

## The Relationship between Sexual Violence and Reproductive Health among Female Youth in Colombia

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Strong evidence exists to demonstrate a relationship between gender-based violence and reproductive health risk. Studies have shown an increased risk for unintended pregnancy among women experiencing intimate-partner violence in Colombia<sup>1,2</sup>; however, as is the case globally, less is known about sexual violence among adolescent and young women, both in partner and non-partner relationships.<sup>3,4</sup>

There are currently 1.7 billion young people aged 10-24 in the world.<sup>5</sup> Because of the decreasing age of menarche and increasing age of marriage, there is a longer than ever period between puberty and adulthood and increasing levels of premarital sexual activity.<sup>6</sup> Clearly, the reproductive health needs of young people are a priority, but very few nations provide adequate access to reproductive health services to adolescents.<sup>7</sup>

Sexual violence not only violates an adolescent's body and human rights, but it also encroaches upon her right to control her fertility, gynecological and overall health and, in cases where the perpetrator is a teacher, her right to an education.<sup>8,9</sup> Sexual violence is defined as "any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and work."<sup>10</sup> Numerous studies have demonstrated that adolescent and young women who have experienced sexual violence have worse outcomes than those who have not.<sup>3,11,12</sup>

Though a conceptual framework for the study of sexual violence and reproductive health has not been specifically defined, it is theorized that the sequelae of sexual violence influences reproductive health in several ways. First, there are the direct biological implications of sexual violence, which may immediately lead to unwanted pregnancy and STIs. The long-term effect of sexual violence on reproductive health outcomes is thought to be related to the disempowering effect of the act, particularly when it happens to a young woman.<sup>4,10</sup> Women who have experienced sexual violence negotiating condom and contraceptive use, thus may face increased risks for unintended pregnancy, abortion, STIs, HIV and subsequent sexual coercion.<sup>3</sup> In addition, research in the developed world has demonstrated a strong association between childhood sexual abuse and increased risk for unsafe sexual practices.<sup>13-15</sup> For a young woman, the experience of sexual violence appears to permeate her future reproductive health.

Colombia is in the late stages of the fertility transition with a total fertility rate (TFR) of 2.4.<sup>16</sup> Though the fertility transition in Colombia is thought to be stalled<sup>17</sup>, fertility has declined dramatically from a TFR of 6.0 in 1968.<sup>18</sup> Family planning methods appear to be generally available, with 92.9% of married women and 93.5% of unmarried sexually active women having ever used a modern family planning method in 2005. Among unmarried sexually active, young women, 66.1% of 15- to 19-year-olds and 66.5% of 20- to 24-year-olds were currently using modern contraceptives.<sup>16</sup> Women's status is undergoing rapid changes in Colombia, which is hypothesized to be linked to increased gender-based violence in areas where gender norms are rapidly changing and where intimate partner violence (IPV) and sexual coercion may be used as a means of controlling women's autonomy.<sup>1</sup>

This study will explore the relationship between sexual violence and a variety of reproductive health outcomes among women between ages 13 and 24 in Colombia in 2005. In this analysis, I will examine the effects of experiencing sexual violence on unintended pregnancy, recent sexually transmitted infection (STI) diagnosis, condom use at last sex, and current use of a modern family planning method, controlling for age of sexual debut and socioeconomic characteristics.

## **Data and Methods**

Data from the nationally representative, women's survey of the 2005 Colombia Demographic and Health Survey (DHS) were used in this analysis. Multi-stage, probability sampling was used to identify households. A total of 41,344 women aged 13-49 were interviewed in the survey. This analysis focuses on the 9,164 sexually experienced female youth (aged 13-24).

The independent variable of interest was a dichotomous variable indicating whether the respondent has experienced sexual violence, which was broadly defined as an affirmative response to questions about ever being physically forced for sexual acts by a spouse, being forced by spouse to perform other sexual acts when not wanted, being forced by someone other than a husband to perform sexual acts, or having been forced to have sex to obtain money or benefits for others. If the participant responded affirmatively to any of these questions, they were considered to have experienced sexual violence.

Outcome variables of interest included various reproductive health indicators: among women who had been pregnant in the prior 5 years, whether the pregnancy was unintended; whether a condom was used at last intercourse; whether the respondent is currently using a modern family planning method, including oral, implanted and injectable contraceptives, intrauterine devices, female and male sterilization and condoms; and whether the respondent was diagnosed with or experienced symptoms of a STI in the last 12 months.

Individual-level variables were also considered based on literature showing their influence on the selected reproductive health outcomes. Control variables include the respondent's current age, sexual initiation before age 15, highest education level, relationship status, religion and rural residence. Ordinal principal components analysis (PCA) was used to calculate a proxy measure of socioeconomic status for the entire sample of women. Included in the PCA were the following household characteristics: ordinal variables indicating the quality of walls, floors and toilets, and dummy variables indicating whether her household had electricity and owned a radio, television, refrigerator, motorcycle and car.

