

# Sex trafficking, prostitution, and increased HIV risk among women during and after the 2015 Nepal earthquake

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## Abstract

Women might be at increased risk of HIV infection after a disaster situation due to several interlinked environmental and social factors, such as increased sex trafficking and prostitution, in resource-limited settings. However, this information has not been clearly understood. Based on the review of available gray and peer-reviewed evidence, the present debate paper summarizes potential factors for increasing women's HIV risk during/after two earthquakes that hit Nepal in 2015. Poverty and socio-economic crisis, displacement and reduced social capital, increased rate of sex trafficking and prostitution, and poor access to health care seem to be the factors to increase women's HIV risk in the earthquake-affected areas of Nepal. There is a lack of essential empirical evidence on environmental and social factors (e.g. increased sex trafficking and prostitution) that are linked with women's HIV risk in the post-disaster phase. Therefore, the factors and interactions discussed should be further studied potentially in disaster-affected areas so that locally and culturally salient and sustainable relief and reconstruction strategies, which include strategies for preventing HIV risk in post-disaster situations, can be developed.

## Keywords

Disaster, earthquake, HIV risk, Nepal, prostitution, sex trafficking

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## Introduction

Disasters, for instance earthquakes, bring significant impact on the numbers, health status and lifestyle of populations, such as deaths, severe injuries requiring extensive treatments, damage to the health facilities, water and food shortage, and population movements, and increased risk of communicable diseases, such as HIV.<sup>1</sup> Such disaster events also highlight the social, physical, psychological, and economic vulnerabilities among different population sub-groups, including women from rural areas, families with children, older adults, disabled, and low-income individuals. These groups suffer disproportionate harm in disasters, as they are less likely to undertake self-protective actions before, during, or after disasters and are also at greater risk for poor physical and psychological health outcomes after a disaster.<sup>2</sup>

Given the increased social vulnerability of at-risk population groups in the context of a disaster, the Joint United Nations Program on HIV/AIDS (UNAIDS) reports that the risk of HIV infection could increase significantly during and

after a disaster, especially in a resource-limited setting.<sup>3</sup> The social and economic crisis following an earthquake disaster might lead to circumstances that are less favorable for at-risk population groups (e.g. women, transgenders), to protect themselves from HIV infection due to their personal and social circumstances after a disaster. However, it is not clear how rapid onset disaster, such as earthquake, would lead to increased HIV risk among various population groups, including general female population. For instance, Rahill et al.<sup>4</sup> and Angulo-Arreola et al.<sup>5</sup> speculated that, after the earthquake

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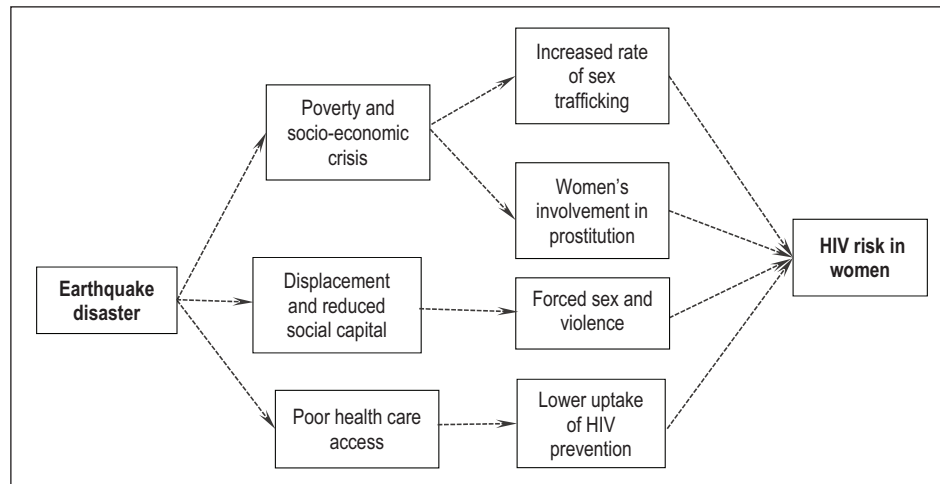
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**Figure 1.** Hypothetical framework for HIV risk among women during and after earthquake disaster.

in 2010 in Haiti, the local HIV epidemic could experience resurgence due to a protracted economic and social crisis. Although existing review findings suggest a link between disasters and HIV, there is a general lack of empirical evidence suggesting an increased burden of HIV in a post-disaster situation among at-risk population groups.

