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## An Exploration of Empowerment, Sexual Violence, and HIV Among Indian Women

Brigid Kyung-Hwa Cecil  
*University of Kentucky*

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AN EXPLORATION OF EMPOWERMENT, SEXUAL VIOLENCE, AND  
HIV AMONG INDIAN WOMEN

CAPSTONE PROJECT PAPER

A paper submitted in partial fulfillment of the  
requirements for the degree of  
Master of Public Health  
in the  
University of Kentucky College of Public Health  
By  
Brigid Kyung-Hwa Cecil, B.A. in Psychology  
Plymouth, Michigan

Lexington, Kentucky  
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Pamela B. Teaster, Ph.D., Chair

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Christina R. Studts, Ph.D., Committee Member

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Richard A. Crosby, Ph.D., Committee Member

## **Abstract**

Empowerment plays a major role in sexual violence and HIV among women worldwide. Findings on empowerment in relation to domestic violence or HIV are scarce and are conflicting. The purpose of this study was to examine the relationship between empowerment and HIV status by means of sexual violence, and to compare this relationship between previously married women (N = 2,658) and currently married women (N = 37,539) living in India. The Baron and Kenny mediated regression model was used, involving simple logistic and multiple logistic regression, drawing from the National Family Health Survey 2005-2006 (NFHS-3). Sexual violence was not found to mediate between empowerment and HIV status. However, a negative relationship between empowerment and HIV status was found among each marital status group. The inverse relationship between empowerment and HIV status was stronger among previously married women than among currently married women. Findings suggest that other factors, such as lack of condom use, may facilitate the link between low empowerment and an HIV-positive status. They also suggest that previously married women are at an increased risk of HIV due to low empowerment. Future research should explore other possible mediators and continue to focus on married women while also shifting focus to previously married women. There is a need for policymakers to transform gender norms via institutions and then for public health and human rights organizations to educate women about HIV and empower them through stigma reduction and economic initiatives.

# **An Exploration of Empowerment, Sexual Violence, and HIV among Indian Women**

## **INTRODUCTION**

The prevalence of human immunodeficiency virus (HIV) in India is 0.27%, yet in terms of number of individuals infected, India has the third highest number in the world.<sup>1</sup> Of all HIV infections in India, 39% are among women.<sup>1</sup> Due to vigorous elimination efforts, there has been a decline in the overall prevalence rate of HIV between 2001 and 2011.<sup>1</sup> While the HIV prevalence rate in high risk Indian states in the South (Andhra Pradesh, Karnataka, Maharashtra, and Tamil Nadu) have been decreasing, several northern states have experienced an increase in HIV prevalence.<sup>1</sup> The National AIDS Control Programme, run by the Indian Ministry of Health and Family Welfare, is the largest HIV and AIDS initiative in India that prioritizes the fight against HIV and AIDS through research, policy, and interventions that target at-risk groups.<sup>1</sup>

Several studies found a positive relationship between sexual violence and HIV among married women, and the authors of these studies suggest that increasing empowerment in women may be an effective strategy to counter domestic violence and subsequently HIV.<sup>2, 3, 8, 12</sup> The World Health Organization and the United Nations prioritize empowering women worldwide in the prevention of domestic violence and HIV and AIDS.<sup>6, 7</sup> However, most studies on empowerment and HIV focus on sex workers or are from an intervention standpoint.<sup>9</sup> Furthermore, a few studies indicate that by increasing empowerment in the form of sociodemographic factors (i.e., higher education, higher income contribution to household, and involvement in microcredit or social groups)<sup>15</sup> or gender equality attitudes (i.e. less tolerance of wife beatings or unwanted sex),<sup>14</sup> the odds of experiencing physical or sexual violence increase rather than decrease in India. In another study, contributing partially to household income was a

risk factor for spousal physical violence against married women whereas full contribution of household income was a protective factor.<sup>16</sup> This increased risk of violence in response to empowerment among married women may apply to previously married women or be even more pronounced due to the immense stigma of being a widowed, divorced, deserted, or separated woman in India.<sup>13</sup> Ethnographic research may explain findings that empowered women in India are at risk of being physically and sexually abused.<sup>11</sup> Findings from past ethnographic research emphasize that social dominance by men is perpetuated by the socialization of gender roles: women being subordinate and men being the strong bread-winners who possess control. Any threat to these norms are often countered through violence against women.

Very few studies have extended research to previously married (i.e., divorced, separated, deserted or widowed) Indian women. That previously married Indian women are at an increased risk of HIV compared with currently married Indian women has been established.<sup>2,3</sup> According to the Indian Ministry of Health and Family Welfare NFHS-3 2005-2006 report, HIV prevalence is highest among widowed and divorced, separated, or deserted Indian women, compared with both never married and currently married Indian women.<sup>5</sup> A recent study also suggests that previously married women may be at risk for sexual violence post-marriage due to stigma of their marital status.<sup>4</sup>

The present study focuses on the relationship between empowerment and HIV status, with sexual violence as a mediator, among previously married women and currently married women in India. Gender equality attitudes relating to refusal of sexual intercourse were used as a proxy for empowerment. It was hypothesized that higher empowerment leads to a greater odds of experiencing sexual violence, which in turn increases the odds of being HIV-positive. Furthermore, it was hypothesized that this mediational relationship was stronger among

previously married women possibly due to becoming more empowered post-marriage and, as a result, falling prey to stigma and sexual harassment, placing them at an increased risk of acquiring HIV.

