Factors associated with increasing the risk of HIV and AIDS in Nepal: Cases from the Kathmandu Valley

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CHAPTER - ONE
INTRODUCTION

The title of the thesis is 'factors associated with increasing the risk of HIV and AIDS in Nepal: cases from the Kathmandu valley'. This thesis is conducted for academic propose with the general objective is to identify the individual, socio-cultural, economic, political and educational factors associated with increasing the risk of HIV and AIDS. In National and international context, various factors are found associated with increasing the risk of HIV and AIDS from the previous literatures. Risk behavior of HIV and AIDS is defined as "risk arises from individuals engaging in risk-taking behavior for a variety of reasons. They may, lack information on HIV, think that HIV and AIDS affect a different social stratum than their own, or may not have access to condoms" (UNAIDS, 1998, p. 4).

Certain behaviors can increase risk of HIV transmission, e.g. having unprotected vaginal, anal, or oral sex with someone who is infected with HIV or whose HIV status you don't know, having many sexual partners, having sex with a sex worker or an injective drug user and sharing needles, syringes, or equipment used to prepare or inject drugs with someone who is HIV infected. Besides that, having sex after drinking alcohol or taking drugs or having a mother who was infected with HIV before child was born may increase the chances of HIV transmission.

The social and economic factors that have been shown in a variety of settings to have the greatest influence on health care, income, poverty, employment, occupation, education, housing, culture and ethnicity. Various social and cultural traditions reinforce vulnerability to HIV. In order to improve population health status and reduce health inequalities, it is important to identify and understand the main factors that protect and promote good health.

These factors are known as the determinants of health also. (National Health Committee, June 1998, p. 8)

A study was conducted to establish the extent to which socio-economic status affects the acquisition of HIV. Data were collected in 1992 from 1784 respondents in Rakai district by the Rakai Project reported that ***education, place of residence and condom ever use*** was found to be highly significantly associated with HIV status (p=.0000). The higher the respondents' level of education, the more likely they were to acquire HIV. Regarding ***occupation*** (includes truck and taxi drivers, fishermen, those in the forces, waitresses, barmaids and market vendors) shows that it was significantly associated with HIV status at the bivariate level, at p=.0000. At bivariate level, ***higher wealth*** status was significantly associated with HIV status (p=.0086) (Ntozi, 1997).

Several studies have attempted to identify the socio-demographic characteristics associated with HIV vulnerability. Some authors (Mishra et al., 2007) focused on the connection between HIV prevalence and wealth, which appears to be positively correlated for a number of sub-Saharan African nations. Other authors (Glynn et al., 2004; Fortson, 2008) have also pointed to education as a risk factor; however, its relationship to HIV sero-prevalence is equivocal. According to the Nunn et al., 1994; Hong et al., 2004; Clark, 2004; Johnson & Way, 2006 as cited by Yang, marital status has also been shown to be associated with HIV infection: individuals who have been married at any time (i.e currently married, widowed or divorced) are more likely to be infected (YANG, 2011, pp. 155-156).

In Nepalese context WHO had identified some factors like; 'poverty, migration, conflict, trafficking of illicit drugs and prostitution are the major contributory factors to Nepal's HIV/AIDS vulnerability (World Health Organization, 11/22/2006, p. 2).

1.1 An overview of Society and HIV and AIDS

HIV and AIDS is one of the most dreaded diseases of century. The epidemic is unique in its devastating impact on the social, economic and demographic underpinnings of development. A decade ago, it was regarded primarily as a serious health crisis. Today, it is clear that AIDS is a development crisis and well accepted as the social problem also. Besides that, in some part of the world is rapidly becoming a security crisis too.

1.1.1 Understanding the nature of society

Society is the web of relationship of individual and society. It was Aristotal who said long back that man is a social animal. The essential fact is that man always belongs to a society or a group of one kind or the other, and without it, he cannot exist (Rao, 2008). On the other hand, without close interaction of individual, society cannot be formed. There are two main theories which explain the nature of society.

i. **Social contract theory:** the classical representative of this school of thought are Thomas Hobbes, John Locke and J. J. Rousseau who through the light on the origin of the society. According to this theory, all men are born free and equal. Individual precedes society. Society came into existence because of an agreement entered into by the individuals.

ii. **The organismic theory of society:** the concept of this theory came from the Plato and Aristotal. The organic theory considers society as a unity similar to that which characterizes a biological organism. The union of individual forming the society has been described as similar to the union between the several parts of an animal body, wherein all parts are functionally related. The animal body is composed of cells, so is the society composed of individuals, and as is the

"*relation of the hand to the body or the leaf to the tree, so is the relation of man to society. He exists in it and it in him*" (Rao, 2008).

In relation to the concept of contract theory and organismic theory, HIV and AIDS also exist in society as a result of interaction between the individual.

1.1.2 Defining HIV and AIDS

Hence, the key term used throughout this dissertation is HIV and AIDS. For the purposes of this study, the definition of HIV and AIDS is aligned closely with that of the joint United Nations Program on HIV and AIDS (UNAIDS) which states "HIV (human immunodeficiency virus) is a virus and AIDS (acquired immunodeficiency syndrome) is the condition caused by that virus" (UNAIDS A. and., 2011,p.3).

HIV: Virus

HIV is the abbreviation for human immunodeficiency virus (John Hubley, 1998, p. 1). HIV attacks the immune system by replicating itself and overwhelming the human body over time, thus opening a way for opportunistic infections (OIs) such as tuberculosis (TB) and pneumonia (Sharma, 2006, p. 18). The HIV virus is an infection of the parasite, human intestinal fluke. It is not a human virus. It only infects us incidentally when we host this parasite in us (Clark D. H., 2001, p. 9). When a person is tested HIV positive, it is not the end of the world (Ahluwalia, 2005, p. 4).

AIDS: The Illness

AIDS is the abbreviated form for Acquired Immune Deficiency Syndrome (John Hubley, 1998, p. 1). It is the life-threatening conditions known as AIDS, which is described as a combination of symptoms that attack the human body following progressive damage to the immune system by the HIV virus. AIDS is not a disease but a syndrome (Sharma, 2006, p. 18). AIDS is a condition in which body's immune system is impaired or becomes useless (Ahluwalia, 2005, p. 2). It is acquired because

AIDS is an infectious disease caused by a virus which is spread from perosn to person through a variety of routes (John Hubley, 1998, p. 1).

AIDS as Biomedical Fact

AIDS is the acronym used for the medically defined acquired immunodeficiency syndrome. In lay terms the acronym can be explained in this way:

Acquired = the virus is non-hereditarily transmitted.

Immunodeficiency = the virus weakens the immune system resulting in greater, susceptibility to various opportunistic infections.

Syndrome = a collection of common symptoms or signs (usually opportunistic infections) which are fairly typical in infected persons (Beine, 2003, p. 54).

1.1.2 Origin of HIV and AIDS

The origin of the HIV viruses and AIDS is still a mystery. There have been many theories but none so far has been proven. During the early stages of the AIDS epidemic the flimsiest evidence was used to blame AIDS on Haitians and Africans. In this session, four theories about the origin of HIV and AIDS are discussed:

I. **Isolated Community Theory:** The AIDS virus has always existed in a small isolated group of people. The virus then was passed to an outsider and spread from there.

II. **Green Monkey Theory:** A variation of this theory is that the virus was present in an animal where it did not cause disease and in some way was transferred to humans where it caused disease. The animal that has received most attention as a possible source has been the African Green Monkey. The evidence that appeared to support this is that the virus HIV-2 is genetically similar to a virus called 'Simian Immune-deficiency Virus

(SIV) which was found in some monkey. Reason for doubting the Green Monkey Theory is that, as SIV is closer to HIV2, the theory would predict that HIV2 would have appeared first.

III. **Germ warfare Theory:** The theory that HIV was produced by the American military as a germ warfare agent is based on a paper published by three East German scientists in 1986.

IV. **Mutation Theory:** Viruses are continually changing and mutating into new strains. It seems a highly likely hypothesis that a mutation took place in a virus to produce a new virus with the deadly properties of HIV (John Hubley, 1998, pp. 31-33).

> The major cause of acquired immune deficiency syndrome (AIDS) is human immunodeficiency virus type 1 (HIV-1). The closest relatives of HIV-1 are simian immunodeficiency viruses (SIVs) infecting wild-living chimpanzees (Pan Troglodytes) and gorillas in west central Africa. SIVs are primarily monkey viruses. It was found that SIV infection causes CD4þ T-cell depletion and increases mortality in wild chimpanzees, and so the origin of AIDS is more ancient than the origin of HIV-1. Tracing the genetic changes that occurred as monkey viruses adapted to infect first chimpanzees and then humans may provide insights into the causes of the pathogenicity of these viruses. (Hahn, 2010, p. 2487)

AIDS was first described in 1981, when previously healthy young adults-mainly men living in urban areas of the United States-began falling ill with opportunistic infections previously unknown among this age group. Similar infections were soon described in Africa, the Caribbean and Europe; AIDS was clearly an epidemic disease. Most of these young people died, and a host of discrepant

hypotheses emerged, but a blood-borne viral pathogen was suspected early on. In 1983, this suspicion was confirmed when Professor Luc Montagnier and others discovered a novel pathogen: a retrovirus tropic for the CD4 cells that orchestrate cell-mediated immunity and protect humans from a broad range of viral, mycobacterial, and fungal pathogens (Sharma, 2006, p. 3).

HIV is not-so-ancient history. Ancient Egyptians described diabetes on a scrap of papyrus 3500 years ago. Two thousand four hundred years ago, Parkinson's was first outlined in a Chinese medical text. And Chinese, Greek, Roman, and Indian civilizations had all recognized malaria long before we had microscopes to observe the parasites that cause the disease. By comparison, HIV is a distinctly modern disease (Understanding Evolution: HIV's not-so-ancient history, 2010).

> Human immunodeficiency virus type 1 (HIV-1) sequences that pre-date the recognition of AIDS are critical to defining the time of origin and the timescale of virus evolution. A viral sequence from 1959 (ZR59) is the oldest known HIV-1 infection. Other historically documented sequences, important calibration points to convert evolutionary distance into time, are lacking, however; ZR59 is the only one sampled before 1976. Here we report the amplification and characterization of viral sequences from a Bouin’s-fixed paraffin-embedded lymph node biopsy specimen obtained in 1960 from an adult female in Léopoldville, Belgian Congo (now Kinshasa, Democratic Republic of the Congo (DRC)), and we use them to conduct the first comparative evolutionary genetic study of early pre-AIDS epidemic HIV-1 group M viruses. (Michael Worobey, 2008, p. 461)

It is also said that in 1960s, when 'Pills' was developed as a family planning contraceptive to protect from the unwanted pregnancy; youth felt the freedom for sex

and sex business highly increased. As a result, numbers of people who were infected from sexual transmitted diseases increased (Dixon, AIDS and You, 2002, pp. 20-23).

Timetable of Important events in AIDS:

Pre 1980	Silent Period: HIV being transmitted before AIDS was recognized as new disease.
1981	Epidemic of Pneumonocystiscarinii infection in Los Angeles, USA.
1981	Epidemic of Kaposi's sarcoma in New York, USA.
1982	Slim disease encountered in Rakai, Uganda.
1983	Increase in Kaposi's sarcoma found in Lusaka, Zambia.
1983	Isolation of virus by Luc Montagnier in France.
1984	Virus found by Robert Gallo in USA.
1985	ELISA blood test developed.
1986	Dr. Halfdan Mmahler, then Director of World Health Organization, addresses United Nations on AIDS.
1986	First case of AIDS reported in India.
1987	WHO Special program on AIDS formed.
1987	HIV2 virus found in AIDS patients in West Africa
1988	First global meeting of health ministers on AIDS.
1990	First Conference on AIDS in Asia and the Pacific held in Canberra, Australia

Sources: (John Hubley, 1998, p. 2)

1.1.3 Global Status of HIV and AIDS

The HIV and AIDS epidemic started in the mid-80s with a few reported cases across the world and since then, hardly 20 years later, it has developed into a global crisis. It has been described as the most devastating pandemic in the history of

modern civilization. Its spread across the globe has been rapid and its impact profound (UNAIDS, 2010). According to the Joint United Nations Programme on HIV and AIDS (UNAIDS) - Globally, an estimated 35.3 (32.2–38.8) million people were living with HIV in 2012. There were 2.3 (1.9–2.7) million new HIV infections globally, showing a 33% decline in the number of new infections from 3.4 (3.1–3.7) million in 2001. At the same time the number of AIDS deaths is also declining with 1.6 (1.4–1.9) million AIDS deaths in 2012, down from 2.3 (2.1–2.6) million in 2005 (UNAIDS, 2013)

As stated in African Development Forum, 2000:2, as cited by Mr. Masebala in his PhD Dissertation that originally, the pandemic was regarded as a health issue only. However, it is increasingly recognized as having much wider and broader implications for all levels of society. In some 20 years, the view of the pandemic has shifted from being a simple medical matter to a complex socio-economic problem on a global scale. The economic consequences are dramatic since the portion of the population that is of a productive age is most severely affected by the epidemic. In effect, currently, the pandemic attacks each component of the Human Development Index. It reduces life expectancy, lowers educational attainment, and reduces per capita income. It undermines the very concept of human development (Tjabane, 2010, p. 175).

People living with HIV and AIDS and those affected by it experience marginalization, which is defined as the exclusion of a whole category of people from useful participation in social life. HIV and AIDS has reached a stage where it is a global responsibility, and the global community therefore urgently needs to find ways to correct the injustices caused by it. It is no longer the responsibility of nation states alone but, rather, that of the global community.

With the dawn of the new millennium, the impact of HIV had reached such catastrophic proportions that the international community responded by establishing UNAIDS in 2001 as an international body to provide appropriate world policy guidelines to halt and reverse the spread of HIV and AIDS as one of the Millennium Development Goals. The UNAIDS acknowledges HIV as a – Global emergency and one of the most formidable challenges to human life and dignity and is committed to strengthening support to nationally owned and led responses (http//: www.undaids.org). As a global emergency, the HIV and AIDS pandemic has been associated with the broader impact of globalization also, both negative and positive.

The epidemic is on the upswing, spreading the fastest in Eastern Europe: new infections in the Russian Federation appear to be almost doubling annually since 1998. Data from Asia also warm against complacency (Sharma, 2006, p. 107). Infection rates in Cambodia, Myanmar, and Thailand are in the 2-4% range, similar to those in many West African countries, while India is second only to South Africa in the number of people currently infected (UNAIDS and WHO, December 2001).

Every day, over 7,000 persons becomes infected with HIV and about 5,000 persons die from AIDS, mostly because of inadequate access to HIV prevention care and treatment services. Roughly 16.6 million (14.4 million–18.8 million) children under the age of 18 have lost one or both parents to AIDS, and millions more have been affected, with a vastly increased risk of poverty, homelessness, school dropout, discrimination and loss of life opportunities. These hardships include illness and death. In the history of 2001 to 2009; annually around 2.7 million people were died from the AIDS in 2004/05 and 2006 which were the highest number of death. In 2001, 4.3 million adult people were newly infected with HIV and in 2009, 2.2 million adults were newly infected which remained in decreasing trend (UNAIDS, 2010).

A report of UNAIDS shows that 2011 was a game changing year for the AIDS response with unprecedented progress in science, political leadership and results. The report also shows that new HIV infections and AIDS-related deaths have fallen to the lowest levels since the peak of the epidemic. New HIV infections were reduced by 21% since 1997, and deaths from AIDS-related illnesses decreased by 21% since 2005 (UNAIDS, Press Release, 21st Nov, 2011)**.**

1.1.4 HIV and AIDS in Asia

In Asia, the rate of HIV transmission appears to be slowing down: the estimated 360 000 [300000– 450 000] people who were newly infected with HIV in Asia in 2010 were considerably fewer than the 450 000 [410 000–500 000] estimated for 2001. Although the rate of HIV prevalence is substantially lower in Asia than in some other regions, the absolute size of the Asian population means it is the second largest grouping of people living with HIV. The incidence of HIV infection in South and South-East Asia appears to have peaked in the mid-1990s (at 440 000–465 000 people newly infected annually) and decreased markedly since then to about 270 000 [230 000–340 000] people acquiring HIV infection in 2010. In India, the country with the largest number of people living with HIV in the region, new HIV infections fell by 56%. About 4.8 million [4 300 000–5 300 000] people were living with HIV in Asia in 2010, 11% more than the 4.2 million [3 800 000–4 600 000] in 2001 (STAC, 2011) .

1.1.5 Status of HIV and AIDS in SAARC Region

SAARC Tuberculosis and HIV/AIDS Centre (SATA) is one of the Regional Centre of SARRC, located in Kthmandu, Nepal. As SAARC report – 2008, Sub-Saharan African remains the most affected regions in the global AIDS epidemic.

More than two thirds (68%) if all people HIV – positive live in this region where more than three quarters (76%) of all AIDS deaths in 2007. It is estimated that 1.7 million (1.4 million – 2.4 million) people were newly infected with HIV in 2007, bringing to 22.5 million (20.9 million-24.3 million) the total number of people living with the virus. Unlike other regions, the majority of people living with HIV in sub-Saharan Africa (61%) are women (SAARC Tuberculosis and HIV/AIDS Centre (STAC), 2008).

In relation to HIV and AIDS, Asia is second hardest hit after Africa. Although overall national HIV infection levels in Asia are low compared with some other continents, notably Africa, but the populations of many Asian nations are so large that even low national HIV prevalence means large number of people are living with HIV (SAARC Tuberculosis and HIV/AIDS Centre (STAC), 2008). Overall in Asia, an estimated 4.9 million (3.7 million-6.7 million) people living with HIV in 2007 (UNAIDS and WHO, December 2007) .

Among the other SAARC countries; Afghanistan reported low HIV prevalence. In June 2008, the official reported number of HIV cases was 435 and estimated number of people living with HIV and AIDS was 2000 only. Within the Southeast Asian region, Bangladesh continues to appear to have one of the lowest HIV prevalence rates, considerably less than one present. The first HIV positive case was detected in 1989 in Bangladesh. Similarly, HIV prevalence in Bhutan was also less than 0.1% of the population. UNAIDS estimates that about 500 people were living with HIV and AIDS at the end of 2007 and first case of HIV was reported in 1993 in Bhutan. Maldives took action against HIV and AIDS before the first domestic case was reported in 1987, as a result, has so far kept the threat to a minimum. The estimated prevalence among adult population (15-49) was less than 0.1%. This

suggests that Maldives is a low HIV prevalence country with a very small magnitude of HIV epidemic. While Pakistan did not report so high number of HIV and AIDS cases. The evidence of first HIV case was documented in 1986 and as of end of 2005, UNAIDS had an estimated 85000 people (adults and children) living with HIV with 0.1% HIV prevalence level that can be considered low. The first Sri-Lankan infected with HIV was reported in 1987 and the first indigenously transmitted HIV case was reported in 1989. The estimated number of people living with HIV and AIDS in Sri-Lanka in 2007 was 4000 and country had been classified as a low prevalence country with an estimated adult prevalence rate of less than 0.1%. Heterosexual transmission was the most common mode of transmission followed by homosexual/bisexual transmission (SAARC Tuberculosis and HIV/AIDS Centre (STAC), 2008).

Globally, India is second only to South Africa in terms of the overall number of people living with HIV. In India, HIV epidemic continue to be concentrated in populations with high risk behavior characterized by unprotected paid sex, anal sex and injecting drug use with contaminated injecting equipment. Commercial sex is the major driver of the epidemic in most parts of the country. In addition, in the north-eastern states, injecting drug use is a prominent mode of transmission. Recently, high HIV transmission among MSM is being increasingly recognized in the country (Sharma, 2006, pp. 247-257).

The evidence of HIV was first documented in Chennai in Southern India in 1986. From then, by the end of 2006, there were estimated 2.47 million (2.0- 3.1 million) people living with HIV in the country. More men are HIV positive than women. Nationally, the prevalence rate for adult females is 0.29% while for males it is 0.43%. In every 100 people living with HIV and AIDS, 61 are men and 39 women (SAARC Tuberculosis and HIV/AIDS Centre (STAC), 2008).

According to the annual report of SAARC Tuberculosis and HIV/AIDS Centre, 2011, the Adult HIV Prevalence Rates and Estimated Numbers of PLHA in SAARC

Region, 2009/10 was as reported below:

Country	HIV Prevalence Rates %	Estimated Numbers of PLHA
Afghanistan	<0.1	2,000
Bangladesh	<0.1	7,500
Bhutan	<0.1	<500
India	0.31	2.39 million
Maldives	<0.1	<100
Nepal	0.33	63,528
Pakistan	0.1	96,000
Sri- Lanka	<0.1	3000
	Regional	**2.56 million**

Sources: (STAC, 2011)

1.1.6 Brief History on HIV and AIDS Epidemic in Nepal

The first case of AIDS was reported in Nepal in a foreign visitor in 1988. Since then prevalence has climbed steadily. The HIV epidemic in Nepal has evolved from a **"low prevalence" to a "concentrated epidemic"**. Nepal is categorized as a "Concentrated" epidemic country with some of the sub population groups likes: IDUs, MSM and FSWs and their clients, Labor migrants and house wives (Health Services Department, 2008/09). HIV and AIDS has become a prominent problem in the tiny South Asian country of Nepal. Experts have stated that the number of AIDS cases has increased fifteen-fold over a three-year period (1990-93) (Beine, 2003, p.66). As stated in one qualitative study conducted among the PLHIV of Jhapa district of Nepal; first most affected with HIV and AIDS were migrants, second were IDUs and third

one were sex workers, rest included daily wages workers, children and wives of infected husbands. As per economic situations, PLHIVs were categorized into three subgroups:

i) Destitute (poorest of all),

ii) Middle class and

iii) Best off (richest of all).

It was estimated from various sources, that among entire PLHIVs, 85% were destitute, 25-30 % were middle class and rest 10-15% belonged to best off group (Ahmad M, 2009, p. 30).

It is said that turism is also one of the key factors which is supporting to drive the HIV virus in Nepal. Dixit suggest that-

Nepal's overwhelming reliance on tourism for foreign exchange also increases the possibility of easy access for the virus. Nepal has direct links (through sex workers and businessmen) with two cities with highest and second highest prevalence of HIV infection in Asia – Bankok and Bombay (Dixit, 1996, p.50).

Epidemiological evidence suggests that the principal routs of AIDS transmission is heterosexual relation with commercial sex workers are the current cases of spread of HIV infection in Nepal (WHO U. &., 1999).

As in other countries in the region, IDUs, MSM and FSW are the groups most at risk with highest HIV prevalence. Majority of HIV cases have been estimated from labor migrants (41%) and increasing numbers of HIV are occurring among their wives (a combined 26% of HIV cases in low-risk women in rural and urban areas). A 2006 study among Nepali migrants traveling to Indian cities for work found that 27% of men engaged in high risk sexual behaviors. In 2005, 46% of estimated HIV infections

in Nepal were among seasonal labor migrants and similar pattern is found in 2007. Clients of sex workers account for 19% of HIV infections in 2005 and 15% in 2007. Spouses or female partners of migrant workers and clients of sex workers, now account for 26% of all adult infections (Health Services Department, 2008/09)**.** Besides it, there are also many widely held beliefs and cultural practices that are contributing to the spread of HIV and AIDS in Nepal:-

1. Having sex with 108 virgins will cure AIDS and STDs,
2. Cleaning the penis with urine, Detol soap, or Coke will cure AIDS and STDs.
3. Nag puja will cure AIDS and STDs.
4. Anal sex will cause HIV.
5. HIV is prevalent only in Bombay.
6. A tika from Sai Baba placed on the penis will cure STDs and AIDS (Beine, 2003, p. 86; Sharada Prasad Wasti, 2011, UK).

As fact sheet of HIV prevalence was published from Nepal's National center for AIDS and STD control (NCASC), HIV and AIDS epidemics in Nepal from 1988 to 2000 on the basis of total sample tested (blood test report) shows that 1807 including 546 female identified as HIV positive out of 1821180 sample tested. Year wise, HIV prevalence in 1988 was 0.04% and it was seen highly increased in 2000 when HIV prevalence reached to 13.03% in general. In an average, overall HIV prevalence was 0.99%in between 1988 to 2000. During that period, HIV prevalence among males was two times more than females (Nepal P. , July 2002).

Similarly, the UNAIDS has published the estimated data from 1990 to 2009 which shows the trend of HIV infection in Nepal. In 1990, estimated number of people living with HIV was only 20000 (adult + children) and gradually it was in increasing trend; likes: in 1991/24000, 1992/28000, 1993/32000, 1994/36000,

1995/40000, 1996/44000, 1997/48000, 1998/52000, 1999/55000, 2000/58000, 2001/60000, 2002/62000, 2003/63000 and in 2004-09, the estimated number of HIV infected people was 64000 which remained constant in-between (UNAIDS, Report on the Global AIDS Epidemic, 2010).

As of the National Estimate of HIV infection in 2010, the total number of PLWHA in Nepal is 63528, of which 3544 are children below the age of 15. The adult HIV prevalence is ***0.39%.*** The total reported cases of HIV to NCASC till July 2011 was 18237, approximately male and female infection ration is 2:1 (male-11787 and female-6450) (UNAIDS A. &., 2011, p. 21). Similarly, as the annual report of MoHP, in 2011, national estimates indicate that approximately 55600 adults and children are infected with HIV virus in Nepal. A total of 18,396 cases of HIV out of them 7437 advanced HIV infection cases had been reported as of Asar 2068. The estimated prevalence of HIV in the adult population is ***0.33*** percent (GOVERNMENT OF NEPAL MINISTRY OF HEALTH AND POPULATION, 2012, p. iv). According to the data of NCASC, 2013, total estimated number of HIV infection was 48600 and among them adult (15-49) HIV prevalence is 0.28% in 2012 (NCASC, 2013) which is decreased than 2011.

1.1.6.1 Trends

- The epidemic is shifting from high risk population groups to low risk population groups through mobile population,
- The concentration of the disease is shifting on the young people (especially migrant population)
- There is insufficient access to ARV,
- Prevailing stigma and discrimination are impending factors for increasing access to available services,

- Inclusive advocacy approach at all levels (community to policy) is critically important to be able to appreciate the gravity of the problem,
- Nepal is experiencing the increased rate of HIV and AIDS in 15-49 age groups (NANGAN, 2012, p. 5),

In conclusion, Globally, AIDS-related illnesses remain one of the leading causes of death and are projected to continue as a significant global cause of premature mortality in the coming decades (UNAIDS, Report on the Global AIDS Epidemic, 2010). It seems clear that the spread of HIV and AIDS in Nepal is due to a combination of complex factors. FSW, client of FSW, MSM and IDUs remained most at risk population and besides these groups; house wives, migrant labors and children are also secondary most risk groups for HIV prevalence. Socio-cultural factors, economic issues and conflict play the vital roles to drive the HIV virus from one to another.

This study particularly looks at the demographic characteristics of the respondents; sex, level of education, place of residence, occupation, marital status, caste and other socio-cultural, economic, individual and political factors and how they affect the individual's chances of acquiring the virus.

1.2 Nature of Study

This was the pure academic research, was conducted for the fulfillment of PhD dissertation. Its aim was to find out the factors associated with increasing the risk of HIV and AIDS in Nepal. Socio-cultural factors play the vital roles to develop the personality of man. To a large degree culture determines how members of a society think and feel. It directs their actions and defines their outlook on life. Members of society usually take their culture for granted. Culture defines accepted ways of behaving for members of a particular society.

The roles of social factors may be different from society to society. Poverty, education, religion, culture, level of awareness, politics...etc plays the vital role to form social norms and values of society. In the context of Nepal, same factors influence community to be vulnerable for HIV infection also. Cultural and social factors are considered enabling environments for HIV transmission, because they are deeply embedded in a society's belief and value system which can be very difficult to challenge. If gender-based violence is viewed as an acceptable factor in preserving gender relations at work, in the home and in the public sphere, it can also contribute to people's vulnerability to HIV transmission. As many previous studies mentioned, cultural beliefs that encourage men to have multiple sex partners exist in many societies. This practice increases men's vulnerability to HIV transmission, as well as the vulnerability of their sexual partners because it increases the likelihood that they will be exposed to HIV and AIDS. Furthermore, cultural views on virginity and female chastity also heighten women's vulnerability to HIV. Thus, social and cultural factors can include a myriad of issues, which directly or indirectly affect the life style of people.

Considering these factors; researcher had developed the proper research design to address these factors and found the result addressing the objectives of study. Such types of social studies are based on various social factors and result might be varied from countries to countries or one region to another region. Any conclusion drawn from studies of other context or countries may not be relevant to the local context of Nepal, so researcher emphasized the greater need of such studies at national and local level.

1.3 Statement of the Problem

The relationship between individual and society is ultimately one of the most profound of all the problems of social philosophy. It raises the questions of values and sociability or the sociality of man. A sociologist always raised the questions; i.e. in what sense man is a social animal? In what sense do we belong to society? In what sense society belongs to us?

In connection to the above questions, the problem addressed in this research related to the various socio-cultural factors associated with increasing risk of HIV and AIDS in context of Nepal. HIV and AIDS have created terminal obstacles in the present, from birth to life early death, and it is slowly destroying the potential future. Entire generations have disappeared, leaving only the youngest and oldest to feed for them. Without the removal of this obstacle of HIV and AIDS, the future of people may be bleak and unchangeable.

There are many problems in society related to the social relationship so Boyne said that "*we are living in a risk society*" (2003, p. 98). HIV and AIDS is fast becoming one of the largest humanitarian and developmental challenges the world has ever seen. The pandemic is increasing poverty and inequality and reversing decades of improvements in health, education and life expectancy (Corinne Strydom, 2009, p. 78). Nepal's HIV and AIDS epidemic is concentrated among most-at-risk populations (MARPs). About 0.5 percent of the adult population of Nepal was estimated to be HIV positive, according to the Joint United Nations Program on HIV and AIDS (UNAIDS), with higher prevalence among subpopulations, such as female sex workers (FSWs), male sex workers (MSWs), injecting drug users (IDUs), men who have sex with men (MSM), and migrants (Nepal U. , Oct 2010, p. 1). The National

Center for AIDS and STD Control (NCASC) reports HIV infections to be more common in the Far Western region of the country, where migrant labor is more common, and in urban areas. In addition, nearly 50 percent of HIV infections in Nepal occur in highway districts (UNGASS, 25 March, 2010, p. 22). As a major identifiable client group of FSWs, truckers are another high-risk population. Increases in condom use among truckers are promising, though, with 93 percent reporting use of a condom at last sexual encounter (UNGASS, 2010).

Many contributing factors were identified in pervious literature likes: "widespread poverty, gender inequality, and health systems (Sharma, 2006, p. 3), topography, environmental degradation, poverty and economic migration (Ramamurthy, 2005, p. 173), low level of education and literacy, denial, stigma and discrimination (WHO U. a., December 2003, p. 7), mobility of population, urbanization, heavy labor migration, the open border between Nepal and India and poverty as casual factors (Ramamurthy, 2005, p. 178), lack of appropriate AIDS education, strong cultural prohibitions against the public discussion of sex are the main causes of AIDS prevalence" (WHO U. &., 1999).

From the many previous literature, researcher come to the point that there are various factors are identified which are directly or indirectly associated with increasing the risk of HIV and AIDS in Global or national context. But in the context of Nepal, still there is lacking of vertical study to identify the contributing factors. So, realizing this fact, the purpose study will be more focus to identify factors associated with increasing the risk of HIV and AIDS in Nepal and to appraise critically the factors and potential ways of reduction of HIV and AIDS. Besides that, study also identifies the knowledge, attitude and practices of target population on HIV and AIDS.

Nepal's poverty, political instability, and gender inequality, combined with low levels of education and literacy, make the task challenging, as do the denial, stigma, and discrimination that surround HIV and AIDS (Nora, August 2008). Even though, there has been no any special attempt found to address HIV and AIDS issues across the line of social factors or any attempt to design a specialized program to address the root causes of regarding to the HIV pandemic. It is important to find out the hidden factors which play the roles of catalyst to increase the risk behavior of men and also equally important to find out the potential solution of risk reduction.

So, regarding to the problem related with the risk of HIV transmission in Nepal; following research questions were raised to meet the objectives of research study:

- What is the relation between different target groups regarding their knowledge, attitude and practices on HIV and AIDS?
- What are the factors and how they are associated with increasing the risk of HIV and AIDS?
- What are the potential ways of reduction of HIV and AIDS?

1.4 Significance of the Study

Research is equally important for social scientists in studying social relationships and in seeking answers to various social problems. Research in social sciences is concerned both with knowledge for its own sake and with knowledge for what it can contribute to practical concerns (Kothari, Research Methodology:Methods and Techniques (second Revised Edition), 2008, p. 6). It provides the intellectual satisfaction of knowing a few things just for the sake of knowledge and also has practical utility for the social scientist to know for the sake of being able to do

something better or in a more efficient manner. As the same, the purposed study will identify the relationships between factors associated with risk of HIV and AIDS and its practical affects in society, as well as it also provides the possible ways of HIV risk reduction.

All over the world HIV and AIDS is causing devastation- destroying communities and families and taking away hope for the future. It affects productions as well as household incomes and expenditures; it poses major problems for health systems and health care practices; it diminishes the capacity of societies to provide essential services and plan for the future; and it threatens good governance and human security (Sharma, 2006, p. 37).

The main focus of this research was to identify the possible factors and its roles increasing the risk of HIV and AIDS among the MARP and general population. It was important to know the root causes and extraneous variables which compel people to involve in high risk behavior knowingly or unknowingly. It was expected that the finding of this research could support to develop the policy, strategy and program to government and to those working agencies who involved in the field of HIV and AIDS prevention program.

1.5 Objective of the Study

The general objective of study is to identify factors associated with increasing the risk of HIV and AIDS in Nepal.

The specific objectives are:

- Identify relation between different target groups regarding their knowledge, attitude and practices (KAP) on HIV and AIDS.

- Identify the possible factors that induce the risk of HIV and AIDS,
- Appraise critically the factors and find out potential ways of reduction of HIV and AIDS,

1.6 Research Hypothesis

In order to provide a general analysis of roles of socio-cultural and other factors in increasing the HIV infection in Nepal as its focus, some of the key issues that this dissertation examined what factors specifically in Nepal – contribute to people's vulnerability to HIV and AIDS, and what was being done to prevent the further spread of the disease. In addition, Dissertation also identified the knowledge, attitude and practices on HIV and AIDS among the target population in Nepal.

Thus, in researching the vulnerability of people to HIV and AIDS and its related issues, the following hypothesis had been formed:

1. Safer sex practices is low in comparison of knowledge of HIV and AIDS,
2. Poverty, Illiteracy and lack of awareness are the major factors associated with increasing the risk of HIV and AIDS in Nepal,
3. Risk of HIV and AIDS will be reduced by applying the '***Multi-dimensional Approaches'*** addressing the factors associated with HIV and AIDS.

1.7 Philosophical Worldviews

Philosophical ideas remain largely hidden in research; they still influence the practice of research and need to be identified.

Worldview is defined as "a basic set or belief that guides action" (Guba, 1990, p. 17). Worldviews are general orientation about the world and the nature of research that a researcher holds. These worldviews are shaped by the discipline area of the student, the beliefs and advisers and faculty in a student's area, and past research experiences. The types of beliefs held by individual researchers will often lead to embracing a qualitative, quantitative or mixed methods approach in their research. Four different worldviews are discussed: post-positivism, constructivism, and advocacy/participatory, and pragmatism.

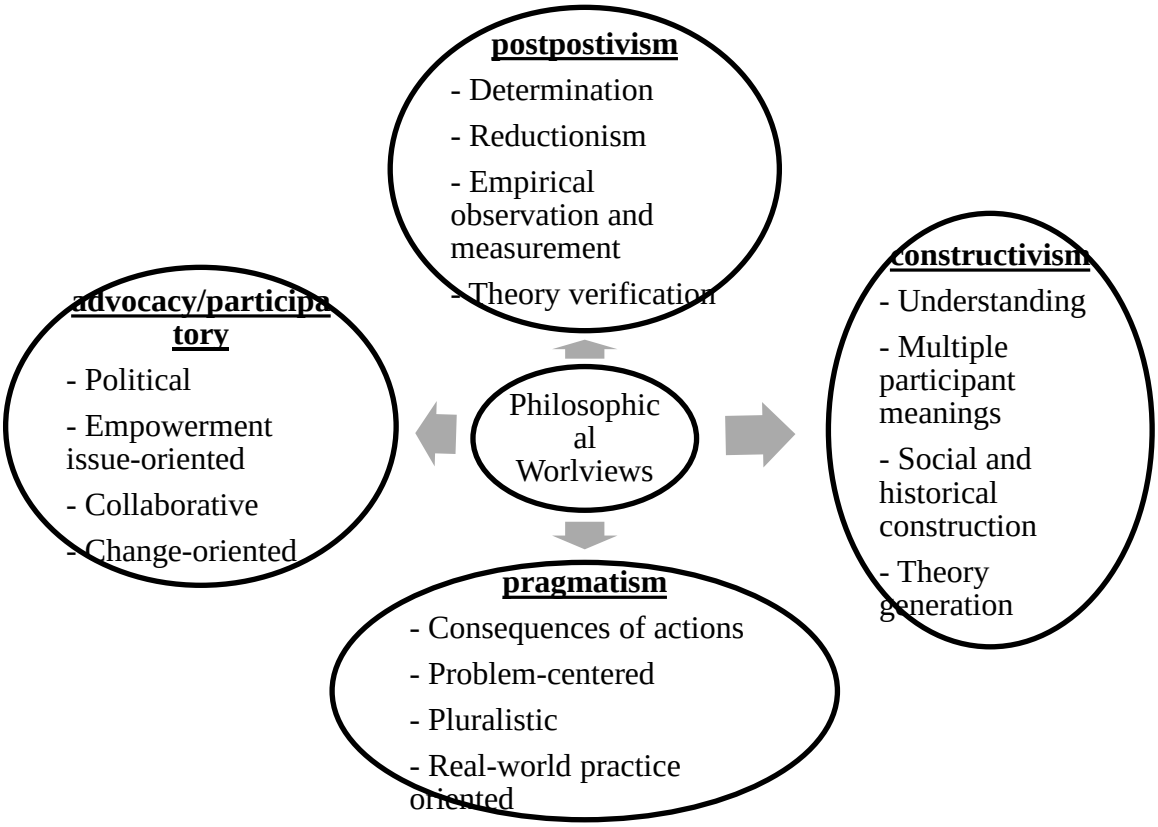


Figure 1: Philosophical Worldviews

Sources: (CRESWELL, 2008, p. 6)

The study was based on ***The Pragmatic Worldview*** because researcher wanted to be problem centered and used the mix data tools to gather the in-depth knowledge on subject matter. John W. Creswell has defined some characteristics of pragmatic worldviews as follows:

- pragmatism as a worldview arises out of actions, situations, and consequences rather than antecedent conditions
- Pragmatism is not committed to any one system of philosophy and reality. This applies to mixed methods research in that inquirers draw liberally from both quantitative and qualitative assumptions when they engage in their research.
- Individual researchers have a freedom of choice. In this way, researchers are free to choose the methods, techniques, and procedures of research that best meet their needs and purposes.
- Pragmatists do not see the world as an absolute unity.
- Truth is what works at the time. It is not based in a duality between reality independent of the mind or within the mind. Thus, in mixed methods research, investigators use both quantitative and qualitative data because they work to provide the best understanding of a research problem.
- The pragmatist researchers look to what and how to research, based on the intended consequences – where they want to go with it. Mixed methods researchers need to establish a purpose for their mixing, a rationale for the reasons why quantitative and qualitative data need to be mixed in the first place.
- Pragmatists agree that research always occurs in social, historical, political, and other contexts. In this way, mixed methods studies may include a postmodern turn, ***a theoretical lens*** that is reflective or social justice and political aims.

- Thus, for the mixed methods researcher, pragmatism opens the door to multiple methods, different worldviews, and different assumptions, as well as different forms of data collection and analyzes (2008, pp. 10-11).

1.7.1 Metaphysics of Research from the Sociological perspective

According to (Proctor, 1998), individuals rarely take time to do systematic enquiry in everyday life, but exploring basic personal beliefs could assist in understanding wider philosophical issues, notably '…the interrelationship between ***ontological*** (what is the nature of reality?), ***epistemological*** (what Can be known?), and ***methodological*** (how can a researcher discover what she or he believes can be known?) levels of enquiry.' Regarding the interrelationship between ontology, epistemology and methodology of this research is explained as below:

Ontology *(Nature of reality)* of this research: here ontology refers to know the nature of reality of society and causative factors associated with risk behavior of HIV and AIDS. Society is the web of relationship of individual. It is well accepted that AIDS is a development crisis and well accepted as the social problem which is in existence since 1981 in the global society. Still, people understand HIV as a deadly disease. But sociologically, it is necessary to understand that how it came into existence and what factors are prominent increasing the risk of HIV transmission, because of the hidden causative factors and lack of intensive research from the sociological perspective.

Epistemology *(Theory of Knowledge)* of this research: the history of HIV viruses and AIDS is still a mystery. Boyne stated that "we are living in a risk society" (RISK, 2003, p. 98). HIV and AIDS is fast becoming one of the largest humanitarian and developmental challenges the world has ever seen. The pandemic is increasing poverty and inequality and reversing decades of improvements in health, education

and life expectancy (Corinne Strydom, 2009, p. 78). The HIV epidemic in Nepal has evolved from a **“low prevalence” to a “concentrated epidemic”**. Nepal is categorized as a “Concentrated” epidemic country with some of the sub population groups likes: IDUs, MSM and FSWs and their clients, Labor migrants and house wives (Health Services Department, 2008/09). Many contributing factors were identified in pervious literature likes: "widespread poverty, gender inequality, and health systems (Sharma, 2006, p. 3), topography, environmental degradation, poverty and economic migration (Ramamurthy, 2005, p. 173), low level of education and literacy, denial, stigma and discrimination (WHO U. a., December 2003, p. 7), mobility of population, urbanization, heavy labor migration, the open border between Nepal and India and poverty as casual factors (Ramamurthy, 2005, p. 178), lack of appropriate AIDS education, strong cultural prohibitions against the public discussion of sex are the main causes of AIDS prevalence" (WHO U. &., 1999).

Regarding these facts, this research find out the knowledge on what factors and how these factors are associated with risk of HIV and AIDS which supports to develop the better understanding on issues of HIV and AIDS from the sociological perspective in the Nepalese context. It has also critically examine the significant factors and developed the 'Multidimensional Approach' to reduce the risk of HIV transmission.

Methodology: Researcher used the concurrent mixed (qualitative and quantitative) method to collect the data. Use of statistic is important to visually interpret findings. As well as, narrative description of qualitative information is important to know the perception and risk behavior of respondents towards the HIV and AIDS. Research is the effort to create new knowledge, seek scientific discovery. There is an attempt to ask more proving questions to identify the unknown variables

involved in research during the field survey. It found the subjective and objective reality of associated factors and risk taking behavior of people on HIV and AIDS. Researcher used the hypothetical deductive method - hypothesize deduce and generalize the findings.

Details data collection and analysis tools and techniques are explained in ***Chapter 3*** of this thesis.

1.8 Theoretical Framework

Researchers have come up with various theories and models to explore the relationship between knowledge, attitude, and beliefs about AIDS and “high-risk" behaviors. They have cited a combination of theories within their typologies, i.e., Freimuth (1992) has identified the health belief model (HBM), social cognitive theory (SCT), diffusion of innovation, social marketing and media advocacy as having been applied in AIDS media campaigns. Hingson and Strunin (1992) have found HBM, the theory of reasoned action (TRA), problem behavior theory, and SCT as being frequently used in research on knowledge, behavior, and attitude in the AIDS context (Melkote, 2000, p. 18).

There are various types of theories are used to analyze the situation of HIV and AIDS in previous literature. Some of the Theories are: ***I) Feminist Theory:*** the theory states that men and women should be politically, economically and socially equal. Feminist theory separated the social from the biological, insisting that we see a difference between what is the product of human ideas, hence something mutable and changeable, and what is the product of biology, hence something (relatively) stable and unchangeable. Feminist theory is very much related with the Behaviors of human being. HIV and AIDS is a ***Behaviors disease***. Consideration of on equal basis female

has the right to “Say No” (Khan, 2000, p. 19). This theory is found to be adopted by Mr. Shahbaz Ahmed Khan in his PhD Dissertation entitled ‘Socio-Economic and psychological impact of HIV/AIDS on Society’.

Similarly, ***II) Social construction Theory*** of Peter L. Berger and Thomas Luck Mann's 1967 book, The Social Construction of Reality is found to be adopted by David K. Beine in his research book entitled ‘Ensnared by AIDS: Cultural Context of HIV/AIDS in Nepal’. He had stated that AIDS has a biomedical reality, but it also has reality as a social construction (2003, p. 59). As the same Fee, Elizabeth and Daniel M. Fox in their book ‘AIDS: The Making of a Chronic Illness’ also claimed "AIDS is a particularly good example of the ***social construction of disease***" (1992, p. 9). Regarding the Social construction Theory, Berger and Luck Mann argue that all knowledge, including the most basic, taken-for-granted common sense knowledge of everyday reality, is derived from and maintained by social interactions. When people interact, they do so with the understanding that their respective perceptions of reality are related, and as they act upon this understanding their common knowledge of reality becomes reinforced (From Wikipedia, the free encyclopedia, 2012).

In course of reviewing the previous literature and studying the factors associated with increasing the risk of HIV and AIDS, the researcher has come up with graphic framework with necessary variables for the present study. The present proposed framework is basically related with ***III) Structural-Functional theory of Robert K. Merton***. Structural and Functional model is one of the best models of social study. Under the *Structural and Functional model/theory, t*his study mainly adopts the concept of *latent function of Merton*. Latent functions are those which are unintended. This idea is related to another concept of Merton – *unanticipated consequences.* Every actions have both intended and unintended consequences. Although everyone is aware of the intended consequences, but all the consequences of social factors are not always manifest or intended result so directly or indirectly unintended result are coming in society. Sociological analysis is required to uncover

the unintended consequences; indeed, to some this is the very essence of sociology (Ritzer, 2000, p. 247).

Many sociologists believed that society is a structure and social units/variables are functional to run the society. The study was going to find out the various factors associated with the risk of HIV and AIDS. It was assumed that the increasing trend of HIV infection in society was associated with latent function (unintended consequences) of various socio-cultural, economic, political, educational and individual factors or variables of society.

1.9 Conceptual Framework:

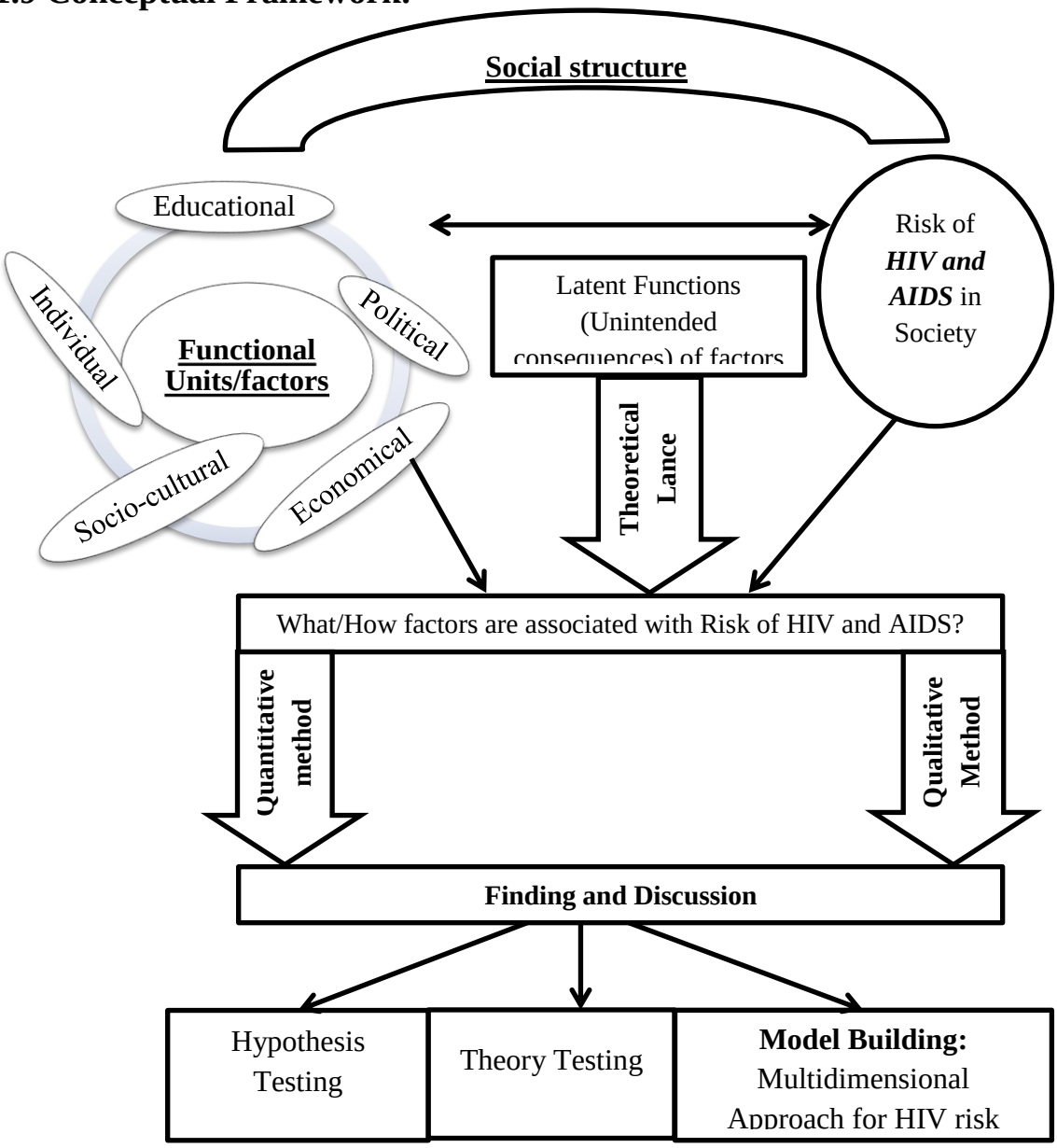


Figure 2: conceptual framework prepared on the base of Structural-functional Theory

On the basis of *Latent Functional Model of R. K. Merton* under the structural functional theory, the above conceptual framework was used to show the co-relationship between different contributing factors and risk of HIV and AIDS in societies. The conceptual framework mentions here that society is one structure and different units/functions of society are equally functional which support to run and change the social style. The function of different factors are intended and unintended both. So, here researcher tried to identify the unintended consequences of different factors which are directly or indirectly associated with increasing the risk taking behavior of people on HIV and AIDS in Nepal. The research identified the co-relation between the factors and risk of HIV and AIDS on the basis of above mention conceptual framework. From the various previous literatures, it was found that on the one hand, individual, socio-cultural, economic, educational and political factors are the root causes to increase the risk of HIV and AIDS. On the other hand, HIV and AIDS also affect the development and changes of societies. But, from this research, researcher had only critically evaluated the associated factors and its unintended consequences. Causal relationship between independent and dependent variables was analyzed considering the theoretical lance of structural functional theory and finding was drawn. On the basis of findings, hypothesis and theory was tested and finally HIV risk reduction approach was developed.

1.10 Design and Setting of the Study

The study used both the quantitative and qualitative methods. Sample size was fixed for quantitative study, but in qualitative study had put the saturation point of information as a guiding principle. Different steps that were used in this study were as follows:

- Multi-stage and simple random sampling was used for study
- Asking a research question based on theoretical orientation
- Selection of research respondents and data collection: data collection in quantitative method was based on pre-coded surveys or other formulaic techniques and in qualitative was based on direct, fluid, observational techniques.
- Data analysis: quantitative method had followed statistical analysis aimed at highlighting universal cause and effect relationships and qualitative method follows analysis focused on context-specific meanings and social practices.
- Reporting the results: result was statistically presented in quantitative method and through case studies in qualitative method.

1.11 Assumptions of the Study

The design of this research work was based on the following assumptions:

There was availability of enough number of target groups as respondents fore survey in the specific site. The main assumption of this study was that the respondents selected were a representative sample of the study area:

- The respondents were cooperative and unbiased on reporting their opinion regarding the roles and relation of social factors to increase the HIV infection and other cross cutting issues.
- The respondent's didn't feel any difficulty to express them fully. The key informants were cooperative and provide required and relevant information to the researcher.
- Most of the respondents were represented from the different districts of Nepal, e.g. Long route transport workers who always travel the different Highway

districts and factory workers who were working as a seasonal labor. So, it was expected that researcher had got wider information and study had represented the whole Nation.

- The political condition, other factors of the country and extraneous variables remained constant during the study periods and did not interfere to the research work.

1.12 Limitations of the Study

The research had following limitations:

- The study had not included the medical aspect (blood testing of respondents, treatment of HIV and AIDS and access on health services) of HIV and AIDS.
- The study has not included other groups than the selected groups (garment factory workers, brick factory workers, Long route transport workers and health workers)
- The researcher had only developed the Multidimensional approach for HIV risk reduction on the basis of findings. Due to time limitation of PhD course work; it could not be applied for testing within that time.
- The study had covered only Kathmandu Valley. As compared to the total number of the potential respondents of whole Nepal, the sample size is small.
- The findings of study might be varied in other regions or districts.
- The collected data were in nominal and ordinal scales so I had used non-parametric statistical test to analyze the data,

1.13 Ethical consideration during the Research

The study was approved by Ethical board of Nepal Health Research Council (NHRC) of Nepal Ministry of Health and population on dated 10 March 2013 (B.S. 2069-11-27) as Reg. no, 11 /2013.

There are a lot of ethical considerations required in social research. To maintain the privacy of respondents and reliability and validity of data, researcher had followed the following techniques as research ethics during the study:

Voluntary participation

A basic principle of research is that people should not be coerced into participation, particularly when they might object to being a 'guinea pig'. So, selected respondents were requested for their voluntary participation in research study.

Informed consent

Respondents were already informed earlier about the research study and their participation. So before starting interview with them, consent form was filled out to ensure their voluntary participation.

Confidentiality

Privacy of respondents' information was well maintained during and after study. Respondents were convinced about the confidentiality of their information which supported to get the real response. It is thus important to assure the person that personal information will not be released and not used in other purpose than research study. Without permission of respondents; photographs or voice recording were not done during the time of interview.

Anonymity

Different from confidentiality is the question of the person remaining anonymous even within the experiment. This was possible by the use of telephone or via remote methods such as emails and letter by post. This gives the person an even greater ability to sustain privacy, but such situation was not came during the research.

1.14 Operational definition

Factor: Factor is one of the elements contributing to a particular result or situation. In this study, factors cover only those elements which are associated with the risk of HIV and AIDS. E.g. Poverty, illiteracy, lack of awareness, discrimination … etc.

Multi-dimensional: in this research multi-dimensional means equal participation and contribution of Private and Public organization, community and Individual to reduce the risk of HIV and AIDS in Nepal.

Population = the total set of observations that can be made is called the **population**.

Risk: 'Risk arises from individuals engaging in risk-taking behavior for a variety of reasons. They may, for instance, lack information on HIV, they may be unable to negotiate safer sex, they may think that HIV and AIDS affects different social strata than their own, or they may not have access to condoms' (UNAIDS, 1998, p. 4). In the context of HIV, risk is defined as the probability that a person may acquire HIV infection. Certain behaviors create, enhance and perpetuate such risk, for example unprotected sex with a partner whose HIV status is unknown, sharing of unsterilized needle and syringes, transfusion of untested blood … etc. In this study

also, risk is understood as people engaging in risk taking behavior because of different factors.

Sample = A **sample** is a set of observations drawn from a population.

Sampling Method = A **sampling method** is a procedure for selecting sample elements from a population.

