




## Community Case Report

## Social, Cultural and Economic determinants of HIV/AIDS: A community case report of Bhutan

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### Abstract

**Background:** Bhutan has a low-level HIV epidemic, with sporadic cases across the whole population. Our society is witnessing momentous social and cultural changes coinciding with the arc of the HIV pandemic. Therefore, this paper systematically assesses socio cultural determinants of HIV in Bhutan for appropriate responses to end the AIDS epidemic by 2030.

**Methods:** We reviewed the literature relevant to HIV in Bhutan using appropriate search engines. We adapted Dahlgren and Whitehead's model of social health determinants in the population as a conceptual framework.

**Results:** Young age played the salient role between rapid sociocultural changes and HIV in Bhutan. Most teens are sexually active, has relaxed sexual norms, low condom use, and has multiple sexual partners. Gender identity and sexual orientation are increasingly fluid among transgender and gay/bisexual men. Worksites with migrants and entertainment venues are nexuses for sexual networking resulting in transactional/sex work.

**Conclusion:** Our findings suggest a high potential for a shift from diffuse cases of HIV to more concentrated HIV epidemic. HIV responses need to be tailored specifically for key populations instead of the current generalized approach. We recommend community-based HIV Self Testing and social support to overcome the structural barriers to enhance case diagnosis.

**Keywords:** Acquired Immunodeficiency Syndrome; Sex Work; Transgender Persons; Sexual Behavior; Bhutan.

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### Introduction

Bhutan has a low adult (15-49 years) HIV prevalence, which is below 0.2% (1). However, the growing incidence of HIV and STIs cases every year indicates infection still taking place in the population. Since 2006, more than 25 cases have been detected annually and the detection trend has increased with an

annual detection rate of more than 55 cases per year since 2015. In 2019, UNAIDS estimated 1336 HIV cases in Bhutan but the total cases diagnosed as of June 2020 stands at 741 (58.1% male and 48.2% female) thus creating a case detection gap of 43% (Figure 1) (2). This converts to 559 people are living with HIV in the population without knowing their HIV status. Besides,

there is also an increasing number of STIs incidence. The STIs incidence increased from 12 per 10,000 populations in 2011 to 92 per 10,000 populations in 2015 (3,4). The dominant mode of transmission among the reported cases is through heterosexual (93%) followed by Mother to Child Transmission (MTCT) (5%) and 2% through Injecting Drug Use (IDU) (5). The situation is further worsened when there is no specific evidence in Bhutan as to how social determinants play a critical role in the acquisition and transmission of HIV/STIs. The evidence shows that the social determinants bring both positive and negative health outcomes of an individual differently thus warrants an understanding of the relationship between social determinants and individual behavior to enable its application to health and illness (6–10). HIV/AIDS is both a biomedical disease and a social phenomenon that is constructed in specific cultural contexts

(10). The evidence also shows a paradigm shift from considering HIV/STIs as an individual behavior to larger policy and social structural factors (11). Studies have shown that these policy and societal determinants play a critical role in making the population vulnerable to HIV/STIs. Therefore, unique HIV/STIs trends in Bhutan recommend dissecting the cases to understand how biological and social determinants in Bhutan’s context play its role in the transmission of HIV/STIs for an appropriate response to end the AIDS epidemic by 2030. Therefore, this study intends to analyze the social determinants and biological factors of HIV infection in Bhutan. This study will guide the Ministry of Health for developing appropriate public health interventions in the prevention and control of HIV and AIDS.

