reporting of physical domestic violence towards his wife and his wife's adoption of a modern method of contraception during the exposure period (Hazard Ratio (HR) 0.782, P 0.040). For the community level variables, a significant negative association was found between the community gender attitudes index and the hazards of a woman adopting contraception (HR 0.544, P 0.001). Thus, women living in PSUs with more conservative attitudes towards gender roles (and thus a higher score on the index) were the least likely to adopt a modern method of contraception. The level of community socioeconomic development showed a significant positive association with the hazards of adopting contraception (HR

1.848, P 0.009). The traditional health index, a measure of the presence of traditional / *ayurvedic* health services in the PSU, showed a significant negative association with the hazards of contraceptive adoption (HR 0.338, P 0.001).

The study finds evidence to suggest a relationship between the experiencing of physical domestic violence and a woman's subsequent contraceptive adoption. The study also highlights that it is not only individual experience of violence that exerts an influence on contraceptive adoption; community attitudes towards gender roles, which create environments of tolerance of violence, are also an influencing factor in contraceptive adoption.