Statistic = A **statistic** is a measurable characteristic of a sample, such as a mean or standard deviation.

Variables = something that may or does vary; a variable feature or factor. Here variable means Independent variables (different factors) and Dependent variables (Risk of HIV and AIDS) and Demographic variables (age, sex, occupation…of respondents).

1.15 Demographic Information of Nepal and Study Area

Nepal lies on the lap of the great Himalayas range of mountains. Nepal is famous because Mount Everest; the world's most imposing mountains is located here. Nepal is a mystic and sacred land, where lord Buddha was born over 2500 years ago, has one of the most unique and exotic culture. Nepal was closed to foreign visitors

until 1951, a situation which contributed greatly to its mystique in the west. This small, hospitable country has since become an exceptionally popular destination for travelers, whether they are in search of climbing challenges or spiritual enlightenment.

Nepal is located into three geographical regions; Himalayas, Mountain and Tarai. Each region is stretching from east to west across the country. It is divided into 5 Development Region (Eastern, Western, Central, Mid-Western and Far-western Region), 14 zones and 75 districts. On May 28, 2008, the Constituent Assembly resolved abolishment of 240-year old monarchy and transition to a Federal Democratic Republic.

Global Position:

Latitude: 26° 12' and 30° 27' North.

Longitude: 80° 4' and 88° 12' East.

Area: The country covers an area of 147,181 sq. km.

Location: Southern Asia, between Tibet (the autonomous region of China) and India

Topography: From the World's deepest gorge 'Kali-Gandaki' to the highest point on earth 'Mt Everest' 8, 848 m. within a distance of 200 km.

Capital: Kathmandu

Population: Population of Nepal as of the census day (June 22, 2011) stands at 26,494,504. The annual average growth rate is 1.35 percent.

Literacy Rate: Overall literacy rate (for population aged 5 years and above) has increased from 54.1 percent in 2001 to 65.9 percent in 2011. Male literacy rate is 75.1% compared to female literacy rate of 57.4%. The highest literacy rate is reported in Kathmandu district (86.3 %) and lowest in Rautahat (41.7%)

Religion: There are ten types of religion categories reported in the census 2011. Hinduism is followed by 81.3 percent (21,551,492) of the population while Buddhism (9.0%; 2,396,099), Islam (4.4%; 1,162,370), , Kirat (3.1%; 807,169), Christianity (1.4%; 375,699), Prakriti (0.5%; 121,982), Bon (13,006), Jainism (3,214), Bahai (1,283) and Sikhism (609).

Official language: Nepali

Caste/Ethnicity: There are 125 caste/ethnic groups reported in the census 2011. Chhetri is the largest caste/ethnic groups having 16.6% (4,398,053) of the total population followed by Brahman-Hill (12.2% ; 3,226,903), Magar (7.1% ; 1,887,733), Tharu (6.6% ; 1,737,470), Tamang (5.8% ; 1,539,830), Newar (5.0% ; 1,321,933), Kami (4.8% ; 1,258,554), Musalman (4.4% ; 1,164,255), Yadav (4.0% ; 1,054,458) and Rai (2.3% ; 620,004).

Flora & fauna: Nepal possesses some of the most outstanding bio-diversity in the world, ranging from sub-tropical Rain-forests to Arid deserts.
Climatic zones: ranges from tropical in the low lands to arctic at higher altitudes.
Climate: varies from cool summers and severe winters in north to subtropical summers and mild winters in south.

Nepal's economy is mainly dependent on the agricultural sector, which accounts for about 36% of GDP and absorbs about 66% of labor population. The agrarian structure in Nepal is characterized by a very small land holding scattered to different plots, where irrigation is either not available or seasonal. Land owner ship is the most important source of food security and household income. The land issue largely affects the poverty status in rural areas where

> 85% of the population lives and has long been a bottleneck to upgrade economic and social status of Nepal. (2009, p. 1)

According to the National report of Nepal, HIV in Nepal is characterized as concentrated epidemic, where majority of infection are transmitted through sexual transmission. Since the detection of the first AIDS case in 1988, the HIV epidemic in Nepal has evolved from a low prevalence to concentrated epidemic. As of 2011, national estimates indicate that approximately 55600, adults and children are infected with the HIV virus in Nepal. A total of 18,396 cases of HIV out of them 7437 advanced HIV infections cases had been reported as of Asar 2068. The estimated prevalence of HIV in the adult population is 0.33 percent (Nepal/MoHP, Feb 2012, p. IV).

CHAPTER - TWO
LITERATURE REVIEW

2.1 Introduction

The chapter literature review deals about those documents which are related to HIV and AIDS. Many studies have been done related to HIV and AIDS situation, knowledge, attitude and practices or behavior (KAP/KAB) among the most at risk population (MARP) but very few literatures were found related with factors/variables associated with increasing the risk of HIV and AIDS which are the root causes of spreading HIV and also influence the transmission of HIV virus from MARP to general population.

The purpose of literature review is, thus to find out what research studies have been conducted in one's chosen field of study, and what remains to be done (Pant, 2002, p. 35). A thoughtful and insightful discussion of related literature builds a logical framework for the research that sets it within a tradition of inquiry and a context of related studies (Rossman, 1999, p. 43).

In this chapter, the researcher summarized those related opinions, principles, findings and recommendations that were reference for this study. The related literature is summarized below.

2.2Factors associated with HIV and AIDS epidemics

There is inverse relationship found between the social factors and HIV and AIDS epidemics. On the one hand, social factors directly or indirectly influence the spread of HIV and epidemic of HIV and AIDS also affects the socio-economic development and changes of society and country. According to Savita Sharma, "the most heavily burdened continent is Africa, where the spread of the pandemic has been

accelerated by a variety of factors; including widespread poverty, gender inequality, and health systems" (HIV/AIDS and You, 2006, p. 3).

> One previous study of South Africa showed that the prevalence of, and risk factors for, HIV infection among women in an urban South African setting. A random sample of 834 women was recruited into a community-based cross-sectional study. HIV prevalence was 37.1% with higher prevalence among migrant women (46.0%) than non-migrant women (34.7%), (odds ratio [OR] =1.61, 95% confidence interval [CI]: 1.11-2.31). The highest HIV prevalence (50.9%) was between ages 26 and 35 years. Having two or more lifetime partners increased the risk of HIV infection (OR=4.88, 95% CI: 3.01-7.89). *Migration, age, marital status, alcohol use, syphilis and gonorrhea were independently associated with HIV infection. Migration increases the risk of HIV infection*. (K Zuma, 2003, p. 814)

As in other developing countries, transmission of HIV in Nepal is driven by factors such as poverty, low literacy levels, lack of awareness on using male and female condom, cultural and religious factors, and stigma and discrimination (Ministry of Health and Population (MOHP), 2012, p. 189). In Nepal, "the topography, environmental degradation, poverty and economic migration are all linked and they combine with other factors to increase vulnerability to HIV" (Ramamurthy, 2005, p. 173). Besides that "gender inequality, low level of education and literacy, denial, stigma and discrimination are major factors to HIV and AIDS vulnerability in Nepal" (WHO & UNAIDS , December 2003, p. 7). The Strategic Plan for HIV and AIDS Prevention have recognized factors relating to mobility of population, urbanization, heavy labor migration to areas where huge infrastructure programs are being undertaken, the open border between Nepal and India and poverty as casual factors

for the spread of the infection in Nepal (Ramamurthy, 2005, p. 178). Besides these factors, it is also reported that the prevalence of HIV and AIDS is due to lake of awareness about the infections. A low level of people awareness contributes to the growing AIDS problem in Nepal. This lake of awareness in the country, low rate of literacy, lack of appropriate AIDS education, strong cultural prohibitions against the public discussion of sex are the main causes of AIDS prevalence (WHO U. and., 1999).

UNAIDS has clearly stated regarding the influencing factors of HIV and AIDS by saying that "In the context of HIV and AIDS, vulnerability is influenced by the interaction of a range of factors including (i) personal factors; (ii) factors pertaining to the quality and coverage of services and programs aimed at prevention, care, social support and impact-alleviation; and (iii) societal factors" (1998, p. 7).

> Personal factors includes sexual history (number of partners, number of unprotected sexual acts, and nature of sexual act), availability of knowledge and skills required to protect oneself and others and, in relation to care and social support, knowledge about treatment and social support programs as well as skills to access and take advantage of them. Factors related to services and programs that influence vulnerability may include the cultural inappropriateness of HIV and AIDS programs, the inaccessibility of such services due to distance, cost and other factors, and the lack of capacity of health systems to respond to a growing demand for care and support for people with HIV and AIDS and those affected. Examples of societal factors influencing vulnerability include cultural norms, laws or social practices and beliefs. (UNAIDS, 1998, p. 7)

2.3 Roles of factors in increasing risk of HIV and AIDS

'AIDS has a biomedical reality, but it also has reality as a ***social construction'*** (Beine, 2003, p. 59). In the same line, Fee and Fox have also claimed "*AIDS is a particularly good example of the social construction of disease*" (Fee, Elizabeth and Daniel M. Fox, 1992, p. 9). Various others authors, making this same claim to varying degrees, have also alluded to this social side of AIDS. Schoepf, for instance, commenting on her research in Zaire, has stated that "AIDS may be usefully viewed as socially produced." Farmer (1992:xi) contends that "the world pandemic of AIDS and social responses to it have been patterned by social arrangements." Similarly, Herdt (1992:3) also claims that "culture shapes our response to the disease." (Beine, 2003, p. 59).

A statement made at the American Academy of Arts and Sciences in1988, as cited by Beine:

> AIDS is a particularly good example of the social construction of disease. In the process of defining both the disease and the persons infected, politics and social perceptions have been embedded in scientific and policy constructions of their reality and meaning. Human beings make disease in the context of biological and social conditions. (Beine, 2003, p. 53)

According to the Berger and Luckman 1996 (cited by Beine), from the ***feminist perspective***, HIV and AIDS were explained in the following manner:

> AIDS is a socially constructed disease and much of the response and attitudes towards HIV-infected individuals' center around the pre-existing concept, paradigms and societal construction of those affected. ***Social construction theory*** is concerned with way in which societies interpret, judge and ascribe meaning to groups, conditions and events. (Beine, 2003, p. 53)

National health committee of New Zealand had reported that the social and economic factors that have been shown in a variety of settings to have the greatest influence on health care, income, poverty, employment, occupation, education, housing, culture and ethnicity. Various social and cultural traditions reinforce vulnerability to HIV. In order to improve population health status and reduce health inequalities, it is important to identify and understand the main factors that protect and promote good health. These factors are known as the determinants of health also (June 1998, p. 8).

> A study conducted in Tanzania by Joseph R Mwanga, Gerry Mshana, Godfrey Kaatano and John Changalucha revealed a number of socio-economic and cultural factors which act as structural drivers of HIV epidemic. Mobility and migration were mentioned to be associated with the risk of HIV acquisition and transmission. Sexual promiscuous behavior was common in all study communities. Chomolea, (a quick transactional sex) was reported to exist in fishing communities, whereas extramarital sex in the bush was reported in non-fishing community which was predominantly Christian and polygamous. Traditional practices such as Kusomboka (death cleansing through unprotected sex) was reported to exist. (2011, p. 1)

From the various previous literature reviews, the following factors are identified as associated factors with increasing the risk of HIV and AIDS:

• Marriage problem, • Multiple sexual partners • Gender-based violence, • Stigma and social taboos • Lack of Knowledge • Alcohol consumption and sexual activity	• Poverty • Conflict • Gender inequality • Human trafficking • Education • Migration • Trust

• Cultural norms and practices	• Religious factor

2.3.1 **Marriage Problem (Early Marriage)**

> Child marriage, defined as marriage of a child <18 years of age, is an ancient, worldwide custom. Other terms applied to child marriage include "early marriage" and "child brides." Child marriage is a human rights violation that prevents girls from obtaining an education, enjoying optimal health, bonding with others their own age, maturing, and ultimately choosing their own life partners. Child marriage is driven by poverty and has many effects on girls' health: increased risk for sexually transmitted diseases, cervical cancer, malaria, death during childbirth, and obstetric fistulas. Girls' offspring are at increased risk for premature birth and death as neonates, infants, or children. (Nour, 2006, p. 1644)

A common belief is that child marriage protects girls from promiscuity and, therefore, disease; the reality is quite different. Married girls are more likely than unmarried girls to become infected with STDs, in particular HIV and human papilloma virus (HPV). In sub-Saharan Africa, girl's ages 15–19 years are 2–8 times more likely than boys of the same age to become infected with HIV (Laga M, 2001). As Joint United Nations Programme on HIV and AIDS, World AIDS Campaign 2004, stated that the risk of acquiring HIV from a single act of unprotected vaginal intercourse is 2–3 times greater for women than men (Nour, 2006, p. 1645)

It is reported that for many young women, the choice to delay first sexism not a decision over which they have control. In many African countries women are unable to refuse unwanted sexual advances; and when they have sex, have limited control over condom use because of the gender-power imbalances. Moreover, the younger the woman is, the greater the power imbalance is likely to be. Gender

inequality also leads to young women often having less access to HIV/STI prevention information or to health care services, including access to condoms, which increases their risk of infection (Audrey E. Pettifora A. v., 2004, p. 1440).

> Young women may be especially prone to HIV infection in comparison to older woman due to larger areas of cervical ecotype and trauma to the immature genital tract during sex. Additionally, behavioral factors, including early age of coital debut, contribute to young women's heightened susceptibility to HIV. Other behavioral factors that are thought to increase a young woman's risk of HIV infection are older partners, inconsistent condom use, forced sex, and transactional sex. In the USA, early age of coital debut has been shown to be associated with a number of negative subsequent outcomes such as STI, decreased condom and contraceptive use, and increased numbers of sexual partners. (Audrey E. Pettifora A. v., 2004, p. 1436)

Similarly, Abdulai Maxim Conjoh and his friends has written in one report that Sierra Leonean adolescents are drastically exposes because of the culture of early marriages most often with elderly men. As reported by all respondents, the influential elderly men will most often lure their poor parents-in-law into given away their daughters with their monies. This often takes place without testing for HIV and so endangers the adolescent girls (Socio-Cultural Factors Affecting the Spread of HIV/AIDS among Adolescents in Sierra Leone, 2011, p. 273).

In Botswana, by 2020, it was found among the aged 15 to 44, there were more men than women in each of the five-year-age cohorts. That might push men to seek partner sin younger and younger age cohorts. This factor in turn may have increased HIV infection rates among younger women. Evidence indicated that older men were

infecting younger women, who then went on to infect their partners, particularly through marriage (Economic Commission for Africa).

Sharma had indicated some different ways of risk created from the marriage system. According to him "there is also the practice of late-age marriage in some societies, where men do not marry until they have built up economic resources. Meanwhile they may have no legitimate access to sex with women and so may engage in sex with other men, often younger men, thereby increasing their vulnerability" (HIV/AIDS and You, 2006, p. 23).

2.3.2 Multiple Sexual Partners/Polygamy

According to the Abramson, the spread of HIV and AIDS in countries around the world has drawn attention to the serious lack of scientific research on human sexuality (RICHARD G.PARKER, 1991, p. 77). In early scientific, policy, and popular discourses around HIV and AIDS, polygyny often features as a cultural practice that facilitates the spread of the epidemic (Gausset, 2001).

As Shelley Clark "Extra-marital sexual partnerships (EMSPs) are a major route of HIV/AIDS transmission in sub Saharan Africa. One longitudinal study on matched married couples in rural Malawi investigated the roles of two types of male friendships – best friends and friends with whom they talk about AIDS – in determining whether men have EMSPs. According to the finding of this study, men's friendships with each other may play an important role in shaping and reinforcing social norms about multiple and concurrent sexual partnerships inside and outside of marriage (Clark S. , 2010, pp. 1-3). Similarly, study of Varga on young men in South Africa found that "having multiple sex partners was a particular status symbol, the yardstick by which masculinity, intelligence and success were measured among one's male friends" (Varga, 1997, p. 55). Kaler 2003, also stated that in many parts of sub-

Saharan Africa, including Malawi, definitions of masculinity are closely entwined with demonstrating sexual prowess through multiple partnerships and men are keen to discuss their “conquests” with each other, as cited by (Clark S. , 2010, p. 3).

As Harris 2006; Harris 2004, Estimates of the percentage of marriages in Central Asia involving polygamous unions are not available; however, polygamy is commonly known to be practiced in Central Asia. Similarly, Jacubowski 2008 also stated that 'The HIV pandemic has carried a new wave of criticism toward the custom. The most common criticism in a Muslim context is that polygamy can increase heterosexual HIV transmission because multiple concurrent sexual partnerships are a primary determinant of HIV transmission' as cited by: (Smolak, 2010 , p. 6). One study of Malawi showed that Polygyny is most common in the district (Rumphi) where HIV infection rates are the lowest. In Balaka, where HIV prevalence is the highest, polygyny is least common. At the aggregate level, polygyny thus negatively correlates with HIV prevalence across the Malawi Diffusion and Ideational Change project (MDICP) study regions. At the individual level the association is positive: the odds for being HIV positive are 2.58 times (95%-CI: 1.34 – 4.94) higher among men who have ever been in polygynous union than among men who have not had any concurrent spouses. The corresponding value for women is 2.00 (95%-CI: 1.30 – 3.08) (Tfaily, 2008, p. 4).

One study investigated the extent to which sexual exclusivity—the restriction of one’s sexual engagements to a single partner—prevails across various marital status, union type, and co-residence categories among Nairobi's poorest residents, slum dwellers. Study shows that a greater proportion of divorced or separated women reported two or more sexual partners (20.5%) in the year preceding the survey, compared to women who were cohabitating (11.5%), widowed (11.1%), and married

and co-resident (1%), or married but living apart (2%). A smaller fraction of younger women (aged 15--29) reported two or more partners in the past year (3.2% than do women aged 30 to 49 (6. 3%, $p<0.001$). This is potentially because older women are more likely to be separated or divorced than are younger women. Fewer women with secondary or higher education reported multiple partners in the past year (2.9%) compared to those with primary or no education (5.3%, $p<0.05$) (Klein, 2007, p. 1 & 9).

Women often contract HIV from husbands or intimate partners who have multiple sex partners. Many societies tolerate and even men encourage in such high-risk behavior and deem promiscuity a sign of masculinity (Sharma, 2006, p. 212).

In contrast of above previous finding, one study of Sub Saharan Africa found that 'The ecological association between polygyny and HIV prevalence is negative at the country as well as sub-national level: HIV prevalence is lower in countries where the practice of polygyny is common, and within countries it is lower in areas with higher levels of polygyny' (Watkins, 2010 , p. 1) .

2.3.3 **Gender-based Violence**

Due to misconceptions and incorrect belief; "Young girls are at particular risk of rape and sexual coercion because it is believed that sex with a virgin "cleanses" or "cures" HIV and AIDS of men" (Sharma, 2006). It is reported that "young women often face physical and sexual violence from their husband, family members, teachers, partners and employers as a result unwanted pregnancies, Sexually Transmitted Infection (STI) and HIV \ AIDS were rampant" (WHO & UNAIDS , 1999). "Coercion and rape are common in many sub-Saharan African countries meaning that many young women are unable to negotiate condom use or to refuse unwanted sexual

advances. It may increase the risk of HIV transmission if trauma to the genital tract was sustained at coital debut due to rape " (Audrey E. Pettifora A. v., 2004, p. 1440). Sharma had stated that violence against women is the most disturbing form of male power which contributes both directly and indirectly to women's vulnerability to HIV" (Sharma, 2006, p. 22). "More than three-quarters of the women in one study experienced intimate partner violence in the last 6 months. Exposure to partner violence was associated with increased HIV risk behaviors, including inconsistent condom use with vaginal sex and substance use during sex" (Malitta Engstrom • Tazuko Shibusawa, 2009, p. 110). Sharma has mentioned the biological status of women by stating that physiologically, women have a greater vulnerability to HIV because the soft tissue in the female reproductive tract tears easily during intercourse, especially during incidences of forced penetration (HIV/AIDS and You, 2006, p. 19).

Not only women but Men having sex with Men also have to face the sexual violence (SV). As support of the above statement, Souradet Y. Shaw et.al reported in their studies that "A total of 543 MSM-T were included in the study. Prevalence of SV was 18% in the past year. HIV prevalence among those reporting SV was 20%, compared to 12% among those not reporting SV ($p = .104$). In multivariable models, and among sex workers, those reporting SV were more likely to report anal sex with 5+ casual sex partners in the past week (AOR: 4.1; 95% CI: 1.2–14.3, $p = .029$). Increased physician visits among those reporting SV was reported only for those involved in sex work (ARR: 1.7; 95%CI: 1.1–2.7, $p = .012$)" (Souradet Y. Shaw, 2012, p. 1). Souradet Y. Shaw and their friends had adopted mmultivariable logistic regression models to examine factors related to SV. Multivariable negative binomial regression models examined the association between physician visits and SV.

2.3.4 **Stigma and social taboos**

Many PLHA fear the stigma and discrimination HIV+ status attracts and therefore do not get tested even if they belong to ‘high risk’ groups, the ability to make accurate estimates of the number of PLWHA in Nepal has been hindered. One major reason for the stigmatization of PLWHA is the array of incorrect information that has circulated about HIV and AIDS. For instance, Sharma’s research has shown that some incorrect beliefs include that HIV can be transmitted through everyday contact such as shaking hands, hugging, coughing or sneezing, using public toilet, sharing bed linen, eating utensils or food and contact with animals or mosquito (HIV/AIDS and You, 2006). Such types of incorrect information support to increase the practices of stigma and discrimination towards the PLHIV. Similarly, as stated by Clendinen, 1983; Altman, 1984; Blake & Arkin, 1988; Herek, 1990, that 'ever since the first cases were detected in the United States in 1981, people with AIDS (PWAs) have been the targets of stigma. Press accounts and anecdotal reports from the early 1980s told the stories of PWAs, and those simply suspected of having the disease, being evicted from their homes, fired from their jobs, and shunned by family and friends. Early surveys of public opinion revealed widespread fear of AIDS, lack of accurate information about its transmission, and willingness to support draconian public policies that would restrict civil liberties in the name of fighting it (cited by: (Gregory M. Herek, 1999, p. 1).

The word “stigma” has Greek origins referring to the marks of physical deformities of foreigners or persons deemed inferior. Christians gave this word a twist by using it to refer to the physical indications of the divine spirit. In modern times, stigma has been defined as “an undesirable or discrediting attribute that an individual possesses, thus reducing that individual’s status in the eyes of society” (Goffman, 1963). Morison

also stated about the stigma is "It is labeling of an individual or group" (January 2006, p. 3).

> Stigma is a phenomenon associated with many chronic health conditions, including leprosy, HIV and AIDS, mental illness, epilepsy, disability and tuberculosis. Stigma and its psychosocial consequences cause indescribable suffering to those who are stigmatized. In addition, stigma has indirect but strongly negative implications for public health efforts to combat the diseases concerned. The effects on the affected individual include psychological stress, depression and other psychiatric morbidity, fear, marital and relationship problems, other social participation restrictions such as loss of employment or reduced employment opportunities and reduced education opportunities, increased (risk of) disability and advanced disease. (Wim H. van Brakel, 14 September 2005, p. 3)

In starting of HIV and AIDS in UK, caregiver or health workers used to take the strange dress like spacesuits to cover their whole body when they went near by the HIV infected people (Dixon, AIDS and You, 2002, p. 14). As reflected in the literature, many of the prevalent negative attitudes are fuelled by cultural or local beliefs about the disease and its causes. As a consequence, the experiences of People Living with HIV/AIDS (PLWHA) are often marred by stigmatization from the wider society, their communities, and even their families (Schatz, 2011, pp. 86-87). Degree of stigma and discrimination is known different in different caste and religion. The social stigma attached to HIV and AIDS that exists in all societies is much more pronounced in Muslim cultures due to the religious doctrine regarding illicit sex and drug related practices. The stigma attached to risk behaviors thus prevents those at

risk from coming forward for appropriate counseling, testing and treatment, as this would involve disclosure of their risky practices (Hasnain, 2005, p. 5).

> The effects of HIV-related stigma and discrimination can be felt on many levels: individual, family, community, programmatic, and societal. They represent obstacles such as preventing individuals from being tested; preventing persons from recognizing that they or family members are HIV positive; inhibiting people from seeking care, support, and treatment; causing people to mislead others; impeding people from using protection in intimate relations; preventing quality care and treatment; increasing social inequities; hindering the access of people living with HIV to housing, education, employment, and mobility; negatively affecting quality of life; and, eventually, leading. (Morrison, January 2006, p. 2)

HIV infected FSWs, MSM and IDUs have been facing the double discrimination; first, they face discrimination being a FSWs, MSM and IDUs and second being HIV positive. FSWs are a highly marginalized subgroup (Day, 1997) and their social stigma is a barrier for the use of health care and treatment (Faugier, 1992; Romans, 2001). Lack of confidentiality, discrimination and negative attitudes held by health care providers, poor communication between service providers and fear of exposure to the public as a sex worker were the major barriers in seeking sexual health services (Teijlingen, April 2009, p. 12)**.** Communities were critical areas of stigma and discrimination for HIV-infected individuals. Individuals and families are dependent on community relations for their social and economic functioning. Community members' fears of physical contact with PLWHA, due to their supposed contagiousness, created social restrictions for PLWHA. These beliefs and responses also led to their social isolation and loss of access to resources (FHI, p. 6).

Stigma and discrimination against people with HIV create major barriers for access to HIV VCT centers and STI services in Asia and the Pacific. For MSM, the stigma of homosexuality itself adds to this, and for MSW yet another stigma, that of sex work is added. (September 2006, p. 29)**.** A qualitative study of 30 MSM in Shanghai identified four aspects of social discrimination:

1. Loss of social status and relationships,
2. Accusations of immortality and abnormality
3. Failure to meet expectations of building a family and
4. Lack of adherence to masculinity. (BDS, 2008)

In terms of social stigma and discrimination towards people with HIV/AIDS, differences exist between European regions. In the Netherlands, for example, the public reaction to people with HIV and AIDS was shown to be moderately positive; knowledge about highly active antiretroviral therapies HAART was associated with a perception of lower risk, and there was a positive attitude towards homosexuals, less fear, and a greater willingness to have personal contact with people with HIV/AIDS. In Eastern Europe, however, stigmatization may be more intense, especially of specific groups, such as homosexuals (WHO, 2005).

Furthermore, those who may believe themselves to be ‘at risk’, may intentionally not be tested, may not seek treatment for their illness, or may not even take precautions such as carrying a condom or their own injecting equipment, out of fear that their ‘risky’ behavior will be discovered by members of their family, friends, the wider community or the authorities (Hayes, 2007, p. 49).

In India, as elsewhere, AIDS is perceived as a disease of "others"- of people living on the margins of society, whose lifestyles are considered 'perverted' and 'sinful' (Sharma, 2006, p. 257). A study carried out in Chennai, India, among female

sex workers showed that they feared the adverse consequences of disclosure of their positive HIV statuses due to the stigma and discrimination associated with HIV and sex work (Ngozi C Mbonu, 2010, p. 2).

In Nepal families are the primary source of care-giving and illness management for most people. But, they were also reported as an important source of stigma and discrimination in the lives of PLWHA. The different forms of stigma and discrimination occurred in a number of families likes;

a. Physical and social restrictions,

b. Fear of losing honor and social standing and

c. Separation and loss of contact with a family.

It is found that a number of PLWHA experienced stigma and discrimination that PLWHAs were not introduced to guests, invited to ceremonies, or were told to stay away from their home because their family was afraid that they would lose their ijjat (prestige) and social standing in the community. PLWHA themselves worried about the damaging effects of local attitudes towards their family because of their HIV status (FHI, pp. 5-6).

People living with HIV are often subject to stigmatization and discrimination and still this is a much talked about issue in Nepal. The self-stigma and hostility in people living with HIV and AIDS inhibits them from disclosing their HIV status and seeking medical assistance, therefore remaining in the shadows and so passing the infection on to others (Sharada Prasad Wasti, 2011, UK, p. 40). However, due to the stigma and discrimination related to HIV and AIDS, PLWHAs are discouraged from accessing what little services are available (The Context of HIV/AIDS in Nepal, 2011). Prevalence studies have been conducted among Nepal's various "high risk groups." Several authors presented paper concerning HIV prevalence among these

various groups at the 3rd National AIDS conference held in Kathmandu in 2008. One survey showed that out of total no. of HIV infected people, 45% could not disclose their HIV status because of social stigma and discrimination and rest 55% could not disclose because of their self-stigma and discrimination. Around 67% of rural women could not disclose because they were women (Tamang, 4-7 July, 2008).

> In Nepal, stigma and discrimination stem from beliefs that HIV and AIDS is a fatal, contagious disease readily transmitted in casual or indirect contact with a person with HIV and AIDS. In addition, the social and intimate nature of its transmission and the emphasis on its spread through sex work and drug use have created stereotypes of PLWHAs and the mistaken image that only immoral people are infected. In order to address inaccurate and damaging attitudes towards PLWHA, it is important to identify the nature of the cultural beliefs and practices that underlie them. (FHI, 2003, p. 2)

2.3.5 Beliefs and Perceptions on HIV and AIDS

Cultural factors (individual beliefs and perceptions) are notoriously complex concepts and shape people's identities and influence their attitude and behaviors. The individual behaviors and beliefs about health and seeking treatment can adversely affect health care utilization and adherence to medication. These factors create a complicated and unforgiving environment for patients who are struggling to endure a chronic, life-threatening illness with life-long treatment. Beliefs and cultural practices are contributing to the spread of HIV and AIDS in Nepal. Most of these are related to folk beliefs about prevention and treatment for HIV and AIDS, such as that having sex with 108 virgins will cure AIDS and STD, cleaning the penis with urine, Detol soap or Coke will cure AIDS and STD, Nag puja (festivals) will cure

HIV, anal sex will cause HIV, HIV is prevalent only in Bombay and a tika from SaiBaba placed on the penis will cure STDs and AIDS. (Sharada Prasad Wasti, 2011, UK)

Many PLWHA suffer feelings of anxiety, worthlessness and hopelessness when diagnosed as HIV-positive. These “internalized” experiences of stigma and discrimination, whether overt or anticipated, may result in losing or withdrawing from family relations and suffering in isolation, which creates additional emotional distress for individuals (FHI, pp. 7-8).

Top 10 HIV and AIDS Myths

There are many HIV and AIDS myths out there. Sadly, HIV and AIDS myths prey on the weak and vulnerable. HIV and AIDS myths are dangerous and contribute to prejudice and stigma.

1. I have just been diagnosed with HIV and AIDS...I am going to die.
2. Why don't we have an HIV and AIDS vaccine? It should be easy!
3. HIV and AIDS can be cured.
4. My family doctor can treat my HIV and AIDS.
5. We don't need a condom for oral sex.
6. I have HIV and AIDS...I can't have children.
7. People over 50 don't get HIV and AIDS.
8. We both have HIV and AIDS...we don't need a condom.
9. HIV and AIDS only affect gay men and drug users
10. HIV and AIDS are the Same Thing. (Mark Cichoki, 2009)

2.3.6 Roles of Poverty in spreading of HIV

Poverty is explained as a social problem (Heald, 2010, p. 140). Poverty can be defined in absolute or relative terms. Poverty has long been recognized as an important determinant of ill health. People who are poor have worse self-reported health, higher rates of disability, and higher rates of death, disease and injury. Children from poor families have higher rates of illness, injury and death than other children (National Health Committee , June 1998, p. 24). To explain the basic causes of poverty, sociologists are increasingly focusing their attention on society as a whole and particularly on the stratification system, rather than studying the poor in isolation. As Peter Townsend states, 'The description, analysis and explanation of poverty in any country must proceed within the context of a general theory of stratification'. Theories of stratification should provide theories of poverty since the poor are part of stratification systems- the bottom part (Heald, 2010, pp. 160-161).

> Poverty is also seen as enhancing vulnerability to HIV. The growing rates of HIV and AIDS in economically disadvantaged communities of the industrialized world and in developing countries emphasize the role played by poverty in fuelling the epidemic. There has long been worldwide recognition of the negative impact of poverty on health and of the need to undertake aggressive action towards poverty alleviation and development. (UNAIDS, 1998, p. 8)

There is adverse relation between poverty and HIV and AIDS. In some countries, MSM live in precarious economic conditions. Bangladesh, Cambodia, Gambia, Senegal and Burkina Faso, a portion of the MSM community was involved in sex work. Almost 83% of 206 respondents in Cambodia acknowledged that they had been paid for sex in the past six months (BDS, 2008).

It has been suggested that HIV and AIDS will be the main obstacle to reaching national poverty reduction targets and the UN Millenniums Development Goals (Loewenson R., 2001).

> Yet AIDS and impacts cause and deepen poverty. HIV and AIDS is directly and indirectly linked to a host of negative outcomes that include reduced social sector spending, giving rise to a lack of access to affordable health care and prevention services; and lower education status; falling household per capita income, increased spending on medicines and funerals; lost productivity, disrupted farming cycles and systems; increased dependency ratios, worse gender inequalities, increased number of orphans, street children, crime, and commercial sex work. (Webb, June 2002)

Dixit also reflects this political economy approach when he concludes that in Nepal "poverty is the root cause of the problem of AIDS" and that prostitution and migration, "two processes that expose the Nepali population to the HIV virus" (Dixit s. B., 1996, p. 50). David Seddon has suggested that environmental degradation, a byproduct of poverty, has also palyed a role in the spread of HIV AND AIDS in Nepal (AIDS in Nepal : Issue for consideration, 1995, p. 7).

Many research found that economic necessity was the most important reason for entry into prostitution and that struggle to find some other means of livelihood and resorted to sex trade as the best alternative. As one FHI report find out that 42.9% non-street based FSW in Kathmandu was paid more than Rs. 500 and 40% in Lalitpur was paid Rs. 500 but street based FSW: (131 out of 240) in Katmandu and (26 out of 40) Lalitpur are paid only Rs.200-400 for sex (FHI, March 2001 – August 2001, p. 8) as a result of economic necessity. Economic necessity is stressed as the structural factor contributing most greatly to the spread of HIV and AIDS. Various other authors

who note poverty as a key factor strongly linked to the spread of HIV and AIDS in Nepal are Sattar (1996), Keyser (1993), Nigam (1994), Smith (1996), Dixit (1996) and Suvedi, Baker and Thapa (1994) as cited by (Beine, 2003, p. 78).

As Beine, many authors have made a strong link between poverty and commercial sex work, migration, and even environmental degradation, and that this factor (poverty) is facilitating the spread of HIV and AIDS in Nepal. The search for alternative forms of employment is most often a response to dire economic situations (Beine, 2003, pp. 81-82).

Finding of many previous literatures show that there is positive relationship between income of people and HIV prevalence. Those people who are living under the line of poverty have high prevalence of HIV infection. But in contrast of the above statement, it is also found from some previous literature; one study of African countries identified that

> At the country level there is a weak positive relationship between national wealth and HIV prevalence across countries in sub-Saharan Africa, where higher prevalence is seen in the wealthier countries of southern Africa. Strong urban–rural economic linkages, good transport links and high professional mobility may translate into both higher incomes and higher HIV incidence. National poverty rates, on the other hand do not show a strong association with HIV prevalence. (Stuart Gillespiea, 2007 , p. 6).

Similar type of finding has been shown in other studies also that "a key explanation for this relationship was that wealthier men could attract and afford multiple sexual partners—particularly commercial sex workers, who were believed to be the main sources of infection—and therefore faced greater risk of acquiring the disease" (Cleland, Ali, and Capo-Chichi 1999). Through their engagement in

commercial sex relationships, wealthy men helped channel HIV infection into the general population (luke, Economic Status , Informal Exchange , and Sexual Risk in Kisumu , Kenya, 2012, p. 377).

Finally, economic hardship and disparity, which tend to affect young women more than men, mean that in many countries the only way a young woman can bring in food or income to her home is through transactional sex, another manifestation of the gender-power imbalance which again reduces the ability of women to negotiate condom use (Audrey E. Pettifora b. A., Early age of first sex: a risk factor for HIV infection among women in Zimbabwe, 2004, p. 1440).The links between poverty and HIV and AIDS are complex and not fully understood. On the one hand, poverty has played -and continues to play- an important role in the spread of HIV (Brummer, November 2002, p. 5)**.**

A study of Sub-Saharan Africa brought the opposite finding than the other regarding the roles of poverty in the spread of HIV. As its finding:

> "Contrary to theories that poverty acts as an underlying driver of human immunodeficiency virus (HIV) infection in sub-Saharan Africa (SSA), an increasing body of evidence at the national and individual levels indicates that wealthier countries, and wealthier individuals within countries, are at heightened risk for HIV. This article reviews the literature on what has increasingly become known as the positive-wealth gradient in HIV infection in SSA, or the counterintuitive finding that the poor do not have higher rates of HIV." (Fox, 2010 , p. 16)

HIV infection is a global public health emergency and is most prevalent in areas of the world where under nutrition is also a serious concern. A major contributing factor is that globally over 800 million people remain chronically

undernourished and the HIV epidemic largely overlaps with populations already suffering from low diet quality and quantity (Louise C Ivers, 2009, p. 1 & 6).

2.3.7 Effects of Conflict on HIV transmission

When Law, order and system is disturbed and terrorist and armed forces come in road, then health related program and message dissemination remains totally stopped which promote the spread of HIV (Dixon, AIDS and You, 2002, pp. 21-22). In such insecure situations, when life is threatened on a daily basis and poverty is on the rise, people- particularly women and girls may sell sex to local populations as well as to peacekeepers, humanitarian, and other foreign workers as a means of economic survival which increases their exposure to HIV and AIDS (Sharma, 2006, p. 25). Soldiers are living in a stressful environment, separated from their family, while civilians might get exposed to sexual violence and have to survive in situations of extreme poverty, which may force them to sell sex to survive (so-called survival sex) (Brummer, November 2002, p. 6).

Conflict and (political) instability contribute to the spread of HIV/AIDS in various ways. ‘Countries experiencing political and/or economic instability have been more vulnerable to the spread of diseases such as HIV/AIDS’ (Kalipeni, 2000, p. 966). Moreover, conflicts disrupt social institutions and family life, largely because wars and conflicts often lead to forced migration (Brummer, November 2002, p. 6). In such situations of armed conflict, women experience all forms of violence, including sexual assault. Clinical data from the Sudan reported that HIV rates among expectant mothers were 6-8 times higher in war-torn areas than in demilitarized zones (Sharma, 2006, p.212).

2.3.8 Gender inequality and the position of women

> In general, gender refers to the biological and social differences between men and women. Gender is a socio-economic and cultural construct for differentiating between roles, responsibilities, constraints, opportunities and needs of women and men in a given context. A basic distinction between men and women which is socially and culturally determined creates unequal power relation in our social life. Thus, an understanding of the unequal power relations between women and men is necessary to be familiar with the basic problems in gender relations. Power is directly related to gender with regard to the access, distribution and use of resources, which are unequally distributed between women and men. (Lazim, 2011, p. 168)

In many societies, important decisions, such as those related to child-bearing, often involve the family, rather than only the individual or the couple, with the influence of elders being particularly strong. More significantly, there is a growing realization of the key role that power relationships and social inequities play in influencing risk (UNAIDS, 1998, p. 5).

It is customary everywhere to classify the human community on the basis of sex into groups of 'men' and 'women'. The biological fact of sex has created much difference between them. The aims and objectives, desires and aspirations, duties and responsibilities, dress styles and behavioral patterns, roles and statuses or men and women are different. Nowhere in the history of humanity were men and women treated alike and assigned statuses alike. Women have not been able to lead a life exactly on par with men in spite of their urge for equality (Rao, Sociology: principles of sociology with an Introduction to Social Thought, 2008, p. 813).

Original sin in the Garden of Eden was women's. She tasted the forbidden fruit, tempted Adam and has been paying for it ever since. In Genesis, the Lord said, 'I will greatly multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children; and thy desire shall be to thy husband, and he shall rule over thee'. Sociologists would regard the above quotation as a mythological justification for the position of women in society (Heald, 2010, p. 369).

> Similarly, in a majority of Muslim societies, there exists an imbalance in power between men and women, which is apparent in heterosexual relations as well as in the economic and social spheres of life – with men having greater power than women. For most women, the private life within the sanctuary of their houses is their whole life. Women remain uneducated and deprived of resources, making them unaware of their civil, legal and sexual rights, economically vulnerable and largely dependent on men. Due to these inequalities, women are more susceptible to contracting HIV and AIDS as they are less likely to be able to negotiate with their partners infected with HIV and AIDS. Women also are easy targets for abusive relationships and are less able to cope with illness once infected. (Hasnain, 2005, p. 5)

The subordinate social and economic position of women in many southern African countries leaves them particularly vulnerable to HIV/AIDS. Cultural and social systems have strict rules concerning female sexuality. Women in these societies have little control over their sexual lives and the sexual lives of their husbands/partners outside marriage (Buvé, 2002; Evian, 1993). This culturally prescribed lack of control on their sexual relationships has made women highly vulnerable to HIV infection (Buvé, 2002, p. 2014). A British Sociologist, Ann Oakley and a supporter of the Women's Liberation Movement, comes down strongly on the

side of culture as the determinant of gender roles rather than biology. The sexual division of labor is supported and justified by a belief and value system which states that gender roles are normal, natural, right and proper (Heald, 2010, p. 373). Connell (1987) elaborated one of the most integrative theories of gender. This theory is important because it allows for an understanding of the complex interplay between gender and power beyond the individual perspective. A central emphasis of this theory is that the analysis of gender involves a three-part structural model involving sexual division of labor (e.g. financial inequality), sexual division of power (e.g. authority), and the structure of affective attachments (e.g. social norms) (Ngozi C Mbonu, 2010, p. 2).

This picture of gender inequity is also apparent in the economic sphere. Women are often dependent on men for financial support and consequently find it difficult to enforce condom use or refuse sex (Brummer, November 2002, p. 6).

2.3.9 Human Trafficking

> Trafficking in persons means the recruitment, transportation, purchase, sale, transfer, harboring or receipt of persons: by threat or use of violence, abduction, force, fraud, deception or coercion (including the abuse of authority) or debt bondage, for the purpose of placing or holding such person, whether for pay or not, in forced labor or slavery-like practices, in a community other than the one in which such person lived at the time of the original act. (Commaraswamy)

It is generally quoted that each year 5,000-7,000 Nepalese women and girls are trafficked or lured into brothels in India, and 100,000-200,000 Nepalese women and girls are working in Indian brothels, large proportions of them in Mumbai (Nepal B. , Sep 2007, p. 269). Trafficked girls have significant chances of contracting HIV

and AIDS, because they have no ability to control their bodies. But they are submissive, and engage in extremely risky sexual behaviors (Karki, June 2008, p. 18). In the mid-1990s, there were about 13500 very young Nepalese girls in Bombay alone who were HIV Positive (Dixit s. B., 1996)**.** Among 287 sex-trafficked and repatriated Nepalese girls and women receiving services at Maiti Nepal between January 1997 and December 2005 and tested for HIV, 109 (38.0%) were found to be infected (Jay G. Silverman, August 1, 2007, p. 536)**.**

2.3.10 Education and HIV and AIDS

In advanced industrial societies, education is provided by the state as a matter of rights for all its citizens (Heald, 2010, p. 173). Education for HIV and AIDS prevention should begin as early as possible, and be continued throughout childhood and adolescence. It should take place in developmentally appropriate ways, building on lessons learned, so as to enable young people to prevent HIV infections and related discrimination (Sharma, 2006, pp. 50-51). The French sociologist Emile Durkheim saw the major function of education as the transmission of society's norms and values. He argues that 'to become attached to society, the child must feel in it something that is real, alive and powerful, which dominates the person and to which he also owes the best part of himself. Durkheim maintained that, 'society can survive only if there exists among its members a sufficient degree of homogeneity; education perpetuates and reinforces this homogeneity by fixing in the child from the beginning the essential similarities which collective life demands. Education and in particular, the teaching of history, provides this link between the individual and society (Heald, 2010, p. 173).

One study in Cote d'Ivoire found more highly educated people to be more likely to engage in multiple sexual partnerships, although they were also more likely to use condoms, thus offsetting some of the risk of exposure to HIV. Similar

observations of a higher probability of condom use among the more educated have been reported elsewhere (Stuart Gillespiea, 2007 , p. 12).

It is said that educations in and of itself can reduce vulnerability to HIV and AIDS by increasing literacy and general educational level, by enhancing a sense of connectedness and security, and by providing access to trusted adults. Young people with more educations are more likely to use condoms than peers with less education, and are less likely to engage in casual sex, particularly in countries with severe epidemics (Sharma, 2006, p. 67).

Realizing the importance of HIV education; Article 53 of the UNGASS declaration was clearly demonstrated:

> By 2005, ensure that at least 90% and by 2010 at least 95% of young men and women aged 15-24 have access to the information, education, including peer education and youth-specific HIV education, and services necessary to develop the life skills required to reduce their vulnerability to HIV infection, in full partnership with young persons, parents, educators and health care providers. (United Nations, 2 August 2001, pp. 7-8)

2.3.11 Impact of Migration

Migration is usually defined as the movement of people from one place to another temporarily, seasonally or permanently, for a host of voluntary or involuntary reasons. The epidemiology of HIV and AIDS is closely linked to the process of migration. Migrants – and mobile populations in general – have played a significant role in the initial spread of HIV in the southern African region (Brummer, November 2002, p. 7). Migration is a global phenomenon that influences the health of individuals and populations (Cathy Zimmerman, 2011 , p. 2).

A study of South Africa on socio-demographic characteristics, patterns of migration, sexual behavior and HIV infection status were obtained for a population of 11,677 women aged 15–49 and men aged 15–54 reported that relative to non-migrant males, non-migrant females had higher odds of being HIV-positive (adjusted odds ratio [aOR] = 1.72; 95% confidence interval [1.49–1.99]), but odds were higher for female migrants (aOR = 2.55 [2.07–3.13]). Female migrants also had higher odds of infection relative to female non-migrants (aOR = 1.48 [1.23–1.77]). The association between number of sexual partners over the lifetime and HIV infection was modified by both sex and migrant status: For male non-migrants, each additional partner was associated with 3% higher odds of HIV infection (aOR = 1.03 [1.02–1.05]); for male migrants the association between number of partners and HIV infection was non-significant. Each additional partner increased odds of HIV infection by 22% for female non-migrants (aOR = 1.22 [1.12–1.32]) and 46% for female migrants (aOR = 1.46 [1.25–1.69]) (Carol S. Camlin, 2010, p. 1). Similarly, a cross-sectional behavioral survey was conducted among non-migrants, returned migrants (with a history of migration), and active (current) migrants in rural areas across two districts with high levels of male outmigration: Prakasam district in Andhra Pradesh and Azamgarh district in Uttar Pradesh, India. Findings of this study document that the average age at migration of study sample was 19 years. Adjusted regression analyses revealed that active migrants were more likely to engage in sex with sex workers in the past 12 months (Prakasam: 15 percent vs. 8 percent; adjusted odds ratio (aOR)=2.1, 95% CI 1.2-3.4; Azamgarh: 19 percent vs.7 percent; aOR=4.0, 95% CI 2.4-6.6) as well as have multiple (3+) sex partners (Prakasam: 18 percent vs. 9 percent; a OR=2.0, 95% CI 1.33.2; Azamgarh: 28 percent vs. 21 percent; a OR=1.9, 95% CI 1.2-3.0) than non-migrants (Niranjan Saggurti, 2011, p. 1).

Nepal does not have a legal definition of migration. In 2001, the census defined a migrant as “a person absent from the household and living in another country for more than six months" (New ERA Nepal, 2008, Round I).

> Nepal has also long history of International Labor migration. Around 200 years ago, Nepalese started to seek work abroad and send remittances back to their families in Nepal. In early 19th century, the first men migrated to Lahore (in today’s Pakistan) to join the army of the Sikh ruler, Ranjit Singh. They earned the nickname “Lahure” which is still used today for Nepalese employed in foreign armies abroad. In 1815/1816, the first British army of India and were then, and still are called “Gurkhas”. Since then, international labor migration of Nepalese has never ceased. Especially in the recent decades, it has greatly increased and diversified in pattern (NIDS, 2004). Migrants are known by different names, like lahure (a returned migrant), or mumbaiwala (a person from Mumbai) in the village. Lahures are very popular; it is very common to find a lahure with a cassette player in his hand and money (often Indian currency) in his pocket. (Krishna C. Poudel M. J., 2004, p. 900)

Migration has been a factor identified as contributing to the spread of HIV and AIDS in Nepal. It is believed that many migrant laborers are bringing the HIV virus home with them when they return to Nepal (Beine, 2003, p. 79). Nepali men in search of work migrate in large numbers to India and further abroad where they subsequently obtain the services of HIV infected CSWs. Then they return home, transmitting the virus to their unsuspecting wives, who subsequently pass the virus to their unborn children (Beine, 2003, p. 76).

It is known that migration is linked with the many other social factors likes; poverty, unemployment, war and conflict, degradation of resources and social injustice/violation. David Seddon also adds here that-

> The clear implication is that it is the degradation of resources and poverty that creates vulnerability and drives the rural poor, particularly from certain identifiable regions, into economic survival strategies that take them away from their homes to work elsewhere; migration is a necessity, and as far as employment is concerned, beggars cannot be choosers. (Seddon, 1995, p. 7)

The group of seasonal migrants especially from rural area to Tarai and India is the high-risk sexual behavior groups. Most of the male migrants are young and unmarried who have low level of education and migrant for the search of job. According to the survey of high-risk group of infection shows those male labors that migrate on urban centers of Nepal and India are, as major risk group of infection due to the chance of contacts with sex-workers remains higher. Many of those migrants don't know about safe sex, even if they know that may not be willing to practice safer method (Seddon, 1995).

2.3.12 Alcohol consumption and sexual activity

Finding of one research conducted by The University of Chicago shows that there is causal relationship between the use of alcohol and risky sexual activity. Report shows that sexually transmitted disease (STD) rates are responsive to increases in alcohol taxes and in the drinking age. The presumed relationship is that a more restrictive alcohol policy reduces alcohol consumption, which in turn decreases risky sexual activity. Reduced-form regressions of STD rates on state alcohol taxes for the years 1981–95 (with controls for state and year) indicate that a $1 increase in the per-gallon liquor tax reduces gonorrhea rates by 2.1 percent, and a beer tax increase of

$.20 per six-pack reduces gonorrhea rates by 8.9 percent, with similar though more pronounced effects on syphilis rates (HARRELL CHESSON, 2000, p. 215). Similarly, an unmatched case-control study was done in Uganda among the 106 HIV positive cases and 424 HIV negative controls between 15- 24 years, reported that Higher HIV infection rates were associated with ever drinking alcohol (odds ratio 2.28, 95% CI 1.43 -3.65, $p<0.001$) and ever using narcotics for recreation (odds ratio 2.49, 95%CI 1.14-5.44, p=0.018) (Kagimu M., 2012, p. 17).

Leif Crowe and William George review the controlled laboratory experiments of the effects of alcohol consumption on human responses to sexual stimuli. Their review suggests that the sexual disinhibiting associated with alcohol consumption is both pharmacological and psychological. That is, alcohol itself and the socially learned expectancies about alcohol both play a role in sexual responses under the influence of alcohol. Thus, there is a scientific basis for the belief that alcohol consumption might increase the likelihood of participating in a risky sexual encounter (George, 1989, p. 374).

Similarly, one study of Uganda reported that alcohol drinking and alcoholism were reported to be the major social factors influencing the spread of HIV and AIDS. It was reported that when people get drunk, their judgment gets impaired and are likely to engage in unintended and unprotected sex. In particular, some men even get wild and lose rationality and sometimes rape other peoples' wives or bar maids (Delius Asiimwe, June 2003, p. 36).

2.3.13 Trust on sex partners

Trusty nature of people also pushes them in risk of HIV transmission. According to the one research conducted in Far-western Region of Nepal, the participants who visited brothels in Mumbai said that the FSWs there used to

ask them to use condoms. However, they did so only with ill-looking women, as they believed that these women might have serious diseases like HIV and AIDS infect them. They did not consider it necessary to use condoms to prevent other STIs. Most participants did not see any reasons for using condoms with village women, as they were different from the FSWs of Mumbai and therefore safe. Some mentioned that they would lose their trust with the local women because their partners would think that condoms should not be used with a person one trusts. (Krishna C. Poudel M. J., 2004)

2.3.14 Cultural norms and practices

Culture has been defined as a complex set of distinctive spiritual, material, intellectual and emotional features that characterize and define a society or social group. In addition to arts and letters, it encompasses ways of life, the fundamental rights of the person, value system, traditions and beliefs (Sengendo, 1999).

Culture is made up of two essential elements:

• It is defines a way of being together with others, It is essentially social

• It is not made up of a given range of activities but consists of all and only those activities through which a society defines and identifies itself

"The activities through which society defines and identifies itself are unique but many and vary from society to society. Most of these cultural norms and practices are related to human sexuality while others are related to the day to day practices/activities of society" (Abdulai Maxim Conjoh, 2011, pp. 269-270).

Some cultural norms and practices relating to sexuality contribute to the risk of HIV infection. Negative attitude towards condoms as well as difficulties

negotiating and following through with their use is one of the many problems (Rose-Innes, 2006). Desired change in behavior cannot easily be achieved without a corresponding change in the community cultural norms and social patterns. For instance, with HIV and AIDS declining faster among the youth than in any other age group, it is believed that social and cultural factors that influence HIV transmission have changed more among youth than adults.

It is reported that the role of culture has been particularly problematic in the fight against HIV and AIDS. When one talks of culture, especially in the context of HIV and AIDS, what comes to mind is the patriarchal society in which we live, as well as the gender inequalities which it has raise to (Mofolo, JUNE 2010, pp. 1-2). Many cultures and religions give more freedom to men than to women. For example, in many cultures it is considered normal -- and sometimes encouraged -- for young men to experiment sexually before marriage. Also, in many cultures, it is considered acceptable for men -- even married men -- to have sex with sex workers. These cultural attitudes towards sex are leading to HIV infections in both men and women -- often the men's wives (UNAIDS, 2001). As news came in one Zimbabwe Sunday newspaper, it was written that cultural practices such as widow inheritance, early marriages and polygamy play a big role in the spread of HIV in Zimbabwe. Further, gender roles in the homes, power dynamics in sexual relations, poverty and dependence on men for money, biological make up as well as religious beliefs plays an important role on females' vulnerability towards HIV and AIDS (CHIKOLOLERE).

By reviewing all published articles since 1990 which were relevant (n = 100 articles from total 130 with Mozambique (a southeast African nation) and HIV or AIDS as key words) based on their epidemiological and/or behavioral data, it was

found that High risk activities, among both men and women, may be encouraged by local traditions and customs. These include cultural rituals and norms such as 'widow cleansing', in which a brother-in-law or other male relative has sex with the wife of the deceased family member, early sexual initiation, intergenerational and transactional sex, and intra-vaginal practices such as vaginal instillation of desiccant herbs for 'dry sex' (Carolyn M Audet, 2010, p. 2).

2.3.15 Religious Factors

An unmatched case-control study was done among the 106 HIV positive cases and 424 HIV negative controls between 15- 24 years, reported that lower religiosity was associated with higher HIV infection rates when the following dimensions were analyzed: feeling guided by God in daily activities (odds ratio 1.90, 95%CI 1.03-3.50, p=0.035), feeling thankful for God's blessings (odds ratio 1.76, 95% CI 1.01-3.11, p=0.042), praying privately (odds ratio 2.02, 95%CI 1.30-3.11, p=0.001), trying hard to be patient in life (odds ratio1.74, 95%CI 1.07-2.84, p=0.024) and trying hard to love God (odds ratio 1.57, 95%CI 1.01-2.42, p=0.039) (Kagimu M., 2012, p. 17).