By focusing on previously married women in India, this study may yield an expanded understanding of groups at risk of HIV. Knowing more about previously married women's risk will benefit not only the research realm but also interventions that deliver physical and mental health services to women in India. This study may also inform policymakers and HIV and AIDS organizations about gender norms that contribute to HIV risk among women in India.

## **METHODS**

The University of Kentucky Institutional Review Board waived review of this study because of the use of publicly available, de-identified secondary data.

### **Study design and sampling scheme**

Data from the third National Family Health Survey (NFHS-3) from 2005-2006, a nationally representative cross-sectional survey, were analyzed for this study. The NFHS-3 collected demographic, socioeconomic, attitudinal, and behavioral data on various health topics from men and women in all 29 states of India.<sup>5</sup> The NFHS-3 data were designed with sample weights to improve national representativeness. Participant details and the sampling strategy have been described in previously published work.<sup>3, 12</sup>

Sampling was carried out through a multi-stage sampling scheme. Sampling was implemented by dividing up the 29 states into two groups and sampling each group in overlapping periods. From November 2005 to May 2006, 12 states were sampled, and from April to August 2006, the remaining 17 states were sampled. Rural and urban populations within the states were sampled separately. Rural sampling consisted of two stages while sampling

among the urban populations consisted of three stages because there are larger populations living in urban wards. In the two-stage sampling among rural areas, the 2001 Census list of villages served as the sampling frame. This list was stratified by several variables. The first level of stratification was by geographic region, subdividing districts into adjacent regions. Within these regions, villages were stratified by village size, percentage of males working in the nonagricultural sector, percentage of the population belonging to scheduled castes or scheduled tribes, and female literacy. Villages with probability proportional to population size (PPS) served as the Primary Sampling Units (PSUs) and were systematically selected at random at the first stage, followed by systematic random selection from household listings and mappings within the PSUs at the second stage. In the three-stage sampling among urban areas, the 2001 Census of wards was used as the sampling frame, and wards were systematically selected at random with PPS for the first stage. For the second stage, a census enumeration block (CEB) was randomly selected within each ward. The third stage involved random selection of a household within each CEB.

### **Data collection and participants**

Data collection for the NFHS-3 was run by the Ministry of Health and Family Welfare (MOHFW), Government of India and was funded by the United States Agency for International Development (USAID), the United Kingdom Department of International Development, the Bill and Melinda Gates Foundation, UNICEF, the UN Population Fund, and the Government of India.<sup>5</sup> A total of 131,596 women from selected households in the 29 Indian states were eligible and invited to participate. Of the women invited, 124,385 participated, yielding a response rate among all eligible women of 94.5%. A total of 85,373 men from selected households were eligible and invited to participate. Of the men invited, 74,369 men were interviewed, yielding a



response rate of 87.1%. Eligible women and men were between the ages 15-49 years and 15-54 years, respectively, and had stayed in selected households the night before the interview (including usual residents and visitors). Interviews were conducted only with participants who gave consent. Interviewing teams consisted of one field supervisor, one field editor, four interviewers, and two health investigators. Data collection took the form of paper-and-pen questionnaires, administered through face-to-face interviews. Immediately following the interviews, field data were entered into microcomputers, and field-check tables were produced to identify errors that may have occurred while interviewers elicited information or filled out questionnaires in the presence of participants. Each interviewer was matched with a respondent of the same sex to provide an atmosphere in which respondents could feel more comfortable discussing sensitive topics. Informed consent and privacy were ensured during the time of the interviews, as well as confidentiality upon completion.

Dried blood spot samples from finger pricks were collected for HIV testing from all consenting eligible women and men in 28 states (Nagaland was excluded due to local opposition). HIV testing procedures were designed and implemented based on scientific principles and field experience in incorporating HIV testing in national surveys. The dried blood spot samples of all consenting participants were sent to the SRL Ranbaxy collection centers, where they were sent to the SRL Ranbaxy laboratory in Mumbai and where the HIV tests were conducted. A total of 102,980 participants were tested for HIV: 52,853 were women and 50,127 were men. Because the 2006 HIV prevalence was estimated from an old surveillance system based on a non-representative sample of the general population of India, in 2007, the National AIDS Control Organization (NACO) decided that the HIV household rates obtained from the NFHS-3 should make up a revised national estimate of HIV, which was 2.47 million, due to

updated surveillance and more systematic data collection.<sup>5</sup> Subsequently, this new HIV prevalence for India was released by NACO in July of 2007.<sup>5</sup>

The current study analyzed 2,658 HIV tested previously married women ages 15-49 years and 37,539 HIV tested currently married women ages 15-49 years old residing throughout the 28 states of India. Previously married women were widowed, divorced, separated, or deserted, and currently married women were in a marriage union where the traditional marriage ceremony of Gauna was performed.

## **Measures**

The DHS Domestic Violence Module included in the NFHS-3 was developed based on a modified Conflict Tactics Scale,<sup>17</sup> which has precautions built into questions and study protocols according to the World Health Organization's ethical and safety recommendations for research on domestic violence.<sup>19</sup> In the current study, the predictor variable was empowerment, the mediator variable was sexual violence, and the outcome variable was HIV status.