All analyses were conducted using Stata 9.1 statistical software. Descriptive statistics for sociodemographic and reproductive health characteristics were calculated for the sexually experienced young women. Pearson's chi-squared tests were used to assess significant differences in the prevalence of the selected reproductive health outcomes among women who reported sexual violence and among those who did not. Multivariate logistic regression models assessed the relationship between each of the four reproductive health outcomes with sexual violence, controlling for the sociodemographic characteristics and age of sexual debut. Sampling weights were applied to the regression models.

## Results

Preliminary analyses were conducted using the early release version of the 2005 Colombia DHS. Religion was not included in these analyses, due to the variable's absence from the preliminary data set. The final data should be available by early October and are expected to be very similar to the preliminary data set.

Among sexually experienced adolescent and young women in Colombia, 13% reported having experiencing sexual violence. The mean age of women included in the analyses was 20.2 years, and 38% were between the ages of 22 and 24. The mean age of sexual debut was 15.9 years, with 23% of women initiating sexual activity before age 15. More women were in the fourth lowest wealth group (27%) than any other wealth group. Only 22% had completed primary school or less. The young women were largely urban residents and unmarried or not living with partners.

Chi-squared tests were used to assess difference in the percentage distributions of the respondents by the selected reproductive health measures of interest by the experience of sexual violence. Among women who had experienced sexual violence and had been pregnant in the prior 5 years, 54% experienced unintended pregnancies. In contrast, 48% of women who did not report sexual violence classified a pregnancy as unintended in the past 5 years. Differences between the two subgroups were statistically significant. Among all respondents, those who had experienced sexual violence were significantly less likely to have used condoms at last sex (20% vs. 24%) and to be currently using a modern family planning method (33% vs. 43%). Young women who had experienced sexual violence were significantly more likely than those who did not report violence to report being diagnosed with an STI or experienced one or more genital tract symptoms in the past 12 months (11% vs. 6%).

In bivariate models, sexual violence was strongly linked to unintended pregnancy and STI diagnosis, as well as a decreased likelihood of current use of modern family planning and condom use at last sex. Multivariate models explored the associations between sexual violence and the selected reproductive health outcomes, controlling for sociodemographic characteristics and age of first intercourse. Among women who had been pregnant in the previous 5 years, respondents reporting sexual violence had significantly higher odds of unintended pregnancy (OR = 1.40, 95% CI = 1.09-1.79) and STI diagnosis (OR = 2.38, 95% CI = 1.80-3.16). In the multivariate models, sexual violence no longer had a significant impact on condom use at last sex or current family planning use.

Having completed secondary education was strongly associated with increased odds of unintended pregnancy (OR = 1.49, 95% CI 1.21-1.83) and condom use at last sex (OR = 1.53, 95% CI = 1.23-1.89). Secondary education was also linked to increased odds of using a modern family planning method (OR = 1.24, 95% CI 1.05-1.47). Completion of higher education was significantly linked to elevated odds of unintended pregnancy (OR = 2.07, 95% CI = 1.48-2.590), condom use during last intercourse (OR = 2.35, 95% CI = 1.77-3.13) and current contraceptive use (OR = 1.41, 95% CI = 1.10-1.80). Initiating sexual intercourse before age 15 was significantly associated with decreased odds of condom use at last intercourse (OR = 0.77, 95% CI = 0.62-0.95), increased odds of recent STI diagnosis or symptoms (OR = 1.47, 95% CI = 1.07-2.00) and current use of a modern family planning method (OR = 1.37, 95% CI 1.16-1.70).

Wealth was not significant in the models examining unintended pregnancy, condom use at last intercourse, or recent STI diagnosis or symptoms. In the model examining family planning, all four wealth variables were significantly associated with decreased odds of using a modern contraceptive method. All age groups were significant and associated with unintended pregnancy and current use of modern contraception. As age decreased, the odds of unintended pregnancy increased. Conversely, the odds of current use of a modern contraceptive method increased with age. Being in union was significantly associated with decreased risk of unintended pregnancy (OR = 0.68, 95% CI = 0.57-0.79) and condom use at last intercourse (OR = 0.30, 95% CI = 0.25-0.37), and increased odds of using a modern method of family planning (OR = 1.91, 95% CI = 1.67-2.17). Rural residence was significantly associated with lower odds of condom use at last intercourse (OR = 0.73, 95% CI = 0.59-0.90).

## **Conclusion**

The results of this analysis indicate a strong relationship between the experience of sexual violence and adverse reproductive health outcomes among young women and adolescents in Colombia after controlling for sociodemographic characteristics and age at first sex. Young women who experienced sexual violence differed significantly from those who did not in terms of unintended pregnancy, condom use at last sex, recent STI diagnosis and current use of modern contraception. In multivariate analyses, young women who experienced sexual violence were significantly more likely to report adverse reproductive health outcomes (unintended pregnancy and STI diagnosis) but not reproductive behavior (family planning use and condom use at last sex). This analysis makes a contribution to the knowledge base about sexual violence and reproductive health outcomes among young women in developing countries.

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