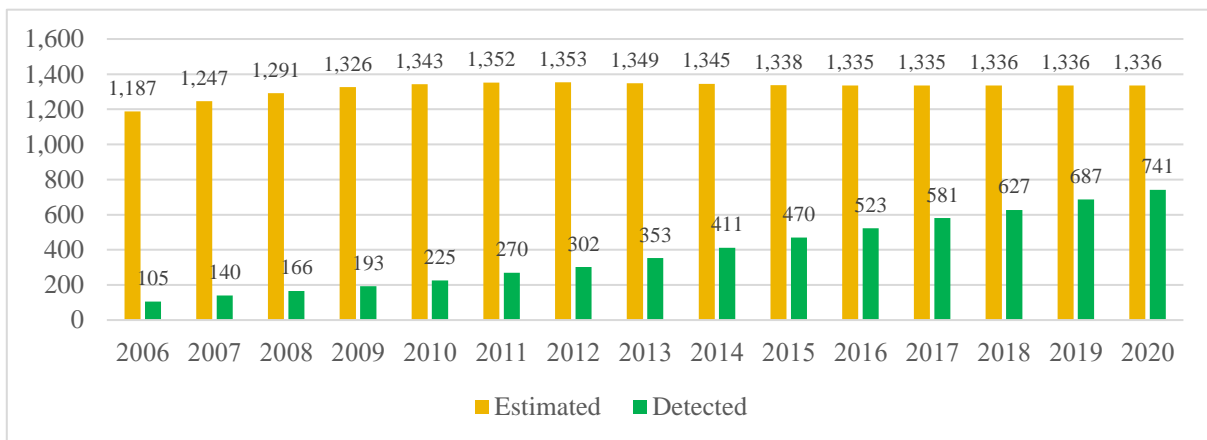


Figure 1. Cumulative number of estimated and detected HIV in Bhutan from 2006-2020. (Source: NACP annual HIV epidemic data, 2020)

**Methods**

***Situational analysis***

The paucity of peer-reviewed publications from and about Bhutan, along with most information inaccessible and local reports, precluded a conventional systematic review of the literature. Our situational analysis was conducted on HIV, AIDS and STIs related to Bhutan. We synthesized available published English language journal articles, reports from health agencies, policy

statements, and program plan relevant to HIV in Bhutan from 2000 to 2020. Search engines used PubMed (Medline), Google Scholar, and e-library. The official websites of WHO, UNAIDS, UNDP and UNODC were searched for available information. The search strategy paired the terms “HIV” and “Bhutan” with various search terms related to the Dahlgren and Whitehead model. We have traced the primary source articles for accuracy of information. We also included reports from Bhutan and other

countries with similar cultural context for our analysis. In total, we have reviewed 54 sources (published and unpublished).

### **Conceptual Framework**

We have adapted Dahlgren and Whitehead's model of social determinants of health (SDH) in population to guide the analysis. While adapting we have removed determinants like housing, water and sanitation, agriculture, food production and environmental condition owing to lack of information. Therefore, as shown in Figure 2 the model was adapted to create a relationship between different determinants. The individuals are placed in the center and then surrounded by various layers like individual lifestyles, social and community network, living and working conditions, economic and political conditions. Also, some personal observations based on field experiences in the subject were used to supplement the findings from literature in analyzing various determinants for HIV infection. In the following findings and discussion, the determinants from innermost layer were presented first and then followed by subsequent outer layers.

### **Ethics consideration**

Since the study is to review the existing study reports and publication which are already in the public domain the ethical clearance was not obtained from the ethics board. However, administrative approval is sought from the Department of Public Health and all confidentiality measures were taken into account where necessary.

### **Results**

#### **BIOLOGICAL FACTORS**

##### **Age**

The General Population Survey (GPS) 2008 showed more than 58% of respondents had sex and their mean age of sexual debut was 16 and 19 years old for males and females respectively. Their condom use during their first sex was 31% (male) and 13% (female) (12). Further, the National Baseline Assessment (NBA) 2009 reported a mean age of first sexual debut at 17 years among 850 drug users and the consistent condom use was just 38%. The Knowledge Attitude Practice & Belief (KAPB) survey 2013 reported mean age for sexual debut among 800 respondents as 17 years (13). Sexual Behavior Network Study 2011 also revealed that 15%, men and 6%, women having their first sex before 15 years old (14).