### *Empowerment*

The predictor variable of empowerment was defined by justification of a wife refusing to have sex with her husband. Furthermore, disagreement with more reasons that justify a wife refusing to have sex with her husband signifies lower empowerment, as it indicates that men hold more power in the marriage.<sup>5</sup> Autonomy of financial decision-making and freedom of movement were not analyzed because these two variables may naturally increase in a previously married woman's life post-marriage due to losing dependence that may have been present within a past marriage, and so the two marital status groups may not be comparable in these dimensions.

The purpose of using gender equality attitudes was to determine if attitudes predict sexual violence as compared with previous studies using sociodemographic factors as measures of

empowerment. Although they do not measure the full concept of empowerment, these attitudes contribute substantially to empowerment in Indian culture.<sup>5</sup> Although previously married women were not confined to the marriage union as were currently married women, the empowerment questions were used to capture empowerment according to societal gender norms, which may be a comparable measurement between each marital status group.

Empowerment was assessed among previously married women and currently married women using responses to the following questions, which have been used in a multi-country study:<sup>18</sup> “Husbands and wives do not always agree on everything. Please tell me if you think a wife is justified in refusing to have sex with her husband when:” 1) “She knows when her husband has a sexually transmitted infection,” 2) “She knows her husband has sex with other women,” 3) “She is too tired or not in the mood.” Answer options for each were “No” (0) or “Yes” (1). These three questions were combined into one variable that measured level of empowerment among each respondent with a range of zero to three (0 = answered none positively, 1 = answered one positively, 2 = answered two positively, and 3 = answered all three positively).

### *Sexual Violence*

The mediator variable of sexual violence was defined as being forced to perform any sexual acts against one’s will by anyone or being physically forced to have sexual intercourse by a spouse. These two questions were used to measure sexual violence in separate regression models to determine whether the wording of the question changed the results.

The first question (Figure 2) was: “Has anyone forced you to perform any sexual acts?” Answer options included “No” (0) or “Yes” (1). Those who reported “Don’t know/refused to answer” were collapsed into the “Yes” category during the coding of this variable.

“Does/Did your spouse ever physically force you to have sexual intercourse when you do/did not want to?” was used as the second question (Figure 3). Answer options included “Never” (0) or “At least once” (1). The original coding of answer options for this question were “No,” “Often in the last 12 months,” “Sometimes in the last 12 months,” and “Yes but am a widow or timing is missing”. “No” was collapsed into its own category of “Never” and the remaining categories were collapsed into one category of “At least once”.

### *HIV Status*

The outcome variable of HIV status was defined by a negative (0) or positive (1) result from the dried blood samples test.

### **Statistical analysis**

This study examined the relationship between empowerment and HIV status with sexual violence as a mediator among previously married women and currently married women with an HIV test result. It was expected that this relationship was stronger among previously married women. While the NFHS-3 data is designed with sample weights, raw data were used in the present study.

Baron and Kenny mediated regression models, involving simple logistic and multiple logistic regression, were built to model the relationship between empowerment and HIV status with sexual violence as a mediator. Separate models were created for each sexual violence question. Within each sexual violence question, separate models were created for each marital status group. Four models were built in total.

Simple logistic regression was used to estimate crude odds ratios (cOR) and 95% confidence intervals (CI) for the following paths, as shown in Figure 1: empowerment predicting sexual violence (path a), sexual violence predicting HIV status (path b), and empowerment

predicting HIV status (path c). Path b' and path c' were assessed simultaneously by using multiple logistic regression, reporting crude odds ratios and 95% confidence intervals, with sexual violence and empowerment as the predictor variables and HIV status as the outcome variable. It was expected that if paths a, b, b', and c were statistically significant and path c' lost statistical significance in relation to path c, then full mediation was demonstrated, due to sexual violence having a full effect on the relationship between empowerment and HIV. If paths a, b, b', and c were statistically significant and path c' remained statistically significant but the crude odds ratio weakened then partial mediation was demonstrated, due to sexual violence having a partial effect on the relationship between empowerment and HIV. The software SPSS version 21.0 was used in 2014.

## **RESULTS**

### **Prevalence**

Table 1 provides sociodemographic characteristics of the sample stratified by marital status. Over half of the previously married women (51.5%) and over half of the currently married women (53.6%) lived in a rural residence. The largest proportions of previously married women either had no education (49.2%) or secondary education (28.3%). Likewise, the largest proportions of currently married women had either no education (38.3%) or secondary education (27.3%). The predominant religion among previously married women (77.3%) and currently married women (80%) was Hindu.

With a range of 0-3, the average score on empowerment among previously married women ( $2.5 \pm 0.97$ ) was slightly lower than currently married women's average score ( $2.6 \pm 0.94$ ). Although more than half of the women in each marital status group did not report anyone forcing them to perform sexual acts, more previously married women reported being forced to

perform sexual acts (33.8%) compared with currently married women (1.8%). The majority of women did not report their spouse physically forcing them to have sexual intercourse, but more previously married women (19.5%) were forced by their spouse to have sexual intercourse than currently married women (6.1%). The prevalence of HIV among previously married women (2.5%) was higher compared with the HIV prevalence among currently married women (0.3%). The HIV prevalence among previously married women was higher than NACO's 2011 national estimate (0.27%) while the HIV prevalence among currently married women was comparable to the national estimate.