Similar to Haiti, Nepal is also among the countries that are most at risk of earthquake around the world, but being a poor country, it lacks capacity and resources to develop effective earthquake preparedness and disaster relief strategies leading to other various social and health problems linked with the disaster.<sup>6</sup> Two earthquakes hit Nepal on 25 April and 12 May 2015, causing around 9000 deaths and 22,300 injuries; furthermore, around 300,000 houses were destroyed, and 2,800,000 people were displaced.<sup>7,8</sup> Due to socio-economic crisis being aggravated by the two earthquakes, the burden of HIV infection could significantly increase, especially in the earthquake-affected areas; however, evidence suggesting this fact has not been documented so far.

More than 38% of the total population infected with HIV in Nepal is general female population (HIV prevalence among general population aged 15–49 years in 2018 = 0.2%) that are particularly vulnerable for HIV infection due to illiteracy and low knowledge about HIV, reduced ability to negotiate condom use leading to HIV risk via unprotected sex, and poor access to HIV testing services. Also, the social context that impacts on women's life circumstances (such as gender inequality and HIV stigma) are influential and make women vulnerable to HIV. The burden of HIV infection in women and wider population could be even higher in the earthquake-affected areas;<sup>9</sup> however, evidence to support this fact has not yet been documented.

In the absence of locally relevant empirical evidence related to disaster and women's HIV risk,<sup>10,11</sup> it is still important to identify and explain potential contextually relevant factors associated with women's HIV risk in order to identify relevant and feasible rescue and reintegration intervention strategies to

reduce the general burden of HIV risk in a disaster situation.<sup>12</sup> It may not be possible to offer empirical evidence of a rise in HIV cases after disaster events, given that there are several methodological, practical, and ethical challenges associated with conducting an empirical research on this question. For instance, research in a post-disaster phase involving direct contact with the vulnerable survivors have a responsibility to make immediate contributions to alleviate current and potential future suffering, and therefore, it may be difficult to balance the critical need for research with the ethical responsibility to protect the vulnerable survivors.<sup>13</sup>

In this context, offering a set of mechanisms and variables could potentially indicate how the HIV burden would look like in a post-disaster situation and this can provide the basis for future empirical research. Therefore, based on the review of available gray and peer-reviewed evidence, the present debate paper summarizes potential factors and mechanisms leading to an increased risk of HIV infection among women during or after a disaster in resource-limited settings. The experience of Haiti is discussed in relation to increased HIV risk during and after the disaster, which could serve as an indicator for the situation in Nepal even though the disaster and healthcare contexts were completely different between Nepal and Haiti.

## Main text

We developed a hypothetical framework (see Figure 1: Factors for HIV risk among women during and after earthquake disaster) to illustrate how rapid onset disaster such as earthquake may drive the HIV epidemic, especially among women. To develop the framework, we conducted a review of available relevant gray (e.g. field notes, field reports) and empirical literature to understand the causal relationship of the factors determining women's HIV risk in a disaster situation. The frameworks illustrate how different factors potentially operate through different potential mechanisms to increase the risk of HIV among women. For instance, the

earthquake led poverty and socio-economic crisis might operate through different mechanisms such as internal displacement, reduced social capital, and increased sex trafficking to influence women's living circumstances and behaviors, such as poor access to health care, involvement in prostitution, poor HIV prevention behaviors, and consequently increase their risk of contracting HIV.