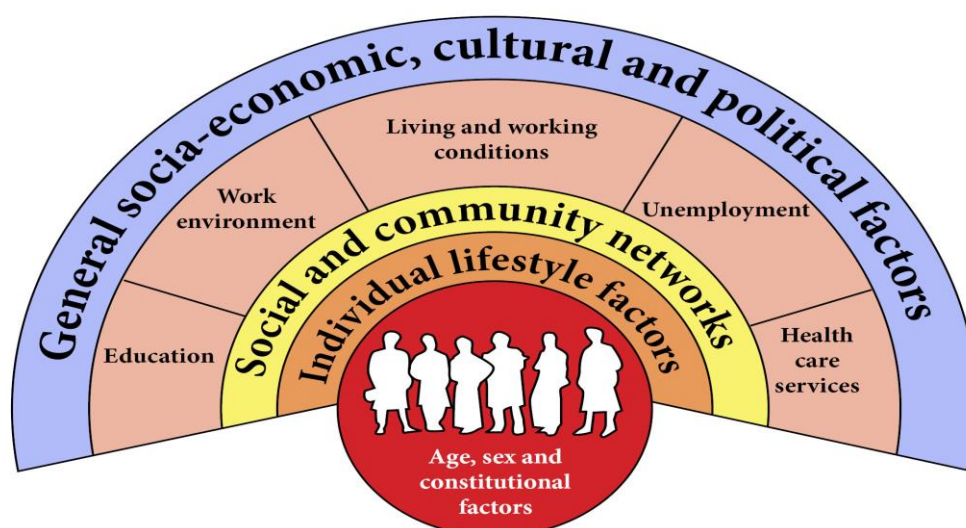


Figure 2. Dahlgren and Whitehead's model of health determinants. Adapted from economic and social research council by Göran Dahlgren and Margaret Whitehead, 1991, Retrieved from [The Dahlgren-Whitehead rainbow - Economic and Social Research Council \(ukri.org\)](http://TheDahlgren-Whiteheadrainbow-EconomicandSocialResearchCouncil(ukri.org))