2.4 Impact of HIV and AIDS on Society

Approximately 25 years since AIDS emerged as a major health emergency, the epidemic has had a serious and in many places devastating, effect on human development. Countries that fail to bring the epidemic under control risk becoming locked in a vicious circle as worsening socioeconomic conditions render people, enterprises and communities even more vulnerable to the epidemic (SAARC, 2008). South Africa's HIV/AIDS epidemic poses a major public health threat with multi-faceted harmful impacts and 'socially complex' outcomes (Schatz, 2011, p. 85).

2.4.1 Impact on population and population structure

As mentioned in the SAARC annual update, the projections made on future situation of HIV and AIDS suggested that by 2015, in the 60 countries most affected by AIDS, the total populations will be 115 million less than it would be in the absence of AIDS. Africa will account for nearly three-quarters of this difference in 2050, and through life expectancy for the entire continent will have risen to 65.4 years from the current 49.1 years, it will still be almost 12 to 17 years less than life expectancy in other regions of the world (SAARC, 2008).

Southern and eastern Africa has been the most severely affected regions. Seven countries have an estimated adult (15-49) HIV prevalence of 20 percent or greater: Botswana, Lesotho, Namibia, South Africa, Swaziland, Zambia, and Zimbabwe. In these countries, all in southern Africa, at least one adult in five is living with HIV. An additional six countries, Burkina Faso, Cameroon, Central African Republic, Kenya, Malawi and Mozambique, have adult HIV prevalence levels higher than ten percent. In fact, seven countries in Sub-Saharan Africa: Angola, Botswana, Lesotho, Malawi, Mozambique, Rwanda, and Zambia have life expectancies below 40 years of age (Economic Commission for Africa).

2.4.2 Impact on households/families

In the first 15 years of the AIDS epidemic, families had to deal with death and the loss of family members. Now, families must deal with HIV infection as a chronic disease to be managed for the lifetime of the infected members. Family members may also become burdened by care giving as the disease progresses, and they may be affected by the stigma often attached to HIV infection. Within families, several routes of HIV infection need to be taken into account: first, sex partners within the family may be at risk from their

> partner; and second, newborns may be at risk of HIV infection by vertical transmission – in utero and during labor and breastfeeding. (WHO, 2005)

Presence of HIV and AIDS will dissolve the household-as parents die children are sent to relatives for care and upbringing, loss of family income and saving are used up or assets are sold (SAARC, 2008). Research in New Delhi, India found that average monthly expenditures exceeded income among families of people living with HIV, partly because of a doubling in purchases of medicines. While these families spent less on entertainment and on children's education to cope with rising care, support and treatment costs due to HIV, most were also forced to sell assets and borrow from friends and relatives (ILO, 2003).

> It is at the level of the family and community that the fullest impact of the HIV pandemic is unraveling. One such ramification is AIDS related poverty among households. Across the African continent, the most vulnerable people are the most economically active. As these active people die, families are struggling to cope not just emotionally, but also economically. Poverty is increasing as bread winners die and scarce savings are utilized in the period of ill health. As savings dwindle, families begin to fragment economically. One implication of this fragmentation of families is the rising numbers of orphan children. Recent estimates put the figure of orphans in Africa in the range of thirteen to fifteen million children. For the future, three factors are particularly important: **First,** AIDS selectively destroys human capital, that is, peoples' accumulated life experiences, their human and job skills, and their knowledge and insights built up over a period of years. **Second,** AIDS weakens or even wrecks the mechanisms that generate human capital formation. **Third,** the chance that the children themselves will contract the disease in adulthood

makes investment in their education less attractive, even when both parents themselves remain uninfected. (Economic Commission for Africa)

2.4.3 Impact on Economic sector

The burning issues of HIV infection remains as social disruptions are manifest in direct economic effects. A World Bank study predicts that South Africa will face "complete economic collapse... within three generations" if the country does not take effective measures to combat AIDS (Sharma, 2006, p. 5). The neoclassical growth model predicts that a decline in the rate of growth of the working-age population will result in an increase in the capital-labor ratio; as the marginal product of labor then rises, so will wages (Sharma, 2006, p. 121). By the year 2020, the World Bank estimates that the macroeconomic impact of HIV and AIDS may be significant enough to reduce the growth of national income by up to a third in countries with adult prevalence rates of 10% (Sharma, 2006, p. 128).

Impact on Enterprises and workplaces

HIV and AIDS is a pandemic that has far-reaching effects. Not only it is a public health challenges intertwined with complex social issues, AIDS is also a looming economic disaster. In an increasingly globalized world, multinational enterprises and small and medium-sized enterprises feel the economic impact of HIV and AIDS equally (Sharma, 2006, p. 127). Additionally, Mr. Sharma had mentioned that the majority of employers have challenged to protect their workforce from HIV infection and to deal with those who are already infected. If employees lack of accurate information about the HIV and AIDS one employee refuse to work with an employee who is known, or is rumored, to have HIV and AIDS because fears of becoming infected (Sharma, 2006, pp. 131-134).

Another long-term impact on the public sector arises from the fact that the death of personnel, particularly at their prime age could create a pool of orphans who are denied the quality education. This could combine with the declining educational systems to reduce the number of qualified entrants to the public sector (Economic Commission for Africa).

In 2001, the Government of the Kingdom of Swaziland commissioned an assessment on three of its smallest Central Agencies, namely the Ministry of Finance, The Ministry of Economic Planning and Development and the Ministry of Public Service and Information (Government of Swaziland, 1999). One study showed that the three agencies would lose 32% of the work force to HIV/AIDS over then twenty years and that the agencies will need to replace an additional 1.6% of the staff complement each year over the same period to maintain staffing levels (Economic Commission for Africa).

2.4.4 Impact on education sector

The impact of HIV and AIDS on education systems in severely affected countries is particularly acute. Substantial numbers of teachers are ill, dying or caring for family members. Girls are being withdrawn from school to assist in the home. Management of educations system is threatened by illness and death of qualified persons (Sharma, 2006, p. 48).

2.4.5 Impact on Children

The impact of HIV and AIDS on children and young people is a severe and growing problem. In 2008, 430,000 children under age of 15 were infected with HIV and 280,000 died of AIDS. In addition, about 15 million children have lost one or both parents due to the disease (UNAIDS, 2010). The HIV infected child is taken care of by his/her mother who herself is HIV infected and is struggling for life. After the

death of the HIV infected mother, the HIV infected child is left at the mercy of others. It is difficult to imagine that if the epidemic of HIV infection (or AIDS) is not checked, there will be tremendous increase in the number of HIV infected children (Ahluwalia, 2005, p. 28). The increase in orphans may well represent one of the largest impacts of the AIDS epidemic. Estimated at 2% for African prior to the epidemic, the proportion of orphans to all children has now risen to as high as 15 to 20% in some African Countries. Estimates indicate that 50% of these children were orphaned by AIDS (Sharma, 2006, pp. 117-118).

> 'One longitudinal study in the United States showed that children with HIV-infected mothers reported more symptoms of depression than children with non-infected mothers. Still another study in the United States showed that the number of orphans was diminishing, but that even in the HAART era children may be orphaned. The loss of parents entails social, psychological, and physical needs that demand immediate attention. And a third study in the United States showed that in most cases the extended family (grandparents) provided care, but nearly a quarter of the children had lived under institutional care or under other care arrangements, such as foster homes. A study of children left motherless by AIDS in the United States showed that when long-term care becomes the task of grandparents, support may be needed with many aspects of care. Such support would include transportation for their own and their grandchild's medical appointments, stress reduction and anxiety management for dealing with their own serious illnesses, respite care, and psychological support. Also, family members may need additional financial support, as income declines in the senior years.' (WHO, 2005)

In several countries, income in orphan households has been found to be 20–30% lower than in non-orphaned households. Studies in urban households in Côte d'Ivoire showed that where a family member has AIDS, average income falls by as much as 60%, expenditure on health care quadruples, savings are depleted and families often go into debt to care for sick individuals. Other studies have suggested that food consumption may drop by as much as 41% in orphan households stigmatization may prompt affected children to stay away from school, rather than endure exclusion or ridicule by teachers and peers. A study in Zambia showed that 75% of non-orphaned children in urban areas were enrolled in school compared to 68% of orphaned children. At a national level, a World Bank study in Tanzania suggested that HIV/AIDS may reduce the number of primary school children by as much as 22% and secondary school children by 14% as a result of increased child mortality, and decreased attendance and dropping out. As effects on households deepen and parents die, children may suffer the loss of their home and livelihood through the sale of livestock and land for survival, as well as through asset stripping by relatives. Children affected by HIV/AIDS may receive poorer care and supervision at home, may suffer from malnutrition and may not have access to available health services, although no studies have yet demonstrated increased morbidity and mortality among broadly affected children compared to unaffected control groups (Richter, December 2004).

Effect of HIV can be measured in school enrolment of children. According to the 1999 South African October Household Survey, as many as 35% of rural African children between the ages of six and 17 years do not attend school. In the sub-Saharan region, an estimated 44 million children, more girls than boys, are not attending school. 48 School drop-out is likely to increase as families become unable to afford

the costs of schooling. Similarly, number of child labor also increased due to HIV. Many children in South and Southern Africa already work hard. The Survey of Activities of Young People (SAYP) commissioned in 1999 by the South African Department of Labor found that more than half a million children between five and 14 years of age work for long hours, mainly collecting wood or water. Closeto 400,000 children do night work; 183,000 do three or more hours a week of paid domestic work and 137,000 works with or close to dangerous machinery or tools. About 19,000 children (0.1%) beg for money or food in public for three or more hours a week. It was found that more than 70% of children work to help their families, either willingly or unwillingly (Richter, December 2004).

In terms of its demographic impacts, HIV and AIDS affect children in the following ways:

- Higher infant and child morbidity and mortality rates
- Lower life expectancy
- Higher rates of orphaning (Webb, June 2002).

UNICEF believes that children suffer profoundly when their households become vulnerable as parents fall sick and die of HIV and AIDS. This suffering includes: Psychosocial distress, Economic Hardship, Withdrawal from School, Malnutrition and Illness, Loss of Inheritance, Fear and Isolation and Increased Abuse and Increased Risk of HIV. Children orphaned by AIDS are at greater risk of malnutrition, illness, abuse, child labor, and sexual exploitation than children orphaned by other causes and these factors increase their vulnerability to HIV infection (Rajbhandari, January 2004). Common consequences of orphaning include growing up in poverty, the loss of parental affection, reduced level of care, stigma and

the psychosocial implications of repeated personal and material losses such as trauma, stress, depression and a loss of social connectivity (PHARAOH, 2005, p. 2).

1.2.6 Psychological impact

After being diagnosed, people confronted with their HIV-positive status are highly stressed and uncertain, despite the availability of highly active antiretroviral therapies HAART, and their lives may be devastated by the need to deal with the new medical, personal and social situation. Research related on the psychosocial aspects of HIV-positive status show that living with HIV is associated with a large measure of stress and depression. People with HIV and AIDS must also manage the stigma associated with HIV/AIDS. Moreover, they must tolerate treatment with adverse side-effects, deal with rejection and social discrimination, and confront the deaths of others in their social networks. Being HIV positive generally makes HIV part of a person's identity (WHO, 2005).

Children who grow up without the love and care of adults devoted to their wellbeing are at higher risk of developing psychological problems. A lack of positive emotional care is associated with a subsequent lack of empathy with others and such children may develop antisocial behaviors (Richter, December 2004). People felt the psychological stresses: Fear of infection, Anticipatory grief, Shame, Helplessness, Discrimination thus, these same anxieties that are felt by the infected are also felt by the affected family members and care givers. It was also stated that affected people are faced with challenges of; loss, death, perceived helplessness, uncertainty about the future, sadness and anger, frustration in navigating the medical system, financial worries and interpersonal stress. These burdens are usually placed on the shoulders of elderly caregivers, family members, partners and sometimes even friends (Cathleen Bezuidenhoudt).

2.5 Risk groups and vulnerability of HIV and AIDS

The National HIV and AIDS Strategy 2002-2006 defines vulnerable groups as those whose lifestyles, social or professional context and behavior make them most vulnerable to HIV and AIDS. Although a number of groups and communities in Nepal have to be considered as "Vulnerable", the groups identified as a possible nucleus for a generalized epidemic are Sex Workers and their clients, injecting drug users, mobile populations especially labors migrants to India, men who have sex with men and prisoners because of their extreme condition (Ramamurthy, 2005, p. 186). Nepal is experiencing transition of HIV epidemic from a high-risk behavior groups to low risk behavior population like housewives and children. The ratio of housewives infected with HIV among all HIV infected women has almost equaled. The estimation also shows that housewives have acquired HIV three times more than the female sex workers in absolute numbers (BK, 2006, p. 115).

Risk groups and HIV prevalence are not uniformly distributed within a particular ecological region in Nepal. It varies between the different rural and urban areas. It is also associated with the extension of high ways, urbanization and mobility status of those particular regions.

2.5.1 Female sex workers and risk of HIV and AIDS

FSWs are hard to reach because they are highly mobile and move regularly from bar to bar, between districts and towns, and within and to other provinces. Some FSWs are difficult to locate because they have primary jobs and engage in sex work part-time. For instance, women from rural areas may travel to urban areas to sell agricultural goods and only sell sex as a way to earn extra income. Higher paid FSWs, such as those who solicit clients from scooters, the Internet, through agents and over

the telephone, have the financial capacity to remain hidden (Lisa Grazina Johnston, 2006, p. 17).

Commercial sex work has been identified as a primary factor in the spread of AIDS in Nepal, the discourse on HIV and AIDS has subsequently been subsumed within the wider discourse of commercial sex work (Beine, 2003, p. 76). The Nepal government has designated female sex workers as one of the most-atrisk population' (MARP) as regards HIV (Amatya, 2010, p. 11).

The dynamics of HIV transmission involving sex workers poses challenges to the national response. Because of the high level of stigmatization associated with sex work, the majoirity of sex workers do not identify themselves as sex workers, especially under age girls (APLF & UNAIDS, 2011, p. 23). The issues of HIV and AIDS in Nepal from a ***critical medical anthropology (CMA)*** perspective or a ***political economy medical anthropology (PEMA)*** perspective, tends to focus on the underlying causes of commercial sex work in Nepal. Prostitution and occupational migration are viewed as the result of deeper economic and political problems. David Seddon, for instance suggests that-

> There has been, and remains, a tendency... to focus attention on women, both as sources of infection (prostitutes and as the main victims. While understandable, this trends to result in an uner emphasis of other factors which contribute to the spread of infection and the development of the epidemic. The economic and social pressures which force women into prostitution, and men to make use of commercial sexual services, and the economic rewards which lead men to organize the sex trade as a source of profit, also need to be analyzed and understood. (Seddon, 1995, p. 4)

Additionally, because of women inferior social status and a lack of alternative source of income and employment associated with poverty, illiteracy and ignorance; women may resort to prostitution increasing their exposure to infection. A study of commercial sex workers in five urban areas of Terai districts of Nepal, reported that the women took up prostitution as a means of obtaining economic support after being deserted by their husbands (WHO & UNAIDS , 1999).

Different surveys and reports have confirmed the stabilization of the HIV prevalence among FSWs. It is suggested that the sex workers largely contribute to increase the HIV prevalence in Nepal. There are between 25,000-34,000 female sex workers in Nepal with an estimated HIV prevalence of 1.3-1.6 percent (Nora, August 2008). The number of FSW seemed to be down sized in 2011. The mapping and size estimation exercise estimates the number of FSWs in Nepal as between 24649 and 28359 and FSWs share only 1% of the total estimated HIV infection (APLF & UNAIDS, 2011, p. 23).

In 2007, national HIV prevalence rate was 4% among the FSW (The World Bank 2007).Street based sex workers are remained as a most high risk group than Non-street based sex workers. Street based sex workers and non-street based sex workers in Kathmandu who have worked as a sex worker in India have HIV prevalence was 41.7% and 40% respectively. 80% HIV prevalence was seen among regular injecting drug users and 33.3% among non-regular users FSW (FHI, March 2001 – August 2001).

The following data represents the sero-prevalence of HIV among the FSW:

Year/	**1992**	**1995**	**1996/97**	**1997/98**	**1999/00**	**2001**	**2004**	**2006**	**2008**	**2011**
HIV prevalence										
Kathmandu	<1 %	2.70 %	8.70%	16.00 %	17.10 %	15.70 %	2%	1.4 %	2.2 %	4.2

Sources: (FHI, March 2001 – August 2001), (NCASC, 2008, Round III), (NCASC, 2009 Round IV), (Health Services Department, 2008/09) (NCASC, 2011, Round IV)

For David Seddon the root of the problem of HIV and AIDS is not commercial sex worker, rather it is the economic and social pressures which push women into this profession, and which push men abroad where they are vulnerable to the use of commercial sexual services (Beine, 2003, pp. 76-77). Likewise, in the context of Nepal, Meena Poudel (1994:10-11) cited by Beine suggests that rural women are the most adversely affected by poverty in Nepal that poverty is, in turn, "the principal cause of the greater risk of HIV infection in Nepal." poverty, according to Poudel, is mainly a result of "resources being whittled away by multi-national companies" and this leads women to pursue prostitution because of a lack of viable alternatives. Poudel claims that-

> "The main reason for this situation among women can be ascribed to widespread poverty, low status, lack of decision making rights, lack of access to time for education and information, rural-urban imbalances, inability to assert their rights, and so on" (Beine, 2003, p. 77).

Most Sex Workers experience increased vulnerability to HIV and AIDS due to a low level of education, which restricts access to information and health care services. They have little control over the risk in sexual encounters because the client often determines whether or not to use a condom. Moreover violence against Sex Workers is common (Ramamurthy, 2005, p. 187).

Comprehensive knowledge on HIV:

Overall 58 percent of FSW of Kathmandu valley were aware of ‘ABC’ (‘A’, abstinence from sex; ‘B’, being faithful to one partner; ‘C’, consistence condom use) as HIV preventive measures, while only 36 percent had comprehensive knowledge on

HIV (NCASC, 2008 Round III). However, only 31% in 2006 and 26.7% in 2009 had comprehensive knowledge on HIV who could share the mode of transmission and other preventive measures also. (NCASC, 2009 Round IV).

Consistent Use of condom among FSWs

According to the IBBS survey report, all of the sex workers of Kathmandu valley knew about condoms, only 75 percent of the FSWs had used condoms with their last clients. A significant decrease in consistent condom using practice of street based (17.4% i.e. 24/138 in 2004, 6.1% i.e. 6/99 in 2006 and 7.4% i.e. 7/95 in 2008), and establishment based FSWs (18.7% i.e. 35/187 in 2004, 7.9% i.e. 12/151 in 2006 and 3.9% i.e. 5/129 in 2008) with non-paying partners was detected. Further consistent use of condoms with partners other than clients, husband and male friends had decreased significantly among the establishment based FSWs (59.7% i.e. 86/144 in 2006 and 38.1% i.e. 24/63 in 2008) (NCASC, 2008 Round III). Similarly, about 46% of the respondents in Kathmandu and 52% in Pokhara were aware of male condoms. However, only 4% reported having ever used a female condom at both sides (IBBS, 2011, Round IV).

2.5.2 Clients of female sex workers and risk of HIV and AIDS

Almost 60 percent of their clients—mainly transport workers, members of the police or military and migrant workers—do not use condoms. Nationally, clients of FSWs have an estimated HIV prevalence of 2 percent (Nora, August 2008). The HIV prevalence is increased among client of sex workers in 2011 which make up over 5% of total HIV cases (APLF & UNAIDS, 2011, p. 23).

The migrant workers, wage labors, transport workers, highway drivers, army, and police usually become the clients of sex workers. A study showed that the proportion of having sex with female sex workers increased by 20% for each group

(42% to 62% for transport workers and from 10% to 30% for migrant workers within one year period of time (2000-2001) (Karki, June 2008). According to the IBBS report, among migrant labors in the West, mid and far West of Nepal, 9 (2.5%) of respondents in the Western region and 23 (6.4%) in the Mid to Far Western region reported ever having sex with female sex worker(s) in Nepal. Of all respondents included in the study, about 10 percent in the Western region and 22 percent of respondents in the Mid to Far Western region reported ever having sex with female sex workers in India (NCASC, 2008 Round II). Clients of sex workers accounts for 19% of HIV infections in 2005 and 15% in 2007. Spouses or female partners of migrant workers and clients of sex workers, now account for 26% of all adult infections (Health Services Department, 2008/09, p. 193)**.**

2.5.3 Intravenous drug users and risk of HIV and AIDS

Injecting drug use is the predominant mode of transmission in parts of southern Europe, the Unites Stated, North Africa, the Middle East, Asia and the NIS, is increasing significantly in South America (Tim Rhodes, 1999)**.** A realistic approach is to recognize that drug injection will be difficult to control and promote the concept of 'harm reduction' (John Hubley, 1998, p. 73). In 1992 it was estimated there were as many as 5.5 million injecting drug users (IDUs) living at least 80 countries. By the end of May 1998 the number of countries and territories reporting injecting drug use had increased to at least 129 and out of 129 countries and territories, 103 have identified HIV infection associated with such behavior. Whereas there has been a relatively long tradition of injecting drug use in certain regions such as North America, Western Europe, and Australia, it is now spreading rapidly throughout all global regions. (Andrew L. Ball, 1998)**.** By the end of 2003, the number of IDU worldwide was estimated as 13.2 million (0.3% of the estimated 4 billion adult

populations). The majority, 10.3 million (78%), live in developing and transitional countries (Carmen Aceijas, 2004).

There is also a cultural tradition of drug use in Nepal (Beine, 2003, p. 91). Nepali culture facilitates the use and abuse of drugs and alcohol. These include an historic cultural acceptance of alcohol used, recreational cannabis used by the elderly, and religious cannabis use by holy men (Shrestha, 1992, pp. 1241-1242). IDUs in Nepal are threatened not only by their behavioral risks but also by a societal response (Ramamurthy, 2005, p. 187). IDUs have been identified as the second largest "risk group" for contracting HIV and AIDS in Nepal and although the issues need to be examined more closely, poverty does not seem to be the main cause pushing people into drug use. One study among IDUs, it was determined that the majority were highly educated and financially self-sufficient, earning well above the national average (Beine, 2003, p. 91).

According to the IBBS report, HIV prevalence among the 300 IDUs in Western and far Western Tarai was 11.7% in 2005, 11% in 2007 and in the third round the prevalence slightly decreased to 8% in 2009 (New ERA, 2009, Round III).

As IBBS round V report presents that HIV prevalence has gradually decreased in both Kathmandu and Pokhara since 2002 and 2003 respectively. The declining trend in HIV prevalence is significant in both sites. The prevalence of HIV among IDUs in Kathmandu is 6.3% in 2011, decreased from 68% in 2002 and in Pokhara it is 4.6% in 2011, decreased from 22% in 2003 (NCASC, 2011, Round V).

In the present situation, the numbers of female drug users are also in increasing trend. Pokhara reported that as many as one third of IDUs are females. The dynamics of female IDUs as reported by the small cohort in Pokhara points to

unprotected sex acts for drugs, reliance on male IDUs for purchase and actual injection of drugs. (Maitland J Peak, January 2001)**.**

Risk behavior and practices of IDUs:

One survey report presents that about 60% (44/73) IDUs had sexual experience. About 45.4% (20/44) IDUs reported that they used condom in their last sexual act, and 67.1% (49/73) IDUs reported that they shared their needle and syringe with their peers. Very few (2/49; only 4.0%) IDUs reported that they shared their needles and syringe but sterilized with spit, urine and water before using (Maitland J Peak, January 2001)**.** As IBBS survey report, few IDUs had used condoms consistently with regular partners in all the three rounds (3.9% in 2005, 7% in 2007, and 8.7% in 2009), but condom use is increasing over time (New ERA, 2009, Round III). But consistent condom use with female sex workers (FSWs) has increased significantly in 2011 compared to the 2002/2003 in both Kathmandu and Pokhara. In Kathmandu, consistent condom use increased from 54% in 2002 to 76% in 2011, while in Pokhara, it increased from 60% in 2003 to 70% in 2011. However, consistent condom use with non-regular female sex partners is lower than with regular female sex partners (NCASC, 2011, Round V).

As from previous report, 81% in 2005, 89.7% in 2007 and 88.3% in 2009 has used injecting with others' previously used syringes and 84.7% in 2005, 95.7% in 2007 and 92.3% in 2009 injecting with syringes kept at public places (New ERA, 2009, Round III). Unsafe injecting behavior has slightly decreased from 2007 to 2009. High risk behavior such as injecting with previously used needles/syringes significantly decreased from 46 percent to seven percent in Kathmandu, from 21 percent to five percent in Pokhara, from 34 percent to 15 percent in Eastern Terai and from 19 percent to 12 percent in Western Terai in 2009 (NCASC, 2009, Round IV)**.**

On the basis of finding from the above data; it can be generalized that IDUs are in double risk of HIV transmission because of their high risk behavior of sharing needle and syringe and unsafe sexual practices.

Knowledge about HIV AND AIDS:

Overall, 73.3 percent of the respondents were aware of all three major HIV preventive measures i.e. ABC, (A- abstinence from sexual contact- B- being faithful to one sexual partner and C-consistent use of condoms) (New ERA, 2009, Round III). More than half of the IDUs in all the sites had comprehensive knowledge of HIV/AIDS prevention and transmission. Compared to other study sites (Pokhara, 62%; Eastern Terai, 63%; and western and far-western Terai, 56%), such knowledge was slightly higher among IDUs in Kathmandu valley (68%) (NCASC, 2009, Round IV). Similarly, the comprehensive knowledge on HIV and AIDS is more or less unchanged both in Kathmandu (66% in 2007 to 64% in 2011) (NCASC, 2011, Round V).

2.5.4 Men Having Sex with Men (MSM) and risk of HIV and AIDS

The countries of Asia and the Pacific are either experiencing severe HIV epidemics among men having sex with men (MSM), or behavioral data demonstrates high risk for HIV acquisition among these men (September 2006)**.** HIV remains a critical health issue for men who have sex with men (MSM). In the United States, an estimated 365,000 to 535,000 MSM are living with HIV, and 42% of new HIV infections occur in this population. Recent data on sexually transmitted diseases and on sexual behavior indicate the potential for resurgence in HIV infections among MSM. Outbreaks of gonorrhea and syphilis have been reported in a growing number of cities, and several studies have observed an increase in unprotected anal intercourse among MSM. These increases in HIV risk behavior may be attributed to several

factors that have affected the sexual practices of MSM, including changes in beliefs regarding the severity of HIV disease (Richard J. Wolitski, 2001, p. 883).

Men having sex with men (MSM) is out of norm among the population in Nepal. Homosexuality is illegal in Nepal under a code of unnatural sex. Nepal Supreme Court recently ordered government to end discrimination against Lesbian, Gay, Bisexual and Transgender (LGBT) and to treat the same rights as other heterosexual citizens. MSM constitute one of the groups at highest risk of HIV transmission in Nepal. (UNAIDS, 2006). In Nepal total of 34 MSM subgroups were identified. The most common were tas, giriyas, metis, kothis, hijras and dohoris. Tas and giriyas performed male role (penetrative), whereas metis, kothis and hijras performed female roles (receptive) (www.amplifyvourvoice.org, May 31, 2011)**.**

The officially adopted estimate for the number of MSM and transgender people in Nepal is 128,500 (Low 64,000 – High 193,000), but this estimated number could not cover the 'hidden population' so it can be estimated that the total number of MSM and transgender can be about 50, 00, 00 in Nepal ((BDS), Blue Diamond Society, 2011)**.** But, in 2008, the National Center for AIDS and STD Control stated there are 134,000 MSM/TG populations. It was reported that MSM accounted for 4% of the cumulative total of infections (UNAIDS, APCOM and EVIDENCE TO ACTION, August 2010, Version 2)**.**

According to the IBBS report, HIV prevalence in male sex workers was 3.9% in 2004 (New ERA/SACTS, 2009, Round III), 5% in 2005, 2.9% in 2007 and 5.2% in 2009 and HIV prevalence in MSM was 4.4% in 2005, 3.4% in 2007 and 3.8% in 2009. Similarly, in 2010, the government reported that the HIV prevalence among MSM and TG was 3.9%, which increased from 3.3% in 2008. In 2010, using the data from UNGASS reporting, the HIV prevalence rate among MSM was 7.96 times

higher than the general prevalence rate of 0.49% (UNAIDS, APCOM and EVIDENCE TO ACTION, August 2010, Version 2).

Risk behavior and Practices of MSM:

UNGASS reports indicated that the proportions of MSM and male sex workers who used a condom at the last occasion of anal sex with a male partner was 71.6% and 93.1% respectively in 2007, and 75.3% and37.8% respectively in 2009. Similarly, consistent use of condom was increased among MSM with non-paying partners from 44% in 2004 to 71% in2007 and consistent use of condom was increased to 100% among male sex workers with paying sex partners, and 72% with non-paying sex partners in 2010 (UNAIDS, APCOM and EVIDENCE TO ACTION, August 2010, Version 2)**.** But, the consistent use of condoms was lowest at 50 percent each for non-paying female sex partner and paid female sex partner (New ERA/SACTS, 2009, Round III).

MSM are still remained as most high risk group because of their multiple sex partners. One research conducted in five study sites (Biratnagar, Birgunj, Bhairawa, Butwal and Nepalgunj) presents the findings that frequency of sexual relations of Metis (sub group of MSM) has the largest number of sexual partners, with 10-400 partners in one month and 90-3500 partners during the last year of study (BDS, 2008).

Knowledge about HIV/AIDS

In 2005 IBBS in Kathmandu valley found that the levels of HIV knowledge and condom use were found to be low. One third (33.6%) of MSM were found to have correct knowledge about transmission and prevention of HIV (September 2006). But it was increased to 83.3 percent of MSM (84.4% MSWs and 82.7% non-MSWs) were aware of all three major modes of transmission, i.e. ‘ABC’ (A- abstinence from

sex, B- being faithful to one sex partner, and C- consistent condom use) (New ERA/SACTS, 2009, Round III)**.**

2.5.5 Migrant/Mobile population and risk of HIV and AIDS

Labor migrants seeking work in India constitute one of the "bridging populations" in the transmission of sexually transmitted infections (STI's) and the human immunodeficiency virus (HIV) (Teijlingen, April 2009). Sharma has stated it reasons by saying that most of the migrant workers are highly mobile and often lives in unhygienic conditions in urban slums. Long working hours, relative isolation from the family and geographical mobility may foster casual sexual relationships and make them highly vulnerable to STIs and HIV and AIDS (Sharma, 2006, p. 254).

The actual volume of internal and external migration is still largely unknown. For the first time, Central Bureau of Statistics (CBS) carried out a survey on migration in 1986/87 where the then villages Panchayats were taken as the unit of migration. Nepalese have been migrating to India since the late 18th century but there is no consistent estimation of the number of this population, but it is mostly agreed that the number approximately 2 to 3 million (NIDS, 2009)**.**

A 2006 study among Nepali migrants traveling to Indian cities for work found that 27% of men engaged in high risk sexual behaviors. HIV prevalence was nearly 8 % in migrants returning from Mumbai, India in 2002 (Nora, August 2008) which increased to 46% of estimated HIV infections in Nepal were among seasonal labor migrants in 2005, and similar pattern was found in 2007 also (Health Services Department, 2008/09)**.** Among other most at-risk populations (MARPs), migrant laborers to India account for a large proportion of the country's HIV positive population. The estimation of HIV infections report also states that 42 percent of all HIV infections in the country were among Nepali labor migrants to India (NCASC,

2008). Mumbai, India has the country's largest brothel based sex industry, with over 15,000 sex workers. It is estimated that in the region of 70% of sex workers in Mumbai are HIV positive (Sharma, 2006, p. 255).

The first round of the IBBS among migrant workers in 11districts in the West to Far-Western Terai region found that 1.1 percent of the migrant workers in the Western region and 2.8 percent in the Far Western region were HIV positive (New ERA, SACTS and FHI, 2006). Likewise, the second round showed a 1.4 percent HIV prevalence among labor migrants in the Western region, and 0.8 percent in the Far-Western region (New ERA/Intrepid Nepal, 2008, Round I)**.**

Far western Region of Nepal remained a least developed region than other region, so most of the youth migrant basically go India for the search of job. Data from Doti district (Far West Nepal) indicates that 83% of households had at least one family member working outside the district and for 94% of them reached India (Andrew S. Furber, February 2002).

According to 2008 Integrated Bio-Behavioral Studies (IBBS) data from Mid to Far Western district samples, about 1 percent of the migrants returning from Mumbai, India, were found to be HIV positive. Migrants who visit FSWs and/or go to the Maharashtra state of India appear to be at highest risk of HIV infection. (USAID Nepal, Oct 2010, p. 1).

Risk behavior and practices of Migrant labor:

Visiting brothels was very common among Nepali migrants in India: ‘May be no migrants return home without having sex in Mumbai (Krishna C. Poudel M. J., 2004). One study found that 11 of 137 men (8%) were positive for HIV infection. The respondents, especially the migrant-returnees from Mumbai, were engaging in risky behaviors such as pre- or extramarital sex, and sex with multiple partners, including

sex workers (Krishna C. Poudel J. O., October 2003). HIV prevalence among migrants within Nepal was 2.3% as compared to 8.5% among migrants to India. 60% of migrants within Nepal and 85% of migrants to India have visited female sex workers. 75% of migrants within Nepal used condom while visiting female sex workers in comparison to only 10% of migrants to India (Gurubacharya, HIV PREVELANCE AMONG NEPALESE MIGRANT WORKERS WORKING IN NEPAL AND INDIAN CITIES, 2004)**..**According to the IBBS report that18.1% respondents from the Western region in 2006 and 11.1% in 2008 and from Mid to Far Western 30.5% in 2006 and 23.3% in 2008\reported ever had sex with a female sex worker (NCASC, 2008 Round II) and IBBS-2010 survey findings reported that consistent use of condom in last year was found low in percentages (only 17.7%) (SSO, 2010, Round III).

Knowledge on HIV AND AIDS:

Nearly all respondents (98.6%) in the Mid to Far Western region and a slightly less percentage (95.8%) in the Western region had heard about HIV and AIDS (NCASC, 2008 Round II). According to the IBBS-2010 result shows that the respondents who heard about HIV are higher in percentages (82.3%). About 26 percentages of the respondents know that HIV and AIDS is transmitted through unsafe sex and about only 18 percentages of respondents are aware that HIV transmission can be avoided by using condom (SSO, 2010, Round III).

They (participants of Doti district) stated that almost every adult member in the study area is familiar with STIs [they use the term ‘Bombay Rog’(disease) to refer to any kind of STIs]. It is also not surprising to them to learn that someone is infected with STIs (Krishna C. Poudel J. O., October 2003).

Wives of Migrant Labors:

The wives of migrant laborers in the four districts of Far-Western Nepal have an HIV prevalence of 0.8 percent. District-wise, the respondents in Doti had a slightly higher prevalence of HIV (2.6%) than those in Achham (0.7%) and Kailali (0.4%). The HIV prevalence among the wives of migrants in this second round (0.8%) is much lower than the first round of the IBBS conducted in 2008 (3.3 %). In first round of IBBS; HIV infections were found to be significantly higher among those respondents who were widowed (22.5%) than those who were currently married (0.6%) (New ERA/Intrepid Nepal, 2008, Round I).

2.5.6 Children and risk of HIV and AIDS

Scheper-Hughes and Sargent describe childhood as "a primary nexus of mediation between public norms and private life" (1998, p. 1).

HIV infection in children occurs mainly through two routes. Firstly, a HIV infected mother can pass on the infection to her unborn baby either before birth or at the time of birth. Secondly, who receive repeated transfusion of blood or blood products for blood disorders such as hemophilia or thalassemia (John Hubley, 1998, p. 40). Innocent children, who have not even seen the world, suffer from the deadly HIV disease for absolutely no fault of theirs. They suffer because their mothers or their fathers have faulted. More than 98% of HIV infection in children results from mother-to-child transmission. It is clear that for every HIV infected child, there is an infected mother and often an infected father (Ahluwalia, 2005, pp. 27-28). As of today, nearly all new cases of HIV infection in children all over the world occurs through parental transmission, that is during pregnancy, delivery or breast feeding (Ahluwalia, 2005, p. 28).

Worldwide in 2009, there were an estimated 16.6 million children who had lost one or both parents to AIDS, including nearly 14.9 million children in sub-Saharan Africa. Orphans and vulnerable children are at higher risk of missing out on schooling, live in households with less food security, suffer anxiety and depression, and are in greater danger of exposure to HIV (www.unicef.org, Mar 2011). As UNAIDS 2000 report; every 50 seconds a child dies of an AIDS related illness and another becomes infected with HIV. Each day approximately 3,500 children are infected by, or die from HIV and AIDS (Webb, June 2002).Few studies have quantified the impact of child-HIV status on infant and child mortality in Africa. Mortality before 2–3 years of age has been reported to be between 7 and 18 times higher for HIV-infected than HIV-uninfected infants, whereas mortality by the age of 5 can be up to 21 times higher for HIV-infected compared with HIV-uninfected children (Eduardo Villamor, 2005, p. 62). The transition from being infected to development of AIDS and death is much quicker with babies than adults and can take between two to five years (John Hubley, 1998, p. 40).

The HIV and AIDS pandemic has created thousands of households headed by children as young as 6 to 11 years. These children cannot provide adequate emotional, nutritional or financial support to their siblings and themselves. Many of these children will feel the effects of a parent's illness long before their death when they shoulder new responsibilities such as caring for younger siblings, taking on additional domestic chores and generating income for the family. These children may be subjected to impersonal and abusive child care and treatment (Corinne Strydom, 2009, p. 79).

2.5.7 Women/Housewife and risk of HIV and AIDS

HIV is transmitted more easily through sexual contact in women than men because the vagina is more easily irritated than the penis. Research shows that sexual relation during menstruation, after menopause and first-time sexual relations are all situations that increase the risk of women contracting HIV (APLF & UNAIDS, 2011, p. 7). In case of women both biological and psychological factors place them at higher risk than men of acquiring HIV infection (Ahluwalia, 2005, p. 24). Gender relationships and sexuality are significant factors in the sexual transmission of HIV and AIDS (Sharma, 2006, p. 21). Gender norms that create an unequal balance of power between women and men are deeply rooted in the socio-cultural context of each society (unicef & UNAIDS, 3-4 February 2003). For social and physiological reasons, women and girls are more vulnerable to HIV infections than are men and boys. Women make up slightly less than half of adults living with HIV and AIDS, but where the epidemic is spreading, prevalence rates are rising fastest among young women (The World Bank, 2005, p. 15).

Women are especially vulnerable of HIV infection because of the high risk of behavior of their spouses or regular partners. And women are generally secondary status in family and society. Women do not negotiate sexual behavior, most of the women would not dare to ask their partners to use a condom and most have little autonomy and little say about sexual matters (WHO & UNAIDS , 1999). Worldwide women are mostly unable to negotiate the frequency and nature of sexual interaction. At times, they are not even able to choose their male partners. About 90% of all HIV infected women have acquired their infection through heterosexual intercourse. Women have little or no control over means to practice low-risk sexual behavior. In

fact, women can do nothing to protect themselves without the knowledge and consent of their male partners (Ahluwalia, 2005, p. 25).

Findings of one repot indicate that women of all ages in methadone treatment are at risk for HIV transmission through inconsistent condom use with vaginal sex, women between the ages of 35 and 44 experienced greater risk for crack or cocaine and alcohol use prior to or during vaginal, anal or oral sex (Malitta Engstrom • Tazuko Shibusawa, 2009, p. 109).

UNAIDS at the end of 2007 estimated that out of the 30.8 million adults worldwide living with HIV, 50% of those adults living with HIV were women. It is suggested that 98% of these women are living in developing world. In Sub-Saharan Africa the number of HIV infection were roughly half a million in men as well as half a million in women in 1985. Since then the number of women living with HIV has increased every year. UNAIDS and the National AIDS Control Organization (NACO) estimated that 2.5 million people are living with HIV/AIDS in India in 2007, 39.3% of these were women (Karki, June 2008)**.** In Botswana, girls are more susceptible to HIV infection than boys – for every one HIV-positive boy under age 14; there are two HIV- positive girls in the same age group (Selim, March 2003). In parts of Sub-Saharan Africa young women are more than three times as likely as young men to be infected (The World Bank, 2005, p. 15).

Male to female ratio of people living with HIV and AIDS (PLHA) is becoming much closer over recent years. In 1990, the ratio was 9:1 (women to men) and in 2000 the ratio was 4:1 (Hayes, 2007, p. 23). In his article ‘“The ‘nameless fever’: The HIV/AIDS pandemic and China’s women’, Renwick (2002) identified the need to examine the HIV/AIDS pandemic from a gendered perspective. He argued that

particularly in developing countries women are increasingly vulnerable to HIV/AIDS and that, fundamentally, HIV/AIDS is an issue of human rights (Hayes, 2007, p. 44).

Nepalese women are not only more vulnerable to HIV and AIDS than their male counterparts, but also that the epidemiological response has been weakened by this social patriarchy. Gender socialization sometimes leads women to remain passive in their sexual choices, even when they are presented with dangerous or life threatening options regarding their sexuality. Rakoczy (2000:17) states that:

> 'Society norms for boys and men say that they are to be leaders, authority figures, independent, strong and aggressive sexually assertive and successful ambitious and competitive while girls and women are to be followers, obedient, dependent, weak and passive, chaste, gentle, nice and kind'. (Johns, March 2009)

Statistical situation of women and House wife and risk of HIV and AIDS:

Nepal is experiencing transition of HIV epidemic from a high-risk behavior groups to low risk behavior population like housewives. The ratio of housewives infected with HIV among all HIV infected women has almost equaled. The estimation also shows that housewives have acquired HIV three times more than the female sex workers in absolute numbers (Suvedi, 2006). As data published from the NCASC; 4 people were HIV infected in 1988 when 25% were women and in 1989 it became 100% HIV prevalence in women. In total 5069 reported as people living with HIV (PLHIV) from 1988 to June 2005, the ratio of women is above one fourth (27%). While analyzing the trend of HIV transmission among the category of "housewives" reported by NCASC; out of total women living with HIV, among them 49.2% were house wives (Suvedi, 2006). This data shows the terrible situation of house wives in Nepalese context.

A descriptive study was carried out from December 2006to May 2008 in 1099 HIV patients visiting HIV clinic, Seti Zonal Hospital, Dhangdi. Among 1099 patients, 54.2% (596) were females and45.8% (503) were males. HIV positive children constituted 10.4% of the total patients. Socio-economic status of the patients revealed that almost 50% were housewives (of whom 42.1% were widow). The major mode of transmission was found to be sexual contact (88.3%) (Paudel BN, Oct 2008).

In South Africa, between the ages of 15-24, a woman was four times more likely to become infected with HIV virus than her male counterpart (UNAIDS, 2006, p. 5). In the 20-29 age group (the prime childbearing age), women were six times more likely to become infected with the virus (Rehle et al., 2007:197). It was also of note that according to a press released from the UNAIDS Global Coalition on Women and AIDS, "most sexually transmitted HIV infections in females occur either inside marriage or in relationships women believe to be monogamous" (WHO & UNAIDS , December 2004).

In many societies, a culture of silence surrounds sex. Women are often ignorant about, and passive in, sexual interactions. This makes it difficult for women to be informed about risk reduction (Sharma, 2006, p. 21). However, it must be recognized that many women are put at risk of HIV infection by the behaviors of their male partners, not their own (Audrey E. Pettifora A. v., 2004, p. 1440).

2.5.8 Prisoners and risk of HIV and AIDS

Prisons do not exist in isolation from the community. The high degree of mobility between prison and the community also means that other sexually transmitted infections (STIs), communicable diseases and related illnesses transmitted or exacerbated in prison (National STD/AIDS Control Programme, July 2011, pp. 1-2). Prisoners have a disproportionately high prevalence of many illnesses. For

example, the prevalence of a wide-range of psychiatric disorders is easily more than double than that found in the community. About 2% of the U.S. general population test positive for the hepatitis C antibody, compared to 12 to 64% of prisoners. In particular, few investigations have explored the health-related quality of life (HRQL) of prisoners. However, the social, demographic, economic and health status of prisoners is clearly different from other groups (Christopher AKY Chong, 2009, pp. 1-2). In the absence of women, heterosexual men will seek release through sex with other men. A social constructionist regards sexual identities (i.e., as gay, straight, etc.) as created through social meaning-making, and acknowledges that individuals may change not only their sexual practices but also their sexual identity at different stages of their lives and indifferent social situations (Donovan, Consensual Sex Between Men and Sexual Violence in Australian Prisons, 31 August 2010, p. 2).

HIV prevalence in prisons is often significantly higher than in the general population. While most prisoners living with HIV contract their infection outside the institutions before imprisonment, the risk of being infected in prison through sharing of contaminated injecting equipment and unprotected sex is great, and contributes to further transmission of the virus (National STD/AIDS Control Programme, July 2011, p. 2).

In the context of Nepal, there is only limited information available as regards prisoners and their vulnerability to HIV and STI. But worldwide (injecting) drug use and sex (either between men or sexual harassment in female prisons) are common. As there is no access to condoms and/or sterile injection equipment, HIV, once introduced into the prison community, may spread quite rapidly. Moreover, most prisons are overcrowded and poor hygiene is a risk factor for all communicable diseases (Ramamurthy, 2005, p. 189). But in international context, some information

is available regarding the sexual behavior and HIV status of prisoners. In 2006–2007, one study among male prisoners in New South Wales and Queensland identified that out of 144men (7.1% of total sample) reported sexual contact with inmates in prison; the majority had few partners and no anal intercourse. Most did so for pleasure, but some for protection, i.e., to avoid assault by someone else (Donovan, 31 August 2010, p. 1).

Prisoners are identified in the National HIV/AIDS Strategy as a 'vulnerable group' requiring targeted intervention. The Strategy acknowledges that once HIV is introduced into prisons, it can spread rapidly through sex and injecting drug use (NCASC, 2002). HIV prevalence among prisoners is not known (Dolan K, 2009, p. 352) because of the lack of intensive study. The Ministry of Home Affairs has previously denied that sex occurs in prisons, because 'men are separated from women in prisons' (FHI, 1999). However, more recent policy documents including the National HIV and AIDS Strategy and the National HIV/AIDS Action Plan and Budget acknowledge that prisoners engage in sexual activity and discuss the need for condom distribution in prisons (NCASC, 2005). The extent of sexual activity in prisons is unknown, however, one key expert has claimed that male-to male sex in prison is 'very common'. There has been a report of a female prisoner becoming pregnant and bearing a child after a sexual relationship with a male prisoner, suggesting that heterosexual activity is also occurring (Dolan K, 2009, p. 352).

2.5.9 Health Workers and risk of HIV and AIDS

Several studies have evaluated, either by direct observation or self-report, the nature and frequency of occupational blood contact among surgeons and obstetricians, medical house staff, emergency department workers, emergency medical service workers, and phlebotomists (Elise M. Beltrami, 2000, p. 765).

One study conducted by Pomeranian Medical University, Szczecin, Poland among the Five hundred ninety-two nurses responded regarding their fear of HIV infection found that a high degree of fear of acquiring HIV infection at work was reported by 64% of nurses (95% CI,60%-68%; 378 of 592), moderate fear by 32% of nurses (95% CI, 28%-36%; 188 of 592), and no fear by 4% of nurses (95% CI, 2%-6%; 26 of 592) (Peter Barss, 2007, p. 231). Similarly, finding of one study conducted among the 309 Iranian Dentists reported that 'The scores for overall knowledge of HIV infection in relation to transmission and of HIV infection characteristics (maximum score, 8 and 12, respectively) were low, with a mean (_SD) of and , respectively.6.19 _1.95 6.47 _1.89 Only 9.7% of respondents agreed with the correct responses to all questions about knowledge of the routes of HIV infection transmission; the level of this knowledge was correlated significantly with the level of education' (Mehrdad Askarian, 2007, p. 84) .

A previous study was conducted among the 601 nurses from surgical wards, operating rooms, and emergency departments of Poland. Almost half of respondents reported having had at least 1 puncture injury during the preceding year, 1 in 5 had exposure via mucous membranes, and more than half had worked at least once with a recent abrasion or cut on their hands. The number of injuries was independent of age ($p = .26$), duration of practice ($p = .21$), and workplace setting ($p = .78$). The percentage of nurses without percutaneous exposure during the preceding year was significantly higher in the group that received special HIV and AIDS training than in the group that did not (95% confidence interval, 5.8-24.1%;) (Maria Ganczak, 2006, p. 175).

2.6 Response to HIV and AIDS in Nepal

The thesis also investigates what policies, strategy and other measures the Nepal Government has put in place to halt the spread of HIV and AIDS.

The Government of Nepal has identified the agenda of HIV and AIDS as a ***"priority 1"*** program under the National Plan. The National Health Sector Programme Implementation Plan (NHSP-IP I and II), Poverty Reduction Strategy Paper (PRSP) and United National Development Frameworks (UNDAF) have also included HIV and AIDS as key components (APLF & UNAIDS, 2011, p. 26). Development policies and programs themselves may have positive and negative effects on the spread and impact of HIV and AIDS. Thus, it is critical during the social planning process to reflect carefully on these potential consequences (UNAIDS, 1998, p. 8).

National Center for AIDS and STD Control (NCASC) is established under the Health Ministry of Government of Nepal to address the national challenges of HIV infection. From the very beginning when first time HIV virus was identified in Nepal, National policy for HIV and AIDS was developed. As well as, it used to develop other policy, strategy and operational guidelines in time and period to address the HIV and AIDS. Health Ministry has developed many more policy and strategy related to HIV and AIDS for the effectiveness of national level HIV prevention, cares and treatment program:

1988 Launched the first National AIDS Prevention and Control Program (short term)

1990-1992 First Medium Term Plan

1993-1997 Second Medium Term Plan

1993 National Policy on Blood safety

1995 National Policy on HIV/AIDS

1997–2001 Strategic Plan for HIV/AIDS Prevention

2000 Situation and Response Analysis of HIV/AIDS -Nepal - December 2000

2002 National HIV/AIDS Strategic Plan (2002-2006)

2003 National HIV/AIDS Operational Plan (2003-2007)

2006 New National HIV/AIDS Strategic Plan, 2006-2011

2006 National HIV/AIDS Action Plan (2006-2008)

2009 National HIV/AIDS Action Plan (2008-2011)

2009 HIV/AIDS Control Board Forms a Thematic group on MSM/MSW (NCASC, 2012)

All these National policy and strategy were developed and adopted to ensure the high priority of Government of Nepal to prevent HIV and AIDS. The history of Nepal's response against HIV and AIDS began with the launching of first National AIDS Prevention and Control Program in 1988 (Government of Nepal, 2064/65 (2007/08)). This program was known as the Short-Term Plan for AIDS Prevention and Control, formed the basis for the First Medium Term Plan 1990-1992. This program was externally reviewed in December 1992 and on the basis of the recommendation made during the review; the Second Medium Term Plan for AIDS Prevention and Control in Nepal was formulated covering the years 1993-97 (Ramamurthy, 2005, p. 177).

In 1993, Government of Nepal accepted the need for multi-sectoral involvement in AIDS and STD control and different focal points were appointed in various sectoral ministries. However, due to frequent political changes neither the National AIDS Coordination Committee nor the multi-sectoral coordination and cooperation has been fully functional (Ramamurthy, 2005, p. 177). In 1995, a

National HIV and AIDS Policy with 12 key policy statements and supportive structures like National AIDS Coordination Committee (NACC) and District AIDS coordination Committee (DACC) to guide and coordinate the response at central and district level was endorsed (Government of Nepal, 2064/65 (2007/08)). The policy was formulated, emphasizing the importance of multi-sectoral involvement, decentralized implementation, and partnership between the public and the private sectors (including NGOs) (Nora, August 2008). Based on the National Policy, a "Strategic Plan for HIV and AIDS in Nepal", covering 1997-2001 was developed and adopted. It tried to operationalize the national policy and to define key activities for each policy objective. Although the strategic plan contained a number of activities aimed at prevention of a fast spread of the epidemic, only a few of them were actually implemented (Ramamurthy, 2005, p. 178).

In 2002 a National AIDS Council (NAC) was established chaired by the Prime Minister intend to set overall policy, lead highest level advocacy, and provide overall guidance and direction to the national HIV and AIDS program (Government of Nepal, 2064/65 (2007/08)). The NACC reports to the NAC. The NAC was meant to set overall policy, lead national level advocacy, and provide overall guidance and direction to the program. The NACC, on the other hand, was expected to lead the multi-sector response and to coordinate active participation of all sectors in the fight against HIV. However, both the NAC and the NACC have essentially been non-functional. At the district level, District Development Committees are charged with implementing and monitoring HIV projects according to national strategies and guidelines. A new semi-autonomous entity (SAE), the “HIV and AIDS and STI Control Board” (2007), was established to enhance and expand the response to HIV and AIDS (Nora, August 2008).

The National HIV and AIDS Strategy (2002 – 2006) was a milestone in national efforts to combat the epidemic in the country. Five priorities were identified for the Strategy (2002 – 2006); they were:

i) prevention of STIs and HIV among the vulnerable groups,

ii) prevention of new infections among young people,

iii) ensuring care and support services are available and accessible for all people infected and affected by HIV/AIDS,

iv) expansion of monitoring and evaluation frame through evidence based effective surveillance and research and

v) Establishment of an effective and efficient management and implementation mechanism for an expanded response (Government of Nepal, October 2007).

'National HIV and AIDS Strategy 2006-2011 is a continuation of the National HIV and AIDS Strategy 2002-2006. It serves as a blueprint for articulating the necessary actions to achieve universal access to prevention, treatment, care and support over the next three years. Its aims to contribute directly to the Millennium development Goal (Halt and begin to reverse the increasing trend of HIV by 2015). Keeping in view of current low coverage and access to services, insufficient focus to treatment care and support as well as inadequate link between prevention and treatment care and support, the NSP (2006 – 2011) is designed in line with Universal Access target of 80% coverage with prevention, treatment, care and support services to Most-at-risk population and People living with HIV and AIDS. The NSP (2006 – 2011) is developed within the broader framework of the National HIV and AIDS Policy and 11 point guiding principles. This strategy has six components with two programmatic components and four cross cutting components. For each

component, component goal, detail strategies, strategic outcomes and key activities have been developed' (Government of Nepal, October 2007).

Based on the international commitment and principles, and on the findings of the situation and response analysis in Nepal, the following are the guiding principles for National HIV and AIDS Strategy 2006 – 2011:

"1. Since HIV/AIDS is more than a public health priority and is a complex, multifaceted problem affecting all aspects of society, ***decentralized, multi-sectoral and interdisciplinary involvement must be established for building an adequate response to the HIV epidemic***. As such commitments, responsibility and accountability of wider health sectors and sectors outside of health will be promoted through high level political commitments.

2. The primary focus of the strategy will be on prevention and universal access for treatment, care and support with strong linkages to treatment, care and support and impact mitigation continuum.

3. The response to HIV/AIDS will be rights based with a specific focus on the rights of people infected and affected by HIV/AIDS.

4. Gender considerations must be central to the development of programs and interventions.

5. Evidence informed policy and programs will feature in the strategy with strategic information and best practices linked to the program design and implementation. As such, resource allocations must take into consideration defined priorities based on the vulnerability and risk factors associated with various groups and communities ensuring adequate focus on most at risk population, vulnerable and marginalized.

6. People and communities must be empowered to protect themselves against HIV infection within a supportive environment. Interventions to mitigate economic impact of HIV and AIDS will be promoted at all levels.

7. Equal and equitable access to basic care and services must be guaranteed for all persons infected and affected by HIV/AIDS.

8. GIPA (Greater Involvement of People Living with AIDS) principle must be ingrained at all levels in the design and implementation of policies, strategies, programs and projects.

9. The strategies, programs and activities must take into consideration the impact of conflict and the opportunities of the post conflict scenario.