### *Increased rate of sex trafficking*

Every year around 7000 Nepalese girls are trafficked for sex to India.<sup>14</sup> Stories of many traffickers trying to abduct young girls and women, especially those who had lost their parents and family members due to Earthquake, have been reported in local project reports, news reports, and online magazines.<sup>15–19</sup> For instance, a report published by the National Human Rights Commission of Nepal in 2016 reported that the rate of sex trafficking might have increased by 15% after the Earthquake.<sup>17</sup> In an e-article published by the newspaper Guardian in 2015, it was reported that the rate of sex trafficking has increased significantly after the earthquakes in Nepal because of the destruction of daily living conditions and the situation in which the social groups such as relatives, neighbors, mothers' groups, and school teachers could not be able to normally protect the women and girls from traffickers.<sup>15</sup> In another e-article published by the newspaper Guardian, it was stated, “[. . .] police in India have uncovered a human trafficking network that has sent hundreds of young women from earthquake-hit areas of Nepal to the Arab Gulf countries, where they were forced into sex work.”<sup>16</sup>

The information reported in such reports and magazines are not based on the collection of empirical data and only based on the stories of individuals, such as earthquake survivors or trafficking victims. Articles from scholarly, peer-reviewed journals, which are considered more credible than the e-articles published in popular magazines, have not yet documented to confirm whether the earthquakes of 2015 have caused increases in the rate of sex trafficking in Nepal. The lack of empirical evidence on risk factors for increased rate of trafficking, and its link with the increased rate of HIV infection in Nepal, is noted to be due to the difficulty in collecting accurate data on trafficking, especially after a disaster when resources shift elsewhere, and people are less likely to seek medical care.

Besides, there are a few studies documented investigating the link between sex trafficking and increased HIV infection rate.<sup>20,21</sup> For instance, a study conducted in 2007 to investigate the possible link of increased sex trafficking with HIV found that out of 287 repatriated Nepalese sex-trafficked girls and women, 109 (38.0%) tested positive for HIV. The median age of women and girls at the time of trafficking was 17.0 years, with 14.7% trafficked prior to age 15 years who were found to have higher risk for HIV.<sup>21</sup> A study conducted among brothel-based sex workers in India found that HIV seroprevalence is strikingly higher among Nepalese (43%) than among Bangladeshis (7%) and Indians (9%), and a clear

majority of Nepalese sex workers join the profession through sex trafficking and enter the profession at a younger age.<sup>20</sup>

### *Poverty and women's involvement in prostitution at the local level*

In South Asian countries, 30% of the total population living with HIV are women of reproductive age and the majority has a history of involvement in forced sex or prostitution before the age of 18 years.<sup>22</sup> The relationship between extreme poverty and women's involvement in transactional sex leading to women's HIV risk is evident.<sup>23</sup> Insecurity, hunger, and unequal distribution of resources put women and young girls at risk of exploitation and abuse, including coercion into transactional sex and prostitution for survival.<sup>24</sup> In a book entitled, “beyond shock: charting the landscape of sexual violence in post-quake Haiti” written by d'Adesky A (2012), it was reported that altogether 37% of girls were engaged in transactional and survival sex after the earthquake of 2010 in Haiti.<sup>25</sup> Thus, the experience of Haiti indicates an increased number of women and young girls involving in survival sex or prostitution after the earthquake; similar to this, a growing number of young women and girls may have been engaged in commercial sex work after the earthquakes of 2015 in Nepal.

A qualitative study conducted among trafficking survivors in 2015 also suggested that some of the women after they returned back to their communities in Nepal were forced to continue working as sex workers due to poverty.<sup>26</sup> A field report published in 2016 by United Nations Entity for Gender Equality and the Empowerment of Women (UN Women) revealed that the total number of HIV cases (Total registered people living with HIV = 191; women = 97, men = 94) had significantly increased in Sindhupalchowk, a hill district with human development index of 0.455; the district which was the most affected by the earthquakes of 2015.<sup>19</sup>