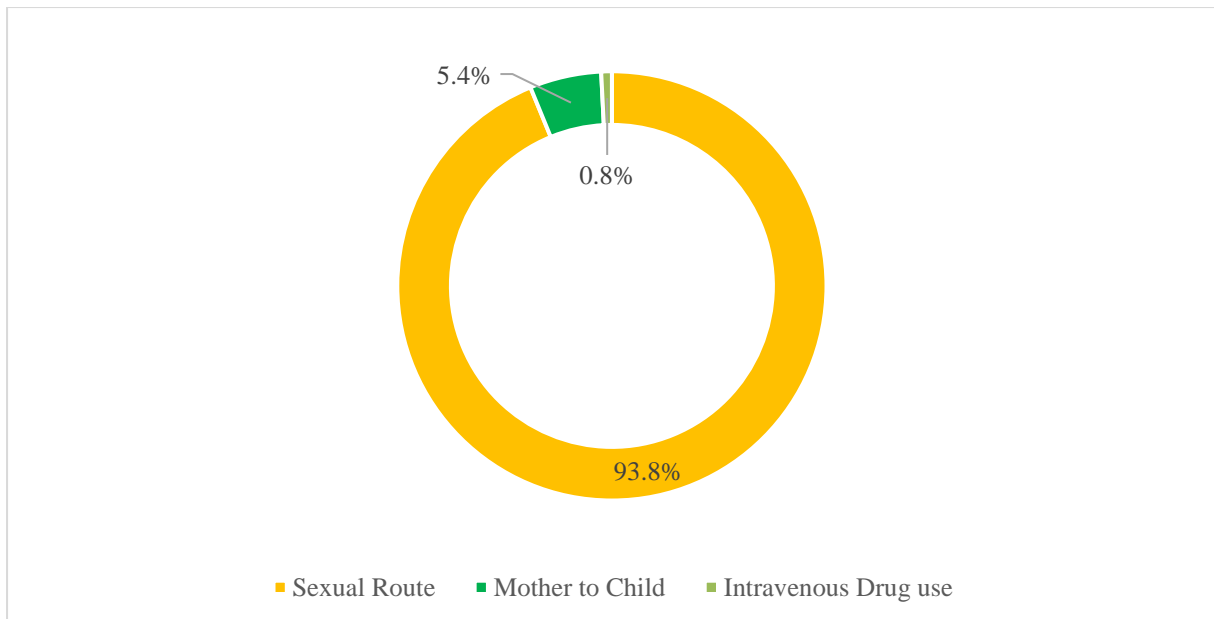


Figure 3. Mode of HIV transmission in Bhutan from 1993-2020. (Source: NACP annual HIV epidemic data, 2020)

### ***Sex and gender***

Although the overall HIV reported cases in Bhutan shows the almost equal proportion of male and female but the current reported new HIV cases between the ages of 15-29 years revealed more younger females infected as compared to males of the same age group. Similarly, among the older age (>30 years) more males are infected as compared to females of same age category (Table 1). The formative assessment on the situation of sex work also showed the emergence of transactional sex between the older men and younger females in Bhutan (15). Concerning gender, the power imbalance, gender-based violence and sexual harassment do exist in Bhutan (16). According to the National Study on Women's Health and Life Experiences 2017 (17), around 35.3% of women in Bhutan have experienced violence in terms of controlling behaviors from their partners during their lifetime. Regarding the gender expression the Population Size Estimation (PSE) Study, 2019 estimated about 378 Transgender (TG) person, 1726 Men having Sex with Men (MSM) and 597 Female Sex Workers (FSW) (18). Such gender expression and their risk for HIV was also depicted in several other studies. However, zero HIV prevalence were

reported among the TG and MSM in Bhutan (19).

### **INDIVIDUAL LIFESTYLE**

#### ***Multiple sexual practices***

The evidence from different sources shows that all forms of sexual practices (vaginal, anal, and oral) exist in Bhutan (15,20–22). GPS (2006) confirms that (1/5<sup>th</sup>) of all the married people (men and women) have engaged in extramarital sex within a year. Such multiple sexual practices were higher among urban areas (23%) as compared to rural areas (14%) (12). The Sexual and Behavioral Net Work Study (SBNS) 2011 also found that men are more likely to have multiple sexual partners as compared to women in the last 12 months (60% among men and 36% among women) (14). Furthermore, the Integrated Biological Behavior (IBBS) Survey 2016 showed an average of 2.6 and 2.2 regular paying clients with MSM and TG in last month and consistent condom use was just 53% and 43% respectively. The findings also indicated that 20% MSM had a bisexual relationship with 1-4 females' sexual partners in one month and the condom use was just 37% (19). The study among the Drayang girls in 2015 found the existence of transactional sex in Bhutan (21,23). About 93% of the reported cases have

acquired HIV infection through heterosexual means (Figure 3).

#### ***Alcohol and Substance abuse***

The NBA, 2009 showed 11% (98/917) male drug users with only one female respondent reported ever IDU (24). The drug use situation in schools and communities by UNODC in 2009 revealed that an equal proportion of male and female students (6/431; 0.01% and 6/457; 0.01%) reported ever IDU (25). According to BSS 2008, about 32% of male drug users (DUs) bought sex from female sex workers and consistent condom use was 27% in last one year and 21.4% did not use condom at all (26). The adult per capita alcohol consumption was 8.47 litres in 2010 which was considered much higher than the global standard rate of 6.2 litres in 2002 (27). Fifty Seven of bar girls reported having engaged in sex under the influence of alcohol and their condom use was 21.1% (21) (Table 2).