10. Public Private Partnership concept shall be developed and expanded at all levels of prevention, treatment and care programs.

11. The strategy must emphasize the national and international commitments and ensure that such commitments are honored and implemented."

(Government of Nepal, October 2007, p. XIII)

The vision of the National HIV and AIDS Strategy for 2006–2011, is to expand the number of partners involved in the national response and to increase the effectiveness of Nepal's response. It emphasizes prevention as key for an effective response to the epidemic, particularly in areas with high levels of out-migration. The strategy also includes care and support for people infected with and affected by HIV and AIDS, recognizes the contribution of care and support to effective prevention, and addresses the importance of accurately tracking the epidemic to monitor the effectiveness of interventions (USAID Nepal, Oct 2010, p. 2). In order to implement the national strategy the National Consolidated HIV/AIDS Work plan, 2006 to 2008

was produced by the NCASC in consultation with key stakeholders (Government of Nepal, 2064/65 (2007/08)).

Nepal Government has developed next 5 years (2011-2016) National HIV and AIDS strategy following the 2006-2011 strategy. As stated in introduction of strategy, building on the achievements, lessons and experiences of the past five years, the strategy (2011- 2016) will focus on the following key points:

a) Addressing the ***all dimensions*** of continuum of care from prevention to treatment care and support
b) Effective coverage of quality interventions based on the epidemic situation and geographical prioritization
c) Health system and community system strengthening
d) Integration of HIV services into public health system in a balanced way to meet the specific needs of target populations
e) Strong accountability framework with robust HIV surveillance, program monitoring and evaluation to reflect the results into NHSP-II and National Plan. (National Centre for AIDS and STD Control, November 2011)

Similarly, UNAIDS has also developed the strategy 2011-2015 with Global commitments of Getting to Zero new HIV infection to address the global challenge of HIV prevalence. The UNAIDS strategy aims to advance global progress in achieving country set targets for universal access to HIV prevention, treatment, care and support and to halt and reverse the spread of HIV and contribute to the achievement of the Millennium Development goals by 2015. The UNAIDS strategy is a roadmap for the Joint Program with concrete goals marking milestones on the path to achieving

UNAIDS' vision of "Zero new HIV infections, Zero discrimination, Zero AIDS - related deaths" (UNAIDS, December 2010).

Nepal established a "National AIDS Council" also chaired by the Prime Minister. The Council with representation from government, non-government organizations, private sector and civil society will take the lead in policy making and will advocate for multi-sectoral participation in the fight against HIV and AIDS in Nepal (Ramamurthy, 2005, p. 178).

Further, Nepal has implicitly adopted the "Greater Involvement of People Living with AIDS Principle (GIPA)" through its participation and approval of the UNGASS and Melbourne documents and other international agreements. Thus, at the international level, Nepal has adopted a sound fundamental set of general guidelines and principles, which should underpin the national strategy. These guidelines and principle include:

I) Multi-sectoral engagement,

II) Broad political commitment,

III) Civil society involvement,

IV) Stigma reduction,

V) Prevention to care continuum and,

VI) Human rights based approaches (Ramamurthy, 2005, p. 184).

These plans and strategies will bridge the gap between policy and programs, and to assist partners in deciding priority advocacy issues and a program to address the specific issue/s in a systematic manner as an advocacy partner, which will feed in to the national program for reaching the needy people and realizing the universal access targets set by the country.

Chapter Summary

In conclusion, the review of literature has focused on the roles and relation of factors associated with HIV epidemic and HIV prevalence among the vulnerable groups and National response to address the HIV and AIDS epidemic in Nepal. Besides, the review of the literature suggests that the HIV and AIDS epidemic has brought about challenges that are too diverse and complex to be tackled by government or by NGOs alone. It raises socioeconomic, legal, ethical and human rights issues that all need to be adequately addressed if the fight against the epidemic is to be successful. From the previous literature review, it is identified that there are many factors likes; poverty, illiteracy, conflict, migration, stigma and discrimination, miss conception, lack of awareness, early marriage, polygamy, cultural norms and practices, trust on sex partners, alcohol consumption during the sexual intercourse, human trafficking, gender based violence…etc associated with increasing the risk of HIV and AIDS globally, but in the context of Nepal, still there is lacking of vertical study to identify the contributing factors and its critical evaluation to find out the potential way of risk reduction. It is found that to response the problems associated with HIV and AIDS, Government of Nepal has developed 5 years National HIV and AIDS strategy and doing their best effort also and side by side some National NGOs and INGOs are also supporting the Government but still active involvement and contribution of private organizations are not found in previous literature. Partnership and involvement of all relevant sectors and a wide range of agencies and individuals including those directly affected by the epidemic are essential to any attempt to stop the spread of HIV and AIDS. The guideline and principles of GIPA is clearly written about the Multi-sectoral engagement to reduce the risk of HIV and AIDS but still it is

not realizing as an issue of public concern and multi-sectoral engagement is not effective.

The center of the epidemic is shifted from Africa to Asia. In Nepal, root causes of HIV transmission are through heterosexual contact and Injecting drug use, as well as, illiteracy, low rate of condom use, limited health facilities, deteriorating socio-economic life pattern support to increase the HIV transmission. Besides that migrant population and client of sex workers stand as a bridging agent to transfer the HIV virus from most risk population to general population likes housewives and children. Open boarder with India also leads human trafficking to the Indian cities.

Considering these facts, the study is designed to address the gaps. The present study has objective to identify the contributing factors associated with increasing the risk of HIV and AIDS in Nepal and its objective also covered to explore the potential way to reduce the risk of HIV transmission.

All these information provided researcher an important insight for achieving the objectives of study. As well as, review of the literature helped the researcher preventing the duplication of the study, designing the research methodology and tools, identifying the major and minor variables, framing the theoretical framework and formulating the research hypothesis.

The next chapter deals with the research methodologies applied in the present study.

CHAPTER - THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research approach, design and methods used to address the research problem as outlined in Chapter 1. 'Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically' (Pankaj Madan, 2010, p. 10).

There are four main sections to this chapter which guides the whole methodology of this research. These are: research approaches (3.2), research design (3.3), sampling design (3.5) and types of data and collection strategy (3.8). Considering these sections, rest sections (research method, sampling filter, data collection tools & instruments, reliability and validity test …etc) are set. Each will deal in turn with a brief explanation of the overall research paradigm being presented and the reason for the selection of the particular paradigm for this research.

3.2 Research Approaches

Mainly, there are two types of research approaches are used in the study as shown in the fig 2.

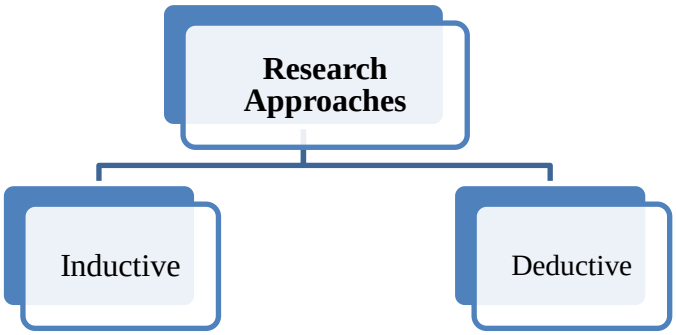
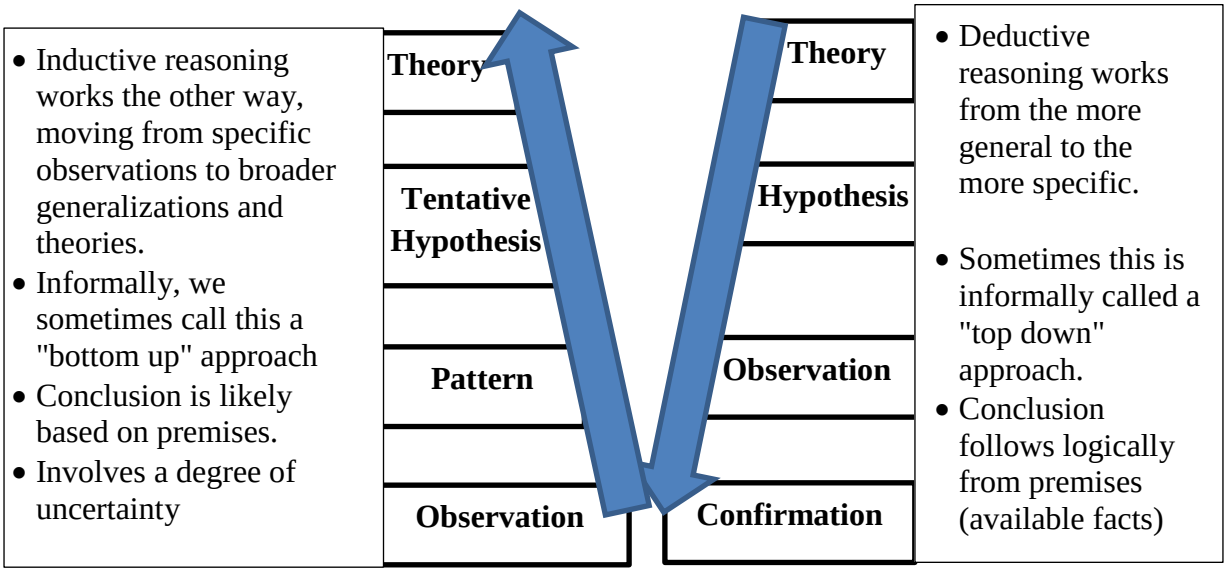


Figure 3: Research Approaches

Inductive Vs. Deductive



Sources: (Burney, 2008)

A deductive approach: testing theory

This study was based on the deductive approach by applying the Structural Functional theory of *Robert K. Merton*; an American Sociologist. In a deductive argument, the truth of the premises is supposed to guarantee the truth of the conclusion.

3.3 Research Design

The research design constitutes the blueprint for the collection, measurement and analysis of data. It is the plan and structure of investigation so conceived as to obtain answers to research questions (Pankaj Madan, 2010, p. 32). This study was non-experimental cross-sectional. It had used the descriptive, exploratory and co-relational research design for quantitative data and phenomenological design was adopted for qualitative data.

Descriptive and Exploratory Research Design: Involves collecting data in order to test hypotheses or to answer questions about the opinions of people on a

particular issue. It is also called survey design. Finding was focused to analyze the answer of 'what' question in descriptive way, besides that data was analyzed to find out the answer of 'how' questions also in exploratory way.

Co-relational Research Design: Involves collecting data to determine whether and to what degree a relationship exists between two or more variables. The degree of relationship was expressed as a correlation coefficient.

3.4 Research Method

The study had followed mix research methods; Quantitative research involves the use of methodological techniques that represent the human experience in alpha-numerical categories and qualitative research provides detailed description and analysis of the quality, or the substance, of the human experience. According to the T. L. Baker, the objective of qualitative research is often to gain a deep understanding of a social situation, which takes account of the perspectives of those being observed (Doing Social Research (Third Edition), 1999, p. 335).

Both the methods are built on empirical or observable reality and require scientific rigor, or systematic adherence to certain rules and procedures. Both the methods were judiciously applied in this study.

3.4.1 Quantitative Study

A quantitative approach is one in which the investigatory primarily uses postpositive claims for developing knowledge (i.e., cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collect data on predetermined instruments that yield statistics data (CRESWELL, 2008).

The study was based on the response of selected respondents. A number of questionnaires were developed for target groups. The questionnaires were filled up by the researcher meeting the respondents in person.

3.4.2 Qualitative Study

The study had used some checklist also for key informants' interviews. The findings of in-depth interview and observation had provided the qualitative information of dependent and independent variables of study. The aim of qualitative study was to explore in-depth understanding on HIV and AIDS. It had oriented towards discovery and in-depth leaning about the issues. Based on the qualitative analysis of obtained information, researcher had developed one case study from each group. According to the Pant, "The case study is a way of organizing social data for the purpose of viewing social reality. It examines a social unit as a whole, that is a person, a family, a social group, an institution, a community or even an entire culture" (A Handbook for Social Science Research and Thesis Writing (3rd Edition), 2002, p. 85).

3.4.3 Mixed Method

Mixed methods research is an approach to inquiry that combines or associates both qualitative and quantitative forms. It involves philosophical assumptions that the use of qualitative and quantitative approach and the mixing of both approaches in a study give more in-depth understanding of research issues. Thus, it is more than simply collecting and analyzing both kinds of data: it also involves the use of both approaches in tandem so that the overall strength of a study is greater than either qualitative or quantitative research.

According to the Creswell, there are three types of Mixed Methods:

I) Sequential mixed method

II) Concurrent mixed method and

III) Transformative mixed method

Among theme, ***Concurrent mixed method was applied in this study***. This research is based on the pragmatic philosophy so being a pragmatic researcher both qualitative and quantitative technique were used in this study. According to the Onwuegbuzie and Leech, 2005; Sechrest and Sadani, 1995, "the pragmatic researchers argue that mono-method research is a danger to the advancement of social sciences and wonder how stakeholders may develop confidence in findings from singular methods, they support the fact that the choice of research methods must reflect the research questions being addressed" (Patel, July 13-14 2009, p. 3).

Mix method procedures are those in which the researcher converges or merges quantitative and qualitative data in order to provide a comprehensive analysis of the research problem. In this design, the investigator collects both forms of data at the same time and then integrates the information in the interpretation of the overall results (CRESWELL, 2008, pp. 14-15).

In chart:

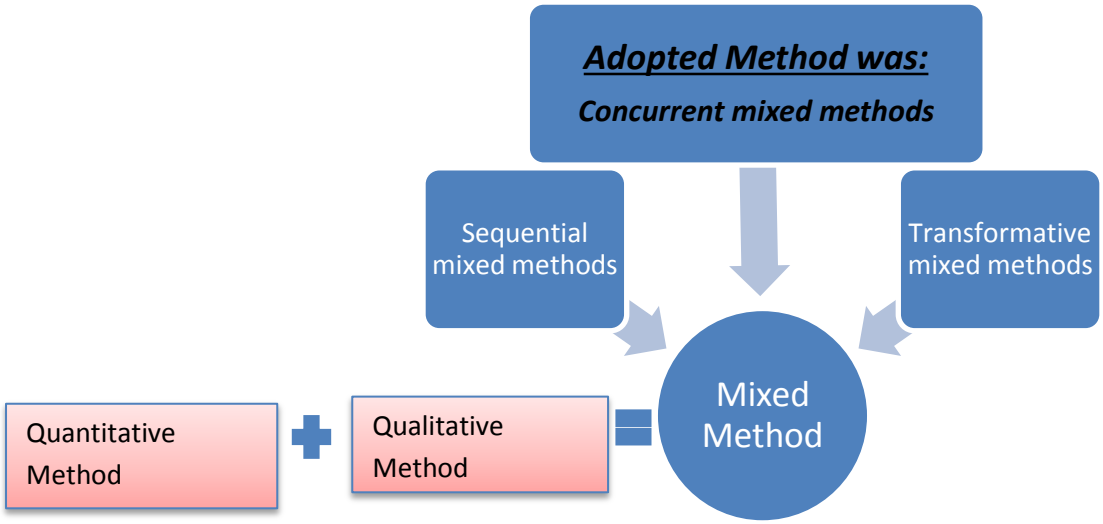


Figure 4: (Mix Method)

3.5 Sample Design

"A sample design is a definite plan for obtaining a sample from a given population. Population or Universe means all the items of the inquiry or investigation made are completely enumerated in inquiry" (Shende, 2012, p. 36). The study was based on the Multi-Stage Sampling to select the study areas and Simple Random Sampling was adopted to select the respondents by using the following matrix:

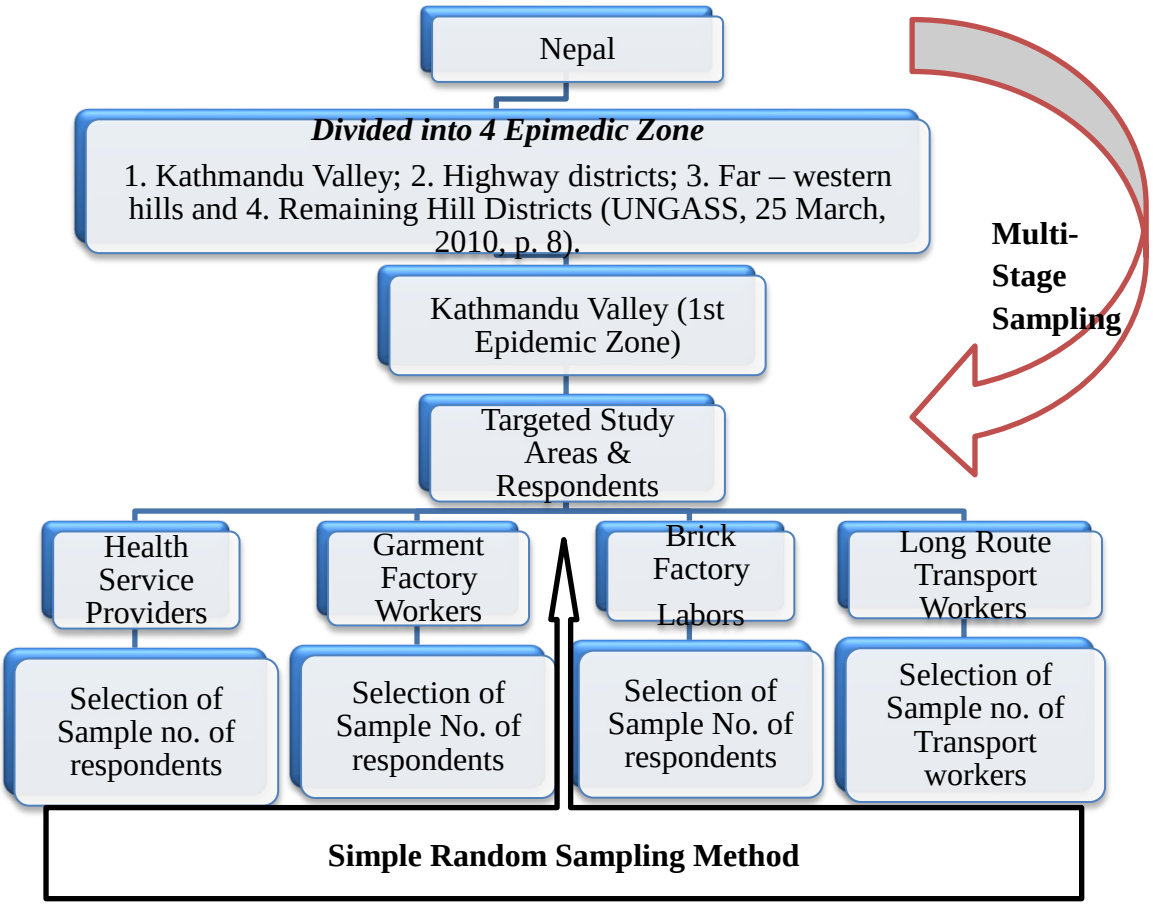


Figure 5: Sampling Framework

3.6 Target Population and Sample Size

The study was carried out in Kathmandu Valley targeting the respondents of different areas and groups. Various criteria such as epidemic zone, Prevalence of HIV, representation of target groups and access of researcher was considered while selecting the study areas.

The respondents of the study were: public transport workers (driver, conductor and helper), labors from brick factory (seasonal migrant labor), garment factories' workers and health service providers (in different layers of health services outlets).

3.6.1 Sample size for Questionnaires survey (Quantitative study)

Representation of Respondents as a sample study for survey				
Category of Respondents	**Type**	**Mode**	**Respondents**	**No. of participants**
Transport workers	Long rout vehicles	Buses which run in East and West Highway districts from Ktm Valley	Driver, Conductor and Helper	101
Labors from Brick factory (seasonal migrant labor),	Workers	Factory of Kathmandu valley	Workers	101
Garment factories' workers	Workers	Factory of Ktm valley	Workers	101
Health Service Providers (in different layers of Health services Outlets)	Health workers	Central Hospital PHC Health Post and Voluntarily Counseling and Testing (VCT)	Health workers (Doctor, Lab Technician and H.A. and Eql and Nurses)	101
Total				**404**

Required sample size was identified by using the following Formula for questionnaires survey:

Step 1 calculation of basic sample size:

$$n = \frac{t^2 \times p(1-P)}{m^2}$$

Where,

n = required sample size

t = confidence level at 95% (standard value of 1.96)

p = estimated prevalence of the risk factors within the target population in the study area at 50% (standard value of 0.5 if no previous data on population (WHO))

m = margin of error at 5% (standard value of 0.05)

Here,

$$n = \frac{1.96 * 1.96 (0.5 (1-0.5))}{0.05 * 0.05}$$

$$n = \frac{3.8416 * (0.5 (1-0.5))}{0.05 * 0.05} = \mathbf{384.16}$$

Step 2: Adjust for expected non-response to get final sample size:

It is estimated that there is chances of 5% non-response or missing data/questionnaires, so 5% is added in basic sample size:

Here,

5% of 384.16 = 19.208

So,

384.16 + 19.208 = **403.368**

Final Sample size is = **404**

Respondents were selected from the four different groups of Kathmandu valley through the simple random sampling method. From these areas, 404 respondents were taken as a sample study.

3.6.2 Sample size for qualitative data

Initially, additional 10% (around 40 participants) of 404 sample size was planned for qualitative study but finally qualitative data was also collected from 22 in-depth interview and 5 case studies on the basis of saturation of information in field. When same information was used to repeat from the next respondents then researcher came to know the saturation of information and stopped the data collection.

3.7 Sampling Filters

3.7.1 Selection of study areas and its justification

In the process of sample selection, certain criteria were adopted and utilized to make the research more scientific. Kathmandu Valley was selected by using the following criteria:

- **Epidemic zones:** The country was divided into four epidemic zones in 2003: 1) ***Kathmandu Valley***; 2) Highway districts; 3) Far – western hills: (7 hill districts of the Far – western development region); and 4) Remaining Hill Districts (UNGASS, 25 March, 2010, p. 8). Statistically, study area covered the 25% areas of total universe on the basis of epidemic zones.
- **HIV prevalence:** In 2010, the government reported that the HIV prevalence among MSM and TG was 3.9% in Kathmandu Valley (UNAIDS A. a., August 2010, Version 2, p. 2). HIV prevalence rate among the FSW was 4.2% and among IDUs was 6.3% in 2011 (IBBS, 2011, Round IV; 2011, Round V).
- **Representation of target groups:**
  A. Kathmandu valley is the capital city of Nepal so there every day large numbers of long rout's Transport workers comes from the eastern region to far western region of Nepal. As information provided by one Transport

Workers to researcher on dated 5th Apr, 2012, daily around 1000 public vehicles (Bus and Micro) used to in and out from Kathmandu Valley.

B. According to the data provided from Federation of Brick Factory Nepal on dated 5th Apr, 2012; there 105 Brick Factories (20 in Kthamandu, 35 in Lalitpur district and 50 in Bhaktpur district) were running at Kathmandu Valley in 2012.

C. According to the data of Garment Association of Nepal (GAN), there 50 Garment Factories were running in Kathmandu Valley in 2012 (2068/069) and by July 2006, 4450 people were working in garment factories within Kathmandu valley (UNDP, November 2007).

D. 1186 Health men powers (Doctor, Lab Technician, H.A. and Equal and Nurses) are working in Governmental health institution within Kathmandu valley (Mega Publication & Research Centre, 15 Dec, 2010, pp. 308-332).

- Economically viable and accessible for researcher on the other.

3.7.2 Selection of Respondents and its justification

Respondents were selected by using the simple random sampling. Following criteria were considered to select the sample respondents:

- Those Public Transport workers (drivers, conductors and helpers) were selected who were involved in long route public transport. According to the report of World Bank, almost 60 percent of clients of FSWs—mainly transport workers, members of the police or military and migrant workers—do not use condoms. Nationally, clients of FSWs have an estimated HIV prevalence was 2% (Nora, August 2008). The HIV prevalence was increased among client of

sex workers in 2011 which could make up over 5% of total HIV cases (APLF & UNAIDS, 2011, p. 23).

- Brick factory's Labors and Garment Factory workers who were from the productive age groups (between15- 49 age) (WHO, Nov, 2009) were selected. According to one previous survey, having girl/boyfriends and physical contact such as holding hands, hugging, kissing, petting and even sexual intercourse were found common among the young factory workers. One in every five unmarried boys and roughly one in every eight unmarried girls had experience of sexual intercourse (Puri, November 2001, p. 78). Majority of Labors and workers of Kathmandu valley are internal-migrant workers. HIV prevalence among migrants within Nepal was 2.3% and 60% of migrants have visited female sex workers and only 75% of migrants used condom while visiting female sex workers (Gurubacharya, 2004, p. 178).
- Health service providers who were working in different layers of Health Service Outlets likes, central hospitals, public health Centre (PHC), and health post and voluntarily counseling and testing (VCT) center of Government of Nepal were selected. They are also in risk of HIV transmission because of their daily involvement in checkups, treatment and blood testing of different types of patients. Besides that, being a health service provider; they have more knowledge and information regarding the underlying factors associated with increasing the risk taking behavior of people on HIV and AIDS. One study conducted among 592 nurses in Poland found that a high degree of fear of acquiring HIV infection at work was reported by 64% of nurses (95% CI,60%-68%; 378 of 592), moderate fear by 32% of nurses (95% CI, 28%-36%; 188 of

592), and no fear by 4% of nurses (95% CI, 2%-6%; 26 of 592) (Peter Barss, 2007, p. 231).

3.8 Types of Data Source

For present research work, primary as well as secondary data were used. Research was broadly classified into two sections. Various statistical tools were used to analyze the primary and secondary data.

3.8.1 Tools of collecting Primary Data

The information was collected directly from the respondents of different groups by using the following tools: -

- Questionnaires

A list of questionnaires was developed for different target groups and was sent to each selected respondents to collect their views. There was range of response questions, close ended questions, providing limited answers to specific responses or on a numeric scale. This tool was used to collect the quantitative data.

Considering the ideas stated by Kothari, questionnaire was considered as the heart of a survey operation. It was very carefully constructed (Kothari, 2004).

- Observation

Observation technique was also applied for this study. Observation of all the study areas was carried out during the data collection. The researcher had observed behavior of target population, understanding of community people and relation between community and target population. This tool was used to collect the more qualitative information and supported to verify the collected data.

- Use of Checklist for in-depth Interview

Direct interview with key informants at field level was carried out. A list of checklist was developed and pre-tested before the interview. Semi-structured open-ended questions were used for interview. Before the implementation of the checklists to the respondents, a pilot study was carried out. Based on the suggestions in the pilot study, some adjustment in the checklists was carried out. The responses were reported through note taking and then voice was also recorded in tape recorder and photographs were also taken with permission of respondents.

In-depth interview was focused to collect the qualitative information.

- ***Case study***

The purpose of a case study was to gain an in-depth understanding of the situation and meaning. Merriam points out that the case study's unique strength is its ability to deal with a full variety of evidence, including documents, artifacts, interviews and observations (Merriam, 1998, p. 8). The use of a case study approach is determined by four factors: the nature of the research questions; the amount of control the researcher has over the variables under investigation; the desired end product; and the identification of a bounded system as the focus of investigation (Merriam, 1998, p. 8). "How" and "why" questions are the most suitable for a case study because the approach draws attention to what can be specifically learned from the single case (Lincoln, 1994, p. 5).

Case study method enables a researcher to closely examine the data within a specific context. In most cases, a case study method selects a small geographical area or a very limited number of individuals as the subjects of study. Case studies, in their true essence, explore and investigate contemporary real-life phenomenon through detailed contextual analysis of a limited number of events or conditions, and their

relationships (Zainal, 2007, pp. 1-2). Yin defines the case study research method "as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (Case Study Research: Design and Methods., 1984, p. 23).

Case study reports were developed based on the responses of the respondents. Total 5 individual case studies were prepared from the field study.

3.8.2 Tools of collecting Secondary Data

Various statistical tools were also used to collect and analyze the secondary data.

a. **Document Review**: - Different library of University and organizations were visited to collect the related documents. Analyzing annual reports and verifying the statements made during the interviews of experts.
b. **Web Search**: - The information related to outside region (other part of Nepal and Globe) was studied from internet. Topic related journal articles, periodicals records and reports, electronics/internet search, was carried out.
c. Various policies from National organization were dealt in details by referring various government publications and reference book, journals, published data from time to time.

3.9 Process of Field Study

The study was carried out in two phases; ***in the first phase***, the questionnaires were sent to a number of experts for their comment and recommendations. Based on their suggestions, the questionnaires were revised and piloted among respondents. Altogether 10% respondents of total sample size were contacted asking to contribute in testing and revising the questionnaires. Panel of respondents were included from

Public transport workers (driver, conductor and helper); labors from brick factories (seasonal migrant labor), garment factories' workers and health service providers (in different layers of health services outlets). They were randomly selected and contacted to seek their opinion regarding factors associated with increasing the risk of HIV and AIDS. In this phase, the list of questionnaires was finalized before that was administered in the selected areas for final data collection.

The tentative numbers of the respondents for the pilot study were as follows:

Group. No.	Main Respondents	Number
1	Transport workers	10
2	Labors from Brick factory (seasonal migrant labor)	10
3	Garment factories' workers	10
4	Health Service Providers (in different layers of Health services Outlets)	10
	Total	**40**

The second phase was concentrated in target areas. In this phase, altogether ***404 respondents*** were selected from each selected areas. The research study was not included more than 404 respondents in survey from the selected groups.

Similarly, in the second phase, qualitative data was collected by conducting in-depth interview with key informants to know the knowledge, attitude and behavior towards HIV and AIDS, factors associated with increasing the risk, cultural norms and values and life style of community people and potential ways of reduction of HIV and AIDS.

According to the Miles and Huberman (1994); the sample size of qualitative research are mainly affected by four aspects:

1. The setting (where the research will take place),

2. The actors (who will be observed or interviewed),

3. The events (what the actors will be observed or interviewed doing), and

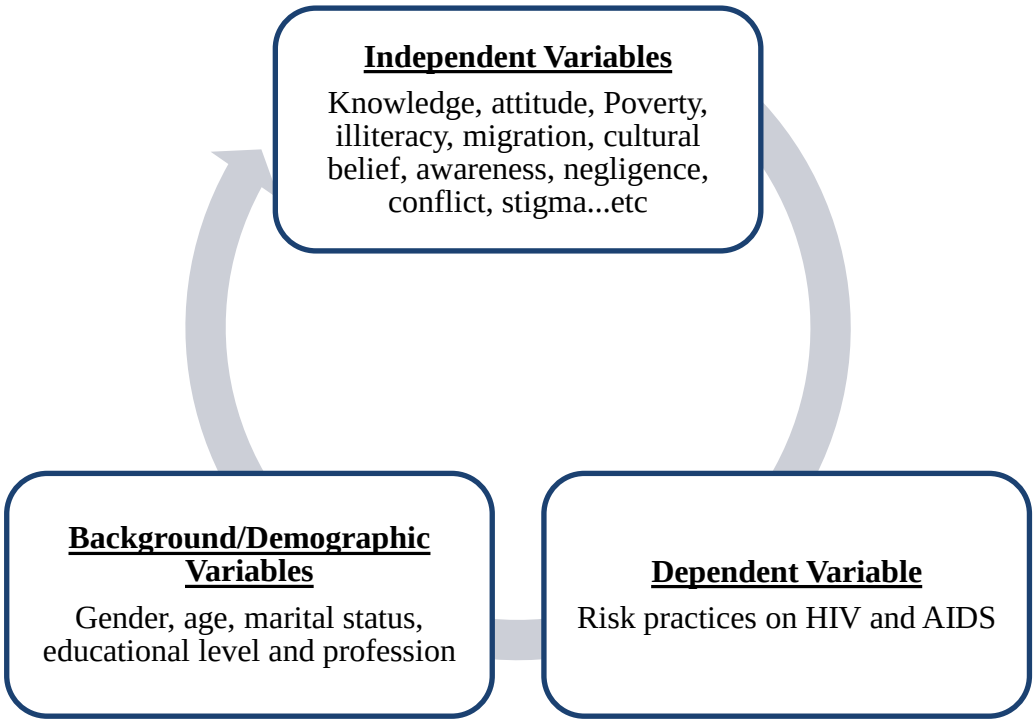
4. The process (the evolving nature or events undertaken by the actors within the setting)

In this phase, researcher had not identified any fix sample size for interview and case study. Researchers generally used ***saturation*** as a guiding principle during their data collection. GUEST, BUNCE and JOHNSON suggest, "Although the idea of saturation is helpful at the conceptual level, it provides little practical guidance for estimating sample sizes for robust research prior to data collection" (2006, p. 59).

3.10 Variables in Research Study

Pant had defined, "variables are characteristics of persons, things, groups, objects, etc. A variable is thus a symbol to which numerals or values are assigned" (2002, p. 106). Variable means an image, perception or concept that can be measured – hence capable of taking on different values. Variable can be subjected to measurement by crude/refined or subjective/objective units of measurement. Therefore, it is known as key elements of research study. Finding of any can be drawn after complete study of roles and relation of variables included in study. As the same, the study, 'factors associated with increasing the risk of HIV and AIDS in Nepal: cases from the Kathmandu valley' also identified the different variables related with subject through the literature reviews and discussion with experts to address the objectives of study.

The following matrix of variables was adopted in research:



Three kinds of variables were examined in this research: Dependent variables which included the risk practices on HIV and AIDS among the community people. Similarly, Independent variable included the factors which play the vital roles in increasing the risk of HIV and AIDS in community. These variables were: Poverty, education, awareness, Gender based violence, conflict, negligence, trafficking, stigma and discrimination, and culture values...etc. The independent variable in an experiment (sometimes called the stimulus) is the variable that brings about the effect on dependent variable (sometimes called a response). The general model of an experiment is to test whether the independent variable led to the dependent variable. We can isolate and examine the effect of the independent variable on the dependent variable (Baker, 1999, p. 49). In addition, Background or demographic variables are known as the basic variable in research study. It was also being studied which

covered: gender, age, marital status, cast, educational level and profession of respondents.

3.11 Questionnaires Formation

Self-reported questionnaires were developed on the basis of theory of planned behavior (TPB) because all the variables related with this research study are related with the practices of human behavior. "Questionnaires based on the TPB can be used to investigate the attitudes and beliefs underlying health-related behavior. In implementation (or knowledge transfer) research with health care professionals, these questionnaires have been used to investigate the uptake of evidence-based practice" (Jillian J Francis, May 2004, p. 2).

Ajzen and Fishbein formulated in 1980 the theory of reasoned action (TRA). This resulted from attitude research from the Expectancy Value Models. Ajzen and Fishbein formulated the TRA after trying to estimate the discrepancy between attitude and behavior. This TRA was related to voluntary behavior. Later on behavior appeared not to be 100% voluntary and under control, this resulted in the addition of perceived behavioral control. With this addition, the theory was called the theory of planned behavior (TpB). The theory of planned behavior is a theory which predicts deliberate behavior, because behavior can be deliberative and planned (AJZEN, 1991, p. 179). In the research area of human behaviors, the *Theory of Planned Behavior* (TPB) is probably one of the best studied and applied theories. For the past two decades, the theory of planned behavior has been widely applied and extended to studies on individual behavior, especially in the prediction of individual's intention to behave and the actual behavior (Chen, 2011, p. 66).

Adopting this theory, mix types (more close and few open ended questionnaires) of questionnaires were developed. Close ended questionnaires were

designed based on Dichotomous (usually these questions require yes/no answers or require a person to answer by choosing an option(s) from a multiple choice of possible answers) in nominal scale and Likert-type Scale. Likert-type is a psychometric scale commonly involved in research that employs questionnaires. In this research also a Likert item was simply a statement which the respondents were asked to evaluate according to any kind of subjective or objective criteria; generally the level of agreement or disagreement was measured. It was considered symmetric or "balanced" because there were equal amounts of positive and negative positions.

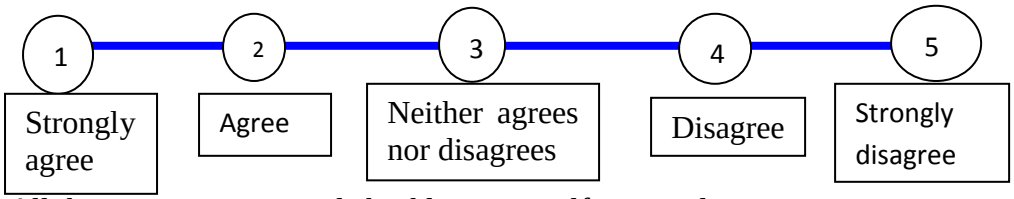
Format of questionnaires:

The format of Dichotomous and multiple choice (nominal scale) questions, for example:

1. Do you have knowledge of HIV and AIDS?
   a. Yes b. No
2. How can people be prevented from HIV transmission?
   a) Safe sex ……...1
   b) Use of condom ……2
   c) Faithful to one partner …….3
   d) Regular medical checks ……..4
   e) Safe blood transfusion ……5
   f) Others ……6

Similarly, the format of a five-level Likert item, for example:

a. Is culture associated with increasing the risk of HIV and AIDS?



All the questionnaires and checklist were self-reported.

3.12 Research Instruments

Researcher had used the questionnaires for field survey, checklist for in-depth interview and case study and review of previous literature to collect the secondary data and information, as an instrument for data collection during the research period.

3.12.1 Test of Research Instruments

A. Validity Test

I. Language Translation-back-translation

The questionnaire and checklist were first developed in English and was translated into Nepali for data collection from the community. The Nepali version was again translated into English. The translation was carried out by freelance translator. If the English translation was correct and gave the same meaning as the original, it was considered as valid, if some deviation, the researcher had discussed with the translator and found the cause and improved the questionnaire and checklist again before data collection.

II. Panel of experts

Content validity of the questionnaire was addressed by identifying items from the literature and through assessment by both experts and participants in the pilot test. The questionnaire and checklist were sent to a number of experts and supervisor for their comment and recommendations. Based on their suggestions, the questionnaire was revised. The first phase of this study had helped in revising the questionnaire and checklist as the researcher had met experts, supervisor and discussed among the team of PhD scholar also for necessary feedback and suggestion.

B. Reliability Test

1. **Pilot test:** Reliability test was carried out by using clarity test. The questionnaires were piloted among the 40 participants. Similarly, discussion was held among the

expert, supervisors and target population. Necessary adjustment of the questionnaires and checklist were made afterwards if required.

2. Cronbach's Alpha: Cronbach's α (alpha) is a coefficient of internal consistency of data. This test was used in this study to test the reliability of collected primary data. The value of Cronbach's Alpha test was done covering the all 64 questions prepared in dichotomous and Likert scales which shows the values of Cronbach's Alpha is: .908 as following table:

Reliability Statistics	
Cronbach's Alpha	N of Items
.908	64

This value is understood excellent reliability of data.

3.13 Selection and training of enumerators

A team of four already trained and experienced enumerators (2 males & 2 females) were selected from the postgraduate students. This team was trained by conducting full 2 days orientation sessions when in 1st day: they got orientation about the nature of study, its objectives, areas and target respondents of study, pattern of questionnaires and interview schedule, rapport building skill, communication skills. Similarly, 2nd day: they got orientation on research ethics and data collection techniques by doing more practical session. The enumerators did exercise that how they would take the interview of respondents, how to convince respondents to participate in research work, what types of language should be used and how to rise the probing questions to find the appropriate answers.

At last, each enumerator had been provided diary, pencil, eraser, cutter, bag, and University letter, and individual consent form for respondents, questionnaires and checklists. Researcher had regularly monitored the field work activities of

enumerator to verify the quality of data. Researcher was involved in in-depth interview of key informants and collection of case study.

3.14 Data Collection Process and Interpretation

The data was collected by using various methods as mentioned above. Following steps were followed to collect data:

- The sample area was confirmed and the respondents were selected through simple random sampling.
- The selected groups were informed about the research work and asked for help through telephone and mail one month before the visit.
- The concerned organizations were requested for allowing their people to participate in the research work as respondents.
- Ethical approval was taken from the Nepal health research council (NHRC),
- Survey was carried among the different groups of respondents.
- As a part of the qualitative research, case studies and in-depth interview were conducted by using the phenomenological approach. To develop case study, similar types of respondents were selected from the selected areas and were interviewed focusing on human experiences and their knowledge and perception on HIV and AIDS.
- Observation was also conducted to identify the respondents' behavior, working environment and their experiences on health related environment.
- The statistical analysis was completed through applied statistics and SPSS, a statistical software package.
- Chi-square (Pearson), correlation (Spearman's rho), percentages and mean were used to analyze the differences of opinion among different groups of

respondents, for example, transport workers Vs. Garment factory workers, health workers Vs. Brick factory labors etc. In addition, the open-ended responses were analyzed by using qualitative methodology. Cases were developed based on the report of the qualitative research.

The collected information were analyzed and interpreted. It helped in synthesizing the result of the work. The data was presented in the graphical form as well. Data gathered from interviews were triangulated by using information gathered from participants' observation, and with documents in order to test their validity.

3.15 Chapter Summary

This chapter has explained the various options available for the execution of the field research and the logic for the selection of the specific approach, strategy and methods applied in this research project.

In summary, the overall methodology was based on a pragmatism philosophy. It combined non-empirical and empirical approaches; is subjective rather than objective (having a high involvement by the researcher); is deductive in terms of theory testing. The study was based on deductive approach, as well as used the descriptive and exploratory design. Kathmandu valley was the study area and respondents were selected from the internal migrants (garment factory workers & brick factory workers), transport workers and health workers by using the simple random sampling method. Sample size was drawn by using the sampling formula. Total sample size was 404. Data and information were collected by using the concurrent mix methods when qualitative as well as quantitative methods were simultaneously used and critically finding was drawn from the both methods. Qualitative methods; employed the in-depth interview, case study and observation and quantitative method employed the survey (questionnaires). To test the reliability and

validity of research instruments (questionnaires or checklist), questionnaires and checklist were sent to the expert and supervisor and on the basis of their comment, it was translated into local language and pilot study was conducted. On the basis of feedback and finding of pilot study, final instruments were prepared by necessary adjustment and correction. Data was collected with the support of trained enumerator and collected data was analyzed by using the computer software program (SPSS) for quantitative data and qualitative information was interpreted and case study was prepared. Chi-square, Correlation and cross tab were used to analyze the significant of data.

The next fourth chapter had analyzed the data and information.

Chapter – Four
Quantitative Data Analysis

This chapter presents the brief analysis and discussion of the background characteristics of the sample male and female respondents of the research. More specifically, it focuses on their demographic information of respondents. This chapter is focused on quantitative data analysis.

4.1: Demographic Characteristics of respondents

The survey has revealed that total 404 respondents were selected for the study from three districts, Kathmandu, Lalitpur and Bhaktpur district of Kathmandu Valley. Respondents of this research were selected from the four different groups: i.e. Transport workers, Garment factories workers, Brick factories workers and Health workers so demographic characteristics of respondents also identified group wise as well as in whole also.

4.1.1 Sex distribution of respondents

Table 1: sex distribution

sex of respondents	Occupation of respondents								Total	
	Health workers		Garment Factory workers		Transport workers		Brick factory workers			
	N	%	N	%	N	%	N	%	N	%
Male	49	48.51	59	58.42	101	100	76	75.25	285	70.54
Female	52	51.49	42	41.58	0	0	25	24.75	119	29.46
Total	101	100	101	100	101	100	101	100	404	100

Sources: Field survey, 2013

In this survey, female respondents were less than males. Among the total respondents in the survey by sex, 29.46 percent were females and rests were males. As the group wise comparison, 51.49% females were participated from health workers, followed by 41.58 % female from garment factory workers and 24.75%

females from brick factory workers. Because of the nature of work, there was no any participation of females participants from transport workers (Table 1).

4.1.2 Caste distribution of respondents

Table 2: Caste distribution

Caste of respondents	Occupation of respondents								Total	
	Health workers		Garment Factory workers		Transport workers		Brick factory workers			
	N	%	N	%	N	%	N	%	N	%
Brahamin/Chhetri	43	42.57	9	8.91	44	43.56	27	26.73	123	30.45
Janjati	45	44.55	68	67.33	47	46.53	55	54.46	215	53.22
Dalit	3	2.97	18	17.82	9	8.91	16	15.84	46	11.39
Others (Muslim & Yadav)	10	9.90	6	5.94	1	0.99	3	2.97	20	4.95
Total	**101**	**100**	**101**	**100**	**101**	**100**	**101**	**100**	**404**	**100**

Sources: Field survey, 2013

As per ethnicity 53.2% of respondents were Janjati followed by 30.44% Chhetri and Brahmin, 11.38% Dalit and 5% others were participated in research study as shown in table 2. Occupation wise, majority (67.33%) Janjati were working in Garment factory followed by 54.46% working in Brick factory, 46.53% were working in Transport sectors and 44.55% were working in heath sectors.

4.1.3 Age distribution of respondents

Table 3: Age distribution

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Age of respondents	404	15	49	27.31	7.614

Age categories of Respondents	Occupation of respondents				Total	%
	Health workers	Garment Factory workers	Transport workers	Brick factory workers		
15-20 Age group	8	39	15	22	84	20.79
21-25 Age group	26	23	37	17	103	25.50
26 - 30 Age group	40	17	27	24	108	26.73
31- 35 Age group	8	14	14	17	53	13.12
36 - 40 Age group	7	4	4	12	27	6.68
41 - 45 Age group	8	1	3	9	21	5.20
46 - 49 Age group	4	3	1	0	8	1.98
Total	101	101	101	101	404	100.00

Sources: Field survey, 2013

Looking at the respondents by age group, 20.79% in the age group 15-20 years, followed by 25.50% in the age group 21-25 years, and 26.73% in the age group 26-30 years, 13.12% in the age group 31-35 years, 6.68% in the age group 36-40 years, and only 5.20% in the age group 41-45 years, and 1.98% in the age group 46-49 years.

The mean age of the respondent was 27.31 years and Std. Deviation was 7.614, which ranges from 15 years to 49 years.

4.1.4 Marital status of respondents

Table 4: Marital status of respondents

Marital status of respondents	Occupation of respondents				Total	%
	Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Married	54	52	58	65	229	56.68
Unmarried	47	49	43	36	175	43.32
Total	101	101	101	101	404	100.00

Sources: Field survey, 2013

Out of total 404 respondents; 229 (56.68%) respondents were married and 175 (43.32%) were unmarried. 101 respondents were participated from each four group, what of which; among these groups, majority (65) married people participated from the brick factory as compare with other groups.

4.1.5 Marriage age of married respondents

Table 5: Marriage age of respondents

Statistics		
Marriage age of respondents		
N	Valid (married)	**229**
	Missing (unmarried)	175
Mean		22.07
Median		22.00
Mode		22
Std. Deviation		4.116

Marriage age group of respondents	Occupation of respondents				Total	%
	Health workers	Garment Factory workers	Transport workers	Brick factory workers		

Less than 15 age	0	9	2	0	11	4.80
15 - 17 Age	0	6	2	6	14	6.11
18 -20 Age	7	21	13	16	57	24.89
21-22 Age	14	9	14	15	52	22.71
23 - 25 Age	16	2	15	19	52	22.71
More than 25 age	17	5	12	9	43	18.78
Total	**54**	**52**	**58**	**65**	**229**	**100**

Sources: Field survey, 2013

Data of above table shows that out of 404, 56.7% people were married where 57 people were married at the age between 18 – 20 age, followed by 52 at the age between 21-22. Similarly, 52 were married at the age of 23-25 age and 43 got married at the more than 25 age. 14 were at the age 15-17 and 11 people were married at the age of under 15 years.

The above data mentioned that around 11% respondents were married under the age of 18. So, it reflects the status of child married. Mean age of marriage was 22.07 years.

4.1.6 Level of Education of respondents

Table 6: level of education of respondents

Educational status of respondents	Occupation of respondents				Total	%
	Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Illiterate	0	17	2	0	19	4.70
Literate	0	16	3	13	32	7.92
Primary	0	32	33	38	103	25.50
Lower Secondary	0	28	34	24	86	21.29
Secondary	10	5	18	20	53	13.12
Higher Secondary and above	91	3	11	6	111	27.48
Total	**101**	**101**	**101**	**101**	**404**	**100**

Sources: Field survey, 2013

As data of education level of respondents shows that majority 103 (25.50%) respondents had primary level of education followed by 111 (27.48%) respondents

had Higher secondary level and above, 86 (21.29%) had lower secondary level, 53 (13.12%) had secondary level, 32 (7.92%) were literate and 19 (4.70%) were illiterate respondents.

Comparatively, it is showed that out of total 19 illiterate respondents, 17 were from the Garment factory workers and only 2 from the transport workers. Similarly, out of total 111 respondents who had higher secondary and above level education, 91 were from the Health workers followed by 11 from transport workers, 6 from brick factory workers and 3 from garment factory workers.

4.2 Knowledge, Attitude and Practices (KAP) on HIV and AIDS

This section of this chapter explores the knowledge, attitude and sexual practices of respondents regarding with HIV and AIDS. Findings of this chapter support to meet the objective no. 2. Finding shows the comparative study between the selected four target respondents.

4.2.1 Knowledge of HIV and AIDS

To identify the knowledge of HIV and AIDS among the different groups of respondents, opinion survey was done among the 404 respondents by using the structured questionnaires. The responses are tabulated and analyzed occupation wise as below.

4.2.1.1 Knowledge on HIV and AIDS among the Respondents

Table 7: Knowledge on HIV and AIDS

Response		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Yes	% within total respondents	25.8%	23.0%	25.3%	25.8%	100%	Asymp. Sig. (2-sided) .000 (S)
	% within Occupation of respondents	100.0%	89.1%	98.0%	100.0%	96.8%	
No	% within Knowledge on HIV and AIDS	0%	84.6%	15.4%	0%	100%	
	% within total respondents	0%	10.9%	2.0%	0%	3.2%	

Total	% within total respondents	25.0%	25.0%	25.0%	25.0%	100%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100%	

Sources: Field survey, 2013

The respondents were asked about the knowledge of HIV and AIDS whether they have heard or not. The above tabulated data of responses shows that among the total respondents, 96.8% respondents had heard about HIV and AIDS and rest 3.2% had no any ideas; they had not heard about the HIV and AIDS. Among them, 100% respondents from the health workers and Brick factory workers had heard followed by 98% transport workers and 89.1% garment factories workers. Comparatively, knowledge about the HIV and AIDS was found lower among the garment factories workers than others groups of study.

There was significant association (p=.000, df = 3) found among the respondents in their perception towards the knowledge on HIV and AIDS.

4.4.1.2 Knowledge on way of HIV transmission

Knowledge about the way of HIV transmission is more important than simply whether people heard about it or not. So, researcher had also asked about the knowledge of HIV transmission (Table 8).

Table 8: knowledge on way of HIV transmission

Response		**Occupation of respondents**				**Total**	**Pearson Chi-Square**
		Health workers	**Garment Factory workers**	**Transport workers**	**Brick factory workers**		
Yes	% within total respondents	26.1%	22.2%	25.6%	26.1%	100%	Asymp. Sig. (2-sided) .000
	% within Occupation of respondents	100%	85.1%	98.0%	100%	95.8%	
No	% within total respondents	0%	88.2%	11.8%	0%	100%	
	% within Occupation of respondents	0%	14.9%	2.0%	0%	4.2%	

Sources: Field survey, 2013

Respondents were asked that whether they had knowledge of way of HIV transmission or not. In response of that question, 95.8% respondents were mentioned that they had knowledge of way of HIV transmission and only 4.2% replied that they had no knowledge of way of HIV transmission.

As response given by the different groups, 100% knew about the at least one way of HIV transmission from the health workers and brick factory workers followed by 98% from transport workers and 85.1% from garment factory workers. Similarly, 14.9% garment factory workers had no knowledge about the way of HIV transmission followed by 2% transport workers.

There was significant association (p=.000, df = 3) found between the respondents of occupation in their perception on knowledge on way of HIV transmission.

4.2.1.3 Knowledge about the different way of HIV transmission

Table 9: Knowledge on way of HIV transmission

Response		Occupation of respondents				Total
		Health workers	Garment Factory workers	Transport workers	Brick factory workers	
HIV transmits by unsafe sexual contact	% within total respondents	25.8%	21.8%	26.1%	26.3%	100%
	No. within Occupation of respondents	98	83	99	100	380
HIV transmitted by Sharing foods	% within total respondents	50.0%	25.0%	25.0%	0%	100%
	No. within Occupation of respondents	2	1	1	0	4
HIV transmits by sharing of needles	% within total respondents	35.0%	14.8%	27.3%	23.0%	100%
	No. within Occupation of respondents	64	27	50	42	183
HIV transmits by others way	% within total respondents	100%	0%	0%	0%	100%

	No. within Occupation of respondents	4	0	0	0	4

Sources: Field survey, 2013

This question was a multiple choice answer type so in total of 404 respondents gave 571 responses. Most of the responses gave more than one answers. Regarding the different way of HIV transmission, 94.1% of the respondents mentioned that unsafe sex is the means of transmission. Similarly, 45.3% of the respondents mentioned that sharing of the needles, 1.0% of the respondents mentioned that sharing of foods and 1.0% mentioned that sharing of blood component and sharing of bleed.

As question related with the way of transmission of HIV, 25.8%, 21.8%, 26.1% and 26.3% respectably Health workers, garment factory workers, transport workers and brick factory workers mentioned that HIV transmitted by unsafe sex. Similarly, 35.0% health workers, 14.8% garment factory workers, 27.3% transport workers and 23% brick factory workers mentioned that sharing of needles. Out of n = 4 respondents where 50% health workers followed by 25% garment factory workers and 25% transport workers mentioned that HIV can transmit by sharing of food and n = 4 health workers mentioned that HIV can transmit by sharing of blood related components and sharing of bleed.

4.2.1.4 Knowledge about the Preventive measures of HIV and AIDS

Knowledge on HIV and AIDS among the targeted respondents was measured by asking about the preventive way of HIV and AIDS. Close ended question was asked having the 'Yes & No' answer. The responses were tabulated as below:

Table 10: knowledge on preventive measure of HIV and AIDS

Response		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Yes	% within total respondents	26.3%	21.6%	25.8%	26.3%	100%	Asymp. Sig. (2-

	% within Occupation of respondents	100%	82.2%	98.0%	100%	95.0%	sided) .000
No	% within total respondents	0%	90.0%	10.0%	0%	100%	
	% within Occupation of respondents	0%	17.8%	2.0%	0%	5.0%	

Sources: Field survey, 2013

In total, 95% respondents had knowledge of HIV prevention.

On the response of question regarding the knowledge on prevention of HIV transmission, 100% health workers and Brick factory workers followed by 98% transport workers and 82.2% garment factory workers answered that they had heard about the HIV and AIDS. Comparatively, higher number (17.8%) of garment factories workers had not knowledge about the preventive measures of HIV transmission as compare with 2% of transport workers which shows the risk of HIV transmission.

There was significant association (p = .000) found between the respondents of different occupation in their perception on preventing knowledge of HIV transmission.

4.2.1.5 Knowledge on different ways of HIV Prevention

Table 11: Knowledge on different ways of HIV Prevention

Response	**Occupation of respondents**				**Total**	**Percent**
	Health workers	**Garment Factory workers**	**Transport workers**	**Brick factory workers**		
safer sex practices	97	77	94	85	353	87.4%
Faithful with one sex partner	42	6	3	4	55	13.6%
regular medical checks	41	3	7	4	55	13.6%
safe blood transfusion	80	18	39	38	175	43.3%
Total	**260**	**104**	**143**	**131**	**638**	**100%**

Sources: Field survey, 2013

Respondents were also asked about their knowledge regarding the different ways of preventive measures of HIV transmission. As mentioned above table, 87.4% reported that safer sex practices can prevent from the HIV transmission followed by 43.3% reported that safe blood transfusion, 13.6% reported that being faithful with one sex partner and same number of respondent reported that regular medical checkup could prevent the HIV transmission.