### **Multivariate analysis**

Figure 2 summarizes the results of the Baron and Kenny mediated regression model for each marital status group, using the sexual violence question "Has anyone forced you perform any sexual acts? No or Yes." Lower empowerment predicted HIV-positive status among previously married women (cOR = 0.75, 95% CI = 0.61, 0.93) and among currently married women (cOR = 0.80, 95% CI = 0.68 – 0.95). Of the 2,568 previously married women, 2,360 (91.9%) were included in the logistic regression between empowerment and HIV status and of the 37,539 currently married women, 34,594 (92.2%) were included in the logistic regression between empowerment and HIV status. Paths a, b, and b' were not statistically significant in the mediated regression analysis. Therefore, sexual violence was not found to be a mediator between empowerment and HIV status among either marital group. Since the primary hypothesis was not found to be significant and empowerment and HIV status unexpectedly had an inverse relationship, the secondary hypothesis could not be assessed.

Figure 3 summarizes the results of the Baron and Kenny mediated regression model for each marital status group, using the sexual violence question "Does/Did your spouse ever

physically force you to have sexual intercourse when you do/did not want to? Never or At least once.” Lower empowerment predicted an HIV-positive status among previously married women (cOR = 0.75, 95% CI = 0.61, 0.93) and among currently married women (cOR = 0.80, 95% CI = 0.68 – 0.95). Though sexual violence was not detected as the mediator, path b was statistically significant, indicating a positive relationship between sexual violence by a spouse and an HIV-positive status among currently married women only (cOR = 2.02, 95% CI = 1.08 – 3.80).

## **DISCUSSION**

### **Main findings and implications**

This is the first quantitative study to analyze whether sexual violence directly facilitates the link between empowerment and HIV among Indian women. Findings suggest that lower empowerment increases the odds of being HIV-positive, and sexual violence does not influence this relationship among either marital status group. These findings were unexpected based on studies that found a positive relationship between empowerment and sexual violence,<sup>14, 15, 16</sup> and studies that found a positive relationship between sexual violence and HIV.<sup>2, 3, 8, 12</sup> One likely explanation is that lack of condom use may be more strongly influenced by lower empowerment, which in turn, increases the odds of being HIV-positive.<sup>2, 14, 22</sup> If a woman is less empowered to refuse sex, she is likely less empowered to negotiate condom use from fear of falling outside of the submissive wife role or of being accused of infidelity.<sup>14</sup>

On the other hand, Silverman et al. found that condom use was not associated with HIV but physical and sexual intimate partner violence was associated with an HIV-positive status.<sup>12</sup> Alcohol use may also be a mediator between the inverse relationship of empowerment and HIV, as alcohol use by men and women have been found to indirectly facilitate the link between sexual violence and HIV by increasing the odds of having unprotected sex.<sup>24, 26</sup> Women having

extramarital sex partners may be a mediator,<sup>22</sup> although more research is needed to explore this possibility. Future studies should explore potential mediators between empowerment and HIV among women in India.

That lower empowerment predicts HIV among women in India's caste system, which is intertwined with religious tradition, follows the theory of gender and power.<sup>23</sup> This theory posits that large social structures (i.e., societal and institutional components) are slow to change in certain societies and, as a result, gender inequality embedded in these structures is manifested in various layers. For example, the religious and cultural more of labeling women as inferior to men expresses itself as harassment in the workforce or as sexual coercion in intimate relationships, often contributing to diseases or to exposures that weaken population health.

The inverse relationship between empowerment and HIV was stronger among previously married women than among currently married women. For every one-point increase on empowerment, the odds of being HIV-positive among previously married women decreased by 25%. For every one-point increase on empowerment, the odds of being HIV-positive among currently married women decreased by 20%. It was expected that previously married women are at a heightened risk of HIV compared with currently married women because of higher empowerment working through sexual violence. This expectation was drawn from literature that highlights an increased HIV prevalence among previously married women relative to currently married women,<sup>2, 3, 4</sup> and literature suggesting that empowerment leads to physical and sexual violence among married women.<sup>14, 15</sup> Empowerment and HIV together have not been thoroughly studied among previously married women. Findings in the present study indicate that the protective effect of empowerment on HIV is stronger among previously married women compared with currently married women.



It is crucial to shift focus to previously married women's risk factors for HIV. Being a widowed, divorced, separated, or deserted woman in India bears a great amount of stigma due to the loss of sexual purity and falling outside of the tradition of marriage. Since forced sexual activity did not influence the negative relationship between empowerment and HIV, one possible explanation is that previously married women, due to stigma and lack of support from being previously married, became less empowered and sought out work as a sex worker voluntarily post-marriage, which predisposed them for risky sexual behaviors (e.g. less condom use) and HIV.<sup>25</sup> Another possible explanation is that certain factors caused low empowerment as a child, which led them to engage in risky sexual behaviors and acquire HIV in their past marriage. Discernment of timing of when previously married women acquired HIV in relation to past marriages is needed.