### **SOCIO-ECONOMIC, CULTURAL AND POLITICAL FACTORS**

#### ***Education***

Study conducted by Lekey et al, showed, about 36.2% of Drayang girls with middle secondary education have engaged in transactional sex followed by girls with primary education and no education. However, these differences in education levels were not significant thus; Drayang girls of varied education level are subject to engage in transactional sex depending upon other factors (21). The cross sectional studies among sex workers have also shown no association between education level and transactional sex (28). The IBBS 2016 revealed low comprehensive knowledge on HIV/AIDS among migrants and sex workers (9% each), transport workers (14%), MSM/TG (12%), DUs/IDUs (21%) and uniformed personnel (32%) respectively (19). Also, the National Health Survey 2012 found low (23.2%) comprehensive correct knowledge on HIV/AIDS among the population aged 15-24 years old (29).

#### ***Unemployment***

The overall unemployment rate has increased from 5.9% in 2017 to 6.9% in 2019. The findings also showed high (22.1%) unemployment rate amongst the females than males (15.5%) between 20-29 years old resulting in total unemployment rates of 9.5% among these two age categories (30). The evidence shows that some of the young males and females were found to be engaging in both the transactional non-transactional sex work due to low economic status and rising cost of urban lifestyle (14,15,21,23,31).

#### ***Work environment***

The BSS 2008 revealed that 39.1% truckers had sex with sex workers in Thimphu and 65.5% in Samdrup Jongkhar in last 12 months. Similarly, 41.1% of taxi driver had sex with sex workers in Thimphu and 26.0% in Phuentsholing respectively but the condom use was only 30% in both groups (26). The KAPB 2013 also revealed that migrant workers (59%, Bhutanese & 46% foreign) engaging in multiple sexual relationships and their condom use was 60% and 47% respectively. The study further found that 42.9% of uniformed personnel had multiple sexual partners that include 6.5%, sex workers. About 32.5% bar girls in Thimphu and 52.0% in Phuentsholing have sold sex in the last one month (32). About 15.8% of HIV cases in Bhutan belongs to private/business, 8.8% drivers, 5.4% uniformed personnel and 22% housewives whose infection mostly acquired from their spouses (33).

#### ***Health care services***

The FA, 2013 showed that 57% of health care providers had some level of fears of HIV infection through occupational exposure (34). The 2009 KAPB revealed internal fear and stigma to disclose HIV status of their friends and relatives to others, 62.9% among uniformed personnel, 58.8% among in school and 58.1% among out of school youths (13). The PSE 2019 showed the experience of stigma among the MSM, transwomen and transmen (MSM 35.4%, TGW 91.2% and TGM 95.2%) due

to their sexual orientation and gender identity (SOGI) (18). The Gender Assessment Report 2019 also found some form of stigma in the health care setting against PLHIV, MSM and TGs owing to inadequate knowledge on SOGI by health workers (16). The NASA 2020 found that the annual Out of Pocket (OOP) expenditure of 37% in accessing ARV, viral load and CD4 testing from the district hospital by PLHIV (35).

### **Cultural**

Generally, it is indicated that sexual norms are relaxed and culturally accepted to some extent. The age-old tradition of visiting girls at night for sexual intercourse called night hunting is still prevalent in some of the rural communities (23). While in urban areas the expansion of socio sexual networks, where people seeking sexual partners in Drayang, discotheques, clubs and karaoke are rising (23). Like any other countries sex, sexuality and HIV/STIs are considered sensitive, private, and controversial. It is also believed that talks on condom use among Bhutanese societies are still considered an act of distrust and suspicion rather than an act of carrying, respect and staying safe from HIV/STIs. Furthermore, the cultural norms restrict women from initiating a discussion on sex resulting in poor communication between male and female to promote condom use (36).