This question had multiple choice options so in total 638 responses were counted among the 6 options. Out of total higher number of responses (260) were given by the Health workers, followed by 143 responses by transport workers, 131 responses by brick factory workers and 104 responses by garment factory workers.

4.2.1.6 HIV status in healthy-looking person

Table 12 : HIV status in healthy looking person

Responses		Occupation of respondents				Total
		Health workers	Garment Factory workers	Transport workers	Brick factory workers	
Yes	% within the total respondents	25.5%	23.7%	24.7%	26%	100%
	% within Occupation of respondents	97.0%	90.1%	94.1%	99%	95%
No	% within the total respondents	23.1%	38.5%	38.5%	0%	100%
	% within Occupation of respondents	3%	5%	5%	0%	3.2%
Don't Know	% within the total respondents	0%	71.4%	14.3%	14.3%	100%
	% within Occupation of respondents	0%	5%	1%	1%	1.7%

Sources: Field survey, 2013

As respondents were asked about the HIV status in healthy looking person, 95% respondents replied that healthy looking person could be HIV positive. Similarly, response of 3.2% respondents was different than above. They said that health of HIV positive persons was very weak and thin so healthy looking person

could not be HIV positive, followed by 1.7% respondents replied that they had no ideas about it.

4.2.1.7 Cure of AIDS

Table 13: cure of AIDS

Responses		Occupation of respondents					Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers	Total	
Yes	% within total respondents	3.2%	48.4%	29%	19.4%	100%	Asymp. Sig. (2-sided) .000
	% within Occupation of respondents	1%	14.9%	8.9%	5.9%	7.7%	
No	% within total respondents	28.6%	20.1%	24.5%	26.8%	100%	
	% within Occupation of respondents	98%	68.3%	83.2%	91.1%	85.1%	
No Response	% within total respondents	20%	40%	20%	20%	100%	
	% within Occupation of respondents	1.0%	2%	1%	1%	1.2%	
Don't Know	% within total respondents	-	62.5%	29.2%	8.3%	100%	
	% within Occupation of respondents	-	14.9%	6.9%	2%	6%	

Sources: Field survey, 2013

Still there is confusion about the cure of AIDS. Because of the use of ART (Anti-retro viral therapy), general people think that ART can cure the AIDS. So, research scholar had asked the question regarding the knowledge of cure of AIDS among the target respondents. As response tabulated above, 85.1% responded that AIDS could not be cured followed by 7.7% responded that AIDS could be cured. Similarly, 6% had no ideas about it and 1.2% had no response.

There was significant association (p=.000) between the knowledge on cured of AIDS and occupation of respondents.

4.2.2 Attitude towards the HIV and AIDS

Research scholar also identified the attitude of respondents towards the PLHIV through the questionnaires survey. Around ten questions comprising attitude regarding the friendship with PLHIV and their job rights, secrecy of HIV status, mandatory blood testing of suspected people, causes to be sex workers and drug users were asked to measure the attitude of respondents.

4.2.2.1 Necessary to have knowledge of HIV and AIDS

Table 14: Necessary to have knowledge of HIV and AIDS

Responses		Occupation of respondents				Total
		Health workers	Garment Factory workers	Transport workers	Brick factory workers	
Yes	% within total respondents	25.7%	23.7%	24.9%	25.7%	100%
	% within Occupation of respondents	99%	91.1%	96%	99%	96.3%
No	% within total respondents	16.7%	33.3%	33.3%	16.7%	100%
	% within Occupation of respondents	1.0%	2%	2%	1.0%	1.5%
No Response	% within total respondents	0%	100%	0%	0%	100%
	% within Occupation of respondents	0%	1%	0%	0%	.2%
Don't Know	% within total respondents	0%	75%	25%	0%	100%
	% within Occupation of respondents	0%	5.9%	2%	0%	2%

Sources: Field survey, 2013

Respondents were asked that whether knowledge of HIV and AIDS was necessary or not. In responses of this question, 96.3% respondents said that knowledge of HIV and AIDS was necessary followed by 1.5% felt not necessary and 2% had no idea about it.

Group wise responses shows that 99% health workers and brick factory workers realized the importance of HIV knowledge. Comparatively, 5.9% of garment factory workers had no any ideas about the importance of HIV knowledge. Similarly,

2% garment factory workers and 2% transport workers had not felt the necessity of HIV knowledge.

4.2.2.2 Attitude toward the PLHIV living in same community

Table 15: Attitude toward the PLHIV living in same community

Responses		Valid Cases		Occupation of respondents				Total
		N	Percent	Health workers	Garment Factory workers	Transport workers	Brick factory workers	
Socially Hate	% within total respondents	9	2.2%	11.1%	44.4%	33.3%	11.1%	100%
Encourage to live long life	% within total respondents	273	67.6%	31.9%	24.2%	20.5%	23.4%	100%
Behave as usual	% within total respondents	157	38.9%	23.6%	21.0%	29.3%	26.1%	100%
Others	% within total respondents	4	1%	50%		50%		100%

Sources: Field survey, 2013

To measure the stigma and discriminatory behavior of respondents towards the PLHIV; some questions were asked regarding their attitude. On the response of question, it was found that 67.6% respondents said that they would encourage PLHIV to live long life followed by 38.9% would behave as usual with PLHIV and only 2.2% replied that they would socially hate the PLHIV.

4.2.2.3 Attitude toward the PLHIV who is living in same family

Table 16: Attitude toward the PLHIV who is living in same family

Responses		Valid Cases		Occupation of respondents				Total
		N	Percent	Health workers	Garment Factory workers	Transport workers	Brick factory workers	
Remove from the home	% within total respondents	5	1.2%	0%	40.0%	60.0%	0%	100%
Encourage to long life	% within total respondents	278	68.8%	29.9%	23.4%	21.6%	25.2%	100%
Behave as usual	% within total respondents	165	40.8%	25.5%	24.8%	26.7%	23.0%	100%
Others	% within total respondents	7	1.7%	57.1%	14.3%	28.6%	0%	100%

Sources: Field survey, 2013

Question was asked among the respondents regarding their behavior towards their own family members if they would be HIV infected. As reported by respondents, 68.8% reported that they would encourage to live long life followed by 40.8% reported that they would do behave as usual. 1.2% mentioned that they would remove such family members from home if they would be HIV infected.

4.2.2.4 Secrecy about the HIV and AIDS of family members

In Nepalese cultural, majority of communities do not want to disclose the HIV status because of the fear to loss the prestige in society.

Table 17: Secrecy about the HIV and AIDS

Responses		Occupation of respondents				Total
		Health workers	Garment Factory workers	Transport workers	Brick factory workers	
Yes	% within total respondents	37.9%	23.7%	10.7%	27.8%	100%
	% within Occupation of respondents	63.4%	39.6%	17.8%	46.5%	41.8%
No	% within total respondents	16.0%	22.8%	36.9%	24.3%	100%
	% within Occupation of respondents	32.7%	46.5%	75.2%	49.5%	51%
Don't Know	% within total respondents	13.8%	48.3%	24.1%	13.8%	100%
	% within Occupation of respondents	4.0%	13.9%	6.9%	4.0%	7.2%

Sources: Field survey, 2013

Respondents were asked about the secrecy of status of HIV in their family. They were asked that if any family member would have HIV positive then would they want it to remain a secret or not. In this question 51% respondents wanted to disclose the HIV status followed by 41.8% wanted it to remain secret and 7.2% don't know what should be done. Data showed that still around 50% people do not want to disclose their HIV status in their community.

If we compared occupation-wise, 63.4% of Health workers wanted HIV status to remain secret as compared with only 17.8% transport workers remained it secret.

Table 18: Educational status of respondents and perception of secrecy of HIV status

Responses			Educational status of respondents						Total	Pearson Chi-Square Tests	Spearman Correlation
			Illiterate	Literate	Primary	Lower Secondary	Secondary	Higher Secondary			
Secrecy of HIV status	Yes	Count	7	12	31	40	22	57	169	Asymp. Sig. (2-sided) .001	Value = -.165, Approx. Sig.= .001[c]
		% of Total	1.7%	3.0%	7.7%	9.9%	5.4%	14.1%	41.8%		
	No	Count	6	18	63	40	29	50	206		
		% of Total	1.5%	4.5%	15.6%	9.9%	7.2%	12.4%	51.0%		
	Don't Know	Count	6	2	9	6	2	4	29		
		% of Total	1.5%	0.5%	2.2%	1.5%	0.5%	1.0%	7.2%		
Total		Count	19	32	103	86	53	111	404		
		% of Total	4.7%	7.9%	25.5%	21.3%	13.1%	27.5%	100.0 %		

Sources: Field survey, 2013

If we see the secrecy of HIV status with level of education of respondents, out of 111 respondents who had higher secondary education; among them 57 (51.35%) reported that they wanted to keep the HIV status secret followed by out of 103 primary level education; 31 (30.10%), 86 lower secondary level; 40 (46.51%) and 53 secondary level; 22 (41.51%), whereas out of 19 illiterate respondents; 7 (36.84%) reported that they didn't want to remain it secret.

As the above data, educated persons were found that they wanted to remain more secret about the HIV status than the illiterate person.

There was significant association (p=.001) and correlation (r = -.165) found between the attitude of respondents towards the secrecy of HIV and AIDS and educational status of respondents.

Respondents were asked about the reason of secrecy also during the time of field survey. Respondents had different reasons who wanted to keep it secret and who didn't want to keep it secret. Those respondents who wanted to keep it secret shared its reasons by saying that *" it is not the matter to say everybody about own HIV status. Still community people have misconception about the HIV so when people know about*

the HIV status then they will hate and give mental torture, PLHIV have to suffer from the stigma and discrimination, and social prestige will be lost. If one people are infected from the transmission of blood then such people are also get stigma and discrimination by saying that they are also infected from the illegal (sex work) relation so it raised the questions in personal character. So, if we keep it secret then it makes easy to live long life in society."

Similarly, those who wanted to disclose the HIV status shared its reasons by saying "AIDS *can't be cured by keeping it secret. It is also just a kind of disease; to be HIV positive is not any sin. It not happens by interest of people but happens by chance. It can transmit other than unsafe sex also likes: by transfusion of blood or sharing by same needles also. If we disclose HIV status then we can prevent other people from the transmission can aware them also and we can get advice also for treatment."*

4.2.2.5 Attitude towards the friends who is HIV positive

Table 19: Attitude towards the friends who is HIV positive

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Live together	% within the total respondents	26.1%	22.4%	24.4%	27.0%	100%	Asymp. Sig. (2-.020sided)
	% within Occupation of respondents	91.1%	78.2%	85.1%	94.1%	87.1%	
Leave him/her alone	% within the total respondents	8.3%	41.7%	25%	25%	100%	
	% within Occupation of respondents	1%	5%	3%	3%	3.0%	
Don't Know	% within the total respondents	20%	42.5%	30%	7.5%	100%	
	% within Occupation of respondents	7.9%	16.8%	11.9%	3.0%	9.9%	

Sources: Field survey, 2013

Regarding the attitude towards the PLHIV was found positive. 87.1% respondents reported that if their friends would be the HIV positive then they would live together. Only 3% reported that they would live such person alone. 9.9% people don't know what would happen in such situation.

There was significant association (p = .020) found between occupation of respondent and attitude toward the PLHIV friends.

4.2.2.6 Attitude toward the right of job of PLHIV

Table 20: Attitude toward the right of job of PLHIV

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Yes	% within the total respondents	26.8%	23.2%	23.2%	26.8%	100%	Asymp. Sig. (2-sided) .002
	% within Occupation of respondents	97%	84.2%	84.2%	97%	90.6%	
No	% within the total respondents	20%	40%	20%	20%	100%	
	% within Occupation of respondents	1%	2%	1%	1%	1.2%	
Don't Know	% within the total respondents	6.1%	42.4%	45.5%	6.1%	100%	
	% within Occupation of respondents	2%	13.9%	14.9%	2%	8.2%	

Sources: Field survey, 2013

Regarding the attitude towards the job rights of PLHIV, 90.6% reported that PLHIV could do the job because it was their human right. Regarding the reason of job rights, respondents explained that HIV is not transmitted by working together. It is not the end of life. PLHIV can do the physical, mental and social work as normal people can do.

There was significant association (p = .002) found between occupation of respondents and attitude toward the job rights of PLHIV.

4.2.2.7 All suspected people have to test the blood mandatorily

Table 21: Test the blood mandatorily

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Yes	% within the total respondents	26%	24.0%	24.2%	25.8%	100%	Asymp. Sig. (2-sided) .005
	% within Occupation of respondents	100%	92.1%	93.1%	99%	96%	
Don't Know	% within the total respondents		50.0%	43.8%	6.3%	100%	
	% within Occupation of respondents		7.9%	6.9%	1%	4%	

Sources: Field survey, 2013

Blood and blood related components are the main source of HIV transmission so suspicion of HIV transmission should be confirmed. Regarding this issue, 96% respondents reported that all suspected people had to test their blood mandatorily. Respondents shared the reasons of mandatorily blood test by saying that it was necessary to know the HIV status to prevent other people from the HIV transmission.

There was significant association (p=.005) found between the occupation of respondents and mandatorily blood testing of all suspected persons.

4.2.2.8 Attitude towards those people who engage in sex business

Table 22: Attitude towards those people who engage in sex business

Case Processing Summary						
Responses	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
people engage in sex business to fulfill the sexual desire	214	53.0%	190	47.0%	404	100%
people engage in sex business' because of poverty	172	42.6%	232	57.4%	404	100%
people engage in sex business because of Innocence	93	23.0%	311	77.0%	404	100%

people engage in sex business because of High ambition to earn more money	211	52.2%	193	47.8%	404	100%
people engage in sex business because of others reasons ...	2	.5%	402	99.5%	404	100%
Don't know why people engage in sex business	9	2.2%	395	97.8%	404	100%

Sources: Field survey, 2013

Respondents were given multiple choice options regarding the involvement in sex business. Respondents could choose the multiple answers also at the same time. Data showed that out of total, 53.0% respondents reported that people engage in sex business to fulfill the sexual desire followed by 52.2% reported that people engage in sex business because of high ambition to earn more money. Similarly, 42.6% reported poverty as a causative factor to engage in sex business followed by 23.0% reported innocence.

The data shows that sexual desire, high ambition and poverty are the main causes to engage in sex business.

4.2.2.9 Practices of drug use among the youth

Table 23: youth as drug users

Case Processing Summary						
Responses	**Cases**					
	Valid		**Missing**		**Total**	
	N	**Percent**	**N**	**Percent**	**N**	**Percent**
Enjoy	108	26.7%	296	73.3%	404	100%
Friends' conduct	344	85.1%	60	14.9%	404	100%
Innocence	56	13.9%	348	86.1%	404	100%
Careless of parents	116	28.7%	288	71.3%	404	100%
Other reasons ...	1	.2%	403	99.8%	404	100%
Don't know	9	2.2%	395	97.8%	404	100%

Responses	**Occupation of respondents**				**Total**
	Health workers	**Garment Factory workers**	**Transport workers**	**Brick factory workers**	

To enjoy	% within the total respondents	37.0%	13.0%	32.4%	17.6%	100%
Friends request	% within the total respondents	25.9%	23.8%	23.8%	26.5%	100%
Innocence	% within the total respondents	60.7%	8.9%	23.2%	7.1%	100%
Careless of parents	% within the total respondents	32.8%	13.8%	33.6%	19.8%	100%

Sources: Field survey, 2013

85.1% respondents replied that people engaged in drug use due to friends' request among them 37% health workers, 13% garment factory workers, 32.4% transport workers and 17.6% brick factory workers reported 'friend's request' as the main factor associated with drug use of youth. Gradually, 28.7% reported that due to careless of parents, 26.7% reported that due to enjoy and 13.9% reported that due to innocence.

The above data shows that friends' request is one of the major factor associated with risk behavior to be a drug's user followed by careless of parents and enjoy.

4.2.3 Sexual Practices of Respondents

During the field survey, respondents were asked about their sexual practices to identify their risk behavior (unsafe sexual practices) which could make them vulnerable for HIV transmission.

4.2.3.1 Practices of discussion between husband and wife about HIV and AIDS

Table 24: Talk about HIV and AIDS with sex partner

Responses			Occupation of respondents				Total
			Health workers	Garment Factory workers	Transport workers	Brick factory workers	
Married	**Yes**	% within the total respondents	30.2%	19.8%	19.1%	30.9%	100%
		% within Occupation of respondents	90.7%	61.5%	53.4%	76.9%	70.7%
	No	% within the total respondents	8.1%	24.2%	43.5%	24.2%	100%

		% within Occupation of respondents	9.3%	28.8%	46.6%	23.1%	27.1%
	Don't Know	% within the total respondents	0%	100%	0%	0%	100%
		% within Occupation of respondents	0%	9.6%	0%	0%	2.2%
	Total	% within the total respondents	23.6%	22.7%	25.3%	28.4%	100%
		% within Occupation of respondents	100%	100%	100%	100%	100%

Sources: Field survey, 2013

70.7% respondents were reported that they had talked about the HIV and AIDS with their life partners (between husband and wife) and remaining 27.1% had not talked followed by 2.2% couldn't remember whether they had talked or not.

Occupation wise, it was found that 90.7% health workers reported that they had discussed about the HIV and AIDS with their husband/wife followed by 76.9% brick factory workers, 61.5% garment factory workers and 53.4% transport workers.

4.2.3.2 Practices of discussion about the HIV and AIDS with other family members (son or daughter)

Table 25: Talk about HIV and AIDS with children

Responses			Occupation of respondents				Total
			Health workers	Garment Factory workers	Transport workers	Brick factory workers	
Married	**Yes**	% within the total respondents	35.4%	17.7%	20.3%	26.6%	100%
		% within Occupation of respondents	51.9%	26.9%	27.6%	32.3%	34.5%
	No	% within the total respondents	16.0%	27.7%	23.5%	32.8%	100%
		% within Occupation of respondents	35.2%	63.5%	48.3%	60.0%	52%
	Not applicable	% within the total respondents	25.0%	10.7%	46.4%	17.9%	100%
		% within Occupation of respondents	13.0%	5.8%	22.4%	7.7%	12.2%
	n't Kn	% within the total respondents	0%	66.7%	33.3%	0%	100%

		% within Occupation of respondents	0%	3.8%	1.7%	0%	1.3%
	Total	% within the total respondents	23.6%	22.7%	25.3%	28.4%	100%
		% within Occupation of respondents	100%	100%	100%	100%	100%

Sources: Field survey, 2013

Only 34.5% married respondents shared that they had talked about the HIV and AIDS with their children also. 12.2% said that some of their children were small and some of them had no child so it was not applicable for them. Rest 52.0% had never talked with their children. Generally, it is common in the Nepalese society that parents usually don't openly talk about the sex and sexuality with their children because of the cultural taboos also.

4.2.3.3 Practices of discussion about HIV and AIDS with friends

Table 26 : Talk about HIV and AIDS with friends

Responses		**Occupation of respondents**				**Total**	**Pearson Chi-Square**
		Health workers	**Garment Factory workers**	**Transport workers**	**Brick factory workers**		
Yes	% within the total respondents	30.6%	16.8%	25.7%	26.9%	100%	Asymp. Sig. (2-sided) .000
	% within Occupation of respondents	100%	54.5%	83.2%	87.1%	81.1%	
No	% within the total respondents	0%	58.6%	22.9%	18.6%	100%	
	% within Occupation of respondents	0%	40.6%	15.8%	12.9%	17.4%	
Don't Know	% within the total respondents	0%	83.3%	16.7%	0%	100%	
	% within Occupation of respondents	0%	5.0%	1.0%	0%	1.5%	
Total	% within the total respondents	24.8%	25.1%	25.1%	25.1%	100%	
	% within Occupation of respondents	100%	100%	100%	100%	100%	

Sources: Field survey, 2013

81.1% respondents reported that they have discussed about the HIV and AIDS with their friends. But still, 17.4% had never discussed about it with their friends. As a reason, they said that it was not necessary to talk about the way of HIV transmission because they were out of risk.

Occupation wise, 100% health workers had talked with their friends about the HIV and AIDS followed by 87.1% brick factory workers, 83.2% transport workers and 54.5% garment factory workers. Comparatively, discussion practices found low in garment factory workers than other groups.

There was significant association (p=.000) found between the occupation of respondents and discussion practices with friends.

4.2.3.4 Experience of sexual intercourse

Table 27: Eexperience of sexual intercourse

Marital status of respondents			Occupation of respondents				Total
			Health workers	Garment Factory workers	Transport workers	Brick factory workers	
Married	Do you have experience of sexual intercourse?	Yes	53	52	58	65	228
		No Response	1	0	0	0	1
	Total		54	52	58	65	229
Unmarried	Do you have experience of sexual intercourse?	Yes	12	7	17	14	50
		No	25	40	24	20	109
		No Response	8	1	1	2	12
	Total		45	48	42	36	171
Total	Do you have experience of sexual intercourse?	Yes	65	59	75	79	278
		No	25	40	24	20	109
		No Response	9	1	1	2	13
	Total		99	100	100	101	400

Chi-Square Tests

Marital status of respondents		Value	df	Asymp. Sig. (2-sided)
Married	Pearson Chi-Square	3.255[b]	3	.354
	Likelihood Ratio	2.904	3	.407
	N of Valid Cases	229		
Unmarried	Pearson Chi-Square	21.103[c]	6	.002
	Likelihood Ratio	20.260	6	.002

	N of Valid Cases	171		
Total	Pearson Chi-Square	25.899[a]	6	.000
	Likelihood Ratio	23.224	6	.001
	N of Valid Cases	400		

Sources: Field survey, 2013

Respondents were asked about their sexual experiences also to find out the risk behavior. In total, 69.5% respondents reported that they had sexual experience; among them out of n = 271 unmarried, 29.2% respondents had sexual experience. 27.2% shared that they had no sexual experiences followed by 3.3% respondents didn't want to share their sexual experiences.

Occupation wise, before marriage sexual experiences was found comparatively high among the transport workers followed by brick factory workers, health workers and garment factory workers.

There was significant association (p = .002) between unmarried respondents and sexual practices.

4.2.3.5 Age of First time sexual intercourse

Table 28: Age of first sexual intercourse

Responses		Occupation of respondents				Total
		Health workers	Garment Factory workers	Transport workers	Brick factory workers	
Less than 15 age	Count	3	8	5	0	16
	% within total respondents	18.8%	50.0%	31.2%	0.0%	100%
	% within Occupation of respondents	4.9%	13.6%	6.6%	0.0%	5.8%
15 - 17 Age	Count	3	9	5	12	29
	% within total respondents	10.3%	31.0%	17.2%	41.4%	100%
	% within Occupation of respondents	4.9%	15.3%	6.6%	15.4%	10.6%
18 -20 Age	Count	16	28	16	25	85
	% within total respondents	18.8%	32.9%	18.8%	29.4%	100%
	% within Occupation of respondents	26.2%	47.5%	21.1%	32.1%	31%

21-22 Age	Count	13	9	21	17	60
	% within total respondents	21.7%	15.0%	35.0%	28.3%	100%
	% within Occupation of respondents	21.3%	15.3%	27.6%	21.8%	21.9%
23 - 25 Age	Count	11	2	19	16	48
	% within total respondents	22.9%	4.2%	39.6%	33.3%	100%
	% within Occupation of respondents	18%	3.4%	25%	20.5%	17.5%
More than 25 age	Count	15	3	10	8	36
	% within total respondents	41.7%	8.3%	27.8%	22.2%	100%
	% within Occupation of respondents	24.6%	5.1%	13.2%	10.3%	13.1%
Total	Count	61	59	76	78	274
	% within total respondents	22.3%	21.5%	27.7%	28.5%	100%
	% within Occupation of respondents	100%	100%	100%	100%	100%

Chi-Square Tests

Marital status of respondents		**Value**	**df**	**Asymp. Sig. (2-sided)**
Married	Pearson Chi-Square	40.358[b]	15	.000
	Likelihood Ratio	44.001	15	.000
	N of Valid Cases	225		
Unmarried	Pearson Chi-Square	28.031[c]	15	.021
	Likelihood Ratio	35.441	15	.002
	N of Valid Cases	49		
Total	Pearson Chi-Square	46.097[a]	15	.000
	Likelihood Ratio	51.709	15	.000
	N of Valid Cases	274		

Sources: Field survey, 2013

69.5% respondents responded that they had sexual experience; out of them only 67.8% shared their first sexual experience. 5.8% had sexual experience in less than 15 years. Gradually, 10.6% had sex experience in between 15-17 years, 31% had 18-20 years, 21.9% had 21-22 years, 17.5% had 23-25 years and 13.1% had after 25 years.

It is found that first sexual experience in less than 15 years was higher among the garment factory workers than the other groups. Among the 5.8% in total; 50% were garment factory workers followed by 31.3% transport workers and 18.8% health

workers. In total, one-third respondents had first time sex experience in between 18-20 years.

Among the unmarried respondents, 6.1% had first time sexual experience before 15 years. Similarly, majority of respondents (34.7%) had experienced in 18-20 age groups followed by 22.4% had experienced in 15-17 age groups.

There was significant association (p=.000 and p=.021) found between the age of first time sexual experience with the married and unmarried respondents respectively.

4.2.3.6 Use of condom in first time sexual experiences

Table 29: Use of condom in first sex

Responses		Occupation of respondents				Total
		Health workers	Garment Factory workers	Transport workers	Brick factory workers	
Yes	Count	23	10	19	19	71
	% within total respondents	32.4%	14.1%	26.8%	26.8%	100%
	% within Occupation of respondents	36.5%	16.9%	24.7%	24.4%	25.6%
No	Count	35	47	55	59	196
	% within total respondents	17.9%	24%	28.1%	30.1%	100%
	% within Occupation of respondents	55.6%	79.7%	71.4%	75.6%	70.8%
Don't Know	Count	5	2	3	0	10
	% within total respondents	50%	20%	30%	0.0%	100%
	% within Occupation of respondents	7.9%	3.4%	3.9%	0.0%	3.6%
Total	Count	63	59	77	78	277
	% within total respondents	22.7%	21.3%	27.8%	28.2%	100%
	% within Occupation of respondents	100%	100%	100%	100%	100%

Sources: Field survey, 2013

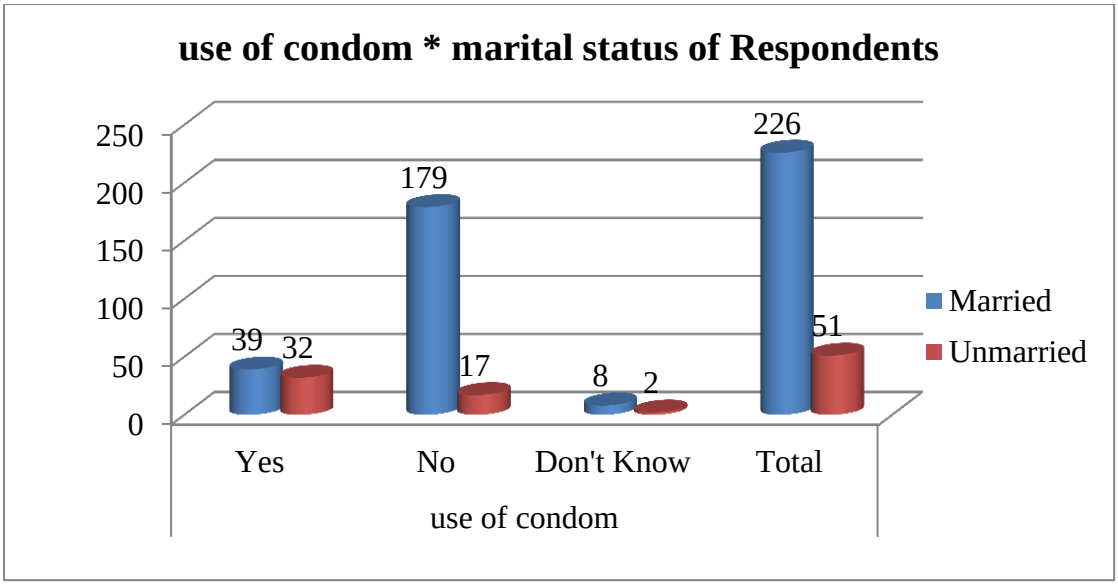


Figure 6: Use of condom on the basis of marital status

Chi-Square Tests				
Marital status of respondents		**Value**	**df**	**Asymp. Sig. (2-sided)**
Married	Pearson Chi-Square	20.213[b]	6	.003
	Likelihood Ratio	20.242	6	.003
	N of Valid Cases	226		
Unmarried	Pearson Chi-Square	4.994[c]	6	.545
	Likelihood Ratio	5.594	6	.470
	N of Valid Cases	51		
Total	Pearson Chi-Square	13.814[a]	6	.032
	Likelihood Ratio	15.820	6	.015
	N of Valid Cases	277		

In total, only 25.6% respondents had used the condom during the first time sexual intercourse remaining 70.8% had not used followed by 3.6% reported that they didn't remember the use of condom in their first sexual intercourse.

On the basis of marital status, 62.7% unmarried and 17.3% married respondents had used the condom during the first sexual intercourse. It is found that 33.3% unmarried and 79.2% married had not used condom.

In case of married respondents, they stated that they did not need condom to have sex with their wife. But in case of unmarried, told that sex could be accidental so during the time of sexual intercourse they had no access on condom.

It is found that 96.8% respondents have heard about HIV and AIDS, 95.8% respondents were mentioned that they had knowledge of way of HIV transmission and 87.4% reported that safer sex practices can prevent from the HIV transmission but 62.7% unmarried and only 17.3% married respondents had used the condom during their first sexual intercourse which accept the hypothesis no. 2.

There is significant association (p=.003) between the use of condom in the first sexual intercourse among the married respondents. But there was no significant association (p=.545) between the use of condom among the unmarried respondents.

Similarly, there was no significant association (Pearson Chi-Square, p = .289, df = 2) found between the level of knowledge on HIV transmission and use of condom in first sexual intercourse.

On the basis of all the above mentioned data support to verify the ***hypothesis no. 2***: safer sex practice is lower than the knowledge of HIV and AIDS.

4.2.3.7 Sexual relation with non-regular sex partners in last 6 months

Respondents were asked about their sexual practices with non-regular sex partners on the basis of occupation of respondents. 11.6% respondents had reported that they had sexual relation with non-regular sex partners since last six month prior to this study. Among them 4/4% respectively from the garment factory works and transport workers followed by 1.8/1/8% respectively from the health workers and brick factory workers (Table 32).

Table 30: sex with non-regular sex partners

Table 7. Occupation of respondents and sex practices with non-regular sex partners				
Responses	**Occupation of respondents**	**Total**	**Pearso**	**Spearma**

			Health workers	Garment Factory workers	Transport workers	Brick factory workers		n Chi-Square Tests	n Correlation
sex with non-regular sex partner in the last 6 months	Yes	Count	5	11	11	5	32	Asymp. Sig. (2-sided) .063	Value = -.009, Approx. Sig.= .881[c]
		% of Total	1.8%	4.0%	4.0%	1.8%	11.6%		
	No	Count	54	47	63	73	237		
		% of Total	19.5%	17.0%	22.7%	26.4%	85.6%		
	No Response	Count	4	1	3	0	8		
		% of Total	1.4%	0.4%	1.1%	0.0%	2.9%		
Total		Count	63	59	77	78	277		
		% of Total	22.7%	21.3%	27.8%	28.2%	100.0 %		

Sources: Field survey, 2013

There was no significant association (p=.063) and correlation (r = -.009) found between the different occupation groups of respondents and their sexual practices with non-regular sex partners.

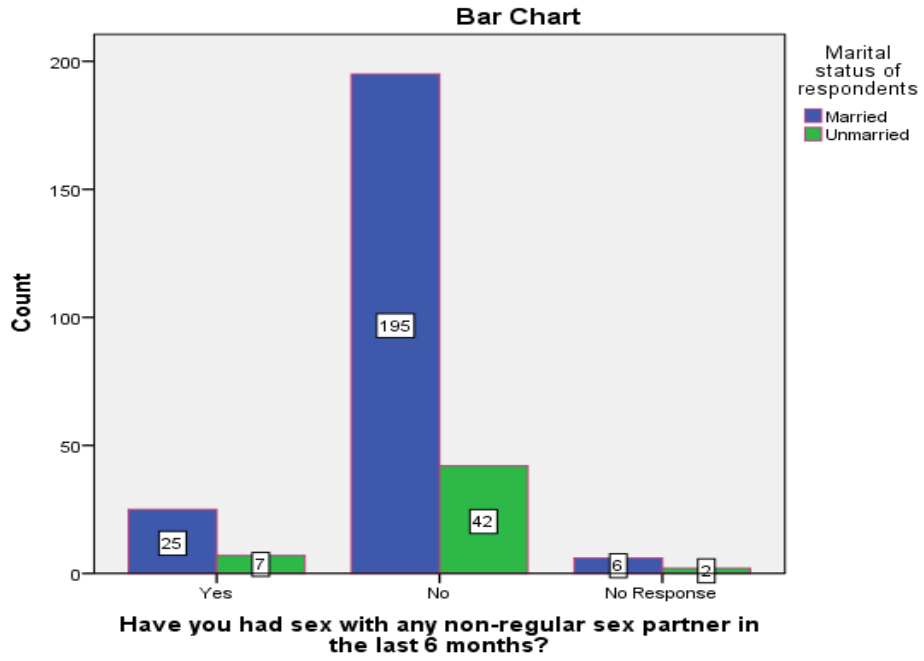


Figure 7: Sex with non-regular sex partners on the basis of marital status

Chi-Square Tests			
Marital status of respondents	Value	df	Asymp. Sig. (2-sided)

Married	Pearson Chi-Square	18.287[b]	6	.006
	Likelihood Ratio	18.859	6	.004
	N of Valid Cases	226		
Unmarried	Pearson Chi-Square	5.603[c]	6	.469
	Likelihood Ratio	6.273	6	.393
	N of Valid Cases	51		
Total	Pearson Chi-Square	11.946[a]	6	.063
	Likelihood Ratio	13.534	6	.035
	N of Valid Cases	277		

From the above data, it is found that in total, 11.6% respondents reported that they had sexual relationship with non-regular sex partners.

On the basis of marital status, 11.1% married and 13.7% unmarried respondents had reported that they had sexual relation with non-regular sex partners.

There is significant association (p = .006) between married respondents and sexual relation with non-regular sex partners. But there is no significant association (p = .469) between unmarried respondents and sexual relation with non-regular sex partners

4.2.3.8 Use of condom with non-regular sex partners

Table 31: Use of condom with non-regular sex partners

Responses		Occupation of respondents				Total
		Health workers	Garment Factory workers	Transport workers	Brick factory workers	
Yes	Count	4	3	4	5	16
	% within the total respondents	25%	18.8%	25.0%	31.2%	100%
	% within Occupation of respondents	80%	27.3%	36.4%	100%	50%
No	Count	1	5	6	0	12
	% within the total respondents	8.3%	41.7%	50%	0.0%	100%
	% within Occupation of respondents	20%	45.5%	54.5%	0.0%	37.5%
Don't Know	Count	0	3	1	0	4
	% within the total respondents	0.0%	75%	25%	0.0%	100%
	% within Occupation of respondents	0.0%	27.3%	9.1%	0.0%	12.5%
Total	Count	5	11	11	5	32
	% within the total respondents	15.6%	34.4%	34.4%	15.6%	100%

	% within Occupation of respondents	100%	100%	100%	100%	100%

Sources: Field survey, 2013

Among the total respondents who reported that they had sex with non-regular sex partners since last 6 months prior to this study shows that 37.5% had not used condom during their sexual intercourse. Trust on sex partners was reported one major causes of not using the condom and second was found negligence behavior. Interview No. 2 of Brick factory workers said that '*during the time of sexual intercourse, people forgets everything and only takes the enjoyment of sex*.'

4.2.3.9 Feeling of risk of HIV transmission

Table 32: Feeling of risk of HIV transmission

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
High risk	% within the total respondents	50.0%	12.5%	0%	37.5%	100%	Asymp. Sig. (2-sided) .002
	% within Occupation of respondents	4.0%	1.0%	0%	3.0%	2%	
Some risk	% within the total respondents	45.9%	21.6%	10.8%	21.6%	100%	
	% within Occupation of respondents	17%	7.9%	4.0%	7.9%	9.2%	
No risk	% within the total respondents	22.9%	24.1%	26.5%	26.5%	100%	
	% within Occupation of respondents	77%	80.2%	88.1%	88.1%	83.4%	
No Response	% within the total respondents	0%	42.9%	57.1%	0%	100%	
	% within Occupation of respondents	0%	3%	4%	0%	1.7%	
Don't know	% within the total respondents	13.3%	53.3%	26.7%	6.7%	100%	
	% within Occupation of respondents	2%	7.9%	4%	1%	3.7%	
Total	% within the total respondents	24.8%	25.1%	25.1%	25.1%	100%	
	% within Occupation of respondents	100%	100%	100%	100%	100%	

Sources: Field survey, 2013

Respondents were asked about their feeling of risk of HIV transmission. On the response of that question, only 2% reported that they felt they were in high risk followed by 9.2% reported some risk of HIV transmission. Similarly, 83.4% mentioned that they were in no risk, 1.7% had no response and 3.7% don't know about their status of risk of HIV transmission.

Comparatively, 4% health workers, 3% brick factory workers and 1% garment factory workers reported that they were in high risk of HIV transmission. Similarly, 17.0% health workers, 7.9% garment factory workers and 4% transport workers and 7.9% brick factory workers reported that they were in some risk of HIV transmission. From the above data, it is found that 21% health workers felt that they were in risk of HIV transmission than the other groups.

There was significant association (P=.002) found between occupation of respondents and data reported for feeling of risk of HIV transmission.

4.2.3.10 Practices of HIV testing

Table 33: HIV testing

Responses		Occupation of respondents				Total
		Health workers	Garment Factory workers	Transport workers	Brick factory workers	
Yes	% within total respondents	53.7%	12%	12%	22.2%	100%
	% within Occupation of respondents	58%	12.9%	12.9%	23.8%	26.8%
No	% within total respondents	14.0%	29.1%	29.8%	27%	100%
	% within Occupation of respondents	40%	82.2%	84.2%	76.2%	70.7%
No Response	% within total respondents	20%	50%	30%	0%	100%
	% within Occupation of respondents	2%	5%	3%	0%	2.5%
Total	% within total respondents	24.8%	25.1%	25.1%	25.1%	100%

	% within Occupation of respondents	100%	100%	100%	100%	100%

Sources: Field survey, 2013

Respondents were asked that whether they had ever tested HIV or not. Out 404 respondents, 26.8% had tested HIV and rest had reported that they had no risk of HIV transmission, so no necessary to test HIV.

Occupation wise, 58% health workers had tested HIV followed by 23.8% brick factory workers, 12.9% garment factory workers and 12.9% transport workers. The data presented that health workers felt more risk than other groups. As face to face interview with health persons shared that because of the nature of their occupation they were always felt risk of HIV transmission especially through the blood related components.

4.3 Comparative study between Knowledge, Attitude and Practices

As the objective no. 1 of this study, relation between the different groups of respondents in relation to their knowledge, attitude and practices was identified through the correlation analysis.

4.3.1 Correlations between Knowledge on way of HIV transmission and secrecy of PLHIV

Table 34: Correlation between knowledge and secrecy of PLHIV

Correlations				
			Knowledge on way of HIV transmission	Secrecy of HIV status
Spearman's rho	Knowledge on way of HIV transmission	Correlation Coefficient	1.000	.155**
		Sig. (2-tailed)	.	.002
		N	404	404
	Secrecy of HIV status	Correlation Coefficient	.155**	1.000
		Sig. (2-tailed)	.002	.
		N	404	404
Source: field survey, 013 **. Correlation is significant at the 0.01 level (2-tailed).				

Sources: Field survey, 2013

Correlation was found between the knowledge on way of HIV transmission and attitude towards the secrecy of HIV status. There was significant relationship (R = .155 and p > .002, 2-tailed) found between level of knowledge and secrecy status of HIV positive.

4.3.2 Correlation between Knowledge on way of HIV transmission and attitude towards the job rights of PLHIV

Table 35: Correlation between knowledge and attitude

Correlations				
			Knowledge on way of HIV transmission	Attitude towards the job right of PLHIV
Spearman's rho	Knowledge on way of HIV transmission	Correlation Coefficient	1.000	.360**
		Sig. (2-tailed)	.	.000
		N	404	404
	Attitude towards the job right of PLHIV	Correlation Coefficient	.360**	1.000
		Sig. (2-tailed)	.000	.
		N	404	404
**. Correlation is significant at the 0.01 level (2-tailed).				

Sources: Field survey, 2013

The study was found the correlation between the knowledge on way of HIV transmission and attitude towards the job right of PLHIV. There was significant relationship (r = .360, p = .000 (2-tailed) between knowledge on way of HIV transmission and attitude towards the right of PLHIV.

4.3.3 Correlation between knowledge on way of HIV transmission and practices of sex with non-regular sex partners

Table 36: correlation between knowledge and sex wih non-regular sex partners

Correlations				
			Knowledge on way of HIV transmission	sex with non-regular sex partner
Spearman's rho	Knowledge on way of HIV transmission	Correlation Coefficient	1.000	.097
		Sig. (2-tailed)	.	.106
		N	404	277
	sex with non-regular sex partner	Correlation Coefficient	.097	1.000
		Sig. (2-tailed)	.106	.
		N	277	277

Sources: Field survey, 2013

The study identified the level of knowledge and sexual practices with non-regular sex partners of respondents. There was no relationship (r = .097 and p =.106 (2-tailed) found between Knowledge on way of HIV transmission and sex with any non-regular sex partner.

This data also proved the hypothesis no. of this study that there was no relation between the knowledge and practices.

4.3.4 Correlation between Knowledge on way of HIV transmission and use of condom in first sexual intercourse

Table 37: correlation between knowledge and use of condom

Correlations				
			Knowledge on way of HIV transmission	Use of condom in first sexual intercourse
Spearman's rho	Knowledge on way of HIV transmission	Correlation Coefficient	1.000	.018
		Sig. (2-tailed)	.	.766
		N	404	277
	Use of condom in first sexual intercourse	Correlation Coefficient	.018	1.000
		Sig. (2-tailed)	.766	.
		N	277	277

Sources: Field survey, 2013

There was no significant relationship r = .018, p = .766 (2-tailed) found between knowledge of way of HIV transmission and use of condom in first sexual intercourse.

4.3.5 Correlation between Marriage age of respondents and Age of First time sexual intercourse

Table 38: correlation between marriage age and age of first time sex

Correlations				
			Marriage age of respondents	Age of First time sexual intercourse
Spearman's rho	Marriage age of respondents	Correlation Coefficient	1.000	.815**
		Sig. (2-tailed)	.	.000
		N	229	225
	Age of First time sexual intercourse	Correlation Coefficient	.815**	1.000
		Sig. (2-tailed)	.000	.
		N	225	274
**. Correlation is significant at the 0.01 level (2-tailed).				

Sources: Field survey, 2013

The mean age of marriage of respondents was found 22.07 years and the mean age of first sexual intercourse was 21. There was significant relationship found (r =

.815, p = .000 (2-tailed) between marriage age of respondents and age of first time sexual intercourse.

4.3.6 Correlation between Educational status of respondents and attitude towards the necessity to have knowledge of HIV and AIDS

Table 39: correlation between education and attitude

Correlations				
			Educational status of respondents	Necessary to have knowledge of HIV and AIDS
Spearman's rho	Educational status of respondents	Correlation Coefficient	1.000	-.134**
		Sig. (2-tailed)	.	.007
		N	404	404
	Necessary to have knowledge of HIV and AIDS	Correlation Coefficient	-.134**	1.000
		Sig. (2-tailed)	.007	.
		N	404	404
**. Correlation is significant at the 0.01 level (2-tailed).				

Sources: Field survey, 2013

Educational status of respondents was taken as the independent variables to find its relation with knowledge of HIV and AIDS. Respondents were from the illiterate to higher education. There was significant relationship (r = - .134, p = .007 (2-tailed) found between Educational status of respondents and Attitude towards the necessary to have knowledge of HIV and AIDS.

4.3.7 ANOVA between KAP and occupation of respondents

Table 40: ANOVA between KAP and occupation of respondents

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Total value of Knowledge	Between Groups	102315.067	3	34105.022	9.241	.000
	Within Groups	1468856.945	398	3690.595		
	Total	1571172.012	401			
Total value of attitude	Between Groups	262137.682	3	87379.227	9.211	.000
	Within Groups	3785136.293	399	9486.557		
	Total	4047273.975	402			
Total value of practices	Between Groups	153345.315	3	51115.105	3.424	.018
	Within Groups	4060006.888	272	14926.496		
	Total	4213352.203	275			

Sources: Field survey, 2013

The table 42 lists the sum of the squares of the differences between means of different target populations and their mean square errors. In table, the “Between

Groups" variation "102315.067" is due to interaction in samples between groups. If sample means are close to each other, this value is small. The "Within Groups" variation "1468856.945" is due to differences within individual samples regarding the total value of knowledge. The "Mean Square" values are calculated by dividing each "Sum of Squares" value by its respective degree of freedom ("df"). The table also lists the F statistic, which is calculated by dividing the "Between Groups Mean Square" by the "Within Groups Mean Square." The significance level of "0.000 & .018" is less than the threshold value of 0.05 and indicates that the null hypothesis can be rejected, leading to the conclusion that the total value of knowledge, attitude and practices are not all the same among the health workers, garment factory workers, brick factory workers and transport workers.

4.3.8 Multiple comparisons between KAP and occupation

Table 41: Multiple comparisons between KAP and occupation

Multiple Comparisons							
*List Square Difference(*LSD)							
Dependent Variable	(I) Occupation of respondents	(J) Occupation of respondents	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Total value of Knowledge	Health workers	Garment Factory workers	-42.862*	8.592	.000	-59.75	-25.97
		Transport workers	-17.961*	8.592	.037	-34.85	-1.07
		Brick factory workers	-9.169	8.592	.287	-26.06	7.72
	Garment Factory workers	Health workers	42.862*	8.592	.000	25.97	59.75
		Transport workers	24.901*	8.549	.004	8.09	41.71
		Brick factory workers	33.693*	8.549	.000	16.89	50.50
	Transport workers	Health workers	17.961*	8.592	.037	1.07	34.85
		Garment Factory workers	-24.901*	8.549	.004	-41.71	-8.09
		Brick factory workers	8.792	8.549	.304	-8.01	25.60
	Brick factory	Health workers	9.169	8.592	.287	-7.72	26.06

	workers	Garment Factory workers	-33.693*	8.549	.000	-50.50	-16.89
		Transport workers	-8.792	8.549	.304	-25.60	8.01
Total value of attitude	Health workers	Garment Factory workers	-58.527*	13.740	.000	-85.54	-31.51
		Transport workers	-31.257*	13.706	.023	-58.20	-4.31
		Brick factory workers	4.594	13.706	.738	-22.35	31.54
	Garment Factory workers	Health workers	58.527*	13.740	.000	31.51	85.54
		Transport workers	27.269*	13.740	.048	.26	54.28
		Brick factory workers	63.121*	13.740	.000	36.11	90.13
	Transport workers	Health workers	31.257*	13.706	.023	4.31	58.20
		Garment Factory workers	-27.269*	13.740	.048	-54.28	-.26
		Brick factory workers	35.851*	13.706	.009	8.91	62.80
	Brick factory workers	Health workers	-4.594	13.706	.738	-31.54	22.35
		Garment Factory workers	-63.121*	13.740	.000	-90.13	-36.11
		Transport workers	-35.851*	13.706	.009	-62.80	-8.91
Total value of practices	Health workers	Garment Factory workers	-30.387	22.220	.173	-74.13	13.36
		Transport workers	-56.191*	20.847	.007	-97.23	-15.15
		Brick factory workers	-2.587	20.787	.901	-43.51	38.34
	Garment Factory workers	Health workers	30.387	22.220	.173	-13.36	74.13
		Transport workers	-25.804	21.139	.223	-67.42	15.81
		Brick factory workers	27.801	21.080	.188	-13.70	69.30
	Transport workers	Health workers	56.191*	20.847	.007	15.15	97.23
		Garment Factory workers	25.804	21.139	.223	-15.81	67.42
		Brick factory workers	53.604*	19.627	.007	14.96	92.24
	Brick factory workers	Health workers	2.587	20.787	.901	-38.34	43.51
		Garment Factory workers	-27.801	21.080	.188	-69.30	13.70
		Transport workers	-53.604*	19.627	.007	-92.24	-14.96
*. The mean difference is significant at the 0.05 level.							

Sources: Field survey, 2013

The above table shows the results of comparing pairs of mean difference between health workers, garment factory workers, brick factory workers and transport workers regarding their .different knowledge, attitude and practices of HIV and AIDS.

There is mean difference of .287 between the health workers and brick factory workers, .304 transport workers and brick factory workers regarding the total value of knowledge of HIV and AIDS. Similarly, health workers and brick factory workers have a mean difference of .738 regarding the attitude of HIV and AIDS. Health workers and garment factory workers have a mean difference of .173, health workers and brick factory workers have a mean difference of .901, garment and transport workers have .223, and garment and brick factory workers have .188 regarding their sexual practices of HIV and AIDS.

The finding of study reported that there was significant difference between the health workers and garment factory workers (mean value = .000), health workers and transport workers (mean value = .037), garment factory workers and transport workers (mean value = .004), garment factory workers and brick factory workers (mean value = .000) regarding the total values of knowledge.

Similarly, there was significant difference between the health workers and garment factory workers (mean value = .000), health workers and transport workers (mean value = .023), garment factory workers and health workers (mean value = .000), garment factory workers and transport workers (mean value = .048), garment factory workers and brick factory workers (mean value = .000) and transport workers and brick factory workers (mean value= .009) regarding the total values of attitude.

Regarding the sexual practices of respondents, there was significant difference found between the health workers and transport workers (mean value = .007), and transport workers and brick factory workers (mean value= .007) only. There was no

significant difference found between the health workers and garment factory workers and brick factory workers, garment factory workers and transport workers, brick factory and garment factory workers.

The above finding shows that the sexual practices of respondents were insignificantly difference than the knowledge and attitude of HIV and AIDS.

4.4 Association of Different factors with HIV and AIDS

This chapter is main finding chapter of this thesis which covers the details analysis of specific objective no. 2 of thesis as well as also covers the general objective in a whole. The main objective of this dissertation was to identify the various socio-cultural, economic, political, individual and educational factors associated with increasing the risk of HIV and AIDS. On the basis of previous literatures, among the various factors: society, polygamy (multiple sex partners), early marriage, cultural and traditional practices, gender based violence, stigma and discrimination, human trafficking, trust on sex-partner, gender inequality, poverty, migration, conflict, negligence, alcoholic nature, lack of awareness and illiteracy were asked for the respondents to verify these factors in the context of Nepal.

4.4.1 Socio-Cultural Factors

4.4.1.1 Association between society and risk of HIV and AIDS

Table 42: Society and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	42.5%	14.2%	7.5%	35.8%	100%	Asymp. Sig. (2-sided) .000
	% within Occupation of respondents	56.4%	18.8%	9.9%	47.5%	33.2%	
Agree	% within the total respondents	35.7%	24.5%	20.4%	19.4%	100%	
	% within Occupation of respondents	34.7%	23.8%	19.8%	18.8%	24.3%	
Neutral	% within the total respondents	11.4%	48.6%	31.4%	8.6%	100%	

	% within Occupation of respondents	4.0%	16.8%	10.9%	3.0%	8.7%	
Disagree	% within the total respondents	8.7%	34.8%	34.8%	21.7%	100%	
	% within Occupation of respondents	2.0%	7.9%	7.9%	5.0%	5.7%	
Strongly Disagree	% within the total respondents	2.6%	28.9%	45.6%	22.8%	100%	
	% within Occupation of respondents	3.0%	32.7%	51.5%	25.7%	28.2%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100%	
	% within Occupation of respondents	100%	100%	100%	100%	100%	

Sources: Field survey, 2013

The respondents were asked about the association between the society and HIV and AIDS in Likert scale (5 scales) to estimate how much value they would like to put it. Various previous literatures has shown the association between the society and risk of HIV and AIDS, so on the basis of previous finding, research scholar had asked this question among the target respondents to know their opinion. As the responses tabulated in Table no. 26 shows that 33.2% respondents strongly agree followed by 24.3% agree. Along with this responses second majority no. 28.2% strongly disagree followed by 5.7% disagree. 8.7% were responded as neutral (neither agree nor disagree).

Research scholar had divided the responses into three categories: Agree, Neutral and Disagree then data came as 57.5% respondents agree followed by 33.9% were disagree and only 8.7% were neutral. So, on the basis of above data, research scholar came in conclusion that there is society is associated with the increasing the risk behavior of HIV and AIDS.

If we see the comparison of responses between the different target respondents; great variation was seen between the health workers and transport workers. 56.4% health workers strongly agree that society is associated with

increasing the risk of HIV and AIDS but just in verse 51.5% transport workers strongly disagree.

There was significant association (p=.000; it is less than .05) found on perception of respondents towards the society as an associated factors with increasing the risk of HIV and AIDS.

4.4.1.2 Association between Polygamy (Multiple Sexual Partners) and risk of HIV and AIDS

Respondents were asked that whether polygamy is associated with risk of HIV and AIDS or not. The responses of respondents are tabulated as below.

Table 43: Polygamy and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	22.9%	23.8%	26.1%	27.2%	100.0%	Asymp. Sig. (2-sided) .002
	% within Occupation of respondents	80.2%	83.2%	91.1%	95.0%	87.4%	
Agree	% within the total respondents	57.1%	25.0%	10.7%	7.1%	100.0%	
	% within Occupation of respondents	15.8%	6.9%	3.0%	2.0%	6.9%	
Neutral	% within the total respondents	15.4%	61.5%	23.1%		100.0%	
	% within Occupation of respondents	2.0%	7.9%	3.0%		3.2%	
Disagree	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100.0%	
	% within Occupation of respondents	1.0%	1.0%	1.0%	1.0%	1.0%	
Strongly Disagree	% within the total respondents	16.7%	16.7%	33.3%	33.3%	100.0%	
	% within Occupation of respondents	1.0%	1.0%	2.0%	2.0%	1.5%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100.0%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

87.4% of respondents were strongly agreed that polygamy is associated with increasing the risk of HIV and AIDS in Nepalese context. Similarly, 6.9% respondents were agreed followed by 3.2% were neutral, 1.5% strongly disagree and 1% were disagreeing. In single sentence, it is found that more than 95% respondents were agreed that there is association between polygamy and increasing the risk of HIV and AIDS.

The above mentioned data gives the similar report as found in some previous literature also. As Cates and Stone 1992; Kost and Forrest 1992 mentioned, "A large number of sexual partners is an important indicator of an elevated risk of contracting an STD, including HIV." Similarly, IOM 1997 also reported that "Adolescents are more susceptible to STDs than adults because they have a higher probability of having multiple sexual partners" as cited by (Guang Guo, 2008, p. S38).

There was significant association (p=.002; it is less than .05) found between respondents of different occupation in their perception on polygamy as an associated factors with increasing the risk of HIV and AIDS.

4.4.1.3 Association between Stigma and discrimination and risk of HIV and AIDS

Table 44: Stigma and discrimination and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	21.4%	24.5%	28.4%	25.8%	100%	Asymp. Sig. (2-sided) .033
	% within Occupation of respondents	48.5%	55.4%	64.4%	58.4%	56.7%	
Agree	% within the total respondents	33.1%	21.8%	18.0%	27.1%	100%	
	% within Occupation of respondents	43.6%	28.7%	23.8%	35.6%	32.9%	
Neutral	% within the total respondents	28.6%	39.3%	25.0%	7.1%	100%	

	% within Occupation of respondents	7.9%	10.9%	6.9%	2.0%	6.9%	
Disagree	% within the total respondents	0%	50.0%	25.0%	25.0%	100%	
	% within Occupation of respondents	0%	4.0%	2.0%	2.0%	2%	
Strongly Disagree	% within the total respondents	0%	16.7%	50.0%	33.3%	100%	
	% within Occupation of respondents		1.0%	3.0%	2.0%	1.5%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100.0%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

In various previous literatures, HIV and AIDS related stigma has been reported to be a major factor contributing to the spread of HIV. Campbell, Foulis, Maimane, & Sibiya, 2005; Groenewald, Nannan, Bourne, Laubscher, & Bradshaw, 2005; Kalichman & Simbayi, 2004 indicated that there is a strong pervasive stigma attached to HIV/AIDS in South Africa, as cited by (Collins Airhihenbuwa, 2009).

