Gynecological Fistula and Its Association with Sexual Violence and Maternal Health Indicators

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Introduction

Background
- A fistula is an abnormal opening in the vagina that causes urinary and/or fecal incontinence.
- Fistulas are typically caused by prolonged or obstructed labor but can also be caused by trauma or provider error.
- The condition has profound psychosocial and other consequences for affected women, who are often the poorest and most vulnerable.
- Studies have shown bivariate associations of fistula and experience of violence.
- While sexual violence is discussed as a cause of traumatic fistula, almost no studies have evaluated the temporal relationship between violence and fistula.

Research objective
- To evaluate the association between self-reported lifetime experience of fistula symptoms and ever and recent experience of Gender Based Violence (GBV) among women interviewed in DHS surveys.
- To begin to investigate and account for temporality in the relationship between GBV and fistula symptoms.

Methods

Data
- 12 household-based DHS surveys in sub-Saharan Africa and Haiti, including 171,677 women ages 15-49
  - Nationally representative surveys
  - Surveys contain standardized questions on domestic violence and fistula
- Data from the 12 surveys were pooled to create one dataset
  - Each survey was weighted equally
- Only women who were selected and completed the interview on domestic violence in privacy were included in the analysis
  90,276 women in the final sample

Measures
- Symptoms of fistula is a woman’s self-report of symptoms of constant leakage of urine or stool from the vagina during the day and night.
- Violence is a woman’s self-report of ever and recent (last 12 months) experience of physical and sexual violence.
- Perpetrator of first act of sexual violence is identified by a woman who experienced sexual violence, categorized as being a partner (current or former husband, partner, or boyfriend) or non-partner (any other perpetrator).
- Terminated pregnancy/stillbirth is defined as ever having a pregnancy that resulted in a miscarriage, abortion, or stillbirth, rather than a live birth.

Analysis
- Self-reported symptoms of fistula were examined for potential bivariate relationships with experience of physical and sexual violence.
- Adjusted multivariable logistic regressions were used to test associations while controlling for other factors.
  - Appropriate adjustments for the stratified cluster sampling design
  - Included a fixed effect for each survey to capture variation between countries.
- Models examined both ever and recent experience of violence to attempt to examine temporality.

Results

Figure 1. Prevalence of self-reported symptoms of fistula

Figure 2. Self-reported causes of fistula

Figure 3. Map of countries included in analysis

Figure 4. Percentage of women reporting symptoms of fistula by experience of violence

Figure 5. Proportion of women experiencing types of violence by self-report of fistula symptoms

Table 1. Multivariable logistic regression of self-reported symptoms of fistula and experience of violence among women age 15-49

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<tr>
<th>Variable</th>
<th>Ever</th>
<th>95% CI</th>
<th>ever</th>
<th>95% CI</th>
<th>ever</th>
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<th>Perpetrator of first act of sexual violence1, 2</th>
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Conclusion
- Women with fistula symptoms report the experience of sexual and physical violence much more often than women without such symptoms.
- Regression analyses show significant associations between self-report of lifetime symptoms of fistula and lifetime experience of physical and sexual violence, as well as recent sexual violence.
- This suggests that violence may occur before and/or after onset of fistula symptoms.
- Women who were first sexually violated by someone other than a boyfriend, partner or spouse have 4.5 times the odds of reporting fistula symptoms compared with women who have never experienced sexual violence.
- Programs treating and supporting women with fistula must incorporate GBV issues into provider training, discharge planning, and service provision or referral.

Acknowledgments

Total Observations | 90,078 | 90,056 | 90,056 | 81,089

1Women who say sexual violence is a cause of fistula are excluded
2Excludes women from Haiti where the DHS omitted the question on the perpetrator of first act of sexual violence
3Associations with marital status, education, and locality were non-significant; results not shown.