### ***Social and community network***

There is no literature on how social and community network plays a role in the prevention of HIV/AIDS in Bhutan, however, the evidence has shown its importance in the prevention of HIV/AIDS (37). Behavior Of the 48 Civil Society Organization is Bhutan, Lhaksam (39) is the only NGO working for a network of people living with HIV/AIDS and Rainbow Bhutan for LGBTIQ communities. The program experience also shows that Self Help group for female sex workers are emerging slowly (40).

### **Political**

There is an increased government effort to prevent the spread of disease through mainstreaming STIs prevention, community education, and personal involvement of the royal family, namely Her Majesty, The Queen Mother, Sangay Choden Wangchuck has increased the support towards the HIV/AIDS prevention (1). Furthermore, it was on 24 May 2004, His Majesty the Fourth King of Bhutan Jigme Singye Wangchuck propagated the Royal Decree calling its citizens to respect the rights of PLHIV and not to stigmatize them (1,41). This was followed by another Royal Edict in 2005 by His Majesty the Fifth King advocating abstinence by rejecting "undesirable activities" and demonstrated compassion to those living with the disease (1). Regarding, sexual orientation and gender the clause decriminalizing same sex in penal code of Bhutan has been modified (42) but inadequate effort prevailed in creating enabling environment for FSWs.

### **Discussion**

This study revealed the prevalence of young age sexuality in Bhutan among younger females and older males. This shows the existence of intergenerational and transactional sex which is evident from the recent assessment on the situation of sex work in Bhutan (15). Globally, intergenerational sex is considered as one of the major risk factors for the acquisition and transmission of HIV/STIs including unwanted pregnancies. This is mainly because of women's inability to negotiate safe sex owing to gender power imbalance and low economic status (43). The other reason could be due to biological factors where low estrogens hormones, larger surface areas of cervix, vagina, and uterus of female enables the infection to occur easily (44–46). Furthermore, female receives more semen, which contains high HIV during sexual intercourse and provides good microbial ecology for HIV to grow (46).

Individual lifestyle is one of the major social determinants influencing the risky

behavior of key and vulnerable populations in Bhutan. This is mainly because of the rapid socioeconomic development that has brought changes in the overall lifestyles of the Bhutanese population. This is evident from growing entertainment venues, discos and bars where many young and adults are bingeing on alcohol and other substance abuse (21). Such drinking patterns can not only result in health risk as evidence from rising alcohol liver diseases (22), loss of financial resources and increasing extramarital affairs (21). The SBNS 2011 showed a connection between alcohol consumption and sexual relationships with low condom use (14). The study among Drayang girls also showed that those girls who consumed alcohol are most likely to engage in transactional sex than those who remained sober (21). The vulnerability assessment, 2009 found a strong correlation between alcohol and violence, and then sexual activity (47). This demonstrates that alcohol drinking culture in Bhutan and its associated risky sexual behavior can be one of the important sociocultural determinants for HIV and other health risks. The situation is further worsened when there is a huge gap of comprehensive correct knowledge on HIV/AIDS among the population aged 15-24 years increasing myths and misconception about HIV/AIDS. The cultural taboo about sex, sexuality, gender and HIV/AIDS is yet another social determinant that is likely to increase the existing stigma and discrimination. The evidence also highlighted cultural taboo and gender stereotyping leading to unbearable social stigma against PLHIV and key populations delaying HIV testing, and treatment (48). Although, there is very low IDUs the presence of DUs tied with risky sexual behavior can still be one of the potential risk factors for HIV infection through this group. Therefore, having an appropriate size estimation of these population is urgently needed to understand the magnitude of IDU's population and associated risk behavior. The emergence of

TGs, MSM and FSWs in Bhutan can be an indication of epidemic likely to pick up among these group in future if the current targeted interventions are not well established. Although the finding indicates the heterosexual as dominate mode of HIV transmission in Bhutan, there is a lack of data to understand the actual source of infection, which could potentially be associated with sex work or migration. The global evidence depicted that in such HIV epidemic the chances of other risky practices, such as homosexual sex can be underreported due to the high level of stigma (49). This shows the high possibility of a shift from the current diffuse low epidemic to concentrated HIV epidemic. As a result, a retrospective case-based risk profiling among the current diagnosed PLHIV is required to understand the source of infection to define the country's HIV epidemic appropriately for effective response.