The above mentioned primary data shows that 56.7% respondents were strongly agree that there is association between the stigma and discrimination with the risk of HIV and AIDS followed by 32.9% were in agree. Against it, only 1.5% respondents were in strongly disagreeing followed by 2% was in disagreeing and 6.9% were in neutral.

There was significant association (p=.033; it is less than .05, df = 12) found between the respondents of different occupation on their perception regarding the stigma and discrimination as an associated factors with increasing the risk of HIV.

4.4.1.4 Association between human trafficking and risk of HIV and AIDS

Table 45: Human trafficking and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	28.8%	25.3%	19.1%	26.7%	100%	Asymp. Sig. (2-sided) .000
	% within Occupation of respondents	83.0%	72.3%	54.5%	76.2%	71.5%	
Agree	% within the total respondents	16.9%	16.9%	43.8%	22.5%	100%	
	% within Occupation of respondents	15.0%	14.9%	38.6%	19.8%	22.1%	
Neutral	% within the total respondents	11.1%	50.0%	27.8%	11.1%	100%	
	% within Occupation of respondents	2.0%	8.9%	5.0%	2.0%	4.5%	
Disagree	% within the total respondents	0%	25.0%	50.0%	25.0%	100%	
	% within Occupation of respondents	0%	1.0%	2.0%	1.0%	1.0%	
Strongly Disagree	% within the total respondents	0%	75.0%	0%	25.0%	100%	
	% within Occupation of respondents	0%	3.0%	0%	1.0%	1.0%	
Total	% within the total respondents	24.8%	25.1%	25.1%	25.1%	100%	
	% within Occupation of respondents	100%	100%	100%	100%	100%	

Sources: Field survey, 2013

Respondents were asked about association between the human trafficking and risk of HIV and AIDS. 71.5% respondents were reported that they strongly agreed that there is association between human/girls trafficking and increasing the risk of HIV transmission followed by 22.1% were agreed. Only 2% respondents were reported disagree.

The finding shows the similarity with finding of international and national previous study. Hajdinjak 2002, p. 51; Omelaniuk 2002; “Trafficking in Persons Report” 2004, p. 23 stated that between 70 and 90 percent of contemporary traffic in women and children in Europe and Asia is related to prostitution and other forms of

sexual exploitation (mainly the pornography industry), as cited by (Aromaa, 2006). Similarly, 109 (38.0%) were found HIV positive among 287 sex-trafficked and repatriated Nepalese girls and women receiving services at Maiti Nepal between January 1997 and December 2005 (Jay G. Silverman, August 1, 2007, p. 536)**.**

There was significant association (p=.000; it is less than .05, df = 12) found between respondents on their perception towards the human trafficking as an associated factors with increasing the risk of HIV and AIDS.

4.4.1.5 Trust on sex-partner is one cause of HIV transmission

Table 46: Trust and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	25.6%	22.1%	17.9%	34.4%	100%	Asymp. Sig. (2-sided) .001
	% within Occupation of respondents	49.5%	42.6%	34.7%	66.3%	48.3%	
Agree	% within the total respondents	29.3%	23.3%	29.3%	18.1%	100%	
	% within Occupation of respondents	33.7%	26.7%	33.7%	20.8%	28.7%	
Neutral	% within the total respondents	15.1%	30.2%	39.6%	15.1%	100%	
	% within Occupation of respondents	7.9%	15.8%	20.8%	7.9%	13.1%	
Disagree	% within the total respondents	16.7%	45.8%	29.2%	8.3%	100%	
	% within Occupation of respondents	4.0%	10.9%	6.9%	2.0%	5.9%	
Strongly Disagree	% within the total respondents	31.3%	25%	25%	18.8%	100%	
	% within Occupation of respondents	5.0%	4.0%	4.0%	3.0%	4.0%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100%	
	% within Occupation of respondents	100%	100%	100%	100%	100%	

Sources: Field survey, 2013

48.3% respondents strongly agreed that trust on sex partners is associated with increasing the risk of HIV transmission followed by 28.7% respondents agreed. 5.9% respondents were reported that there is no association between trust and risk of HIV and AIDS followed by 4% respondents were reported strongly disagree.

There was significant association (p=.001; it is less than .05, df = 12) found on perception of respondents on trust on sex partner as an associated factors with increasing the risk of HIV and AIDS.

4.4.1.6 Association between Gender Based Violence and Risk of HIV and AIDS

Table 47: Gender based violence and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	41.9%	24.3%	4.1%	29.7%	100.0%	Asymp. Sig. (2-sided) .000
	% within Occupation of respondents	31.0%	17.8%	3.0%	21.8%	18.4%	
Agree	% within the total respondents	53.3%	10.5%	12.4%	23.8%	100.0%	
	% within Occupation of respondents	56.0%	10.9%	12.9%	24.8%	26.1%	
Neutral	% within the total respondents	7.4%	34.5%	35.1%	23.0%	100.0%	
	% within Occupation of respondents	11.0%	50.5%	51.5%	33.7%	36.7%	
Disagree	% within the total respondents	2.6%	26.3%	50.0%	21.1%	100.0%	
	% within Occupation of respondents	1.0%	9.9%	18.8%	7.9%	9.4%	
Strongly Disagree	% within the total respondents	2.6%	28.9%	36.8%	31.6%	100.0%	
	% within Occupation of respondents	1.0%	10.9%	13.9%	11.9%	9.4%	
Total	% within the total respondents	24.8%	25.1%	25.1%	25.1%	100.0%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

Respondents were asked about the association between the gender based violence and risk of HIV and AIDS in Nepalese context. In the response of above

question, 18.4% respondents were found strongly agree followed by 26.1% respondents were agree against the 9.4% strongly disagree followed by 9.4% disagree. Regarding this question higher numbers (36.7%) of respondents were found to be neutral.

As finding compared with the previous study; it shows the varied result. More than 50% respondents were found disagree on association between the gender based violence and risk of HIV transmission. In previous study, it is found that gender based violence creates the high chances to be HIV infection. According to the Sharma, 2006, violence against women is the most disturbing form of male power. It contributes both directly and indirectly to women's vulnerability to HIV. Similarly, WHO & UNAIDS , 1999 and Audrey E. Pettifora, 2004, p. 1440 also reported that more than three-quarters of the young women often face physical and sexual violence from their husband, family members, teachers, partners and employers as a result unwanted pregnancies, Sexually Transmitted Infection (STI) and HIV \ AIDS were rampant.

From the discussion in Nepalese context, there was no influence of gender based violence to increase the risk of HIV transmission. Though there was significant association (p=.000; it is less than .05) found between the respondents on their perception towards the gender based violence as an associated factors with increasing the risk of HIV and AIDS.

4.4.1.7 Association between Cultural and Traditional Practices and risk of HIV and AIDS

Table 48: Traditional practices and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	33.3%	33.3%	22.2%	11.1%	100%	Asymp. Sig. (2-

	% within Occupation of respondents	3.0%	3.0%	2.0%	1.0%	2.2%	sided) .000
Agree	% within the total respondents	53.3%	26.7%	13.3%	6.7%	100%	
	% within Occupation of respondents	7.9%	4.0%	2.0%	1.0%	3.7%	
Neutral	% within the total respondents	11.3%	28.6%	36.8%	23.3%	100%	
	% within Occupation of respondents	14.9%	37.6%	48.5%	30.7%	32.9%	
Disagree	% within the total respondents	25.9%	22.2%	25.9%	25.9%	100%	
	% within Occupation of respondents	20.8%	17.8%	20.8%	20.8%	20.0%	
Strongly Disagree	% within the total respondents	32.5%	22.9%	16.3%	28.3%	100%	
	% within Occupation of respondents	53.5%	37.6%	26.7%	46.5%	41.1%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100%	
	% within Occupation of respondents	100%	100%	100%	100%	100%	

Sources: Field survey, 2013

41.1% respondents were strongly disagreeing followed by 20% disagreeing in the question whether there is association between the cultural or traditional practices and risk of HIV and AIDS. Only 2.2% respondents were strongly agree followed by 3.7% were agree. 32.9% respondents were replied in neutral rating.

From the above data, it is found that more than 60% (majority) respondents reported that there is no association between cultural and traditional practices and risk of HIV and AIDS in the Nepalese context. Finding shows the varied result from the previous study.

Many previous literatures as mentioned in 2.3.14 of Chapter 2 show the closer association between the cultural practices and risk of HIV transmission. As previous literature, negative attitude towards the use of condom, patriarchal society, cultural attitude toward the sex, power dynamics in sexual relations and religious beliefs plays

an important role on females' vulnerability towards HIV and AIDS in the context of South Africa, Zimbabwe (CHIKOLOLERE).

Though there was significant association (p=.000; it is less than .05) found between respondents on their perception towards the cultural practices as an associated factors with increasing the risk of HIV and AIDS.

4.4.1.8 Association between Early Marriage and risk of HIV and AIDS

During the time of questionnaires survey, respondents were asked about that whether there is association between early marriage and risk of HIV and AIDS or not. The responses of respondents are tabulated in following table 50.

Table 49: Early marriage and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	45.5%	36.4%	18.2%		100.0%	Asymp. Sig. (2-sided) = .000 (S)
	% within Occupation of respondents	5.0%	4.0%	2.0%		2.7%	
Agree	% within the total respondents	62.5%	12.5%	12.5%	12.5%	100.0%	
	% within Occupation of respondents	19.8%	4.0%	4.0%	4.0%	7.9%	
Neutral	% within the total respondents	24.6%	26.2%	35.4%	13.8%	100.0%	
	% within Occupation of respondents	15.8%	16.8%	22.8%	8.9%	16.1%	
Disagree	% within the total respondents	24.4%	26.7%	24.4%	24.4%	100.0%	
	% within Occupation of respondents	20.8%	22.8%	20.8%	20.8%	21.3%	
Strongly Disagree	% within the total respondents	18.6%	25.2%	24.3%	31.9%	100.0%	
	% within Occupation of respondents	38.6%	52.5%	50.5%	66.3%	52%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100.0%	

	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

In various previous literatures; early marriage was also reported as associated factor with increasing the risk of HIV transmission. One previous study conducted at Zimbabwe between November 1999 and September 2002 among the 4393 sexually active women aged 18–35 years found that HIV prevalence in this sample was 40.1%. The median age of coital debut was 18 years and 11.8% of women reporting having experienced coital debut at age 15 or younger. Women with early coital debut had a significantly higher risk profile, including multiple lifetime partners and not completing high school (Audrey E. Pettifora b. A., 2004, p. 1435).

So this variable was also tested in the context of Nepal, but above data shows that 52% respondents are strongly disagree against the 2.7% respondents are strongly agree that early marriage is associated with increasing the risk of HIV transmission. 21.3% are in disagree followed by 16.1% are in neutral. From this study mean age of marriage age was found 22 years but more than 35% had married before 20 years of age. The early marriage system is found high in far-eastern region of Nepal and Dalit (disadvantage) communities of Tarain region in compare with other part of Nepal.

Though there was significant association (p=.000; it is less than .05) found on perception of respondents on early marriage as an associated factors with increasing the risk of HIV and AIDS.

4.4.1.9 Association between gender Inequality and risk of HIV and AIDS

Table 50: Gender Inequality and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	54.3%	11.4%	14.3%	20%	100%	Asymp. Sig. (2-sided) = .000
	% within Occupation of respondents	18.8%	4.0%	5.0%	6.9%	8.7%	

Agree	% within the total respondents	36.4%	21.2%	9.3%	33.1%	100%	(S)
	% within Occupation of respondents	42.6%	24.8%	10.9%	38.6%	29.2%	
Neutral	% within the total respondents	12.3%	31.5%	32.9%	23.3%	100%	
	% within Occupation of respondents	17.8%	45.5%	47.5%	33.7%	36.1%	
Disagree	% within the total respondents	21.4%	21.4%	30.4%	26.8%	100%	
	% within Occupation of respondents	11.9%	11.9%	16.8%	14.9%	13.9%	
Strongly Disagree	% within the total respondents	18.4%	28.6%	40.8%	12.2%	100%	
	% within Occupation of respondents	8.9%	13.9%	19.8%	5.9%	12.1%	
Total	% within the total respondents	25%	25%	25%	25%	100%	
	% within Occupation of respondents	100%	100%	100%	100%	100%	

Sources: Field survey, 2013

Data was collected from the respondents by asking the question that whether there is association between gender inequality and risk of HIV transmission. Data mentioned that very few (only 8.7%) respondents gave response in strongly agree followed by 29.2% response in agree. Apart from this, 13.9% respondents disagree and 12.1% strongly disagree. Majority of the respondents (36.1%) replied in neutral answer. From this data, it is known that majority of respondents are not sure to say the association between gender inequality and risk of HIV and AIDS.

Though there was significant association (p=.000; it is less than .05, df = 12) found on perception of respondents on gender inequality as an associated factors with increasing the risk of HIV and AIDS.

4.4.2 Economic factors

Researcher has tried to find out the association between economic factors and risk of HIV transmission.

4.4.2.1 Association between Poverty and risk of HIV and AIDS

Table 51: Poverty and risk of HIV and AIDS

Responses	Occupation of respondents	Total	Pearson

		Health workers	Garment Factory workers	Transport workers	Brick factory workers		Chi-Square
Strongly Agree	% within the total respondents	22.1%	27.5%	5.3%	45.0%	100%	Asymp. Sig. (2-sided) = .000 (S)
	% within Occupation of respondents	28.7%	36%	6.9%	58.4%	32.5%	
Agree	% within the total respondents	21.7%	22.4%	39.9%	16.1%	100%	
	% within Occupation of respondents	30.7%	32%	56.4%	22.8%	35.5%	
Neutral	% within the total respondents	29.2%	29.2%	37.5%	4.2%	100%	
	% within Occupation of respondents	6.9%	7.0%	8.9%	1.0%	6%	
Disagree	% within the total respondents	39.4%	15.2%	31.8%	13.6%	100%	
	% within Occupation of respondents	25.7%	10%	20.8%	8.9%	16.4%	
Strongly Disagree	% within the total respondents	20.5%	38.5%	17.9%	23.1%	100%	
	% within Occupation of respondents	7.9%	15%	6.9%	8.9%	9.7%	
Total	% within the total respondents	25.1%	24.8%	25.1%	25.1%	100%	
	% within Occupation of respondents	100%	100%	100%	100%	100%	

Sources: Field survey, 2013

In this research poverty was taken as one of the independent variables on the basis of various previous literatures, are identified that poverty is positively associated with HIV infection. The primary survey data shows here that 32.5% respondents were strongly agreed followed by 35.5% were agreed regarding the association between the poverty and risk of HIV and AIDS. Besides that, 16.4% respondents disagree and 9.7% strongly disagree.

Majority of the respondents agreed that there is association between the poverty and risk of HIV transmission. The finding can be compared with the previous study also which shows the similar result. As previous result reported that 'the connection between individual wealth and HIV/AIDS has long been of interest to researchers and policy makers. In the early stages of the epidemic in sub-Saharan

Africa, economic status was positively associated with HIV infection (UNAIDS 1998; Hargreaves et al. 2002; Lyons 2003). A key ex- planation for this relationship was that wealthier men could attract and afford multiple sexual partners—particularly commercial sex workers, who were believed to be the main sources of infection—and therefore faced greater risk of acquiring the disease (Cleland, Ali, and Capo-Chichi 1999). Through their engagement in commercial sex relationships, wealthy men helped channel HIV infection into the general population' (luke, 2012, p. 377).

There was association (p=.000; it is less than .05, df = 12)) found on perception of respondents on poverty as an associated factors with increasing the risk of HIV and AIDS.

4.4.2.2 Association between 'Migration and risk of HIV and AIDS'

Table 52: Migration and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	25.1%	22.1%	25.5%	27.3%	100.0%	Asymp. Sig. (2-sided) = .017 (S)
	% within Occupation of respondents	57.4%	51.0%	58.4%	62.4%	57.3%	
Agree	% within the total respondents	25.0%	22.8%	21.7%	30.4%	100.0%	
	% within Occupation of respondents	22.8%	21.0%	19.8%	27.7%	22.8%	
Neutral	% within the total respondents	28.9%	39.5%	15.8%	15.8%	100.0%	
	% within Occupation of respondents	10.9%	15.0%	5.9%	5.9%	9.4%	
Disagree	% within the total respondents	34.8%	17.4%	34.8%	13.0%	100.0%	
	% within Occupation of respondents	7.9%	4.0%	7.9%	3.0%	5.7%	
Strongly Disagree	% within the total respondents	5.3%	47.4%	42.1%	5.3%	100.0%	
	% within Occupation of respondents	1.0%	9.0%	7.9%	1.0%	4.7%	
Total	% within the total respondents	25.1%	24.8%	25.1%	25.1%	100.0%	

	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

Migration problem is high in developing countries which support to increase the risk of HIV transmission. In the Nepalese context; migrant population stands as a bridge population to transmit the HIV from most at risk population to general population. In this research also, respondents were asked about the association between the migration and risk of HIV transmission. Data shows here that 57.3% respondents strongly agreed followed by 22.8% respondents agree. Against this data, 5.7% and 4.7% respondents respectively disagree and strongly disagree in above mentioned question. Around 9.4% respondents were found to reply in neutral response.

Various national and international pervious literatures also show that migration is one causative factor to spread the HIV and AIDS. Bummer has mentioned that 'migrants – and mobile populations in general – have played a significant role in the initial spread of HIV in the southern African region' (November 2002, p. 7). Similarly, in the context of Nepal, Beine has also mentioned that 'migration has been a factor identified as contributing to the spread of HIV and AIDS in Nepal. It is believed that many migrant laborers are bringing the HIV virus home with them when they return to Nepal' (Ensnared by AIDS: Cultural Context of HIV/AIDS in Nepal, 2003, p. 79).

There was association ($p=.017$; it is less than .05, $df = 12$)) found between the respondents on their perception on migration as an associated factors with increasing the risk of HIV and AIDS.

4.4.3 Political/structural factors

4.4.3.1 Association between the conflict and Risk of HIV and AIDS

Researcher had collected the primary data through the questionnaires from the 4 different groups regarding the roles of conflict increasing the risk of HIV. It was the opinion survey measured in Likert scales. The responses of respondents are tabulated as bellows:

Table 53: Conflict and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	21.4%	19.9%	28.9%	29.9%	100.0%	Asymp. Sig. (2-sided) = .010 (S)
	% within Occupation of respondents	42.6%	39.6%	57.4%	59.4%	49.8%	
Agree	% within the total respondents	29.6%	25.8%	22.0%	22.6%	100.0%	
	% within Occupation of respondents	46.5%	40.6%	34.7%	35.6%	39.4%	
Neutral	% within the total respondents	22.6%	45.2%	25.8%	6.5%	100.0%	
	% within Occupation of respondents	6.9%	13.9%	7.9%	2.0%	7.7%	
Disagree	% within the total respondents	50.0%	33.3%	0%	16.7%	100.0%	
	% within Occupation of respondents	3.0%	2.0%	0%	1.0%	1.5%	
Strongly Disagree	% within the total respondents	14.3%	57.1%	0%	28.6%	100.0%	
	% within Occupation of respondents	1.0%	4.0%	0%	2.0%	1.7%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100%	
	% within Occupation of respondents	100%	100%	100%	100%	100%	

Sources: Field survey, 2013

Various previous researchers have mentioned that during the conflict period; people become more vulnerable for HIV transmission. According to the Kalipeni, ‘Countries experiencing political and/or economic instability have been more vulnerable to the spread of diseases such as HIV/AIDS’ (2000, p. 966). Similarly,

Dixon also mentioned that when Law, order and system is disturbed and terrorist and armed forces come in road, then health related program and message dissemination remains totally stopped which promote the spread of HIV (AIDS and You, 2002, pp. 21-22). Regarding the sex-business during the conflict, Mr. Brummer said that Soldiers are living in a stressful environment, separated from their family, while civilians might get exposed to sexual violence and have to survive in situations of extreme poverty, which may force them to sell sex to survive (so-called survival sex) (Labour Migration and HIV/AIDS in Southern Africa, November 2002, p. 6).

On the basis of previous finding; researcher had asked the question regarding the association between conflict and risk of HIV and AIDS in the context of Nepal during the survey among the 404 respondents. The primary data shows that 49.8% respondents reported 'strongly agree' followed by 39.4% respondents reported 'agree'. Besides that only 1.5% reported ' disagree' followed by 1.7% reported ' strongly disagree'. 7.7% respondents found in neutral response.

The finding shows the similarity with the previous literature. The primary survey data shows that around 90% respondents agreed that conflict contribute increasing the risk of HIV transmission in Nepalese context also.

There was association (p=.010; it is less than .05, df = 12)) found between the respondents on their perception on conflict as an associated factors with increasing the risk of HIV and AIDS.

4.4.3.2 Study of Secondary data

Besides the above primary data, Researcher has compared the secondary date of HIV infection between pre, during and post conflict between armed force of Nepal and the Communist Party of Nepal-Maoist (CPN-M) to measure that whether there is any association or not between the conflict and risk of HIV transmission.

Table 54: Secondary data of Estimated number of PLHIV

Pre-Conflict Situation of HIV and AIDS			
Year	**Estimated number of PLHIV**	**Increasing No. of PLHIV**	**Increasing trend of PLHIV in %**
1991	24000	-	-
1992	28000	4000	16.67
1993	32000	4000	14.29
1994	36000	4000	12.50
1995	40000	4000	11.11
During Conflict Situation of HIV and AIDS			
1996	44000	4000	10.0
1997	48000	4000	9.1
1998	52000	4000	8.3
1999	55000	3000	5.8
2000	58000	3000	5.5
2001	60000	2000	3.4
2002	62000	2000	3.3
2003	63000	1000	1.6
2004	64000	1000	1.6
2005	64000	0	0.0
2006	64000	0	0.0
Post-Conflict Situation of HIV and AIDS			
2007	64000	0	0.0
2008	64000	0	0.0
2009	64000	0	0.0
2010	63528	-472	-0.7
2011	55600	-7928	-12.5

Data Sources: (UNAIDS, 2001), (UNAIDS A. &., 2011, p. 21) (Donovan, 31 August 2010) and (GOVERNMENT OF NEPAL MINISTRY OF HEALTH AND POPULATION, 2012, p. iv).

The secondary data shows that trend of HIV infection was increasing in decreasing rate from the 1991 to 2004. It is seen that increasing rate was 16.67% from 1991 to 1992 which came in 1.6% from 2003 to 2004. Post conflict situation is seen in continue decreasing trend. The above data shows some variation with the primary response of respondents. The secondary data was divided into 3 stages; pre-conflict, during conflict and post-conflict. If we compare the data between during conflict and post-conflict then it shows the similarity with primary data and with other previous literature because in post-conflict, estimated no. of HIV positive was decreased. But when we compare the data with pre-conflict stage then it is found that during the pre-conflict also after identifying the HIV virus in Nepal, the trend of estimated no. of HIV positive was increasing. So, in Nepalese context, practically (on the basis of

secondary data of estimated no. of PLHIV) conflict was not significantly associated with increasing the risk of HIV transmission.

4.4.4 Individual factors

Individual behavior of people play the main role to make the vulnerable for HIV transmission so regarding the individual practices, researcher had identified some factors; negligence behavior, lack of awareness and alcoholic nature and collected the perception of respondents about these factors and its association with risk of HIV transmission.

4.4.4.1 Association between Negligence and the risk of HIV and AIDS

Table 55: Negligence and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	21.6%	24.8%	25.4%	28.2%	100.0%	Asymp. Sig. (2-sided) .000
	% within Occupation of respondents	74.3%	85.1%	87.1%	97.0%	85.9%	
Agree	% within the total respondents	58.3%	19.4%	19.4%	2.8%	100.0%	
	% within Occupation of respondents	20.8%	6.9%	6.9%	1.0%	8.9%	
Neutral	% within the total respondents	27.8%	38.9%	27.8%	5.6%	100.0%	
	% within Occupation of respondents	5.0%	6.9%	5.0%	1.0%	4.5%	
Disagree	% within the total respondents	0%	50.0%	0%	50.0%	100.0%	
	% within Occupation of respondents	0%	1.0%	0%	1.0%	.5%	
Strongly Disagree	% within the total respondents	0%	0%	100.0%	0%	100.0%	
	% within Occupation of respondents	0%	0%	1.0%	0%	.2%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100.0%	

	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

85.9% respondents reported that they were 'strongly agree' regarding the association between the negligence and risk of HIV and AIDS followed by 8.9% respondents reported 'agree'. In total more than 94% respondents mentioned that negligence of people is one major factor associated with increasing the risk of HIV and AIDS in Nepalese context. The data was found fully supported by qualitative data (open ended question) collected from the respondents. Negligence was reported top 1 factor in ranking.

There was association (p=.000; it is less than .05, df = 12)) found between the respondents on their perception towards the negligence as an associated factors with increasing the risk of HIV and AIDS.

4.4.4.2 Lack of awareness is associated with risk of HIV transmission

Table 56: Lack of awareness and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	27.3%	22.1%	22.4%	28.2%	100.0%	Asymp. Sig. (2-sided) .001
	% within Occupation of respondents	83.2%	67.3%	68.3%	86.1%	76.2%	
Agree	% within the total respondents	21.8%	26.9%	34.6%	16.7%	100.0%	
	% within Occupation of respondents	16.8%	20.8%	26.7%	12.9%	19.3%	
Neutral	% within the total respondents	0%	75.0%	25.0%	0%	100.0%	
	% within Occupation of respondents	0%	8.9%	3.0%	0%	3.0%	
Disagree	% within the total respondents	0%	50.0%	50.0%	0%	100.0%	

	% within Occupation of respondents	0%	2.0%	2.0%	0%	1.0%	
Strongly Disagree	% within the total respondents	0%	50.0%	0%	50.0%	100.0%	
	% within Occupation of respondents	0%	1.0%	0%	1.0%	.5%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100.0%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

In total, 95.5% respondents (76.2% reported 'strongly agree' and 19.3% reported 'agree') reported that there is association between the lack of awareness and risk of HIV and AIDS. Out of rest 3.0% reported that they were neither agrees nor disagrees.

There was association (p=.001; it is less than .05, df = 12)) found between the respondents on their perception on lack of awareness as an associated factors with increasing the risk of HIV and AIDS.

4.4.4.3 Association between Alcoholic nature and the risk of HIV and AIDS

Table 57: Alcoholic nature and risk of HIV and AIDS

Responses		**Occupation of respondents**				**Total**	**Pearson Chi-Square**
		Health workers	**Garment Factory workers**	**Transport workers**	**Brick factory workers**		
Strongly Agree	% within the total respondents	25.0%	14.1%	7.8%	53.1%	100.0%	Asymp. Sig. (2-sided) .000 (S)
	% within Occupation of respondents	15.8%	8.9%	5.0%	33.7%	15.8%	
Agree	% within the total respondents	28.6%	22.2%	20.6%	28.6%	100.0%	
	% within Occupation of respondents	17.8%	13.9%	12.9%	17.8%	15.6%	
Neutral	% within the total respondents	10.6%	42.4%	32.9%	14.1%	100.0%	
	% within Occupation of respondents	8.9%	35.6%	27.7%	11.9%	21.0%	
Disagree	% within the total respondents	34.3%	23.9%	25.4%	16.4%	100.0%	

	% within Occupation of respondents	22.8%	15.8%	16.8%	10.9%	16.6%	
Strongly Disagree	% within the total respondents	28.0%	20.8%	30.4%	20.8%	100.0%	
	% within Occupation of respondents	34.7%	25.7%	37.6%	25.7%	30.9%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100.0%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

Regarding the association between alcoholically nature and risk of HIV transmission, 30.9% reported 'strongly disagree' followed by 16.6% reported 'disagree'. 21% respondents reported 'neither agree nor disagree (neutral)'. Only 15.8% and 15.6% reported 'strongly agree' and 'agree' respectively.

Comparatively, higher number of Transport workers mentioned that there was no association between the alcoholically nature and risk of HIV transmission than the other groups. But as findings came from the in-depth interview with transport workers; majority of respondents reported that they used to take the alcohol during their sex with non-regular sex partners. Above survey data shows the vary result from the previous study also.

Similarly, from the various previous literatures also identified the close association between the alcohol and risky sexual activity. According to the George, 'there is a scientific basis for the belief that alcohol consumption might increase the likelihood of participating in a risky sexual encounter' (1989, p. 374). In addition to this study, one study of Uganda reported that alcohol drinking and alcoholism were reported to be the major social factors influencing the spread of HIV and AIDS. It was reported that when people get drunk, their judgment gets impaired and are likely to engage in unintended and unprotected sex. In particular, some men even get wild and

lose rationality and sometimes rape other peoples' wives or bar maids (Delius Asiimwe, June 2003, p. 36).

Though there was association (p=.000; it is less than .05, df = 12)) found between the respondents on their perception on alcohol consumption during the sexual intercourse as an associated factors with increasing the risk of HIV and.

4.4.5 Educational factors

Table 58: Education and risk of HIV and AIDS

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	31.0%	22.3%	18.2%	28.5%	100.0%	Asymp. Sig. (2-sided) .000 (S)
	% within Occupation of respondents	84.2%	60.4%	49.5%	77.2%	67.8%	
Agree	% within the total respondents	14.8%	24.1%	42.6%	18.5%	100.0%	
	% within Occupation of respondents	15.8%	25.7%	45.5%	19.8%	26.7%	
Neutral	% within the total respondents	0%	70.0%	30.0%	0%	100.0%	
	% within Occupation of respondents	0%	6.9%	3.0%	0%	2.5%	
Disagree	% within the total respondents	0%	50.0%	25.0%	25.0%	100.0%	
	% within Occupation of respondents	0%	4.0%	2.0%	2.0%	2.0%	
Strongly Disagree	% within the total respondents	0%	75.0%	0%	25.0%	100.0%	
	% within Occupation of respondents	0%	3.0%	0%	1.0%	1.0%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100.0%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

Educational factor is reported as one of the major factor associated with increasing the risk of HIV and AIDS. From the survey data as tabulated above shows that 67.8% respondents reported 'strongly agree' followed by 26.7% reported 'agree'

regarding the association between education and risk of HIV and AIDS. Only 3% respondents reported 'disagree' followed by 2.5% had neutral response.

There was significant association (p=.004) found between the respondents on their perception that illiteracy can be causative factors for increasing the risk of HIV transmission.

4.5 Risk Reduction of HIV and AIDS (Corrective Measures)

Respondents' opinion was collected to identify the factors associated with prevention of HIV transmission. The data are tabulated and discussed as bellows:

4.5.1 Awareness raising can reduce the risk of HIV and AIDS

Table 59: Awareness raising and risk reduction

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	25.1%	22.5%	24.6%	27.8%	100.0%	Asymp. Sig. (2-sided) .004 (S)
	% within Occupation of respondents	85.1%	76.2%	83.2%	94.1%	84.7%	
Agree	% within the total respondents	32.6%	25.6%	27.9%	14.0%	100.0%	
	% within Occupation of respondents	13.9%	10.9%	11.9%	5.9%	10.6%	
Neutral	% within the total respondents	6.3%	68.8%	25.0%	0%	100.0%	
	% within Occupation of respondents	1.0%	10.9%	4.0%	0%	4.0%	
Disagree	% within the total respondents	0%	50.0%	50.0%	0%	100.0%	
	% within Occupation of respondents	0%	1.0%	1.0%	0%	.5%	
Strongly Disagree	% within the total respondents	0%	100.0%	0%	0%	100.0%	
	% within Occupation of respondents	0%	1.0%	0%	0%	.2%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100.0%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

84.7% of the respondents strongly agree that awareness rising can support to reduce the risk of HIV transmission followed by 10.6% agree on the same. Besides that very few respondents (.7%) disagree on it.

There was significant association (p=.004) found between the respondents on their perception on awareness rising to reduce the risk of HIV transmission.

4.5.2 Mandatorily blood test of suspected people

Table 60: blood testing and risk reduction

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	22.9%	30.5%	33.1%	13.6%	100.0%	Asymp. Sig. (2-sided) .000 (S)
	% within Occupation of respondents	26.7%	35.6%	38.6%	15.8%	29.2%	
Agree	% within the total respondents	20.2%	21.1%	29.4%	29.4%	100.0%	
	% within Occupation of respondents	21.8%	22.8%	31.7%	31.7%	27.0%	
Neutral	% within the total respondents	16.2%	43.2%	27.0%	13.5%	100.0%	
	% within Occupation of respondents	5.9%	15.8%	9.9%	5.0%	9.2%	
Disagree	% within the total respondents	22.7%	19.3%	14.8%	43.2%	100.0%	
	% within Occupation of respondents	19.8%	16.8%	12.9%	37.6%	21.8%	
Strongly Disagree	% within the total respondents	50.0%	17.3%	13.5%	19.2%	100.0%	
	% within Occupation of respondents	25.7%	8.9%	6.9%	9.9%	12.9%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100.0%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

Regarding the mandatorily blood test of suspected people, comparatively more than 55% respondents (29.2% reported ‘strongly agree followed by 27.0% reported ‘agree’) agree that risk of HIV transmission can be reduced by mandatorily blood test of suspected people. This data shows vary between the opinion of respondents and rule of HIV testing. As the rules of HIV testing; it is voluntarily.

There was significant association (p=.000; it is less than .05) found between the respondents on their perception on mandatorily blood testing of suspected people.

4.5.3 Isolate the PLHIV from community

Table 61: Isolation of PLHIV and risk reduction

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	2.8%	33.3%	36.1%	27.8%	100.0%	Asymp. Sig. (2-sided) .000
	% within Occupation of respondents	2.0%	24.0%	25.7%	19.8%	17.9%	
Agree	% within the total respondents	3.5%	19.3%	52.6%	24.6%	100.0%	
	% within Occupation of respondents	2.0%	11.0%	29.7%	13.9%	14.1%	
Neutral	% within the total respondents	13.2%	31.6%	44.7%	10.5%	100.0%	
	% within Occupation of respondents	5.0%	12.0%	16.8%	4.0%	9.4%	
Disagree	% within the total respondents	27.2%	24.3%	15.5%	33.0%	100.0%	
	% within Occupation of respondents	27.7%	25.0%	15.8%	33.7%	25.6%	
Strongly Disagree	% within the total respondents	48.1%	21.1%	9.0%	21.8%	100.0%	
	% within Occupation of respondents	63.4%	28.0%	11.9%	28.7%	33.0%	
Total	% within the total respondents	25.1%	24.8%	25.1%	25.1%	100.0%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

The data shows that still 35% respondents (17.9% reported ‘strongly agree followed by 14.1% reported ‘agree’) agree that HIV can be reduced by keeping PLHIV in separate place. The data indicate that still 35% people have misunderstanding of HIV transmission and does stigma toward the PLHIV.

There was significant association (p=.000; it is less than .05) found between the respondents on their perception on that awareness raining can support to reduce the risk of HIV transmission.

4.5.4 Provide job to all can reduce the risk of HIV and AIDS

Table 62: Job and risk reduction

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	13.8%	28.4%	10.1%	47.7%	100.0%	Asymp. Sig. (2-sided) .000
	% within Occupation of respondents	14.9%	30.7%	10.9%	51.5%	27.0%	
Agree	% within the total respondents	36.8%	21.6%	24.6%	17.0%	100.0%	
	% within Occupation of respondents	62.4%	36.6%	41.6%	28.7%	42.3%	
Neutral	% within the total respondents	22.0%	36.6%	31.7%	9.8%	100.0%	
	% within Occupation of respondents	8.9%	14.9%	12.9%	4.0%	10.1%	
Disagree	% within the total respondents	18.9%	18.9%	47.2%	15.1%	100.0%	
	% within Occupation of respondents	9.9%	9.9%	24.8%	7.9%	13.1%	
Strongly Disagree	% within the total respondents	13.3%	26.7%	33.3%	26.7%	100.0%	
	% within Occupation of respondents	4.0%	7.9%	9.9%	7.9%	7.4%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100.0%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

Respondents were asked about the employment opportunity then 27.0% reported ‘strongly agree’ followed by 42.3% reported ‘agree’ that by providing the job opportunity to all can reduce the risk of HIV transmission. Besides that 20.5% respondents were disagree on it.

There was significant association (p=.000; it is less than .05) found between the response of respondents on their perception on that providing the job opportunity can support to reduce the risk of HIV transmission.

4.5.5 Improving in individual behavior

Table 63: Improving individual behavior and risk reduction

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	21.3%	24.0%	26.6%	28.1%	100.0%	Asymp. Sig. (2-sided) .001
	% within Occupation of respondents	72.3%	81.2%	90.1%	95.0%	84.7%	
Agree	% within the total respondents	51.3%	23.1%	12.8%	12.8%	100.0%	
	% within Occupation of respondents	19.8%	8.9%	5.0%	5.0%	9.7%	
Neutral	% within the total respondents	25.0%	50.0%	25.0%	0%	100.0%	
	% within Occupation of respondents	4.0%	7.9%	4.0%	0%	4.0%	
Disagree	% within the total respondents	60.0%	20.0%	20.0%	0%	100.0%	
	% within Occupation of respondents	3.0%	1.0%	1.0%	0%	1.2%	
Strongly Disagree	% within the total respondents	50.0%	50.0%	0%	0%	100.0%	
	% within Occupation of respondents	1.0%	1.0%	0%	0%	.5%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100.0%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

84.7% respondents strongly agree that risk of HIV can be reduced by improving the individual behavior followed by 9.7% respondents reported ‘agree’. Very few (only 1.7%) reported that they disagree on above.

There was significant association (p=.001; it is less than .05) found between the respondents on their perception on that improving the individual behavior can reduce the risk of HIV transmission.

4.5.6 Manage the separate 'Red Light Areas' for sex workers

Table 64: Separate red light area can reduce risk of HIV

Response		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	2.6%	23.1%	50.0%	24.4%	100.0%	Asymp. Sig. (2-sided) .000
	% within Occupation of respondents	2.0%	17.8%	39.0%	18.8%	19.4%	
Agree	% within the total respondents	16.7%	30.7%	29.8%	22.8%	100.0%	
	% within Occupation of respondents	18.8%	34.7%	34.0%	25.7%	28.3%	
Neutral	% within the total respondents	33.3%	35.9%	23.1%	7.7%	100.0%	
	% within Occupation of respondents	12.9%	13.9%	9.0%	3.0%	9.7%	
Disagree	% within the total respondents	21.7%	16.7%	21.7%	40.0%	100.0%	
	% within Occupation of respondents	12.9%	9.9%	13.0%	23.8%	14.9%	
Strongly Disagree	% within the total respondents	48.2%	21.4%	4.5%	25.9%	100.0%	
	% within Occupation of respondents	53.5%	23.8%	5.0%	28.7%	27.8%	
Total	% within the total respondents	25.1%	25.1%	24.8%	25.1%	100.0%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

In the context of Nepal, sex business is illegal and government punished such persons or organization which involves in promoting the sex business. Even though, researcher had collected opinion of respondents regarding the way of HIV prevention by managing the separate red light area for sex business. Above data shows that out of total 47.7% respondents (19.4% 'strongly agree' and 28.3% 'agree') agree on above mentioned way of HIV prevention. Similarly, 42.7% respondents (27.8% 'strongly disagree' and 14.9% 'disagree') had just oppositive ideas; they disagree on the above way of HIV prevention. In their opinion, managing the separate area for sex business

destroys the Nepalese culture and it support to increase the risk of HIV transmission. 9.7% were in neutral (neither agree nor disagree).

There was significant association (p=.000; it is less than .05) found between the respondents on their perception on managing the separate red-light areas can reduce the risk of HIV transmission.

4.5.7 Controlling of human trafficking

Table 65: Controlling human trafficking can reduce risk of HIV

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	27.5%	24.5%	23.4%	24.5%	100.0%	Asymp. Sig. (2-sided) .181
	% within Occupation of respondents	74.3%	66.3%	63.4%	66.3%	67.6%	
Agree	% within the total respondents	22.0%	22.0%	26.6%	29.4%	100.0%	
	% within Occupation of respondents	23.8%	23.8%	28.7%	31.7%	27%	
Neutral	% within the total respondents	11.8%	47.1%	41.2%	0%	100%	
	% within Occupation of respondents	2.0%	7.9%	6.9%	0%	4.2%	
Disagree	% within the total respondents	0%	33.3%	33.3%	33.3%	100%	
	% within Occupation of respondents	0%	1%	1%	1%	.7%	
Strongly Disagree	% within the total respondents	0%	50%	0%	50%	100%	
	% within Occupation of respondents	0%	1%	0%	1.0%	.5%	
Total	% within the total respondents	25%	25%	25%	25%	100%	
	% within Occupation of respondents	100%	100%	100%	100%	100%	

Sources: Field survey, 2013

Many previous literatures have mentioned human trafficking as a causative factor which indirectly promotes the risk of HIV transmission. Regarding the same issue, respondents were asked the question on preventive measures of risk of HIV transmission. 67.6% respondents strongly agree that controlling the human trafficking can reduce the risk of HIV transmission followed by 27% reported ‘agree’. Only very few respondents had reported disagree (.7%) and strongly disagree (.5%).

There was no significant association (p=.181; it is less than .05) found between the respondents on their perception on that controlling the human trafficking can reduce the risk of HIV transmission.

4.5.8 Stopping of stigma and discrimination towards PLHIV

Table 66: Stopping stigma can reduce risk of HIV

Responses		Occupation of respondents				Total	Pearson Chi-Square
		Health workers	Garment Factory workers	Transport workers	Brick factory workers		
Strongly Agree	% within the total respondents	18.6%	21.6%	26.0%	33.8%	100.0%	Asymp. Sig. (2-sided) .000 (S)
	% within Occupation of respondents	42.6%	49.5%	59.4%	77.2%	57.2%	
Agree	% within the total respondents	38.7%	23.7%	19.4%	18.3%	100.0%	
	% within Occupation of respondents	35.6%	21.8%	17.8%	16.8%	23.0%	
Neutral	% within the total respondents	21.2%	48.5%	30.3%		100.0%	
	% within Occupation of respondents	6.9%	15.8%	9.9%		8.2%	
Disagree	% within the total respondents	25.8%	35.5%	29.0%	9.7%	100.0%	
	% within Occupation of respondents	7.9%	10.9%	8.9%	3.0%	7.7%	
Strongly Disagree	% within the total respondents	43.8%	12.5%	25.0%	18.8%	100.0%	
	% within Occupation of respondents	6.9%	2.0%	4.0%	3.0%	4.0%	
Total	% within the total respondents	25.0%	25.0%	25.0%	25.0%	100.0%	
	% within Occupation of respondents	100.0%	100.0%	100.0%	100.0%	100.0%	

Sources: Field survey, 2013

Stigma and discrimination is reported as one of the major factor associated with increasing the risk of HIV and AIDS. In Nepalese context, stigma and discrimination is strongly associated with HIV and AIDS because of the misunderstanding on way of HIV transmission. Majority people still thinks that HIV transmits only through the sex. In this research also, 94.1% of the respondents mentioned that unsafe sex is the means of HIV transmission followed by 45.3% of the respondents mentioned that sharing of the needles.

More than 80% (57.2% ‘strongly agree’ and 23.0% ‘agree’) respondents agreed that if we stop the stigma and discrimination towards the PLHIV then we can reduce the risk of HIV transmission.

There was significant association (p=.000; it is less than .05) found between the respondents on their perception on that reducing the stigma and discrimination can reduce the risk of HIV transmission.

4.5.9 Responsibilities to reduce the risk of HIV and AIDS

Organizations	Response		Actual responsibilities of individual in percent
	N	Percent	
Government	72	17.8	17.8 + 31.2 = 49
Non-Governmental organizations	36	8.9	8.9 + 31.2 = 40.1
Private Sectors	24	5.9	5.9 + 31.2 = 37.1
Communities	34	8.4	8.4 + 31.2 = 39.6
Individual people	256	63.4	63.4 + 31.2 = 94.6
All are equally responsible	126	31.2	
Don't know	9	2.2	

Table 67: Reponsibilities to reduce risk of HIV

Responses		Occupation of respondents				Total
		Health workers	Garment Factory workers	Transport workers	Brick factory workers	
Government	% within the total respondents	23.6%	41.7%	22.2%	12.5%	100.0%
Non-Governmental Organization	% within the total respondents	41.7%	19.4%	25.0%	13.9%	100.0%
Private Sectors	% within the total respondents	54.2%	4.2%	29.2%	12.5%	100.0%
Community	% within the total respondents	38.2%	20.6%	26.5%	14.7%	100.0%
Individual	% within the total respondents	18.4%	23.4%	29.3%	28.9%	100.0%
All are equal	% within the total respondents	47.6%	18.3%	14.3%	19.8%	100.0%
Don't Know	% within the total respondents	0%	55.6%	44.4%	0%	100.0%

Sources: Field survey, 2013

Multiple choice optional questions were asked with respondents regarding the responsible agencies for HIV risk reduction. Majority of respondents (63.4%) reported that individual people should be more responsible to reduce the risk of HIV

and AIDS followed by 31.2% mentioned that all (Governmental agencies, Non-governmental, Private sectors, community and Individual) should be equally responsible. Only 17.8% reported Governmental agencies, 8.9% reported Non-governmental organization, 8.4% reported community and 5.9% reported private organization should be responsible.

CHAPTER – FIVE
QUALITATIVE DATA ANALYSIS

Some semi-structured questionnaires were also developed to collect the qualitative information from the respondents for the purpose to make in-depth understanding on perception towards HIV and AIDS. Basically, discussion was held under 5 themes: Knowledge, attitude, sexual practices, causative factors and preventive measures of HIV and AIDS. On the basis of nature of occupation and level of education, focus of these themes was slightly categorized during the interview. The questions related with knowledge, attitude and sexual practices were much discussed among garment factory workers, brick factory workers and transport workers and causative factors and preventive measures were more discussed with health workers.

5.1 In-depth Interview

In-depth interview was also taken with key informants from Garment factory workers, brick factory workers, transport workers and health workers. The details discussions were elaborated below.

5.1.1 Interview with Transport workers

Interview No. 1

Knowledge:

42 years Mr. Arjun (name changed), permanent resident of Dhangadi district (far western region of Nepal) working in transport sectors since 22 years told *"I have heard about the HIV and it is dangerous disease. It transmits from the unsafe sex with multiple sex partners. I don't know AIDS is cured or not. But as I know* ***if we wash penis from our own urine after sex; any virus can be died. So often I also used to do the same when I have unsafe sex so I felt I am not in risk"***.

Attitude:

Regarding the attitude on HIV and AIDS, he said "I have not seen any HIV infected person. If I will meet such person then *I will not talk with him like other*

normal people because there may be chances of transmission. If any family members will get HIV then I will keep it secret because community will hate such infected person. Besides that HIV infected person will also loss their confidence to talk with neighbor and friends. So, ***if I will be infected then I will do suicide because people will hate me and morality will be down among the family, relative and community. People will call by the name of AIDS"***.

Practices:

As he was asked about his sexual behavior then he explained, "*We have to live long time far from the family (here the family indicates the wife) so sex relation happens with non-regular sex partners. It is normal in transport sectors*." He had also non-regular sex partners. Before marriage; he had kept sexual relation with a ***Badi*** woman (a group of Nepalese women in Mid-western and far-western of Nepal who used to involve in sex business in past years) by paying 20 rupees for one time sex. Even after marriage, one night, he had sex with a woman while he was too much drunk without use of condom. Connecting with this incident, laughingly he added "*when I wake up early in the morning and saw that lady then I was surprised because that female was old (teeth less) whom I had sexual relation in last night"*. He said "*everything's happed due to* ***too much drink***".

He added again, "*But regularly, we can't visit the sex workers because of limited income. We can't afford. Basically I do not use to pay money for sex*".

"*Nowadays I regularly* ***use condom*** *even with my wife also. It prevents me from the HIV transmission and unwanted pregnancy also*".

Causes of increasing the HIV and AIDS:

Mr. Arjun, told "*People engage in sex business because of poverty (compulsion) for some people and someone engage for joy also. Besides that lack of knowledge and negligence are major causes of HIV transmission*".

Preventing Measures:

Mr. Arjun, told *"Government should manage the separate red-light areas for sex business then risk of HIV transmission will be reduced".*

Interview No. 2

Face to face interview was taken with 25 years Mr. Bijaya (name changed), permanent resident of Udayapur district (Eastern Region of Nepal). He was working in transport sector (Kathmandu to Udayapur) as a conductor since 6 years. He had completed class 7 and married at the age of 18.

He was asked some questions related to HIV and AIDS as below:

Knowledge on HIV and AIDS:

As I asked him about HIV and AIDS, he told me "yes, I have heard it from some people like you (people who involved in HIV related program) but I can't explain it in details and difficult to make other people understand". He knew that HIV transmits through unsafe sex with multiple sex partners and sharing of needles. It will not transmit from kiss or walking together

Regarding prevention of HIV and AIDS, he said, 'safer sex practices and use of sterilized or new needles can prevent HIV transmission'. I also asked him to know about the knowledge on cure of AIDS then he replied me 'no, I have not clear idea about its treatment or cure but as I know it can't be cured completely'.

Attitude towards HIV and AIDS:

I had discussion with him to know his attitude towards the HIV and AIDS and people living with HIV and AIDS. First question was related with the necessity of information of HIV and AIDS. He told me that information of HIV and AIDS was necessary for those who are unknown or innocent person because they could be safe from the HIV transmission. Till the date of this study, he had not seen or met any HIV infected person. I asked him, if you meet any PLHIV, what do you do? Then he answered me "we have to give respect and love to the PLHIV so his/her confidence will increase and can live sometime long life. My behavior will be as usual because it will not transmit by handshaking or living together". In his view, if we could provide job opportunity to PLHIV then they would be tension free and could live their life independently also. He told, "It also supports them to safe from the social stigma and discrimination. Society also dominates only such people who are economically poor".

I asked him next question regarding the secrecy of HIV status within the family member. My question was:

Question: In your family, if someone has HIV and AIDS then will you disclose it?

Respondent: No, I don't want to remain it secret. There is no any advantage by keeping it secret. People will hate us if we afraid from the society. I encourage them (PLHIV) to go ahead of society and ask them to do something good work.

I also asked him to know his attitude towards the sex workers. Question was, in your opinion, why people engage in sex business in our Nepalese context? He tactfully answered me "*I am not sure about it because it is the others' matter. It may be interest or compulsion also*".

Practices on HIV and AIDS:

I also raised some questions regarding his sexual practices. He informed that he never discuss with his wife about the HIV and AIDS. As its reason, he told "*I think she knows as well as I also know so there is no need of discussion"*.

Regarding the non-regular sex partners, openly he said "it is common in our transport sector; usually truck drivers have many chances to get sex with non-regular sex workers than bus drivers. In bus line, around only 5 to 10% people usually involve in unsafe sex because we have to reach in our destination within the fix time. We are responsible to drive the many passengers in time. But, I have no any non-regular sex partners. My friends ask me also to visit dance bar or sex workers but I don't want to go because of my family also. I remember my family when I meet with non-regular sex workers".

He had experience of condom use. He said that he never felt any risky movement of HIV transmission He said, "but one time, before 4 or 5 years ago when I was suffered from the stomach pain then doctor suspected me about the HIV infection so blood was tested for HIV. I think, doctor suspected on me because of my profession. After that, I have not tested my blood".

Risk factors of increasing HIV and AIDS:

The main objective of this study was to identify the factors associated with increasing the risk taking behavior of HIV transmission. So, I asked about the association between some socio-cultural, economic and individual factors and risk behavior.

He said poverty causes to increase the risk of HIV transmission because poor people are back in education so they have lack of knowledge. Regarding the education

he said, "I think, there is no difference between educated or uneducated. Educated person can also be at risk because sex is biological need for all types of people. In some cases, educated person may have chances of unsafe sex because of the unavailability of condom".

He didn't believe on our cultural taboo (no open discussion of sex …) as a causative factor. He said, "No, I think culture is not responsible for HIV transmission because if people do not feel hesitation then they can openly discuss about the sex education also'.

He said, "HIV transmits due to negligence behavior of individual so we can't be safe by blaming other factors."

Preventive Measures of HIV and AIDS:

Regarding the involvement of respondent in HIV prevention activities, respondent had not involved in any formal HIV awareness program. As I had asked him about the responsibility of HIV transmission, he told, "*It is the mistake of individual. It depends on the personal behavior. When and how people face the sex relation, nobody knows. So we can't blame the government or other organizations. Government never asks anybody to keep unsafe sex relation with multiple sex partners. So, individual should be more responsible and be careful also*".

I asked him about the role of Individual to reduce the HIV. In his view, individual should also responsible to share their knowledge with other people, who are doing the risk behavior. Similarly, community can provide the awareness program to their community people. He adds, private organization should provide information to their company's staff and workers time to time so they could motivate their staff and save life also from the unknown disease.

Finally, I asked him about the role of Government to prevention of HIV transmission. He said that government should launch the awareness program nationwide targeting the general people to most vulnerable groups.

It is found that Mr. Bijaya had clear knowledge about the mode of HIV transmission and its preventive measures. But he had not clear knowledge about the treatment of HIV and cure of AIDS. In general, his attitude found positive towards the PLHIV. His sexual behavior found safe and experiences of using condom use. In his view, negligence behavior of individual is main factor of HIV transmission. So, individual should be more careful. Community, private organization and government should involve in preventing activities.

Interview No. 3

Mr. Thapa, permanent resident of Jhapa district, had been working as a conductor in transport sector (kathmamdu – Kakarvitta – Kathmandu rout) for 4 years. He was 26 years old, and student of Master 2nd year. He was married at the age of 22 years.

He shared his life history by saying "*I was involved in politics. I was vice-president of free students' union and became the central member of Nepal student Union. I worked as an army police for 2 years. In 2061B.S. because, of conflict between Army and Maoist, I have left the job of Army. Then recently, I joined job of teaching in lower secondary level. After 1.5 years of working experience, I left that job then I joined transport sector. Now, I am enjoying in this sector. There is romance in this sector. Money is good*".

Knowledge of HIV and AIDS

As the question was raised about the knowledge about the HIV and AIDS, Mr. Thapa said, "Yes, I have heard about it. It is very dangerous and deadly disease. As I

know, it transmits from the unsafe sex with infected person, sharing of needles, bled and blood and infected mother to child. A mosquito when bite one infected person then if within 24 hours it bites other person then there is chances of HIV transmission. Till date, there is no medicine of HIV and AIDS to cure it. If the PLHIVs get love and no stigma and discrimination then they can live long life".

He knew the mode of HIV transmission and its preventive measures. He said some preventive measures as bellows:

i. No sex with HIV infected or suspected person.
ii. Use of condom.
iii. No sharing of needles and bled.
iv. Only tested blood should be exchanged.

Attitude towards HIV and AIDS

Mr. Thapa was found positive towards the PLHIV because he told, "I have not met any PLHIV. I will not hate such person, if we will give love and sympathy then they can live some long life". He added, "If there were any HIV infected person in my community, I would allow him/her to live in same community because HIV is not transmitted by living in the same village".

He was ready to disclose the HIV status if his family members would get HIV.

Practices on HIV and AIDS

Mr. Thapa had not discussed about the HIV and AIDS with his wife. He said that he rarely used to discuss with friends.