While empowerment strategies to combat domestic violence and HIV and AIDS have been implemented with success in several African countries,<sup>10</sup> it is cautioned that increasing empowerment may have varying effects on domestic violence, depending on the context. A study in Bangladesh found that higher empowerment in individual women in culturally conservative areas increased their risk of experiencing spousal physical violence while higher empowerment in less conservative areas was unrelated to spousal physical violence.<sup>20</sup> Another study in India found that higher education in both the husband and wife was a protective factor for physical violence by the husband but was a risk factor for sexual violence.<sup>21</sup> These studies highlight the persistence of gender norms in contexts that are slower to evolve than less conservative cultures. Empowering individual women in societies that rigidly undermine gender equality may decrease their risk of HIV, yet at the same time, put them at risk of violence.

Mediation was not detected in Figure 1 or in Figure 2. However, as shown in Figure 2, sexual violence was found to positively predict HIV status among currently married women. The sexual violence question used in Figure 2 referred to spousal sexual violence and is consistent with previous studies. Referring to sexual violence committed by a “spouse,” rather than “anyone,” may have allowed women to feel more inclined to disclose their violence experiences because spousal violence is a norm in much of India. Future research should study sexual violence and HIV using questions that ask about specific perpetrators, such as other relatives or authority figures.

### **Strengths and limitations**

This study underscores that a woman’s lower empowerment score is a risk factor for HIV among both previously married and currently married women in India. It also emphasizes the heightened risk among previously married Indian women, a population that has seldom been studied. The present study brings clarity to the links between empowerment, sexual violence, and HIV, a mediational relationship that was not quantitatively evaluated among Indian women prior to this study.

Several limitations of this study exist. Reporting bias likely occurred, due to the sensitive nature of sexual violence. Sexual coercion, along with forced sexual acts, is included in the World Health Organization’s definition of sexual violence.<sup>27</sup> In Indian society, however, women view submission to a husband’s sexual urges as a form of surrender and, thus, unforced. If women in this sample believed that abiding to a husband’s sexual urges is a wife’s duty, then the women would not have reported it as forced. Surrendering for the sake of gender norms or because of the threat of violence is considered sexual coercion. Therefore, the sexual violence questions do not adequately measure the full concept of sexual violence. The NFHS-3 did not

have a question asking about unwanted sexual intercourse without force. No question in the NFHS-3 data set allowed for measurement of sexual violence post-marriage among previously married women. If included, a clearer picture of sexual violence between the two marital status groups may have been revealed. Because this was a cross-sectional study, none of the variables inferred a timeline. Therefore, it is unknown whether HIV acquisition occurred in childhood from marrying young, making low empowerment a reality, or if low empowerment precipitated any sexual risk behavior and the acquisition of HIV.

Finally, studies on sexual violence among women in India focus more on northern India because that is where greater gender inequality is thought to occur. Furthermore, several northern regions have experienced an increase in sexual violence and HIV rates.<sup>1, 28</sup> By sampling from all states of India, the NFHS-3 is representative of India. If the issue of sexual violence is more pronounced in northern India, however, the current results are misleading because they do not capture these geographic differences.

## **Recommendations**

There is a paradox of sexuality in modern India: pop culture increasingly presents women as sexual objects in the media, yet at the same time, Indian society is firmly rooted in the traditional Hindu and cultural belief that men are prized over women. This contradiction creates sexual temptation, yet men and women remain without sexual freedom. This conundrum results in widespread sexual repression among women and men and consequently leads to control imbalances, sexual risk behaviors, and violence.

Although there is a time and place for community-level initiatives, it is crucial for public health and human rights efforts in India to move beyond condom use education and economic empowerment of women. Indian policymakers in collaboration with NACO should mainstream

gender into their political agendas, in order to appropriately shape gender norms. Gender equality and collective efficacy principles being taught in schools and in religious institutions would be powerful change agents if they were mandated in policy. In order for institutions to make an impact, girls and boys need to be present in schools. When an impoverished family faces the decision to educate their son or their daughter, they will often choose to educate their son because of male preference. Therefore, the Indian government should provide subsidies for families in rural India to educate not only their sons but also their daughters. Once large scale change has been initiated, then HIV and empowerment initiatives have the true potential to empower whole communities of women through education, stigma reduction, and microfinance. Previously married women, in particular, would benefit from empowerment initiatives that unite them with men to collaborate on campaigns that inform policymakers about the need for gender equality.