Stigma and discriminations are one of the major barriers to HIV testing services. This is evident from the current case detection gap of 43% of the estimated 1300 PLHIV, and 37% non-compliant cases (2). The previous punitive law on homosexual has also deterred MSM and TG person to come forward for timely HIV testing and treatment (42). This shows that need to create enabling environment for this group of population is critical to ensure the accessibility of the services. The global evidence also shows that biological, behavioral, legal, and social and cultural factors put TGs and MSM population at greater risk of HIV infection (50). The studies in Bhutan have also shown the existence of a complex network of social interactions, sexual behaviors, culture, demography and accessibility of the health services by the key and vulnerable population due to HIV and gender-related barriers (18,19,34). Therefore, overlapping sexual relationships among MSM, TG and heterosexual populations coupled with growing transactional and non-transactional sex work with low condom

use can be one of the major risk factors for HIV/STIs including unwanted pregnancies. The global evidence shows that MSM having anal sex is 18-fold greater per act probability of HIV/STIs infection than vaginal sex (51). Nevertheless, despite the existence of high-risk behavior for HIV/STIs by this group of populations the current targeted interventions to reach MSM and TG has not worked well. Therefore, it is important to re-strategize the current approach of reaching the MSM and TG by introducing the community-based HIV testing, HIV self-testing and online outreach to improve the service accessibility.

The low socio-economic status and unemployment also played a silent role in increasing the risk of HIV and STIs. This is evident from several national studies where unemployment and the high living standard was cited as one of the reasons for getting into sex work by the key and vulnerable populations irrespective of their gender (14,15,21,23,31). The ultimate reason for growing unemployment was due to rural urban migration (52) and it is evident from the findings of this study where the rate of unemployment is higher in urban areas as compared to rural areas. Although there is no direct evidence to show the association between the unemployment and HIV infection among the current living cases but the higher unemployment rate among younger females (53) and concentration of HIV infection between the ages of 15-39 years show a likelihood of greater risk for HIV/STIs for low socioeconomic status individuals. Marlink R et al. (2008) also illustrated the likelihood of facing economic challenges by HIV affected households with no work as compared to HIV negative counterparts (54).

The absence of Self-Help Group (SHG) or poor network of key populations may hinder HIV prevention services among the high risk group in Bhutan. The global evidence also shows that social network support is important for building the connections between HIV patients and their

social environment (10). The increased mobility due to greater socio-economic development may also increase the likelihood of exposure to several risk factors. Therefore, the work environment is one critical social determinant that influences risk for HIV/STIs in Bhutan.

### **Conclusion**

The study found relaxed sexual norms resulting in multiple sexual relationships between different subpopulation groups with low condom use as one of the major risk factors for HIV/STIs. Individual lifestyles, working environment and cultural determinants are intertwined and influence each other resulting in increased risk behavior and more complex structural barriers for testing, and treatment among key populations. For example, social and cultural values, norms, and traditions influence individual lifestyles and behaviors of the population. Although heterosexual predominates the mode of transmission but the exact source of infection is still unknown and thus deserves further validations. All social cultural determinants require balanced interventions to reach key populations with comprehensive HIV prevention services. The government should further strengthen HIV testing such as community-based testing and HIV Self Testing including the dissemination of right messages using the right channel to help change behavior and enhance case diagnosis.

### **Limitations**

The major limitation was the unavailability of related articles to analyze all the determinants of Dahlgren and Whitehead's health model. Some of the factors like agriculture and food, housing, environmental condition, water and sanitation need to be removed owing to no available literature. The author has also added his judgment based on his field experiences.

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