Regarding the sexual relation with non-regular sex partners, he said "Yes, I have non-regular sex workers but regularly I use the condom because without use of condom; first there may be chances of unwanted pregnancy and second we can be safe from sexual transmitted infection (HIV or STIs). I have done HIV testing also". He tried to explain about the frequency of sexual relation with non-regular sex

partners. He explained, "I can't follow regularly any girls but if I get chances of sex then I use to do sex with non-regular sex partners. Accidently such types of chances happen. If we leave such chances then it will be questioned in our masculinity. Till, I have not paid money for sex".

When I asked about the reason of relation between the transport workers and non-regular sex partner, he said, "our families are living happily and we have adequate money also to fulfill the basic needs of family. We are regularly traveling from one place to another place so if girls keep relation with us then they can enjoy by free traveling, lodging and fooding".

He was sure that he was safe from the HIV transmission because he told, "No, I regularly use condom with non-regular sex workers. Time to time I used to test my blood also".

Preventive Measures of HIV transmission

Regarding the preventive measures of HIV transmission, he said, "PLHIV should be respected and provide equal opportunity. PLHIV should be kept in safe places so they cannot transmit other people. Government can manage separate red-light area for sex workers like India and other countries".

In his views, individual should be more careful and need to disclose their HIV status openly so other people can be safe from transmission. Similarly, he also highlighted the role of private sectors. He said, "private sector should be responsible to aware their staff about the HIV and AIDS. But it is difficult for private sector because they can't spend money in such program".

Interview No. 4

During the time of face to face to interview with transport workers; researcher had conducted interview 36 years, Mr. KC, resident of Kaski district. He was working in the field of transport sector as a driver as well as bus owner since 2 years.
He was asked question related with risky behavior among the transport sectors.

Knowledge on HIV and AIDS

Mr. KC was asked about the level of understanding of HIV transmission among the transport workers. He explained in brief by saying that "as I know, many of them have heard about it but had not got right information and knowledge about it. So due to lack of adequate knowledge, there is high chance of HIV transmission to transport workers. Who has no knowledge about it, headache and HIV is the same because both are diseases. In such circumstances, people are in high risk of HIV transmission".

Sexual practices among the transport workers

He added some more and said, "In transport sectors, more time people live out of home and want to do romance so when they use to take drink then they desire sex. Comparatively now a days some educated people are also involved in transport sectors. Somehow they are aware about the HIV transmission. In this sector, as my experience, there are two major causes of risk behavior of transport workers:

- First, there is no necessary to do hard labor to earn money so they easily spend money for romance and
- Second, lack of knowledge".

Causative factors in increasing the risk of HIV transmission

Regarding the causative factors of HIV transmission, he told, "Hotel owners are also responsible to increase the HIV because everybody are interested to earn

money so they keep beautiful girls for their business promotion and transport workers also take their passengers in such hotel for lodging or fooding. Then there is a regular chance to visit between hotel's girls and transport workers which create the chances of sexual relationship".

He said, "***Education*** is major factor which is associated with risk taking behavior. Those people who have good education they are definitely aware about the HIV transmission".

Preventive measures of HIV transmission

I asked him about the preventive measures of HIV transmission. Then he said, "For prevention, first we need to give knowledge. We can gather all transport workers in one place to aware them. It should be compulsory to involve all transport workers in HIV awareness program".

Being a bus owner, I asked him about the roles of owner of bus to prevent the HIV transmission among the transport workers. He said, "it is the responsibilities of owners also to aware their staff (driver, conductor and helpers). We have to think about their family life also. We can't control their sexual desire but we can aware them. One ***individual should be more careful***. If we think sex is everything then there may be high chances of sex with non-regular sex workers".

Interview No. 5

40 years resident of far-western region of Nepal working as a driver since 20 years said that he had also heard about the HIV and AIDS but he had not clear knowledge about the difference between HIV and AIDS. He knew only that HIV can transmit from the sex. He said "*I think medicine of AIDS may be very expensive; it has around 1 Lakh per injection. So if rich people will be infected then they can live*

otherwise poor will be died without medicine. If I will get HIV then I will intensively transmit HIV to other person by prinking the needles".

He hesitated to share about his own personal sex experience in details.

Interview No. 6

18 years unmarried Mr. Ramesh (name changed) has been working as a helper in transport sector since 1 year. He had read only class 5.

Regarding the knowledge about the HIV and AIDS, he told "*No, I have no idea about it. I am totally unknown about it*". He also said that he had no sex experience so he had no risk of any sexually transmitted disease.

Interview No. 7

Similarly, 19 years, Mr Tiwari resident of syangja district was working as a Helper in transport sector since 3.5 years. He had read up to class 9. He was unmarried. He shared that *"I have heard about AIDS. It is a kind of disease. But I have not detail knowledge about it"*. He refused to share about his sexual practices.

5.1.1.1 Finding of field observation of transport workers:

Long rout Transport workers (bus driver, conductor, helpers) were selected for survey and face to face interview. Fortunately bus owner was also found and the interview was taken with him too. In researcher observation, it was found that transport workers were found more involved in romance and entertainment; like visiting café, restaurant and bar

After collecting the data of in-depth interview of transport workers

frequently. They were more frank and discussed openly about their knowledge, attitude and practices on sexual behavior. Sexual behavior found different from region wise. Respondents were selected region wise; Eastern region to far-western region of Nepal who daily travel from Kathmandu valley to their respective districts. The workers who travel eastern region were found somehow careful and less-involved in sexual activity with commercial sex workers. They also found some shyness nature during the time of discussion of sex and sexual experience. Far western region's transport workers were found more frank and active in discussion on sex and sexual experience. They openly shared their sexual life. They found more active in sexual intercourse and found few involved in HIV awareness program too. Mid-western region's transport workers were also found in similar character and nature with eastern region. Level of knowledge found a little bit good among eastern regions' transport workers than other regions. Most of the respondents were found confuse about the differences between the HIV and AIDS; they were more familiar with word 'AIDS' than 'HIV'. Comparatively, helpers were found much unknown about the HIV and AIDS than drivers and conductors. Helpers were found less involved in sexual activity and felt hesitation to disclose their sexual experience.

In concluding line of observation; risk behavior found high among the transport workers of far-western region than other regions.

5.1.2 Interview with Brick Factory workers

Interview No. 1

32 years, Mr. BK, residents of Salyan district working in Brick factory since 3 years. He was married having two children. He has studied only grade 3. He used to stay 6 months out of house and 6 month in house.

Knowledge on HIV and AIDS

He has heard about the HIV and AIDS before 1 year when he was visiting India. One organization (he couldn't remember the name of that organization) had been disseminating the message of HIV and AIDS in boarder of Nepal and India targeting the seasonal migrant workers who were visiting India to seek the job. He knew that HIV transmits only through the sex with multiple sex partners (sex workers), did not know other way of transmission.

He told that being faithful with own sex partner could reduce the risk of HIV transmission.

Attitude towards PLHIV

Regarding the attitude towards the HIV and AIDS; he told *"being a HIV positive is shameful work. So, if my family members or I would be infected then I could not disclose HIV status in communities"*.

Practices of respondents on HIV and AIDS

Regarding the risk behavior of respondent, Mr. BK hesitated to discuss openly about his sexual life. He only told that *"being a married person, I had no any non-regular sex partner. So, I have no doubt of any sexually transmitted disease."*

Interview No. 2

Face to face interview was conducted with 26 years Mr. Kamal resident of Salyan district who had been working in the brick factory since 15 years. He was illiterate. Discussion was held focusing on the knowledge, attitude and practices of HIV and AIDS.

Knowledge of HIV and AIDS

He said that he had heard about the HIV and AIDS but couldn't explain it in details.

He told that unsafe sex with multiple sex partners makes people vulnerable for HIV transmission. He also said that HIV can be identified after blood test only.

Attitude towards PLHIV

Mr. Kamal very easily accepted the HIV status and told *"PLHIV are also normal people, our brother/sister. So, no need to hate them. They can live together in a family and work with us. HIV can't be cured by keeping it secret. I will encourage such person to get treatment if available."*

Practices of HIV and AIDS

He told that he had discussed about the HIV and AIDS with friends but not with wife. He also shared that he had 1st sex experience in their own village before marriage when he had not used condom because at that time he had no idea about the use of condom and was unknown about the modes of HIV transmission. He laughingly said *"when attachment becomes closer with any sex partner and both will be ready for sexual intercourse, everything forgets at that time, when & how HIV transmits, and none cares either it transmits or not".*

He shared "*after marriage, due to fear of family and social prestige, I had not made any non-regular sex partners".*

Causes of increasing the risk of HIV transmission

He shared his opinion by saying *"poor people are more vulnerable for HIV transmission because money is needed to manage the basic needs of family so for that*

money, people are compelled to do any risky work which increase the risk of HIV transmission".

Interview No. 3

20 years Mr. Mohan had also participated in interview. He was also working in brick factory. His education level was only grade 7.

Knowledge of HIV and AIDS

He had heard about the HIV and AIDS and he knew only one mode of HIV transmission that is unsafe sex with HIV infected sex partners. He had no knowledge about the treatment of HIV and cure of AIDS. He said, "I don't know about its medicine".

Attitude towards HIV and AIDS

I asked him about the necessity of knowledge of HIV and AIDS. He said, "Yes, it is good to get knowledge of any disease so we can care our life". He had not met any PLHIV prior to this study.

I asked him: if you meet then what will be your reaction?

He said, "Surprised! I will not go near by him/her because I don't want to put any relation with such person". He said, "If my family member become HIV positive then it becomes compulsion to take care him till he/she live. But I will manage some careful distance with them (PLHIV)".

Practices on HIV and AIDS

He had not talked about HIV and AIDS with friends and wife because of the shyness. He added that because of our cultural barrier we couldn't talk openly on the issue of sex and sexuality.

He said that because of the fear of HIV transmission, he had no any non-regular sex partners.

Preventive Measures of HIV

He shared his opinion regarding the role of different organizations for the prevention of HIV transmission. He said, "Brick factory workers would be benefited if private organization (brick factory) would also organize awareness program on HIV and AIDS and other more health related programs". Similarly, he said that government should be responsible to control the sex business and need to provide the job. He also pointed out the role of individual and community. Individual should be careful and controlled the sexual relation with multiple sex partners. Besides that, community could control their children and asked them to do the safe behavior.

Interview No. 4

20 years unmarried Ganga (name changed) was originally resident of Salyan district. She is illiterate, working since 1.5 years in Brick factory. She had no any knowledge about the HIV and AIDS. She also shared that she had no sex experience.

Interview No. 5

24 years unmarried Garima (name changed) was originally resident of Salyan district. She is illiterate, working since 2 years in Brick factory. She had heard about the HIV and AIDS but she had no knowledge about its way of HIV transmission and its preventive measures.

5.1.2.1 Finding of field observation of brick factory workers:

During the data collection from the brick factory workers, researcher observed the field activity of respondents. It was found that most of the respondents were illiterate and visited from India, hilly district of Nepal and periphery districts of Kathmandu valley. Schools students (mostly orphan) were found working there due to poverty. From the discussion, role of poverty found difference on the basis of gender. On the one hand, poverty compel female to involve in risky sexual relation.

On the other hand, because of poverty male can't purchase sex so there is low chance to involve in unsafe or multiple sexes. They have their own group on the basis of geography. They were provided temporary house to stay in brick factory so they found working morning to evening. Due to language problem; Indian workers found not so closed with Nepalese workers. Same thing happen with researcher also. Indian workers refused to participate in study. So participants were selected from the Nepalese workers.

Researcher is talking with brick factory owner to get permission of data collection from brick factory workers

Most of the participants found very innocent and cooperative. In the beginning they felt some hesitation but after explaining the whole objectives of study and introduction of researcher then they openly shared their experience regarding the HIV and AIDS. Most of the respondents had knowledge but many of them confused to differentiate between the HIV and AIDS. There also word 'AIDS' found more similar than HIV. They knew only sexual activities is the main source of HIV transmission than other blood components. They were not participated in any awareness program and no any HIV awareness related poster or pamphlets were put into the premises of brick factory. It might be due to their illiteracy; they were feeling confusion to give their opinion regarding the causative factors and preventive measures of HIV and AIDS during the time of interview.

It was difficult to make participation of female in face to face interview because most of the females were living with their husband or guardian so they

hesitated to participate in study. On the other hand, who participated they also felt shyness to discuss with male. So, female enumerators were used to collect data from the female participants.

5.1.3 Interview with Garment Factory Workers

Interview No. 1

Interview was taken with 22 years, Mr. Alam (name changed), was working in garment factory. He was married at 20 years and he had studied up to class 10.

Some of the question related with knowledge, attitude and practices on HIV and AIDS were asked during the interview. His responses are narrated as below:

Knowledge on HIV and AIDS

Researcher: Have you heard about HIV and AIDS?

Respondent: Yes, I have heard about it. It is very fearful disease

Researcher: What are the ways of HIV transmission?

Respondent: Unsafe sex with multiple sex partners

Researcher: What are the prevention of HIV and AIDS?

Respondent: Be careful in our personal (sex) behavior

Attitude towards HIV and AIDS

I raised some to his attitude towards the HIV and AIDS or PLHIV. I asked him:

Researcher: Have you seen any HIV infected persons?

Respondent: No, I have not seen HIV infected person. If I will see then I will not go near by him. I will not keep any relation with such person.

Researcher: Do you want to give job to PLHIV?

Respondent: No, I don’t want to give any job to such person because; they can transmit disease to other people also.

Researcher: In your family, if someone has HIV and AIDS then how you behave with them?

Respondent: No, I don't want to disclose it. There is no any advantage by disclosing it. People will hate us.

Researcher: In your opinion, why people engage in sex business in our Nepalese context?

Respondent: Because of poverty

Researcher: Have you faced any risky movement during your life when you felt fear of HIV transmission in your blood also?

Respondent: No, I have no any sex relation with any non-sexual partners. So, I have no doubt about me regarding the risk of HIV transmission.

Practices on HIV and AIDS

He said that he had not talked with his friends and family members. I asked him reason then he said, "I have no any problem of HIV so it is not necessary to talk about the HIV. If I will talk then they will either angry with me or think that I am bad person so I have this problem".

He had no experience of condom use because he told, "I need not to use of condom because I have no any non-regular sex partners". He had not involved in any HIV awareness program also.

Preventive measures of HIV and AIDS

Mr. Alam also shared his ideas about preventive measures of HIV and AIDS in context of Nepal. He said, "If government can provide the job opportunity then people can be safe from the HIV infection. If people will get job then why should join any sex business".

He gave importance on the role of individual to reduce the HIV. He said that people can be safe if they would be careful in personal sex behavior. "We can prevent our-self by thinking about our prestige".

Regarding the role of community, private organization and Government to reduce the risk of HIV, he said, community can't do anything to reduce the risk of HIV transmission. People should think for their behavior. Private organization has given the job for us so it is enough for us. Government should provide the free treatment to HIV infected and need to bring the strong policy to address the issues of HIV and AIDS".

Interview No. 2

Interview was taken with 40 years, Mr. Shah. He was working since 15 years in garment factory. He has passed school leaving certificate (SLC). He was from ethnic group.

Knowledge on HIV and AIDS

I had some discussion with Mr. Shah. He told me, "I have heard about HIV and AIDS before 10 years. He knew about the way of HIV transmission. But he didn't know about the cure of AIDS.

Attitude towards HIV and AIDS

Regarding the attitude of Mr. Alam, I asked him:

Researcher: Have you seen any HIV infected persons?

Respondent: No, I have not seen HIV infected person. If I will see then I will love and respect him. My behavior will be the same with him/her as I do with other normal people. I will be ready to provide any types of support which I can.

Researcher: Do you want to give job to PLHIV?

Respondent: Yes, I will give job on the basis of their capacity because it is their right to do job. HIV can't be transmitted by working, eating and sitting together.

Researcher: In your family, if someone has HIV and AIDS then do you want to remain it secret?

Respondent: Yes, I don't want to disclose about the HIV status because community people will hate us and they can break relation with our family.

Researcher: In your opinion, why people engage in sex business in our Nepalese context?

Respondent: Because of poverty

Practices on HIV and AIDS

He had not experiences of involvement in any HIV awareness program. As well as he had no experiences of condom use also. As a reason, he told, "I need not to use of condom because there is no necessity to use the condom with wife". He told that he had no any sex relation with any non-sexual partners neither before marriage nor after marriage. Besides that I asked him:

Researcher: Did you talk about the HIV and AIDS among your friends or family members?

Respondent: Yes, I have talked about the HIV and AIDS with my wife and not with children because they are small and can't understand about it. But I have not talked with any neighbor because there is no problem of HIV in my village as well as there is no any PLHIV in my village.

Preventive Measures of HIV and AIDS

I had asked him some questions regarding the ways to reduce the risk of HIV and AIDS. He said, "Government is responsible to launch the HIV awareness

program as well as need to create the job opportunity". He also added, "If government can provide the job opportunity then people will not visit any aboard country by leaving their own family. Sex is biological need of people so when they live long time alone then there is high chances to keep the sexual relationship with sex workers which create the risk of HIV transmission".

I also asked about the roles of different organization to reduce the risk of HIV and AIDS:

Researcher: What is the role of Individual to reduce the HIV?

Respondent: Individual should avoid the unsafe sex relation and need to use the condom with non- regular sex partners. Education is important factors which can safe people from the HIV infection. There is very low chance to get the HIV infection for the educated people.

Researcher: How one community play role to reduce the risk of HIV?

Respondent: In community, they can share their knowledge with other people and guardians can control their children and ask them to do the safer behavior.

Researcher: How private organizations contribute in reduction of HIV transmission?

Respondent: Private organization can also support by giving the job with adequate facilities (salary) which can manage the basic needs of workers. If private organization can pay salary in time and it is enough to fulfill the basic needs of people then workers will not think for any additional income (sex business) so they can be safe from the risk of HIV infection.

Around 2-4% garment factory workers are used to involve in sex business because of the inadequate income. Market price of every item is increasing but our level of income remains the same. So sex business becomes the compulsion for the poor people.

Researcher: What is the role of Government to prevention of HIV transmission?

Respondent: Government should launch the HIV awareness program in massive way as well as it has to provide the job opportunity for all on the basis of experience and capacity.

Interview No. 3

Researcher had conducted interview with 25 years married, Mr. Pahari. He was working in garment factory since 8 years. He was married when he was 21 years. He has completed class 7 only.

I asked him some questions regarding the knowledge, attitude, sexual practices, risk factors and preventive measures of HIV and AIDS as below discussion:

Knowledge on HIV and AIDS

Researcher: Have you heard about HIV and AIDS?

Respondent: Yes, I have heard. I got one chances to participate in HIV awareness program when I was working in Garment factory of Jhapa district then I got many information about it

Researcher: What are the ways of HIV transmission?

Respondent: Unsafe sex with multiple sexes and through the blood related component. If we do the deep tongue kiss and there is any wound in leap then there is chances of bleeding which transmit the HIV from one to another. HIV can be transmitted through the mosquito bite. There is no risk of HIV transmission by living, working, hugging or handshaking with PLHIV.

Researcher: What are the prevention of HIV and AIDS?

Respondent: By keeping safer sex relation. HIV can't be transmitted by working together, living, handshaking or hugging

Researcher: Do you think that AIDS can be cured?

Respondent: I don't know whether HIV is cured or not. But as I heard, if whole blood of body can be replaced then there is chance to live some long time. I think, there may be any medicine available in market to prevent from the HIV transmission but I am not sure about the medicine.

Attitude toward the HIV and AIDS

Researcher: Have you seen any HIV infected persons?

Respondent: No, I have not seen HIV infected person but heard about the HIV infected person. If I will see then I will love him. If my friends will be HIV then I will not leave him alone and will not break the relation with such people.

Researcher: Do you want to give job to PLHIV?

Respondent: Yes, I will give job to such PLHIV because they have also right to do live life and do the job.

Researcher: In your family, if someone has HIV and AIDS then do you want to remain it secret?

Respondent: Yes, I will share openly among my family members and community because HIV can't be cured by keeping it secret.

Researcher: In your opinion, why people engage in sex business in our Nepalese context?

Respondent: Because of poverty under compulsion people engage in sex business. They come from the village to city (kathmandu) in search of job but can't get job easily as a result they have to face the problem. Here in garment factory, income is very low and market price is high so to manage the basic need; people have to go for sex business. When I was working in one garment factory of Thamel area (tourist area of Nepal), I found that even school/college

students were also involved in sex business. They sell their sex in very cheap rate because of the ***poverty***. But some found that because of their ***high ambition*** also engaged in sex business to earn much money in short period.

Practices on HIV and AIDS

Researcher: Have you faced any risky movement during your life when you felt fear of HIV transmission in your blood also?

Respondent: No, I have no any sex relation with any non-sexual partners neither before marriage nor after marriage.

Researcher: Did you talk about the HIV and AIDS among your friends or family members?

Respondent: Yes, I have talked about the HIV and AIDS with my wife and because my wife also use to participate in such types of health awareness program.

Researcher: Have you involved in any HIV awareness program?

Respondent: Yes, I have involved in HIV awareness program when I was working in one Garment factory of Jhapa district.

Researcher: Do you have any non-regular sex partners?

Respondent: Yes, I had sex partner before marriage when I was 20 years old but after I have no any sexual relationship with any non-sexual partners.

Researcher: Do you have experience of use condom?

Respondent: Yes, I have used condom many times. I had used condom in my first sexual contact before marriage because I was aware about the HIV transmission. After marriage, because of the fear of family conflict and social prestige we can't go with other non-regular sexual partners.

Sexual behaviors among the garment factory workers

Regarding the sexual behavior among the garment factory workers, he shared his experience, "I found still some of the people (especially females) are working here to pretend that they are earning money by doing the labor work in Garment but in reality they works as a sex worker. We can easily assume that one garment factory worker gets 4500 to 5000 monthly salary in Kathmandu and they have to pay 3000 - 3500 monthly house rent only then how can they manage other basic needs (fooding, medicine). On the other hand, I am seeing that they are spending the more luxurious life then what may be the other sources?"

He also shared his experiences:

> "When I was working in Thamel area then there were many people used to involve in sex business. In day time; they worked in Garment factory and in evening and night they used to work as a sex worker".

He said, "I think, many of them (females) are doing such risk behavior to get enjoy. On the other hand, most of the clients of sex workers were from the rich family".

Causes of increasing the risk of HIV transmission

He said, "In my opinion, unsafe sex is major factor which contribute to increase the risk of HIV transmission".

Researcher: In your opinion, poor or rich who are in more risk of HIV transmission?

Respondent: ***rich people are in more risk of HIV transmission*** because poor people have no adequate income/money to visit the many sex workers/hotel/restaurant but rich people are usually visiting in different places. If you see the situation of Kathmandu, we found many of drugs users are from the rich family and we can see the son of rich family visit the disco/dance bar where they can have sex with non-regular sex partners.

Researcher: In your opinion, society is responsible to increase the risk of HIV transmission?

Respondent: No, as I know, ***individual*** should ***be more careful than the society***

Preventive Measures of HIV

Researcher: What are the ways to reduce the risk of HIV and AIDS in context of Nepal?

Respondent: Government, non -government, private organization and individual should work together to reduce the risk of HIV.

Researcher: By addressing the problem of poverty and unemployment can reduce the risk of HIV and AIDS?

Respondent: Yes, it can support the reduction of HIV transmission.

Researcher: What is the role of Individual to reduce the HIV?

Respondent: Individual should be more careful of HIV infection. ***Individual is prime factor to increase or reduce the HIV infection***.

Researcher: How one community play role to reduce the risk of HIV?

Respondent: In community, they can share their knowledge with other people and guardians can control their children and ask them to do the safer behavior. Community can give equal love and respect to the PLHIV which can reduce the stigma and discrimination then there is higher chances that people will disclose their HIV status and other people will be saved as well as, is aware also.

Researcher: Do you have any ideas about the roles of NGOs to reduce the HIV transmission?

Respondent: No, I have no ideas about it.

Researcher: How private organizations contribute in reduction of HIV transmission?

Respondent: Private organization can also support by keeping the condom house within the office premises and time to time can manage the HIV awareness program,

Researcher: What is the role of Government for prevention of HIV transmission?

Respondent: Government should launch the HIV awareness program in massive way as well as it has to provide the job opportunity for all on the basis of experience and capacity so they have not to do the sex business. Government should manage the separate area for the 'sex business'.

Interview No. 4

Interview was also conducted with 35 years married Mr. Patel, working in garment factory since 15 years. He had married at the age of 20 years. He had passed + 2.

Knowledge on HIV and AIDS

In my first question regarding the knowledge of HIV and AIDS; he said:

> "Yes, I have heard about the AIDS and not about the HIV. As I know, it is very big disease. But I am not clear about its way of transmission and other things. I don't know about the different or similarity between AIDS and HIV. I think 2nd form or 2nd name of AIDS may be HIV".

He said, "No sex relation with any non-regular partners to prevent from it".

He had no knowledge about the cure of AIDS.

Attitude towards HIV and AIDS

Attitude of Mr. Patel found negative towards the HIV infected persons because when I asked him about the HIV infected person, he said, *"I have not seen such person, if I will see then I will hate such person*". He didn't want to disclose the HIV status if any of his family members would be HIV infected.

Practices on HIV and AIDS

As his information, his sexual behavior found not risky. He was not so aware about the mode of HIV transmission and no experiences of condom use though his behavior found safe. He had no any non-regular sex partners.

Interview No. 5

Face to face interview was conducted with Mr. Jitendra kumar (name changed). He was 42 years old. His education level was only class 7. He was married at the age of 19 years. He was working in garment factory worker since 20 years. As he was asked about the knowledge of HIV and AIDS, he told ***"I have heard about the HIV but don't have detail knowledge about it".***

Interview No. 6

Interview was conducted with 35 years married Mr. Shah. He was working as a supervisor since 20 years in garment factory. His education level was only 5 classes.

Knowledge on HIV and AIDS

Researcher: Have you heard about HIV and AIDS?

Respondent: Yes. I have heard about it

Researcher: How HIV transmits from one person to another?

Respondent: As I know, it transmits from the unsafe with multiple sex partners.

Attitude towards HIV and AIDS

Researcher: Have you seen any HIV infected person?

Respondent: No, I have not seen any HIV infected person. If I will see or meet with such person then I will do the normal behavior as usual. If I have capacity then I will provide job opportunity to PLHIV also.

Practices on HIV and AIDS

Researcher: Have you discussed with your friend or family members about the HIV and AIDS?

Respondent: I have not discussed with friends but sometimes I used to talk with my wife.

Researcher: Have you used condom?

Respondent: Yes, I have used condom after marriage. I had used only after marriage because before marriage I had no sex with other non-regular sex partners.

5.1.3.1 Finding of field observation of garment factory workers

Garment factories were visited to collect the information. Many seasonal migrant workers from India and Tarain (plain area) area of Nepal found working in garment factory. Very similar environment with brick factory was found in garment factory. In the beginning, it took time to convince the owner and rapport building among the respondents. Females hesitated to participate in face to face

Researcher is taking interview with garment factory workers

interview because they felt shyness to share their knowledge and practices on HIV and AIDS.

Majority reported that they had heard about HIV and AIDS but found somehow confusion about its way of transmission and preventive measures. They were also found more familiar with word "AIDS" than "HIV". Nepalese workers were more openly talking about the sexual activities than Indian workers. Among Nepalese workers also; workers who were from hilly and mountainous districts were found more active in discussion than Tarain (plain) districts. No risk behaviors were identified from the discussion of sexual practices. Some participants from the Muslim community were found unknown about the use of condom. They didn't feel necessity of use of condom with their wife. No any informative poster or pamphlets were kept in factory premises.

5.1.4 Interview with health workers

Interview was taken with some health workers. Research had given more focus on risk of HIV transmission among the health workers, its causative factors and preventive measures.

Interview No. 1

Interview was conducted with Lab Technician of Nepal Army Institute of Health Science. I asked him questions as below:

Risk of HIV transmission

Researcher: Do you feel that health workers are also in risk of HIV transmission?

Respondent: Yes

Researcher: If yes, then how do you feel that health workers are in risk of HIV transmission? Pls. explain in brief.

Respondent: When health worker take care of the positive cases sometime they may have accidental prick while giving injection, drawing blood, doing any diagnostic procedure, doing surgery they may come in contact with the blood or blood product and they may be infected.

Researcher: Is there any preventive measure available when you feel suspected of HIV infection? If yes, pls. explain in brief.

Respondent: Yes there is a preventable measure. Immediately they should consult STD, HIV and AIDS control Centre in Teku and take ARV medicine as soon as possible within 72 hours for 28 days.

Preventive Measures

I asked her about the roles of individual, community, private organization, non-governmental organization and government to reduce the HIV transmission in Nepal.

She briefly explained about her ideas as below:

A. **Roles of Individual:** First of all the individual should have the knowledge about how to prevent himself/herself from transmission of HIV that is safe sex, should not use infected needle if he/she is injectable drug user. Blood should be properly screened before getting transfused. Then he/she can teach family member, peer group, neighbor, and community people about how to prevent from HIV.
B. **Roles of community/society:** Society should bring awareness program in the community, school and other related area and time to time run the awareness programs.
C. **Roles of private organizations:** These organizations should bring more HIV awareness program and should be implemented.

D. **Role of Government:** Govt. should give more and more awareness program because in Nepal people are infected due to ignorance. Health education is one way to prevent HIV and this should be given by many sources like television, radio, pamphlet etc.

E. **Role of non-governmental organizations:** Instead of staying in city area and planning the project, should do spot visit and make plan and implement strictly and give service to more prone area, and to more needy people.

Interview No. 2

One Health Program Coordinator of Government health institution was selected for interview. He had provided some information regarding the risk of HIV transmission among the health workers. Similarly he had also shared his experiences and ides about the risk factors of HIV transmission and its way of risk reduction in the local context of Nepal.

The discussion was held as below:

Risk of HIV transmission

Researcher: Do you feel that health workers are also in risk of HIV transmission?

Respondent: Yes

Researcher: If yes, then how do you feel that health workers are in risk of HIV transmission? Pls. explain in brief.

Respondent: When a health worker cares a patient, the health worker may not know the patient has HIV or not. If the health worker does not take precaution, there is chance to contamination of the patient blood to the health worker's cuts and wounds result the transmission of HIV.

Researcher: Is there any preventive measure available when you feel suspected of HIV infection? If yes, pls. explain in brief.

Respondent: Yes. The health worker must use gloves when taking care of the patient. The health worker must bandage the cuts and wounds.

Preventive Measures

Regarding the preventive measures of HIV transmission, he also highlighted the roles of following sectors:

a. **Roles of Individual:** An individual should have a faithful one sexual partner only. Use a condom if you think a risk. Do not use the unsterile needles. Do not share needles. The individual should ensure that the blood must be tested on HIV before transmission.
b. **Roles of community/society:** The community and society should not discriminate HIV positive person and they should support socially to the patient with HIV.
c. **Roles of private organizations:** The private organization should support to access for the volunteer counseling and testing (VCT) of the HIV and behavioral change communication to community especially most vulnerable groups on the prevention and mode of HIV transmission.
d. **Role of Government:** The Government should expand the antiretroviral medicines services to district hospital along with VCT centers. A rehabilitation centers for PLHIV should be established by Government in the district hospitals.
e. **Role of non-governmental organizations:** NGO should support to Government technically and financially to disseminate and launch the HIV awareness program.

Interview No. 3

Interview was conducted also with the Counselor of HIV and AIDS program jointly implemented by Government and Non-government organization. He had also mentioned some major factors associated with increasing the risk of HIV transmission:

Causative Factors of HIV transmission

Researcher: In your opinion, what are the major factors which directly or indirectly support to increase the risk of HIV transmission? And how these factors support?

Respondent: Nepal has been facing concentrated epidemic of HIV and AIDS. Still many people are not ready to disclose their status. The following factors are supporting to increase the HIV transmission in Nepal:

- Lack of knowledge: innocent house wives (spouses of labor migrant) are HIV transmitted by their husband.
- Unemployment; Due to lack of job opportunity most of the population (sexually matured) of hilly region, migrated to India to search job. HIV prevalence in Labor Migrants is very high comparative to other risk groups.
- Coverage: Most of unemployed youth Hilly and Terai region are migrated to India to search the job opportunity. But the HIV awareness programs lunched by Government organization (GO) and non-government organizations (NGOs) are unable to cover all areas (all wards, VDC, district) which are also in risk of HIV transmission. It is truth; risk of HIV transmission in Nepal almost same in all district.

- Distance between Service Delivery Point (SDP) and clients: there is inadequate Voluntary Counseling and Testing Center (VCT) as per the requirement of clients and geography. Most VCT sites are located at District headquarters but such types of services are needed in remote village. So the existing VCT sites are inadequate to cover up all targeted population.
- Stigma and Discrimination: still stigma and discrimination towards the HIV positive person is high in our society. Due to fear of stigma, even suspected people are also not ready for blood test, they afraid to disclose their HIV status in society.

Researcher: Do you feel that our socio-cultural belief systems are associated with HIV transmission?

Respondent: Obviously, our socio-culture is very rigid towards the sex and sexuality and sexually transmitted disease. 21st century is running but our culture is still not changing on sex and sexuality. People not talk openly on sexual objects. So we can say that our socio-cultural belief is one of the factors to increase HIV transmission.

Preventive Measures

Researcher: What are the ways to reduce the risk of HIV and AIDS in context of Nepal?

Respondent: Following steps are very useful to reduce HIV transmission in Nepal:

- Increase the accessibility of Voluntary Counseling and Testing for all risk population.

- Reduce the abroad migration and create employment opportunity within our own country.
- Increase an awareness campaign intensively all over the country on HIV and AIDS.
- People should be aware on safer sex.
- Content of HIV and AIDS should be made a part of course in school and +2 levels.

I had asked him about the roles of following sectors to reduce the HIV transmission in Nepal?

He said:

A. ***Roles of Individual:*** Every individual should have knowledge on HIV and AIDS. Each individual adopt safer sexual behavior and all are equally responsible to share knowledge and advocacy on HIV and its issues.
B. ***Roles of community/society:*** Each and every tasks, society /community have vital role to achieve. Community can play positive role to reduce new HIV transmission and can create supportive environment towards the PLHAs. If society can do such then it is truth that in such community HIV transmission can reduced dramatically.
C. ***Roles of private organizations:*** Private organizations are also equally responsible to fight with HIV epidemic. A small effort makes a great achievement and output. They can create job opportunity and can support to launch the HIV awareness program targeting their own staffs and workers.
D. ***Role of Government:*** Government role is very crucial in each and every activities conducted in the country. Other stakeholders and partner's role is just

support to government policy, program and activities. If the government policy should be effective, specific and well-planned, it is truth that new HIV transmission reduces very fast and also reduced HIV related death.

E. ***Role of non-governmental organizations***: Non-governmental organization has been playing vital role to reduce HIV transmission and HIV related death since few decade ago. But it is not enough; NGOs should have close coordination with each other and government bodies. Still we can see most of organizations are working on same districts, VDCs and wards and program are duplication in some districts. But some districts are still out of access of services on HIV and AIDS. So NGO should reduce duplication of services and cover up more and more risk population.

Interview No. 4

Face to face interview was taken with Program coordinator of HIV and AIDS Prevention program of Nepal government. The interview was held as below:

Causative factors

I asked him: what are the major factors which directly or indirectly support to increase the risk of HIV transmission? And how these factors support?

He said, "The major driving factor is unsafe sexual practices and using unsterilized syringes and needles. Socio economic factors led people to the vulnerability towards HIV infections. Social misconception and beliefs about sex, sexuality and sexual education etc also fuel for increased infection. Poverty, traditional belief, stigma and discrimination at community and health facilities; unavailability of information and education and delay or no access to services

especially treatment care and support contribute in increasing the risk of HIV transmission".

I also asked him, "Do you feel that our socio-cultural belief systems are associated with HIV transmission?"

Respondent: Yes, misconception and social beliefs increases the social stigma and discrimination towards PLHIV and their families as a result PLHIV will not disclose their status in family and communities.

Risk of reduction of HIV and AIDS

Researcher: What are the ways to reduce the risk of HIV and AIDS in context of Nepal?

Respondent: Reduction of social stigma and discrimination, increase access to treatment care and support services for PLHIV, increased and scale up the services facilities, reduce migration and or increase knowledge of MARPs communities and socio economic empowerment of PLHIV, other vulnerable populations etc

He has responded roles of individual, community and public and private organization to reduce the HIV transmission in Nepal:

a. Roles of Individual

- To increase knowledge on HIV and AIDS and its causes and effects
- Sharing of knowledge and information to peers, families and community people
- Support on HIV and AIDS initiation carried out by the I/NGOs and Government agencies

b. Roles of community/society

- Involve, participate and support in HIV and AIDS related services and information
- Empower community people to increase access to information of HIV and AIDS
- Support PLHIV to live dignified life

c. Roles of private organizations

- Support on HIV and AIDS initiation considering their social responsibility
- Provide working opportunities to PLHIV and their families that will help dignified life for PLHIV

d. Role of Government

- Carry out survey and mapping in regular basis
- Scale up the services facilities in remote areas
- Increase ownership and accountability towards HIV and interventions
- Monitor and support to NGOs to scale up the interventions
- Interlink HIV with multi-sectoral agencies within different ministries

e. Role of non-governmental organizations

- Identify the real needy communities for intervention
- Provide comprehensive package of services for PLHIV
- Increase opportunities to access treatment care and support
- Coordinate with Govt. agencies for sustainable program such as livelihoods and income generation of PLHIV and vulnerable communities

5.1.4.1 Finding of field observation of health workers

Health workers were one of the intellectual groups of the study. By profession, they were more familiar with the HIV and AIDS. So, they were asked more about the risk of HIV transmission among the health workers and its preventive measures.

Due to busyness of health workers, most of the responses were taken in written form. Comparatively they were more open about HIV and AIDS than other groups of study. They actively participated in survey and interview. Most of them were found involve in HIV awareness activities. On the basis of sharing of health workers; there was no any precaution except gloves and masks available to prevent from HIV transmission. If any health workers would be suspected of HIV transmission then immediately they should consult STD HIV and STD control center, Teku, Kathmandu and take ARV medicine as soon as possible within 72 hours for 28 days. But they were not ready to disclose their HIV status. From their response, it was understood that if they will be disclosed as HIV positive then health seekers will not take their service; people will not believe on them. HIV related informative posters or pamphlet were found almost in all hospital. Regarding the sexual behavior of health workers, they didn't want to talk openly and

5.2 Case Study

Case study was conducted with five respondents among them 3 were PLHIV. The in-depth life history was collected to understand the situation of HIV and AIDS.

Case study No. 1

28 years married Mrs. Rita Thapa (name changed) is living with HIV from 2008. She was born in small farmer house as a third child. There was no problem to manage the basic needs of family. Her child life was spent happily.

She was married at the age of 20. Her husband was used to visit the Mumbai, India for the search of job. She was unknown to the sexual behavior of her husband. She said "*I have no knowledge about the HIV and AIDS till my 1st sexual intercourse"*. After 3 years of marriage, her husband returned home having with some unknown disease, then she brought her husband to the hospital for the treatment then it was identified that her husband was HIV positive. After some time, her husband died then gradually she became ill and people suggested her to go hospital for check-up. Then with the support of one local NGO, she was brought Teku Hospital, Kathmandu for HIV testing. She was also identified HIV positive. After getting positive result, she said *"I felt very nervous, bad feeling, for a movement became senseless, I felt now my life is destroyed and going to die within few years."*

Effect in life

She said "*gradually my study stopped no job opportunities, economic burden increased because of expenditure in treatment and disturbance came in family and social relation. Due to HIV, I have to lose my husband in my very young age. I have to leave my father-in-law house also. Then I went back to my parent's house and I disclose my HIV status with my parent. For sometimes, they became speechless, but gave me moral support and encourage me to live long life."* Regarding the social behavior, she told "*when community people know my HIV status then I have to face stigma and discrimination. They blamed in my character."*

Present situation

Prior to this study, Thapa was reading in +2 and working as a Counselor in VCT. She got 2nd marriage at the age of 25 years with PLHIV. Now, her health status was good, was taking ART medicine. Her husband worked as a farmer. Her social and

economic status was also good. She told, *"Now community people also respect me and do the normal behavior".*

Responsible factors to make vulnerable

She said "My husband became the HIV positive due to ***lack of awareness*** on HIV and AIDS, there may be ***negligence*** also. On the other hand, my ***blind trust*** towards my husband made me also HIV positive."

Causes of increasing the risk of HIV in Nepal

Regarding the causes of increasing HIV in Nepal, she said, "Unemployment, Poverty, Lack of awareness and negligence of Government in the field of HIV are the major factors associated with increasing the risk of HIV in Nepal."

Preventive Measures:

Awareness of HIV, active involvement of Government, non-government and other private organization is necessary. If we provide free treatment, easy access in education, and job opportunity without any discrimination then the HIV transmission can be reduced.

Case study No. 2

Mr. Kiran (name changed) shared his life experiences through his introduction by saying "my name is Kiran (name changed), permanent resident of Bardiya district of Nepal. I am 29 years old married people. I was born in economically middle family. We are total 6 children and I am a 1st child of my parent. My child life spent very happily. My peers were very alcoholic and used to take cigrate from the very beginning. Due to such environment, I could not pass class ten also. Then I went

various cities of India (Gowa, Kalkata, Mumbai, Delli, Gujrat and Silang) and Kathmandu of Nepal in the search of job in hotels and garment factories."

He shared his sexual experiences also by saying "I had sexual experience at the age of 16 with my girlfriend. Till that time; I was not aware about the HIV and AIDS. After that frequently I used to keep the sexual relationship with non-regular sex partners, but used the condom. Unfortunately, one day I had unsafe sexual intercourse with one woman who was suspected as HIV infected then I felt myself in risk of HIV transmission. Then I visited one hospital of Kathmandu for HIV testing. I found that I was HIV positive. When I got the report, long time I felt very nervous, bad feeling, for a movement became senseless, I felt now my life is destroyed and going to die within few years."

"First time I told my mother and brother about my HIV status. They easily understood my problem and do the normal behavior as usual. It gave me some courage in my life to live long time."

Present life style:

I had asked his present life status during the time of research then he said "*right now, I am doing the agriculture work and married with PLHIV. Social and economic life is good. Health is improved by taking the ART."*

Future plan of your life: about the future plan; Mr. Kiran said "*I want to involve in awareness rising on HIV and AIDS to protect other people from HIV transmission. I am very much interested to do job in the field of HIV and AIDS project also."*

Factors make you or your family vulnerable for HIV infection: He said "unsafe sex practices due to lack of awareness made me HIV positive."

The reasons to increase the HIV and AIDS in Nepal: he said "Unemployment, Poverty, Lack of awareness and Illiteracy are the main reasons increasing the HIV and AIDS."

More responsible increasing the HIV and AIDS: Mr. Kirna said, "Government should be more responsible because it products more human-resources but can't provide the job so people compel to do any risky work consequently HIV is increasing."

Preventing Measure:

He said, "I can't blame society in increasing the risk of HIV. Government should be more careful about the treatment and job opportunities of PLHIV."

Case study No. 3

Researcher had conducted in-depth interview with 37 years HIV positive lady from the Brahmin community; permanent resident of Rupandehi district (out of Kathmandu valley) of Nepal. She was married at 20 years of age. She was working as a community and home based care (CHBC) worker in one HIV awareness project in local level.

Past family life:

She shared her past life by saying, "I am born in simple family and child life was spent very simply. I have just passed class 7. My peers were from the very simple family. They used to obey the cultural system of their family. I have visited Kathmandu, Pokhara, Delhi and Mumbai in the search of job. Economic condition of your family was normal. No. of family members including parents and children: 8 members and I am 2nd daughter of family."

Knowledge and Practices on HIV and AIDS:

"I had first sexual intercourse at the age of 20 years. I had no knowledge of HIV and AIDS or STIs before my 1st sexual intercourse. My first sexual partner was my own husband. I had no any non-regular sex partners. My husband has started to use the condom during the sexual intercourse when he was found the HIV positive."

Feeling of Risk of HIV transmission:

"When I tried to go aboard then I was referred for medical check-up then doctor gave me medical report of HIV positive in my blood."

Feeling after HIV testing

"When I found HIV positive in my blood then I surprised and felt nervous. I became helpless, could not think anything what is right and wrong. I was afraid that if society could know my HIV status and they would hate me and removed from the society."

Effect in life after identifying HIV positive

"I felt loneliness in my life, depression, no concentration in work, what to do and what not. I thought that my life time was completed and going to die soon. Then 1st time I told my HIV status with my mother then gradually other members of family."

Society's or family's attitude

"In the beginning I was afraid from the social discrimination, because our society is dominated by male. But I found not so different behavior from society and family so till social and family relation is good."

What factors make you or your family vulnerable for HIV infection?

"Poverty and ***lack of awareness*** made me vulnerable. I am infected from my husband through the sex."

Reasons to increase the HIV and AIDS in Nepal

"First, ***Poverty*** and second, ***social norm*** of our society is responsible which deprives the open discussion of sex and sexuality."

Prevention of HIV transmission

"First, need to increase the awareness on HIV and AIDS, government and private sectors should bring the plan to create the job opportunity, also need to manage the availability of sources of entertainment. Individual should be sincere during the sexual intercourse and blood transfusion."

Case study No. 4

Detail case study was conducted with 34 years, Mr. Lama, working in the field of transport sector as a driver since 19 years. He was the permanent resident of Dhanusa district (out of Kathmandu valley). He has studied up to class 8 only. He was from the ethnic community and married at the age of 17 years old. He told "*I started my work from Dhanusa district as a Khalasi (helper) in local bus when I passed class 8. Daily different types of people met. I had driven long rout bus from Kathmandu to Delhi also 3 years".*

He shared his life experience on HIV and AIDS as follow:

Knowledge of HIV and AIDS

He told. *"I have some knowledge of HIV and AIDS. It transmits from the unsafe sex and sharing of needles".*

Attitude towards risk behavior

Regarding the attitude towards the risk behavior on HIV, he shared that *"In my experience in Nepal and India, the people whose economic status is not good are engaged in sex business for survive and on the other hand who has good economic status they are engaged for joy and romance. The people whose economic status is*

Middle level neither can do such sex business nor can pay for sex. So comparatively, ***middle class people are safe from HIV transmission than poor and rich people****".*

Practices on HIV and AIDS

Mr. Lama said, "In this sector, nobody cares other. I have no experience of sharing of HIV information between the friends."

Risk behavior

He said "sex is common in this field so being a transport worker; everybody thinks that all are same".

He also shared his own sex experiences, *"I have also visited many dance bar and restaurant, but 2-3 times I had sex experience with non-regular sex partners. One time when I used to drive the bus from Kathmandu to Delhi; one day, my friend took me in red-light areas of India. It was my first experience in India. In the beginning, I denied keeping sex relation with any girls but I made compulsion to have sex because the girls were scolding and questioning me about my masculinity. So, I drank 4 beers and finally chose one sex worker for sex. Similarly, I have next experience in Nepal also. I had visited one hotel of Thamel of Kathmandu with my friends. We took beer and when all became drunk then one of my friends ask me to do sex with one sex worker. Then he requested with Hotel owner and hotel owner send around 10 girls but I afraid to choose any one because when I heard that they all were professional sex workers then I refused to do sex because of the fear of HIV transmission".*

He also shared the status of HIV among the transport workers by saying "*I think, out of 100 HIV infected, at least 25% may be transport workers. Transport workers used to do much expenditure for ladies also so many girls prefer transport*

workers which make the sex easy. There may be HIV positive in longue route transport workers also; but nobody will be ready to disclose their HIV status".

"I have no doubt of HIV positive in my blood. Though, I have been regularly doing blood test also to confirm the health status".

Contributing factors of increasing the risk of HIV transmission

Mr. Lama said "*Lack of self-awareness, knowledge and negligence are the major causes to increase the HIV. When people became drunk then can't thing about the safety. Just they need one lady for sex".*

Preventive measures

Regarding the preventive measures, he shared his *opinion "Education is the main factors which can safe people from the HIV transmission".*

He added again "*government should manage the red light area like India. Here is very dangerous because secretly sex business is running. People closely visit such areas. They can't openly take the condom for protection so there are high chances of unsafe sex".*

"Individual and society should be more responsible to prevent from the HIV transmission. Here sex business is common so society can restrict such business in their areas and society can aware their community members".

Case study No. 5

30 years married Mr. Buddhalal permanent resident of Kavre district said that he was just literate because of family economic crisis, he could not read. He was working in brick factory since 3 years. Annually 6 months, he stayed in brick factory. He was married in 24 years. He was living with his family in brick factory.

Knowledge of HIV and AIDS

He had heard about the HIV and AIDS from friends and radio. He said HIV transmits by unsafe sex. He was found a little bit confused about the way of HIV transmission through the blood.

Attitude towards PLHIV

He had not seen any HIV positive people. He said if he would meet with PLHIV then he would not hate such person and would live together.

Practices on HIV and AIDS

He had no any non-regular sex partners. He said that he feared to keep sexual relationship with other sex partners because of the fear of STIs and unwanted pregnancy. He had no experience of condom use. He had no doubt in life to be HIV positive. Not tested HIV.

Contributing factors of increasing risk of HIV transmission

Mr. Buddhalal had shared that ***negligence and poverty*** is associated with risk of HIV. People involved in sex trade under compulsion because of poverty; nobody become sex worker by interest. In his opinion, level of education could not determine the risk behavior of people; ***educated people can be HIV positive***. He said that hotel owners must be responsible to reduce the risk of HIV transmission, because they mostly use the ladies as a source of income in their business.

Preventive Measures of HIV

Individual should be careful and be safe and community needs to openly discuss on sex and sexuality

Government and other organization should involve in awareness program and need to establish the new job opportunities for youth which could control the migration. It ultimately supports to reduce the risky behavior of HIV transmission.

5.3 Open ended questionnaires

Respondents were asked open ended questions also to collect their opinion regarding the factors associated with increasing the risk of HIV and AIDS in the Nepalese context during the survey among the 404 respondents. They were asked to write the top three factors only as they felt most significant.

The responses are tabulated as bellows:

Table 68: Factors identified from the open ended question

S.N	Factors	Health Workers				Garment Factory Workers				Transport Workers				Brick Factory Workers				Grand Total Rating				Rating
		Rating				Rating				Rating				Rating								
		1	2	3	Total	1	2	3	Total	1	2	3	Total	1	2	3	Total	1	2	3	Total	
1.	Negligence	7	9	6	**22**	13	10	3	**26**	18	19	11	**48**	20	10	8	**38**	58	48	28	**134**	1st
2.	Lack of awareness/knowledge	13	18	15	**46**	10	15	5	**30**		7	5	**12**	14	18	5	**37**	37	58	30	**125**	2nd
3.	Poverty	6	13	8	**27**	12	13	9	**34**	9	4	10	**23**	8	17	14	**39**	35	47	41	**123**	3rd
4.	Illiteracy (lack of education)	12	7	4	**23**	17	13	6	**36**	12	8	1	**21**	12	22	8	**42**	53	50	19	**122**	4th
5.	Unsafe sex	15	7	4	**26**	6	5	6	**17**	16	7	6	**29**	22	3	7	**32**	59	22	23	**104**	5th
6.	High ambition to earn money					5	4	8	**17**	5	6	10	**21**	1	5	11	**17**	11	15	29	**55**	6th
7.	Not use of condom	2	1	1	**4**	4	2	3	**9**	7	8	7	**22**	7	3	6	**16**	20	14	17	**51**	7th
8.	Illegals sex business of Hotel/restaurant/Prostitution	2	1	7	**10**	3		8	**11**	5	5	5	**15**	2	4	6	**12**	12	10	26	**48**	8th
9.	Multiple sex partners/ Illegals relation	7	2	1	**10**	5	1	8	**14**	3	1	5	**9**	6	3	3	**12**	21	7	17	**45**	9th
10.	Girls (Human) Trafficking	5	1		**6**	2	1	6	**9**	2	2	2	**6**	1	1	5	**7**	10	5	13	**28**	10th
11.	Friends request/conduct			1	**1**	4	3	2	**9**	3		2	**5**		2	6	**8**	7	5	11	**23**	11th

S.N	Factors	Health Workers				Garment Factory Workers				Transport Workers				Brick Factory Workers				Grand Total Rating				Rating
		Rating				Rating				Rating				Rating								
		1	2	3	Total	1	2	3	Total	1	2	3	Total	1	2	3	Total	1	2	3	Total	
12.	Sharing of same needles		6		6		5		5		2	3	5	1	2	4	7	1	15	7	23	11th
13.	Innocence	3	1		4				0	1	4	3	8	2	3	1	6	6	8	4	18	12th
14.	Sexual desire						1	2	3	5	3	3	11			3	3	5	4	8	17	13th
15.	Drug abuse		1	4	5	1			1		2	1	3	1	3	2	6	2	6	7	15	14th
16.	Migration (aboard job)	1	2	1	4	1	1		2	1	1		2	1	1		2	4	5	1	10	15th
17.	Unsafe blood transfusion	1	1	3	5			1	1			1	1			2	2	1	1	7	9	
18.	Society misbehavior/traditional behavior		1	4	5	1			1		1	1	2		1		1	1	3	5	9	
19.	Unemployment	1	5	1	7				0		1		1				0	1	6	1	8	
20.	Misuse of Internet/technology			7	7				0				0			1	1	0	0	8	8	
21.	Weak Government law	2	2		4			1	1		2		2				0	2	4	1	7	
22.	Deception of sex partners (Trust)	2			2	1		1	2	1		1	2			1	1	4	0	3	7	
23.	lack of sex education	3		2	5				0				0				0	3	0	2	5	
24.	Imitation of western culture		1	3	4				0			1	1				0	0	1	4	5	
25.	Secrecy of HIV status	1		1	2				0				0	1			1	2	0	1	3	
26.	Alcoholic Nature					1	1		2		1		1					1	2	0	3	
27.	Bad behavior	1			1				0	1	1		2				0	2	1	0	3	
28.	Rape					1			1				0	1				2	0	0	2	
29.	Inadequate communication/information center		2		2				0				0				0	0	2	0	2	
30.	Social			1	1				0			1	1				0	0	0	2	2	

S.N	Factors	Health Workers				Garment Factory Workers				Transport Workers				Brick Factory Workers				Grand Total Rating				Rating
		Rating				Rating				Rating				Rating								
		1	2	3	Total	1	2	3	Total	1	2	3	Total	1	2	3	Total	1	2	3	Total	
	discrimination																					
31.	Women violence		2		**2**				**0**				**0**				**0**	0	2	0	**2**	

Sources: Field study, 2013

The above table shows that there are 31 factors were reported by the respondents as associated factors with increasing the risk of HIV transmission. Among them, top 15 factors are identified as the major associated factors on the basis of rating given by respondents. Gradually 'negligence' was reported as major factors followed by lack of awareness, poverty, illiteracy, unsafe sex, high ambition … and so on.

A similar type of research study, conducted by Pokhara University, reported that when the respondents were asked about the factors which indirectly helps in HIV and AIDS prevalence, most of them answered that illiteracy (19.5%), prostitution (18.5%) and poverty (15.5%) appear to be most important indirect variables of HIV and AIDS prevalence. Apart from these, human trafficking (13.6%) and distancing from spouse (12.9%) also appear important intervening mode of transmission (Pokhara University, 2012).

As comparison with the previous study, the finding of the study remained significant.

5.4 Multidimensional approach as a Preventive measures

Multidimensional approach means, 'An assessment of situation from the multi-sectors or angles to find out the solution of problem'. This approach is developed by addressing the different factors associated with the risk of HIV and

AIDS on the basis of primary data of research collected by using the qualitative and quantitative approach.