### *Internal displacement and reduced social capital*

According to United Nations Office for the Coordination of Humanitarian Affairs, 2.8 million people were displaced during and after the two earthquakes and the majority (70%) of the affected population were living in temporary settlements.<sup>27</sup> Large population groups being concentrated in temporary shelters and camps provide risks with regard to sexual violence and HIV.<sup>24</sup> United Nations has estimated that 3.2 million women and children are at risk of rape, sexual exploitation, violence, and trafficking during/after the earthquakes in Nepal.<sup>28</sup> A survey conducted in Haiti in 2010 after the earthquake revealed that 14% of internally displaced persons residing in the camp reported of being the victim of rape or other forms of sexual harassment, and 86% of them were women.<sup>29</sup> A total of 9% mentioned that one or more members of their household have been raped or forced into having sex.<sup>29</sup>

In a qualitative study conducted by Joshi et al.<sup>30</sup> in Haiti, seven of the eight victims who were sexually assaulted

reported that a condom was either not used or used improperly during the assault, resulting to pregnancies. The pregnancies also indicated an increased risk for sexually transmitted infections (STI) from the assault. For instance, with respect to the female reproductive system, injuries to the mucosal epithelial barrier of the genital tract such as lacerations and abrasions provide an easy path for STIs, including HIV. Little is known about the specific health consequences for victims of non-partner sexual violence and where poverty and social marginalization may interact with sexual violence to increase HIV risk.<sup>30</sup> It can be assumed that due to the collapse of health and social infrastructure and community networks services, and an increased rate of sexual violence, internally displaced women are at high risk of HIV and STIs.

### Poor health care access and poor HIV prevention practices

The structure of general social system along with (HIV-related) health care system had broken down due to the earthquakes in Nepal; this could have led to reduced uptake of HIV prevention and treatment services in the affected areas. A lesson learned from Haiti was that the catastrophic earthquake resulted in the marked decline in HIV testing and new antiretroviral treatment enrollment.<sup>31</sup> The earthquake profoundly impacted the healthcare access; for instance, the decline in testing and treatment uptake was due to the interruption of medical supplies and services in healthcare facilities. Within 3 months of the earthquake, the Haitian government was able to meet the demand of supplies of antiretroviral drugs and general medical supplies, which subsequently led to increases in testing and treatment uptake rates.

In Nepal, women's access to general health services is often compromised due to their social and economic position in the family and society, and women, particularly during the earthquake period, had poorer access to HIV prevention services. The women belonging to disadvantaged social groups such as returnee trafficked women, those involved in prostitution, or living with HIV are the one who had limited healthcare access because of layered stigma attached to being a member of marginalized groups.<sup>9</sup>

### Conclusion and implications

This debate paper highlights the fact that women's HIV risk in the earthquake-affected regions could be highly driven by forced sex, prostitution, and sex trafficking, and these factors are likely to increase in the aftermath of earthquake due to disruption of family and social ties, housing and infrastructure, health services, and education facilities. We suggest that these factors need to be further studied, particularly in a post-disaster situation in a resource-limited context, so that locally and culturally salient and sustainable relief and reconstruction strategies can be built. Although we have limited the case study to Nepal, the factors and mechanisms may

have equal relevance to other settings with comparable disaster and healthcare contexts.

Given that a disaster situation is unpredictable, such research needs to take into account the local context that could differ not only by the type of disaster but also by the political, economic, social, and cultural circumstances. Besides, general program strategies should include initiatives to improve and sustain access to HIV education and testing services to the people at risk and antiretroviral treatment to the people diagnosed with HIV in line with supporting existing environmental, social, and community infrastructures, which are of course severely damaged in the earthquakes. In addition, HIV prevention and treatment should be one of the issues in disaster preparedness and response strategies in HIV epidemic settings.

### Author contributions

R.J. performed the literature research and drafted the manuscript. P.T.A., S.T., and A.R.A. critically revised the manuscript for important intellectual content and approved the final version for publication. All authors approved the final manuscript.

### Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Ethical approval

It is a review, so no human participants were enrolled in the study direct or indirectly. No ethics approval was sought.

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