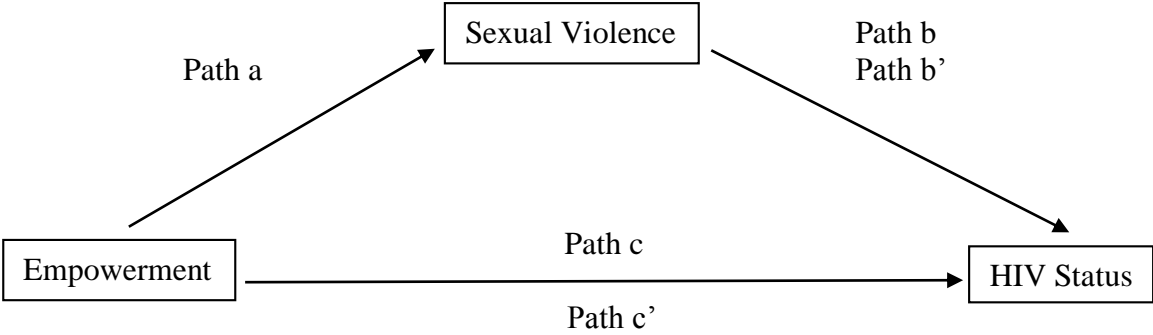
While currently married women are important on which to focus, previously married women are emerging as a vulnerable population in regard to HIV. Most importantly, it is necessary for institutions and policy to initiate change first, followed by interventions that empower entire communities of women. Gender inequality deeply embedded in societal level entities may then and finally unravel, laying a solid foundation on which community and individual empowerment may flourish.

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**Figure 1. Conceptual model of empowerment, sexual violence, and HIV status among previously married women and currently married women in India**

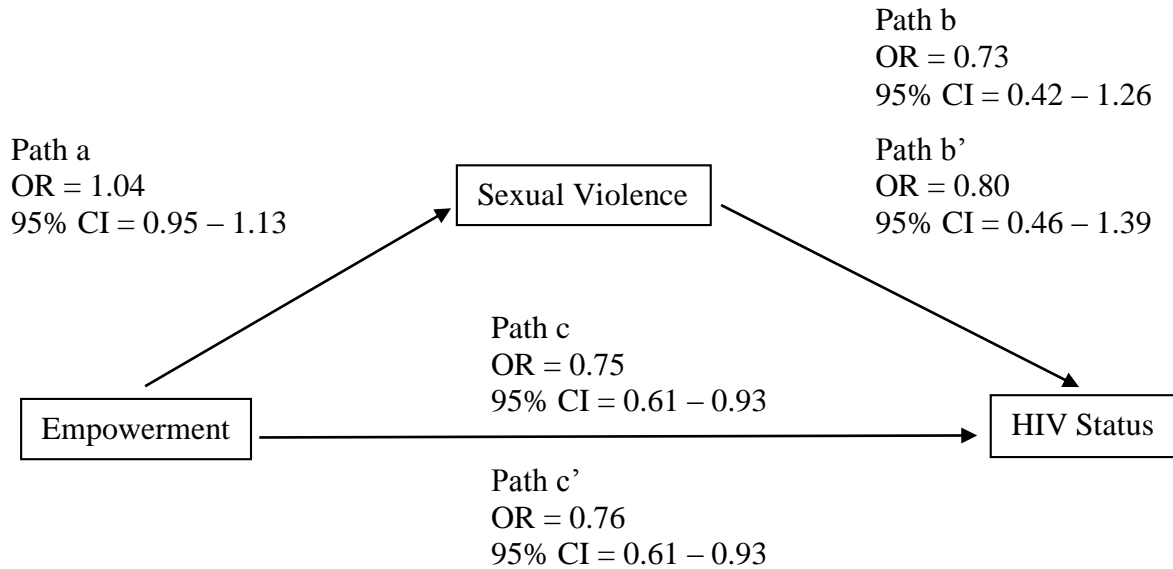


**Table 1. Sociodemographic Characteristics of HIV Tested Previously Married Women and HIV Tested Currently Married Women in India, 2005-2006 (N = 40,197)**

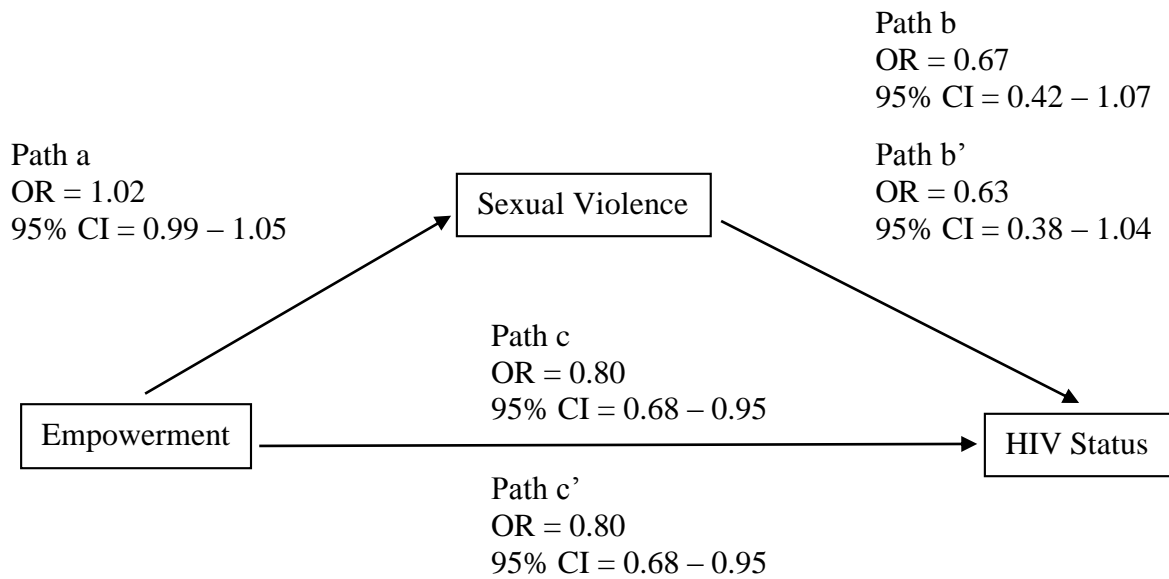
Characteristic	Previously Married Women N (%) or Mean $\pm$ SD (N = 2,658)	Currently Married Women N (%) or Mean $\pm$ SD (N = 37,539)
<b>Age (years)</b>		
15-24	193 (7.3)	8,270 (22)
25-34	679 (25.5)	14,645 (39)
35-49	1,786 (67.2)	14,624 (39)
<b>Residence</b>		
Urban	1,288 (48.5)	17,430 (46.4)
Rural	1,370 (51.5)	20,109 (53.6)
<b>Education</b>		
	<b>(N = 2,657)</b>	<b>(N = 37,538)</b>
No education	1,308 (49.2)	14,385 (38.3)
Primary	517 (19.5)	5,770 (15.4)
Secondary	751 (28.3)	13,999 (27.3)
Higher	81 (3)	3,384 (9)
<b>Religion</b>		
	<b>(N = 2,602)</b>	<b>(N = 36,534)</b>
Hindu	2,012 (77.3)	29,233 (80)
Muslim	339 (13)	4,863 (13.3)
Christian	186 (7.2)	1,832 (5)
Buddhist/Neo-Buddhist	65 (2.5)	606 (1.7)
<b>Empowerment</b>		
	<b>(N = 2,360)</b>	<b>(N = 34,594)</b>
Gender equality attitudes	2.5 $\pm$ 0.97	2.6 $\pm$ 0.94
<b>Sexual Violence</b>		
Anyone forced sexual acts		<b>(N = 28,165)</b>
No	1,760 (66.2)	27,669 (98.2)
Yes	898 (33.8)	496 (1.8)
<b>Spouse forced sex</b>		
	<b>(N = 621)</b>	<b>(N = 28,157)</b>
Never	500 (80.5)	26,441 (93.9)
At least once	121 (19.5)	1,716 (6.1)
<b>HIV Status</b>		
Negative	2,592 (97.5)	37,425 (99.7)
Positive	66 (2.5)	114 (0.3)



**Figure 2. Previously Married Indian Women ages 15-49 years**

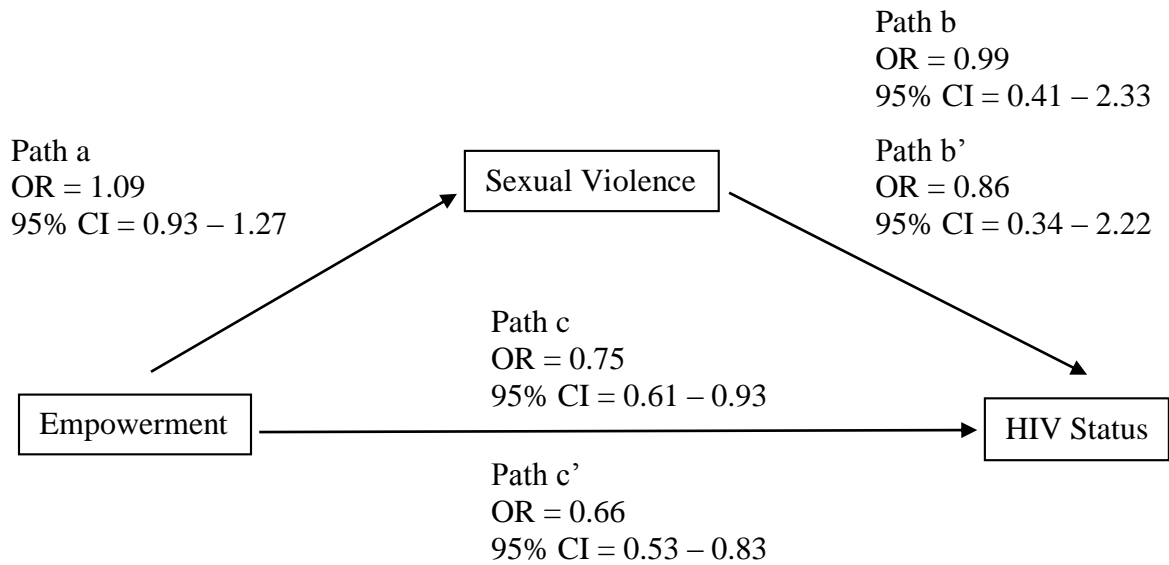


**Currently Married Indian Women ages 15-49 years**

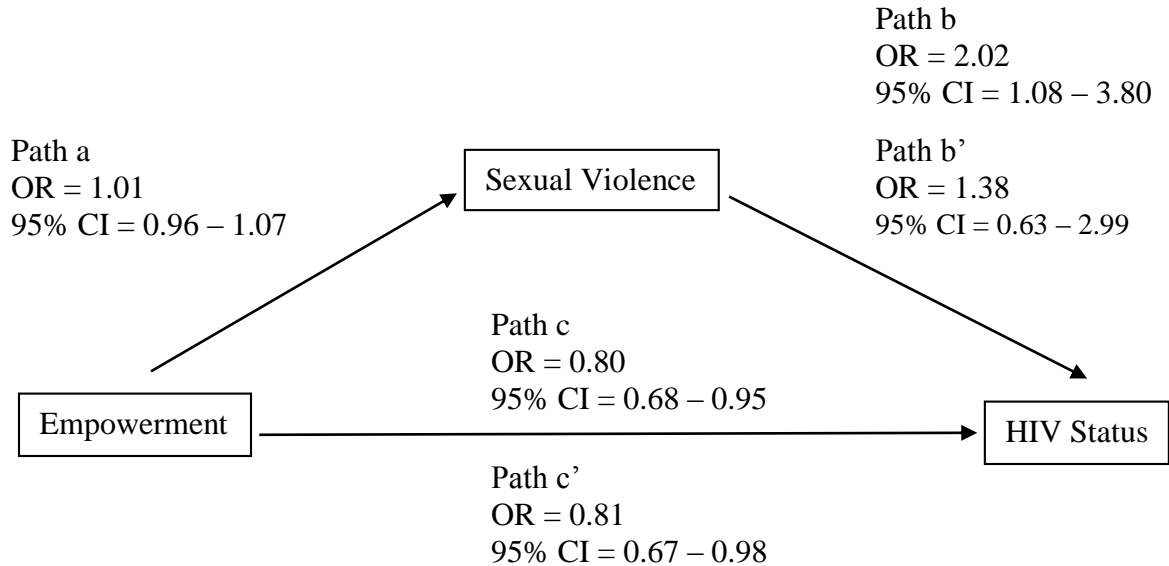


**Note:** Results of the Baron and Kenny mediated model for empowerment, sexual violence, and HIV using the sexual violence question “Has anyone forced you to perform any sexual acts? No or Yes”: crude odds ratios (cOR) and 95% confidence intervals (CI) estimated by simple logistic regression at path c, simple logistic regression at path a, simple logistic regression at path b, and multiple logistic regression at path b’ simultaneously with path c’.

**Figure 3. Previously Married Indian Women ages 15-49 years**



**Currently Married Indian Women ages 15-49 years**



**Note:** Results of the Baron and Kenny mediated model for empowerment, sexual violence, and HIV using the sexual violence question “Does/Did your spouse ever physically force you to have sexual intercourse when you do/did not want to? No or Yes”: crude odds ratios (cOR) and 95% confidence intervals (CI) estimated by simple logistic regression at path c, simple logistic regression at path a, simple logistic regression at path b, and multiple logistic regression at path b’ simultaneously with path c’.

## **Biographical Sketch**

Brigid Kyung-Hwa Cecil, B.A. in Psychology  
3628 Mossbridge Way, Lexington, Kentucky 40514  
(734) 604-2010  
brigidcecil@gmail.com

Several volunteer, educational, and student leadership experiences related to public health have contributed to the development of my professional career. In the winter of 2008, I traveled to Tanzania, East Africa, for one month and volunteered with a non-profit organization that empowered HIV-positive persons through microfinance. There, I assisted local teachers with instructing HIV-positive children in basic Math and English and shadowed HIV-positive women who ran their own microfinance businesses. After obtaining a Bachelor of Arts in Psychology from the University of Iowa in 2009, I traveled to Sierra Leone for two months with a faith-based organization. During those two months, I assisted in local schools by running small group tutoring sessions on a weekly basis, assisted with recreational activities, and conducted informal psychosocial assessment of children who had behavioral issues. In March of 2013, I traveled to Cuba with the University of Kentucky Health Care Delegation for ten days. This was an educational trip to learn about Cuba's health care system in the context of Cuba's culture and political system. The delegation visited with professionals in different industries, with a focus on health care professionals, in order to understand the thriving health care system from an inside perspective. In May of 2013, I traveled to Ecuador with the University of Kentucky. This was a volunteer trip with various health care students to assist with basic health care needs at a local health center in Santo Domingo, Ecuador. There, I worked at a public health station where I surveyed patients on nutrition assessment and assisted with oral health education.

Between January 2012 and December 2013, I served as the University of Kentucky Student Public Health Association (UKSPHA) Vice President. During that time, I helped plan and organize community health events, such as National Public Health Week and Red Ribbon Week learning activities in an elementary school, and I attended the American Public Health Association Conference 2013 in Boston, Massachusetts. I also initiated some public health projects. For example, I led an awareness campaign on World Water Day 2013 by passing out pamphlets on contaminated water issues on local and global levels, on the University of Kentucky campus. My MPH practicum entailed working on several projects at two different public health departments in rural Kentucky. Projects included creating PowerPoint slides on sexually transmitted infections, diabetes, blood pressure and cholesterol, researching elderly fall prevention trainings for the workforce, and conducting phone surveys with local restaurant managers to document their awareness and opinions on smoking ban ordinances in public spaces.

My understanding of public health has expanded greatly, having gained international volunteer and leadership experiences related to public health over the past six years combined with my MPH program experience in the context of one of the most rural and impoverished states in the U.S. Not only have I served in some of the poorest communities of the world, but I have also developed an appreciation for local public health initiatives. Having the passion for global and local public health and the ability to serve diverse populations will contribute substantially to my endeavors as a public health professional.