Framework of Multidimensional Approach:

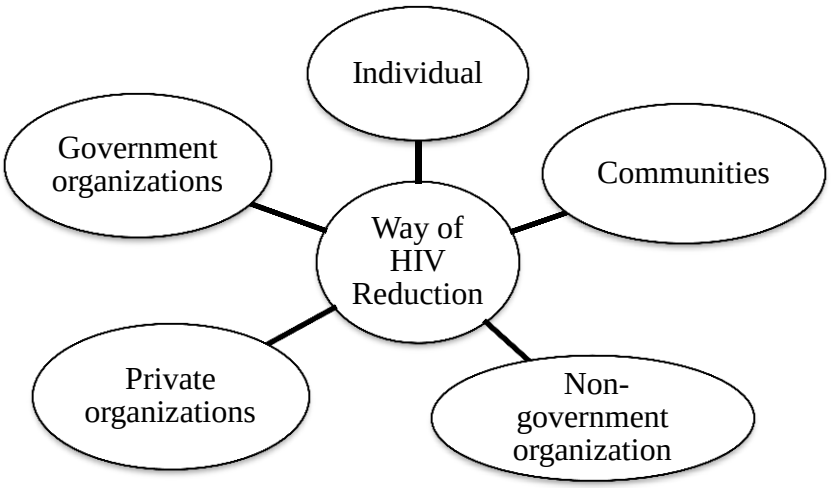


Figure 8: Multidimensional Approach for HIV risk reduction

Defining the factors associated with the actors and their roles and responsibilities to reduce the risk of HIV transmission:

Description of Multidimensional Approach				
Actors	**Data from 4.5.9**	**Factors associated with actors**		**Roles & Responsibilities**
		Latent Function	**Manifest Function**	
Individual	**94.6%**	• Use of alcohol during the sexual intercourse, • High ambition, • high sexual desire, • Pressure of friends, • Misuse of Internet/technology, • Trust on sex partners, • Secrecy of HIV status	• Negligence, • unsafe sex, • Multiple sex partners, • sharing of needles,	• To be sincere, each individual adopt safer sexual behavior • Negligence behave should be corrected, • Openly talk about sex education • Be faithful with their sex partners, • Sharing of knowledge and information to peers, families and community people

Description of Multidimensional Approach				
Actors	**Data from 4.5.9**	**Factors associated with actors**		**Roles & Responsibilities**
		Latent Function	**Manifest Function**	
Community	**39.6%**	• Girls (Human) Trafficking, • Socio-cultural taboos, • gender based discrimination	• Stigma and discrimination • Social awareness,	• Accept the HIV and AIDS as a social problem • Intensive support and involvement in awareness campaigns, • Reduce the stigma and discriminatory behavior to HIV infected or affected people,
Private Organization	**37.1%**	• Inadequate involvement in social awareness campaigns	• Unsafe sex business of Hotel/restaurant (Prostitution)	• Increase the involvement in corporate social responsibilities • Organize at least quarterly one health awareness program targeting their workers, • Create the employment opportunities to youths,
Government organization	**49.0%**	• Poverty, • Illiteracy, • conflict, • Human (Girls) Trafficking,	• Government health policy/strategy: health service delivery, • Unemployment (Migration/prostitution) problem,	• Develop the policy on the ground of underlying causes of HIV and AIDS, • Launch the program addressing the social, cultural, educational and economic factors, • sex trade should be managed legally; cannot be controlled, • Mobilize multi-sectoral agencies • Extension of health services in hard to reach areas
Non-Government Organization	**40.1%**	• Support for infected and affected people	• Geographical coverage of health awareness program	• Increase the community participation in each movement, • Identify the real needy communities for intervention • Provide comprehensive package of services for infected and affected people

The above explained risk reduction model was discussed with other previous study which stated the HIV risk reduction model.

Condom use and negotiation of safer sex are reported to be the most effective means of HIV risk reduction (J. N. Sayles, 2006). Similarly, a previous study conducted by J. A. Catania, S. M. Kegeles, and T. J. Coates had reported that the AIDS risk reduction model in which self-efficacy plays an important role (1990). The concept of self-efficacy is defined as having confidence in one's ability to perform a particular behavior, and it has been regarded as an important component of health-related behavioral change (A. Bandura, 1977). Self-efficacy emphasize three stages where a young person has knowledge about a particular safer sex behavior (i.e., using condoms), they then have to think that the behavior is socially acceptable (norms/attitudes) and to believe that they would be able to practice the behavior (self-efficacy) before they actually engage in the behavior (J. A. Catania, 1990).

Multivariate analysis found the variables: having been tested for HIV, concurrent sexual partners, transactional sex partners in life time, low HIV risk perception, and difficulty of getting condoms, acceptable to have coerced sex, high relationship control, and participating in1-2 loveLife face-face programmes to be significantly associated with high self-efficacy for males. Similarly with regards to females, low HIV risk perception, HIV/AIDS stigma, ever drugs and having life goals were associated with high self-efficacy in multivariate analysis (Julia Louw, 2012, p. 3).

From a public health standpoint, conceptual framework for HIV prevention was developed by Vikrant V. Sahasrabuddhe and Sten H. Vermund considering HIV prevention in three phases: ***(i) primary prevention***, for hitherto uninfected by HIV, ***(ii)***

secondary prevention, for recent HIV 'acutely infected' individuals and ***(iii) tertiary prevention*** targeting persons with chronic HIV infection. To address these phases, different strategies was applied at the **micro** (individual or family) level, **meso** (community) level, and **macro** (policy or structural) level (2007). Vikrant V. Sahasrabuddhe and Sten H. Vermund also reported. "prevention and control of sexually transmitted infections (STIs) has proven effective in reducing HIV infection when treatment is available promptly for symptomatic persons in conditions of an emerging infection. Biologically, it is assumed that reduced genital tract inflammation reduces infectiousness for HIV as well as reducing susceptibility in HIV-uninfected persons" (2007, p. 1).

From the above discussion, it is found previous study also; those individual factors are mostly reported as associated factors with risk of HIV and AIDS. In my study also, ***94.6%*** respondents reported individual factors to be the most effective means of HIV risk reduction. So the finding of my study shows the similar result with previous study.

CHAPTER – SIX
SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATION

Summary, findings, conclusion and recommendation are presented under this chapter.

6.1 Summary

The main purpose of this study was to identify the factors associated with increasing the risk of HIV and AIDS in the context of Nepal. The whole research was guided by the Pragmatic philosophy and deductive approach was adopted by using the latent function of Structural functional theory of R. K. Merton (Sociologist). 404 respondents were selected from 4 groups: garment factory workers, brick factory workers, transport workers and health workers by using the simple random sampling. Multistage Simple Random Sampling was used to deduct the size of study area on the basis of logical reasoning and simple random sampling was adopted to select the respondents. Under the random sampling, lottery method (two types of similar paper card was used having with symbol of '0' and '1' ('0' means not selected and '1' means selected) was used to select the respondents for survey and interview both. The entire paper cards were kept in one container and participants were asked to draw the card. Who got the 1, was selected for the study. Concurrent mix-method was used to collect the quantitative and qualitative data. Survey was done to collect the quantitative data and interview and case study were done to collect the qualitative data. A survey questionnaire was developed on the basis of theory of planned behavior.

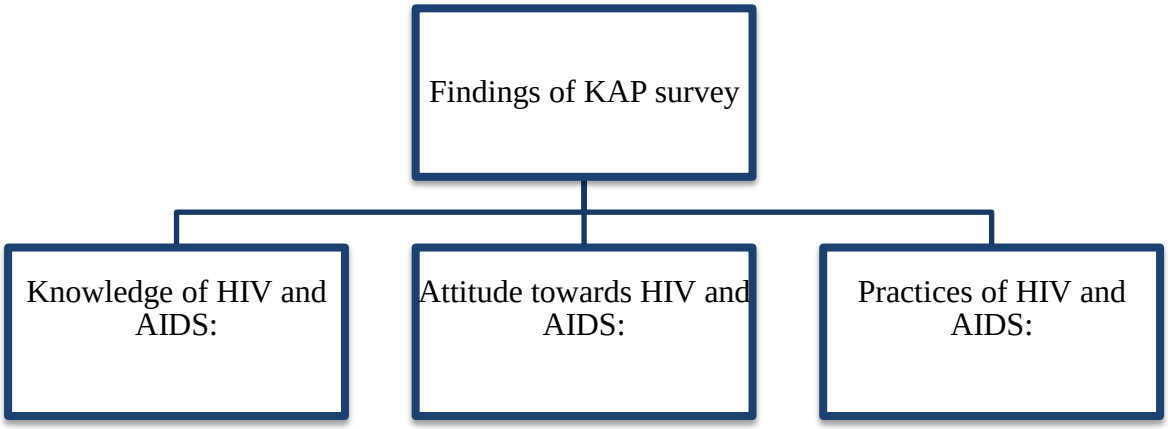
Before visiting the field, Research topic was approved from Research Degree Committee (RDC) of Dr. K. N. Modi University, Newai, Rajasthan, India and ethical

approval was taken from the Nepal Health Research Council (NHRC) of Ministry of Health. Written consent was also taken from the each respondent during the survey.

Quantitative data was analyzed by SPSS and Excel and qualitative data was manually transcribed and analyzed in descriptive way.

Objective wise findings of study are summarized as below:

Specific Objective No. 1



Under the KAP survey, 35 questions were asked to measure the knowledge, attitude and practices on HIV and AIDS among the respondents. Among them, 25 questions were analyzed.

Level of knowledge varies from 13.6% (reported that being faithful with one sex partner can prevent from the HIV transmission) to 96.8% (respondents have heard about HIV and AIDS).

Similarly, attitude towards PLHIV shows totally negative 2.2% (replied that they socially hate the PLHIV) to fully positive 87.1% (respondents reported that if their friends would be the HIV positive then they would live together). 42.8% respondents wanted the HIV status to remain secret.

70.7% respondents were reported that they had talked about the HIV and AIDS with their life partners (between husband and wife). 29.2% unmarried respondents had sexual experience. 5.8% had sexual experience in less than 15 years of age. On the basis of marital status, 62.7% unmarried and 17.3% married respondents had used the condom during the first sexual intercourse. Similarly, 11.1% (n = 25/226) married and 13.7% (n = 7/51) unmarried respondents had reported that they had sexual relation with non-regular sex partners.

As interview was conducted among the 22 respondents; 2 respondents were found totally unknown about the HIV and AIDS followed by 4 respondents had no clear knowledge about the way of HIV transmission. 5 respondents said that they did not want to keep any relationship with HIV infected persons. Similarly, involvement in sexual activity with non-regular sex partner was found higher among the transport workers than other groups of study.

Specific Objective No. 2

Factors identified from the previous literatures were:

Marriage system, Multiple sexual partners, Gender-based violence, Stigma and social taboos, Lack of knowledge, Alcohol consumption and sexual activity, Cultural norms and practices, Poverty, Conflict, Gender inequality, Human trafficking, Education, Migration, Trust and Religious factor

These factors were tested in the context of Nepal and only those factors were reported which was found significant association with increasing the risk of HIV and AIDS in Nepalese context. These factors were taken significant which had got more than 50% responses in strongly agree and agree. Among them, following factors were found significant on the basis of response of respondents from the primary data.

Factors	Strongly Agree	Agree	Total	Ranking	P value
Lack of awareness	76.20%	19.30%	**95.50%**	1	.001

Negligence	85.90%	8.90%	**94.80%**	2	.000
Illiteracy	67.80%	26.70%	**94.50%**	3	.000
Polygamy	87.40%	6.90%	**94.30%**	4	.002
Human trafficking	71.50%	22.10%	**93.60%**	5	.000
Stigma & discrimination	56.70%	32.90%	**89.60%**	6	.033
Conflict	49.80%	39.40%	**89.20%**	7	.010
Migration	57.30%	22.80%	**80.10%**	8	.017
Trust	48.30%	28.70%	**77.00%**	9	.001
Poverty	32.50%	35.50%	**68.00%**	10	.000
Society	33.20%	24.30%	**57.50%**	11	.000

Similarly, following factors were identified from the open-ended questionnaires:

Negligence, lack of awareness, poverty, Illiteracy (lack of education), unsafe sex, High ambition to earn money, Not use of condom, Illegals sex business of Hotel/restaurant or Prostitution, Multiple sex partners/ Illegal relation, Human (Girls) Trafficking, Friends request/conduct, Sharing of same needles, Innocence, Sexual desire, Drug abuse, Migration (aboard job), Unsafe blood transfusion, Society misbehavior/traditional behavior, Unemployment, Misuse of Internet/technology, Weak Government law, Deception of sex partners (Trust), lack of sex education. Imitation of western culture, Secrecy of HIV status, Alcoholic Nature, Bad behavior, Rape, Lack of communication/information, Social discrimination, Women violence

Specific Objective No. 3

Under this objective, researcher had tried to find out the way of risk reduction. So, on the basis of findings, multidimensional approach was developed which had explained the roles of each stakeholder addressing the factors associated with risk of

HIV and AIDS.

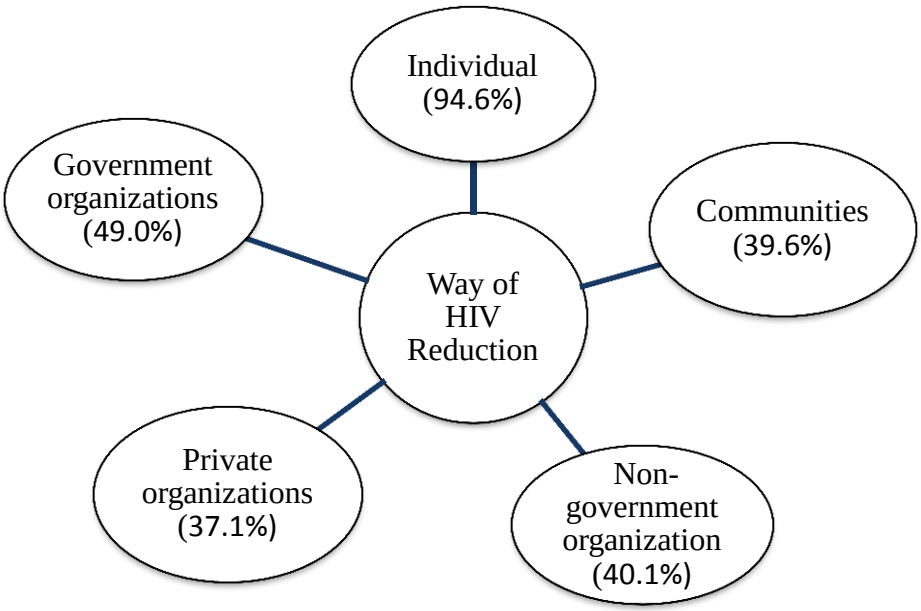


Figure 1 1: Multidimensional Approach developed for way of HIV reduction

From the survey, 94.6% respondents reported that individual should be responsible followed by government (49%), non-government organization (40.1%), communities (39.6%) and private organization (37.1%) to reduce the risk of HIV and AIDS. Similarly, during the time of interview also, majority of respondents highlighted the role of individual was prime. Individual should be careful and needed to make other people safe if s/he was HIV positive. Similarly, interviewees also said that government should create the job opportunity to address the poverty and migration.

6.2 Findings

6.2.1 Demographic status of Respondents

1. Among the total (n=404) respondents in the survey by sex, 29.46 percent were females and rests were males. 27 people were selected for interview to understand their knowledge, attitude, practices on HIV and AIDS and opinion was taken regarding the causative factors increasing the risk of HIV

transmission and its preventive measures. Among them, 5 respondents were taken for case study.

2. As per ethnicity 53.2% (n=215/404) of respondents were Janjati followed by 30.44% (n= 123/404) Chhetri and Brahmin, 11.38% (n= 46/404) Dalit and 5% (n= 20/404) others were participated in research study,
3. Age wise, from 15 to 49 years old people were selected for the study where majority of the respondents were from 26-30 age groups,
4. Out of total 404 respondents; 229 respondents were married and 175 were unmarried,
5. Out of 404, 56.7% (229) people were married where 57 people were married at the age between 18 – 20 ages, followed by 52 at the age between 21- 22. Similarly, 52 were married at the age of 23-25 age and 43 got married at the more than 25 age. 14 were at the age 15-17 and 11 people were married at the age of under 15 years.
6. As data of education level of respondents shows that majority (103 respondents) of respondents had primary level of education followed by 111 respondents from the Higher secondary level, 86 from lower secondary level, 53 from secondary level, 32 from literate and 19 were illiterate respondents.

6.2.3 Finding related with Objective no. 1

1. The above tabulated data of responses shows that among the total respondents, 96.8% (n=404) respondents have heard about HIV and AIDS and rest 3.2% have not any ideas, have not heard about the HIV and AIDS. From the in-depth interview, it was found that >50% respondent of transport workers, garment factory workers and brick factory workers who had heard about the HIV and AIDS but had not clear knowledge about the difference between HIV and AIDS.

2. 95.8% (n = 404/388) respondents were mentioned that they had knowledge of way of HIV transmission and only 4.2% (n = 404/16) replied that they had no knowledge of way of HIV transmission.
3. Regarding the different way of HIV transmission, 94.1% (n=404/380) of the respondents mentioned that unsafe sex is the means of transmission. Similarly, 45.3% (n=404/183) of the respondents mentioned that sharing of the needles, 1.0% (n=404/4) of the respondents mentioned that sharing of foods and 1.0% (n=404/4) mentioned that sharing of blood component and sharing of bleed. During the time of face to face interview, one respondent mentioned that "if *a mosquito when bite one infected person then if within 24 hours it bites other person then there is a chance of HIV transmission"*.
4. In total, 95% respondents had knowledge of HIV prevention.
5. Respondents were also asked about their knowledge regarding the different ways of preventive measures of HIV transmission. As mentioned above table, 87.4% (n = 353/404) reported that safer sex practices can prevent from the HIV transmission followed by 43.8% (n = 177/404) reported that proper use of condom, 43.1% (n=174/ 404) reported that safe blood transfusion, 13.6% (n = 55/404) reported that being faithful with one sex partner and same number of respondent reported that regular medical checkup. Regarding the way of preventive measure, researcher found some misunderstanding among the respondents also during the time of interview. One transport worker said "***as I know if we wash penis from our own urine after sex; any virus can be died. So often I also used to do the same when I have unsafe sex so I felt I am not in risk"***
6. 95% respondents replied that healthy looking person could be HIV positive.

7. 85.1% responded that AIDS could not be cured followed by 7.7% responded that AIDS could be cured. Similarly, 6% had no ideas about it and 1.2% had no response. Some respondents were found unknown to the treatment facilities provided by government also. One respondent from transport sector said "*I think medicine of AIDS may be very expensive; it has around 1 Lakh per injection. So if rich people will be infected then they can live otherwise poor will be died without medicine."*
8. 96.3% (N = 404) respondents were replied that knowledge of HIV and AIDS is necessary followed by 1.5% felt not necessary and 2% had no idea about it.
9. 67.6% respondents reported that they encourage PLHIV to live long life followed by 38.9% behave as usual with PLHIV and only 2.2% replied that they socially hate the PLHIV. Regarding the attitude on HIV and AIDS, it was also found from the interview that one transport worker said *"I have not seen any HIV infected persons. If I will meet with such person then I will not talk with him like other normal people because there may be chances of transmission*."
10. As reported by respondents, 68.8% reported that they would encourage to live long life followed by 40.8% reported that they would do behave as usual. 1.2% mentioned that they would remove such family members from home if they would be HIV infected.

51% respondents wanted to disclose the HIV status followed by 42.8% wanted it to remain secret and 7.2% don't know what should be done. Data showed that still around 50% people do not want to disclose their HIV status in their community. Educated persons were found that they wanted to remain more secret about the HIV status. 63.4% of Health workers wanted HIV status to remain secret as compared with only 17.8% transport workers remained it secret. In interview time, one transport worker said "***if I will be infected then I will do suicide because people will hate and***

morality will be down among the family, relative and community. People will call by the name of AIDS". With level of education of respondents, out of 111 respondents who had higher secondary education; among them 57 (51.35%) reported that they wanted to keep the HIV status secret followed by out of 103 primary level education; 31 (30.10%), 86 lower secondary level; 40 (46.51%) and 53 secondary level; 22 (41.51%), whereas out of 19 illiterate respondents; 7 (36.84%) reported that they didn't want to remain it secret.

There is significant relationship found (R = .155 and p > .002, 2-tailed) between level of knowledge and attitude towards the secrecy status of HIV positive.

11. 87.1% respondents reported that if their friends would be the HIV positive then they would live together. Only 3% reported that they would live such person alone. 9.9% people don't know what would happen in such situation. From in-depth interview, one garment factory worker said ***"If I will see then I will not go near by him. I will not keep any relation with such person".***

12. 90.6% reported that PLHIV can do the job. In response of open ended question regarding the job of PLHIV, it was mentioned "*it is the human right of doing job. We can encourage living long life by providing the equal opportunity on the basis of their knowledge, experience and qualification. It makes them independent; fulfill their basic needs and supports to reduce the social stigma and discrimination also."*

13. 96% respondents reported that all suspected people have to test their blood mandatorily. As a reason, majority of respondents had mentioned that HIV transmission from infected person to healthy person would be reduced and other person could be safe by testing the blood of suspected people mandatorily.

14. The data shows that sexual desire, high ambition and poverty are the main causes to engage in sex business.
15. 85.1% respondents replied that people engaged in drug use due to friends' request. Gradually, 28.7% reported that due to careless of parents, 26.7% reported that due to enjoy and 13.9% reported that due to innocence.
16. 81.1% respondents reported that they have discussed about the HIV and AIDS with their friends. But still, 17.4% had never discussed about it with their friends. Similarly, 70.7% reported that they had discussed with their wife/husband. Social orientation of sex and sexual intercourse plays the vital role on discussion of HIV and AIDS. During the time of face to face interview, one brick factory worker said ***"I had not talked about HIV and AIDS with friends and wife because of the shyness".***
17. 69.5% respondents responded that they had sexual experience. 3.3% respondents didn't want to share their sexual experiences. There is significant association found ($p = .002$) between unmarried respondents and sexual practices.
18. 69.5% respondents responded that they had sexual experience; out of them only 67.8% shared their first sexual experience. 5.8% had sexual experience in less than 15 years. Gradually, 10.6% had sex experience in between 15-17 years, 31% had 18-20 years, 21.9% had 21-22 years, 17.5% had 23-25 years and 13.1% had after 25 years.
19. 69.5% respondents responded that they had sexual experience; out of them only 67.8% shared their first sexual experience. 5.8% had sexual experience in less than 15 years. Gradually, 10.6% had sex experience in between 15-17 years, 31% had 18-20 years, 21.9% had 21-22 years, 17.5% had 23-25 years and 13.1% had

after 25 years. There is significant relationship found *(r = .815, p = .000 (2-tailed)* between marriage age of respondents and age of first time sexual intercourse.

20. In total, only 25.6% respondents had used the condom during the first time sexual intercourse. On the basis of marital status, 62.7% unmarried and 17.3% married respondents had used the condom during the first sexual intercourse. It is found that 33.3% unmarried and 79.2% married had not used condom. During the time on interview; respondents shared that they need not use condom with their wife in their first time sexual intercourse. Similarly, some respondents were selected from the Muslim community said ***"we do not use condom due to our religious and cultural belief also"***.
21. It is found that in total, 11.6% respondents reported that they had sexual relationship with non-regular sex partners. On the basis of marital status, 11.1% married and 13.7% unmarried respondents had reported that they had sexual relation with non-regular sex partners. In face to face interview, some transport workers shared that "*we got chance to have a sex with non-regular sex partners because of emotional attachment with them*". There is no relationship (r = .111 and p = .066 (2-tailed) between Knowledge on way of HIV transmission and sex with non-regular sex partner.
22. Among the total respondents (11.6%) who reported that they had sex with non-regular sex partners since last 6 months prior to this study shows that 37.5% had not used condom during the sexual intercourse.
23. Only 2% (n=404) reported that they felt they were in high risk followed by 9.2% reported some risk of HIV transmission. Similarly, 83.4% mentioned that they were in no risk, 1.7% had no response and 3.7% don't know about their status of risk of HIV transmission. During the field observation and face to face interview,

it was found that most of the respondents except health workers considered the risk of HIV transmission only through the unsafe sex, no other ways. So, they thought that if they had no non-regular sex partners then they had no risk of HIV transmission. But, majority of health workers realized that they were in risk of HIV transmission due to their occupation.

24. Out 404 respondents, 26.8% had tested HIV and rest had reported that they had no risk of HIV transmission, so no necessary to test HIV. In interview, Health workers said "*when a health worker cares a patient, the health worker may not know the patient has HIV or not. Sometimes, they may have accidental prick while giving injection, drawing blood, doing any diagnostic procedure, doing surgery they may come in contact with the blood or blood product and they may be infected so regularly blood testing is necessary to confirm own HIV status*".

6.2.2 Finding related with Objective No. 2

1. 57.5% respondents agree followed by 33.9% disagree that society is associated with increasing the risk of HIV and AIDS. 8.7% were responded as neutral (neither agree nor disagree).
2. 87.4% of respondents were strongly agreed that polygamy is associated with increasing the risk of HIV and AIDS in Nepalese context.
3. The data shows that 52% respondents are strongly disagree against the 2.7% respondents are strongly agree that early marriage is associated with increasing the risk of HIV transmission. In field interview also, respondents were strongly avoid that early marriage couldn't be blamed as a contributing factors increasing the risk of HIV transmission.
4. From the survey data, it is found that more than 60% (majority) respondents reported that there is no association between cultural and traditional practices and risk of HIV and AIDS in the Nepalese context.

5. Only 18.4% respondents were found strongly agree followed by 26.1% respondents were agree against the 9.4% strongly disagree followed by 9.4% disagree in question 'there is association between the gender based violence and risk of HIV and AIDS in Nepalese context'. Regarding this question higher numbers (36.7%) of respondents were found to be neutral.
6. The above mentioned primary data shows that 56.7% respondents were strongly agree that there is association between the stigma and discrimination with the risk of HIV and AIDS followed by 32.9% were in agree.
7. 71.5% respondents were reported that they strongly agreed that there is association between human/girls trafficking and increasing the risk of HIV transmission followed by 22.1% were agreed. Only 2% respondents were reported disagree.
8. 48.3% respondents strongly agreed that trust on sex partners is associated with increasing the risk of HIV transmission followed by 28.7% respondents agreed.
9. Majority of the respondents (36.1%) replied in neutral (neither agree nor disagree) answer regarding the association between gender inequality and risk of HIV transmission. Very few (only 8.7%) respondents gave response in strongly agree followed by 29.2% response in agree. Apart from this, 13.9% respondents disagree and 12.1% strongly disagree.
10. The primary survey data shows here that 32.5% respondents were strongly agreed followed by 35.5% were agreed regarding the association between the poverty and risk of HIV and AIDS. Besides that, 16.4% respondents disagree and 9.7% strongly disagree.
11. Data shows here that 57.3% respondents strongly agreed followed by 22.8% respondents agree regarding the association between the migration and risk of HIV transmission. Against this data, 5.7% and 4.7% respondents respectively disagree

and strongly disagree in above mentioned question. Around 9.4% respondents were found to reply in neutral response.

12. Researcher had asked the question regarding the association between conflict and risk of HIV and AIDS in the context of Nepal during the survey among the 404 respondents. The primary data shows that 49.8% respondents reported 'strongly agree' followed by 39.4% respondents reported 'agree'. Besides that only 1.5% reported ' disagree' followed by 1.7% reported ' strongly disagree'. 7.7% respondents found in neutral response.
13. The secondary data shows that trend of HIV infection was increasing in decreasing rate from the 1991 to 2004. It is seen that increasing rate was 16.67% from 1991 to 1992 which came in 1.6% from 2003 to 2004. Post conflict situation is seen in continue decreasing trend.
14. In total more than 94% respondents mentioned that negligence of people is one major factor associated with increasing the risk of HIV and AIDS in Nepalese context.
15. Regarding the association between alcoholically nature and risk of HIV transmission, 30.9% reported 'strongly disagree' followed by 16.6% reported 'disagree'. 21% respondents reported 'neither agree nor disagree (neutral)'. Only 15.8% and 15.6% reported 'strongly agree' and 'agree' respectively.
16. In total, 95.5% respondents (76.2% reported 'strongly agree' and 19.3% reported 'agree') reported that there is association between the lack of awareness and risk of HIV and AIDS. Out of rest 3.0% reported that they were neither agree nor disagree.
17. From the survey data as tabulated in 4.2.5 shows that 67.8% respondents reported 'strongly agree' followed by 26.7% reported 'agree' regarding the

association between education and risk of HIV and AIDS. Only 3% respondents reported 'disagree' followed by 2.5% had neutral response.

18. From the open ended question asked among the 404 respondents regarding the major factors associated with increasing the risk of HIV transmission, it was found that negligence was reported as one of the major factors. Similarly, lack of awareness/knowledge, Poverty, Illiteracy (lack of education), Unsafe sex, High ambition to earn money Not use of condom, Illegals sex business of Hotel/restaurant/Prostitution, Multiple sex partners/ Illegals relation, Girls (Human) Trafficking, Friends request/conduct, Sharing of same needles, Innocence, Sexual desire, Drug abuse, Migration (aboard job) were also reported gradually.

6.2.4 Findings related with Objective No. 3

1. 84.7% of the respondents strongly agree that awareness rising can support to reduce the risk of HIV transmission followed by 10.6% agree on the same. Besides that very few respondents (.7%) disagree on it.
2. More than 50% respondents (29.2% reported ‘strongly agree followed by 27.0% reported ‘agree’) agree that risk of HIV transmission can be reduced by mandatorily blood test of suspected people.
3. The data shows that still 35% respondents (17.9% reported ‘strongly agree followed by 14.1% reported ‘agree’) agree that HIV can be reduced by keeping PLHIV in separate place.
4. 27.0% reported ‘strongly agree’ followed by 42.3% reported ‘agree’ that by providing the job opportunity to all can reduce the risk of HIV transmission. Besides that 20.5% respondents were disagree on it.
5. 84.7% respondents strongly agree that risk of HIV can be reduced by improving the individual behavior followed by 9.7% respondents reported ‘agree’. Very few (only 1.7%) reported that they disagree on above.

6. Out of total 47.7% respondents (19.4% ‘strongly agree’ and 28.3% ‘agree’) agree that by managing the separate red light area for sex business can be a way of HIV prevention. Similarly, 42.7% respondents (27.8% ‘strongly disagree’ and 14.9% ‘disagree’) disagreed on the above way of HIV prevention.
7. 67.6% respondents strongly agree that controlling the human trafficking can reduce the risk of HIV transmission followed by 27% reported ‘agree’.
8. More than 80% (57.2% ‘strongly agree’ and 23.0% ‘agree’) respondents agreed that if we stop the stigma and discrimination towards the PLHIV then we can reduce the risk of HIV transmission.
9. Majority of respondents (63.4%) reported that individual people should be more responsible to reduce the risk of HIV and AIDS,
10. Multidimensional approach was recommended as a preventive measure of HIV risk reduction. Different responsible actors were identified and their roles and responsibilities were also signed in multidimensional approach.

6.3 Conclusions

This study had undertaken to look at factors associated with risk behavior of HIV and AIDS from the sociological perspective. The main purpose of this study was to identify the various socio-cultural, educational, economic, political and individual factors directly or indirectly associated with increasing the risk taking behavior of people on HIV and AIDS. Study was also taken the objective to identify the knowledge, attitude and practices on HIV and AIDS and its way of risk reduction.

The study was based on the pragmatism philosophy. Deductive approach was used to test the existing theory. Cross-sectional descriptive and exploratory research design was adopted. Study was conducted among the transport workers, garment factory workers, brick factory workers and health workers of Kathmandu valley. 404

respondents were selected for survey and around 22 key informants were interview and 5 case studies were prepared. Respondents were selected by using the simple random techniques. Concurrent mix method was used to collect the qualitative and quantitative data. In quantitative data, cross-tab, frequency table and mean values were analyzed for descriptive analysis of data, as well as chi-square test and correlation was done to explore the relation between two variables. Similarly, manual editing, transcribed and narrative analysis was done for qualitative data. Ethical approval was taken from Nepal health research council (NHRC) and written consent form was filled out by each respondent for survey.

6.3.1 Hypothesis Testing

Testing of Hypothesis no. 1: 'safer sex practice is lower than the knowledge of HIV and AIDS'

Finding of study showed that more than 95% respondents had knowledge of HIV and AIDS but safer sex practice was found low than the level of knowledge. 87.4% (n = 353/404) reported that safer sex practices can prevent from the HIV transmission but 62.7% unmarried and only 17.3% married respondents had used the condom during their first sexual intercourse. In face to face in-depth interview, around 50% respondents were found in hesitation to share their sexual experiences and use of condom.

Majority reported that unsafe sex practices contributed to increase the number of HIV infected people than the sharing of needles or transfusion of infected blood or blood related components. From the face to face interview, it was identified that most of the respondents except health workers were found confused about the different between the HIV and AIDS. The word 'AIDS' was found more familiar than the word 'HIV' among the transport workers, brick factory worker and garment factory workers. Still there was misunderstood about the cure of AIDS found among the respondents.

One respondent said "***if we wash penis from our own urine after sex; any virus can be died".***

From the survey, it was found that more than 95% respondents were found positive towards the PLHIV. They shared that they would encourage and behave as usual to live long life with PLHIV. During the interview, some respondents shared that they would not hate PLHIV but they would not keep close relation with such person. They said *"if such person would angry then anytime they could transmit HIV"*. From finding of qualitative study, it was found that still very openly people were not accepting the HIV status.

11.6% respondents reported that they had sexual relationship with non-regular sex partners in the last 6 months prior of survey. Among them 37.5% had not used condom during the sexual intercourse. There was no relationship ($r = .097$ and $p = .106$ (2-tailed) found between Knowledge on way of HIV transmission and sex with any non-regular sex partner.

There was no significant relationship $r = .018$, $p = .766$ (2-tailed) found between knowledge of way of HIV transmission and use of condom in first sexual intercourse.

On the basis of overall findings (quantitative and qualitative), it was found that hypothesis no. 1: 'safer sex practice is lower than the knowledge of HIV and AIDS' was accepted.

This study identified that, negligence, lack of awareness, poverty, illiteracy, unsafe sex practices, high ambition to earn money, not use of condom, multiple sex partners, human trafficking and illegal sex business of hotels and restaurant are identified as a major factors associated with increasing the risk of HIV and AIDS.

Testing of ***hypothesis no. 2 was: poverty, illiteracy and lack of awareness*** *are the major factors associated with increasing the risk of HIV and AIDS in Nepal.*

From the close ended questionnaire survey (quantitative method), it was found that 95.50% respondents were found agree on lack of awareness, 94.80% on negligence, 94.50% on illiteracy, 94.30% polygamy, 93.60% on Human trafficking, 89.60% on Stigma & discrimination, 89.20% on Conflict, 80.10% on Migration, 77.00% on Trust, 68.00% on Poverty and 57.50% on Society regarding the association between these factors and risk of HIV and AIDS. The findings shows that these factors were found associated with risk of HIV and AIDS. But in order, ***lack of awareness, negligence and illiteracy*** were found major top 3 factors associated with increasing the risk of HIV and AIDS in Nepalese context.

For the verification of close ended data, open ended question (qualitative method) was also asked among the respondents. Regarding the associated factors of HIV and AIDS, respondents were asked to write top 3 factors which they felt most. From the finding, ***negligence, lack of awareness and poverty*** were reported as top 3 factors associated with increasing the risk of HIV and AIDS.

Negligence was reported as one of the major factors from the open ended questionnaire because comparatively safer sex practices was found lower than the level of knowledge from the quantitative data also which clearly indicated the negligence behavior of people.

Similarly, lack of awareness also found to be associated with risk behavior. It is reported from the primary data that due to lack of awareness people used to involve in unsafe sex practices and sharing of needles which increased the risk of HIV transmission. On the other hand, due to poverty and illiteracy, people used to involve in sex business. In primary data, respondents reported that illegal sex business run by

hotel and restaurants were also associated with risk of HIV transmission. It was also reported that people engaged in risk business of HIV transmission because of high ambition to earn money. Stigma and discrimination was also found one factor associated with risk of HIV and AIDS because majority did not believed on other way of HIV transmission than the unsafe sex practices.

By mixing of findings of quantitative and qualitative (survey and interview) study, it was found that *lack of awareness* and *negligence* were identified in I & II ranking from both techniques. Regarding the '***illiteracy'*** came in top IV ranking in finding of open ended question and top III in survey but '***poverty'*** was ranked in top X factor in finding of survey and top III in open-ended question. Considering the top ranking of response also, illiteracy falls within the top IV ranking than poverty. So, ***lack of awareness, negligence and illiteracy*** remained major top 3 factors associated with increasing the risk of HIV and AIDS in Nepalese context.

From the field observation, it was found that the influence of poverty was found difference as the sex of respondents. Majority of male respondents said that because of poverty, they couldn't pay for non-regular sex so they didn't visit any non-regular sex partners. On the other hand, from the female perspective, it was reported that because of poverty female had to involve in unsafe sexual behavior. From these two perspectives, it is known that ***poverty become barrier for male and same poverty become the stimulating factors to involve in sex behavior for female***. So, it can be said that role of poverty is found relative in relation of sex to increase the risk behavior of HIV transmission.

Regarding the hypothesis testing, out of 3 factors stated in hypothesis, 2 factors found in top 3 factors and one factor; poverty was not come in top 3 factors.

Regarding the ***hypothesis no. 3***: Risk of HIV and AIDS will be reduced by applying the '***Multi-dimensional Approaches***' addressing the factors associated with HIV and AIDS.

≥ 80% agreed that by awareness rising, improving the individual behavior, and stopping the stigma and discrimination towards the PLHIV can support to reduce the risk of HIV transmission. Similarly, ≥50% agreed that by mandatorily blood test of suspected people, controlling the human trafficking and providing the job opportunity to all can reduce the risk of HIV transmission. ≥ 35% respondents agreed that HIV can be reduced by keeping PLHIV in separate place and by managing the separate red light area for sex business.

To reduce the risk of HIV transmission by addressing the all causative factors associated with increasing the risk of HIV and AIDS, individual to community, private organization, non-governmental and governmental organization were reported to be responsible and their tasks also identified. Considering the responsible actors and its roles to address the risk factors, researcher had developed one comprehensive model which was called as multidimensional approach. The approach was developed on the base of hypothesis no. 3.

This approach can support to strengthen the National strategy of Nepal Government also. Because National HIV and AIDS Strategy 2006 – 2011 of Nepal has highlighted the importance of involvement of multi-sector which stated that "Since HIV and AIDS is more than a public health priority and is a complex; multifaceted problem affecting all aspects of society, decentralized, multi-sectoral and interdisciplinary involvement must be established for building an adequate response to the HIV epidemic".

6.3.2 Theory Testing

The study was based on the '***Latent function model'*** *of R. K. Merton under the structural functional theory*. In conclusion, it was found from the finding of study that role of various factors were found not only ***latent function but manifest function*** also. E.g. function of *'negligence'* and *'lack of awareness'* found manifest because data already shows that safer sex practices was low than the level of knowledge. Similarly, during the face to face interview, respondents were found confused about the different between HIV and AIDS. In survey, 7.7% replied that AIDS could be cured followed by 6% had no ideas about it and 1.2% had no response.

So regarding the theory testing, it could be said that the structural function theory was found applicable in sociological study of HIV and AIDS but we need to measure the function of different factors with manifest model also along with latent model.

6.4 Recommendation for Future Research

Following recommendations are made on the basis of results obtained from the study:

- Future researcher can test the impact of each individual factor on risk taking behavior of people among the PLHIV by conducting the longitudinal research.
- Similarly, future researchers can apply and test the multidimensional approach for risk reduction and can evaluate the impact.
- Future research can do the comparative study on influence of socio-cultural, political-economic factors on risk of HIV and AIDS between the high epidemic zone and low or middle epidemic zone,
- Sociological research should not be concentrated only to count the head of respondents but it should be concentrated to capture the feeling and

emotion of respondents and cultural values and practices which can gives the real picture of society so further research should be done in qualitative domination.

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Annexes

Annex 1: Individual consent Form and Field Questionnaires

Research for Ph.D. Thesis
Questionnaires for the Health, Transport, Garment & Brick factory Workers
Consent form

My name is Tej Bahdur Karki. I am a PhD Scholar of Dr. K. N. Modi University, Newai, Rajasthan, India. As part of my studies, I am conducting research on the topic "Factor Associated with increasing the risk of HIV & AIDS in Nepal". The objectives of the research are to identify the factor associated with increasing the risk of HIV and AIDS and to find out the level of knowledge, attitude and practices of people related on HIV and AIDS and to find out the potential ways of risk reduction.

I want to collect information that can help to understand better the situation of HIV and AIDS in Nepal. If you agree to participate in the survey, I will ask you some questions. Your honest answer is very important for the search project. Anything you say is completely confidential. Your name will not be written on this form, and I want to ensure that the information you give me will never be used in other purpose than this study. You don't have to answer any question if you don't want to answer (I will skip that question and continue with the following questions), and you can end this interview/questionnaires any time you want. There is no right or wrong answer. The search techniques will also include taking photographs, tape (voice) recording of interviews with your consent, as well as observation during the field visit. If you have any queries about this research do not hesitate to contact me any time in my cell phone no. 9841 944610.

I would greatly appreciate your help in responding to this survey. The survey will take not more than 45 minutes.

Do you want to participate in this research? Yes/No

Signature of Interviewee (not compulsory) ……

Date ……..

Signature of interviewer ……

Individual code _____

Dear Respondents

I, Tej Bahadur Karki, am a PhD scholar currently undertaking Doctor of Philosophy (PhD) from Dr. K. N. Modi University, Rajasthan, India and am conducting research regarding factors associated with increasing the risk of HIV and AIDS in Nepal. I would be most grateful if you would volunteer to assist in this project, by answering a series of questionnaires touching upon certain aspects of this topic. Be assured that any information provided will be treated in the strictest confidence. It will not be individually identifiable at any stage. You are entirely free to withdraw at any time or to decline to answer particular questions without prejudice.

Please, read all the questions thoroughly and answer / circle the best one in the context of Nepalese society.

Group A
General Information

1. Sex: a. Male b. Female c. Third Gender

2. Caste: a. Brahmin / Chhetri b. Janjati c. Dalit d. …….other (Mention)

3. Address: a. Kathmandu valley b. out of Kathmandu valley

4. How old are you?
…… years

5. Marital status:
a. Married b. Unmarried c. Widows d. Divorce

6. If you are married then how old you were at the marriage time?
…… years

7. What is your educational status?
a) Illiterate b) Literate c) Primary
d) Lower secondary e) Secondary f) Higher secondary and above

8. How you are living now?
a. Alone ……1 b. With family ……2 c. With friends …….3

Group B
Knowledge on HIV and AIDS

Scale	Q.N.	Questions	Response
Nominal Dichotomous/Multiple choices	1	Have you heard about HIV and AIDS?	a. Yes ……..1 b. No ……2
	2	Do you know the way of HIV transmission?	a) Yes ……..1 b) No ……2
	2.1	If yes, how are the HIV and AIDS transmitted?	a. Sexual contact ……1 b. Sharing foods ……..2 c. Sharing of needle ……3 d. Others ……..4
	2.2	Can a person get the HIV virus from mosquito bites?	a) Yes ……..1 b) No ……2 c) Don't know ……98 d) No response ……..…96
	2.3	Can a pregnant woman infected with HIV transmit the virus to her unborn child?	a. Yes ……..1 b. No ……2 c. Don't know ……98
	3	Do you know the prevention of HIV and AIDS?	a) Yes ……..1 b) No ……...…2
	3.1	If yes, how can it be prevented?	a. Safe sex ……...1 b. Use of condom ……2 c. Faithful to one partner …….3 d. Regular medical checks ……..4 e. Safe blood transfusion ……5 f. Others ……6
	4	Do you think that a healthy-looking person can be infected with HIV?	a. Yes ……1 b. No ……..…2 c. Don't know ……..…98 d. No response ……..96
	5	Can AIDS be cured?	a) Yes ……1 b) No ……..…2 c) Don't know ……...…98 d) No response ……..….96

Group C
Attitude towards HIV and AIDS

Scale	S.N.	Questions	Response
Nominal Dichotomous/Multiple choices	1	In your opinion, is it necessary to have knowledge of HIV and AIDS?	a. Yes ……..…..1 b. No ……..…2 c. Don't know ……..98 d. No response ……..96
	2	In your community, if someone has HIV then what do you do?	a. Socially hate ……..1 b. Encourage to long life ……...2 c. Behave as usual ……3 d. Others ……....4
	3	If yours relative gets HIV, would you be willing to take care of him?	a. Yes ……1 b. No ……..2 c. Don't know ……...98 d. No response ……..……96
	4	In your family, if someone has HIV and AIDS then what do you do?	a. Remove from home ……..1 b. Encourage to long life ……..2 c. Behave as usual ……3 d. Others ……...4
	5	If a member of your family gets	a. Yes ……....1

		HIV, would you want it to remain a secret?	b. No ……2 c. Don't know ……..…98
	5.1	If yes or no, pls. mention your reasons:	
	6	If your friends is HIV positive then what do you do?	a. Live together ……1 b. Leave him/her alone……..…2 c. Don't know ……..98
	7	PLHIV have right to do job or not?	a. Yes ……...1 b. No ……2 c. Don't know ……..98
	7.1	If yes or no, pls. mention your reasons:	
	8	All suspected people have to test the blood mandatorily?	a. Yes ……..…..1 b. No ……..…2 c. Don't know ……..…98
	8.1	If yes, then why? Pls. mention your reason.	
	9	In your opinion, why people engage in sex business?	a. To fulfill the sexual desire ……1 b. Poverty ……..……2 c. Innocence ……..…3 d. High ambition to earn more money ……4 e. Others ……5 f. Don't know ……...……98
	10	In your opinion, why youth are become drug users?	g. To enjoy …… ……1 h. Friends request …...……2 i. Innocence ……..…3 j. Careless of parents.……4 k. Others ……5 l. Don't know ……...……98

Group D
Practices on HIV and AIDS

Scale	S.N.	Questions	Response
Nominal Dichotomous/Multiple choices	1	Do you ever talk about HIV and AIDS with your wife or husband?	a. Yes ……..…1 b. No……2 c. Don't know ……98 d. Not Applicable ……..95
	2	Do you ever talk about HIV and AIDS with your children?	a. Yes ……..1 b. No……2 c. Don't know ……..…98 d. Not Applicable ……..95
	3	Do you ever talk about HIV and AIDS with your friends?	a. Yes ……...1 b. No……..2 c. Don't know ……..…98
	4	Do you have experience of sexual intercourse? ***(Note: If No then directly start from Q. 6)***	a. Yes ……..…..1 b. No ……2 c. No response ……..…96
	4.1	If yes, then at what age did you have first sexual intercourse?	a. ……..years b. Don't know ……98

	4.2	Who was your first sexual partner?	a. wife or husband ……1 b. boy or girl friend ……..…2 c. Female/male sex workers ….3 d. Don't know ……..…98 e. No response …….96
	4.3	Did you use condom in your first sexual intercourse?	a. Yes ……..…..1 b. No ……2
	4.4	Have you had sex with any non-regular sex partner in the last 6 months?	a. Yes ……...1 b. No ……....2 c. No response …….96
	4.5	If yes, did you use condom during the time of sexual intercourse with your non-regular sex partner?	a. Yes ……...1 b. No ……..……2 c. Don't know ……...98 d. Not applicable ……..95
	5.	Do you know HIV or STI status of your sex partner?	a. Yes, I know ……....…1 b. I don't know ……...……98
	6.	Do you have any problem of sexually transmitted infection (STIs)?	a. Yes ……..1 b. No ……2 c. Don't know ……..98 d. No response ……96
	7.	To what extent do you think that you are at risk of HIV infection?	a. High risk……..1 b. Low risk …….……2 c. No risk ……3 d. Don't know …….…….98 e. No response …….96
	8.	**I don't want to know the result,** Have you ever had HIV test?	a. Yes ……..……1 b. No ……..….2 c. No response ……96

Group E
Factor associated with HIV and AIDS

Scale	Q. N.	Questions	Response				
			Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Ordinal Likert Scale	1	society is responsible in increasing the risk of HIV and AIDS	**1**	**2**	**3**	**4**	**5**
	2	Poor people (Poverty) are in high risk of HIV infection.	**1**	**2**	**3**	**4**	**5**
	3	Due to Illiteracy, risk of HIV and AIDS is increasing day by day.	**1**	**2**	**3**	**4**	**5**
	4	Lack of awareness is associated with risk of HIV transmission.	**1**	**2**	**3**	**4**	**5**
	5	Negligence is one cause to increase HIV.	**1**	**2**	**3**	**4**	**5**
	6	Early marriage is associated with risk of HIV transmission.	**1**	**2**	**3**	**4**	**5**
	7	Those who have multiple sex partners are in high risk of HIV infection.	**1**	**2**	**3**	**4**	**5**
	8	Those who have faced gender-based violence are more vulnerable for HIV infection.	**1**	**2**	**3**	**4**	**5**

	9	Traditional cultural norms and belief systems are causes of HIV transmission.	**1**	**2**	**3**	**4**	**5**
	10	Human trafficking is responsible to increase the risk of HIV transmission.	**1**	**2**	**3**	**4**	**5**
	11	Migrant population is responsible to increase the risk of HIV transmission.	**1**	**2**	**3**	**4**	**5**
	12	Trust on sex-partner is one cause of HIV transmission.	**1**	**2**	**3**	**4**	**5**
	13	Use of alcohol during the sexual activity increases the risk of HIV transmission.	**1**	**2**	**3**	**4**	**5**
	14	Gender inequality support to increase the risk of HIV transmission.	**1**	**2**	**3**	**4**	**5**
	15	People do not want to know their HIV status because of Stigma and discrimination which increases the risk of HIV transmission.	**1**	**2**	**3**	**4**	**5**
	16	People are displaced and cab be raped also during the time of conflict which increase the risk of HIV transmission.	**1**	**2**	**3**	**4**	**5**
	17	Health workers are also vulnerable for HIV and AIDS.	**1**	**2**	**3**	**4**	**5**
	18	Transport workers are more vulnerable for HIV and AIDS.	**1**	**2**	**3**	**4**	**5**
	19	Garment Factory workers are vulnerable for HIV and AIDS.	**1**	**2**	**3**	**4**	**5**
	20	Brick factory workers are vulnerable for HIV and AIDS.	**1**	**2**	**3**	**4**	**5**
	21	People do not want to disclose their HIV status because of their own self-humiliation.	**1**	**2**	**3**	**4**	**5**
	22	Educated people are more aware on HIV infection than uneducated people.	**1**	**2**	**3**	**4**	**5**
Scale	**Q. N.**	**Questions**					
Open ended questionnaires	23	Pls. mention only 3 factors which you feel, are more associated with risk of HIV and AIDS. 1. …… 2. …… 3. ……					
	24	Who is more responsible in increasing the risk of HIV and AIDS in Nepal? For example: individual, community, government or other non-governmental, private organization or others... ……					

Group F
Way of reduction of HIV and AIDS

Scale	Q. N.	Questions	Response				
			Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
Ordinal Likert Scale	1	Awareness raising can reduce the risk of HIV and AIDS	**1**	**2**	**3**	**4**	**5**
	2	Mandatorily blood test of suspected people can reduce the risk of HIV and AIDS.	**1**	**2**	**3**	**4**	**5**
	3	Isolate the PLHIV from community can reduce the risk of HIV and AIDS.	**1**	**2**	**3**	**4**	**5**
	4	Provide job to all can reduce the risk of HIV and AIDS.	**1**	**2**	**3**	**4**	**5**
	5	Improving in individual behavior can reduce the risk of HIV and AIDS.	**1**	**2**	**3**	**4**	**5**
	6	Manage the separate 'Red Light Areas' for sex workers can reduce the risk of HIV and AIDS.	**1**	**2**	**3**	**4**	**5**
	7	Controlling of Human trafficking can reduce the risk of HIV and AIDS.	**1**	**2**	**3**	**4**	**5**
	8	Stopping of stigma and discrimination towards PLHIV can reduce the risk of HIV and AIDS.	**1**	**2**	**3**	**4**	**5**
Open ended	9	In your opinion, what may be the others ways to reduce the risk of HIV and AIDS in the context of Nepal?					

Scale	Q. N.	Questions	Response
Dichotomous/Multinl Nominal	10	Who is more responsible to reduce the risk of HIV and AIDS?	a. Government ……1 b. Non-government organization …….2 c. Private sectors ……..…3 d. Communities ……....4 e. Individual ……5 f. All are equal ……6 g. Don't know ……..98

Thanks for Participation

Annex 2: Checklists Interview

Sex: caste: Age:
Address/organization: Occupation:
Education: Marital status:

1. How you are aware about HIV and AIDS?
2. What are the ways of HIV transmission?
3. What are the prevention of HIV and AIDS?
4. Why knowledge of HIV and AIDS is important for all?
5. In your family, if someone has HIV and AIDS then how you behave with them?
6. In your opinion, why people engage in sex business in our Nepalese context?
7. Have you faced any risky movement during your life when you felt fear of HIV transmission in your blood also?
8. How society is associated with in increasing the risk of HIV transmission?
9. In your opinion, Trust on sex-partner is one cause of HIV transmission, is it right?
10. Use of alcohol during the sexual activity increases the risk of HIV transmission.
11. Do you feel that early marriage, gender-based violence and Girl trafficking make women vulnerable of HIV transmission?
12. Do you feel that our socio-cultural belief system e.g. not to talk about sex education, misconception on HIV transmission … etc are associated with HIV transmission?
13. How poverty play the role to increase the risk of HIV transmission?
14. How do we say that illiterate people are more vulnerable than literate people?
15. Is negligence behavior of people made them vulnerable for HIV transmission?
16. How Stigma and discrimination is associated with risk of HIV transmission?
17. In your opinion, who are more vulnerable for HIV infection in Nepal?
18. How Health workers are vulnerable for HIV infection? Explain.
19. What are the ways to reduce the risk of HIV and AIDS in context of Nepal?
20. By addressing the problem of poverty and unemployment can reduce the risk of HIV and AIDS?
21. Managing the separate ‘Red Light Areas’ for sex workers can reduce the risk of HIV transmission.
22. What is the role of Individual to reduce the HIV?
23. How one community play role to reduce the risk of HIV?

24. How private organizations contribute in reduction of HIV transmission?

25. What is the role of Government to prevention of HIV transmission?

26. In your opinion, a role of non-governmental organizations is important to reduce the risk of HIV transmission.

27. Do you want to say anything more about the risk factors of HIV transmission and its way of HIV risk reduction?

Thanks for your participation.

Annex 3: Checklists Case study

Name: (not necessary, if you don't want to disclose your name)
Sex: caste:
Address:
Age:
Birth place:
Marital status:
If you are married, then how old you were at the marriage time? …… years
What is the occupation of your husband or wife? ……..

1. **Your past family life**
   1.1 How your child-life and younger age spent?
   1.2 Your education,
   1.3 Types of peer groups,
   1.4 Exposure visits of different places and its purpose
   1.5 Economic condition of your family
   1.6 No. of family members including parents and children:
   1.7 Which child you are (1^{st}, 2^{nd}, 3^{rd} ….etc) ?
2. Did you have any knowledge about the on STI, HIV and AIDS before your first sex?
3. **Practices on HIV and AIDS:**
   3.1 At what age did you have first sexual intercourse?
   3.2 Who was your first sexual partner?
   3.3 Do you have any non-regular sex partners also?
   3.4 If yes, then how frequently, you used to do sex with non-regular sex partner?
   3.5 What was the sexual behavior of your sex partner? If you have non-regular sex partner then mention about their behavior also.
   3.6 Did you ever use the condom during the sexual intercourse?
   3.7 How did you felt, you are in risk of HIV transmission?
   3.8 Have you ever gone for STI or HIV testing?
   3.9 If yes, then who support you for testing?
4. Feeling after STI or HIV testing
5. Effect in life

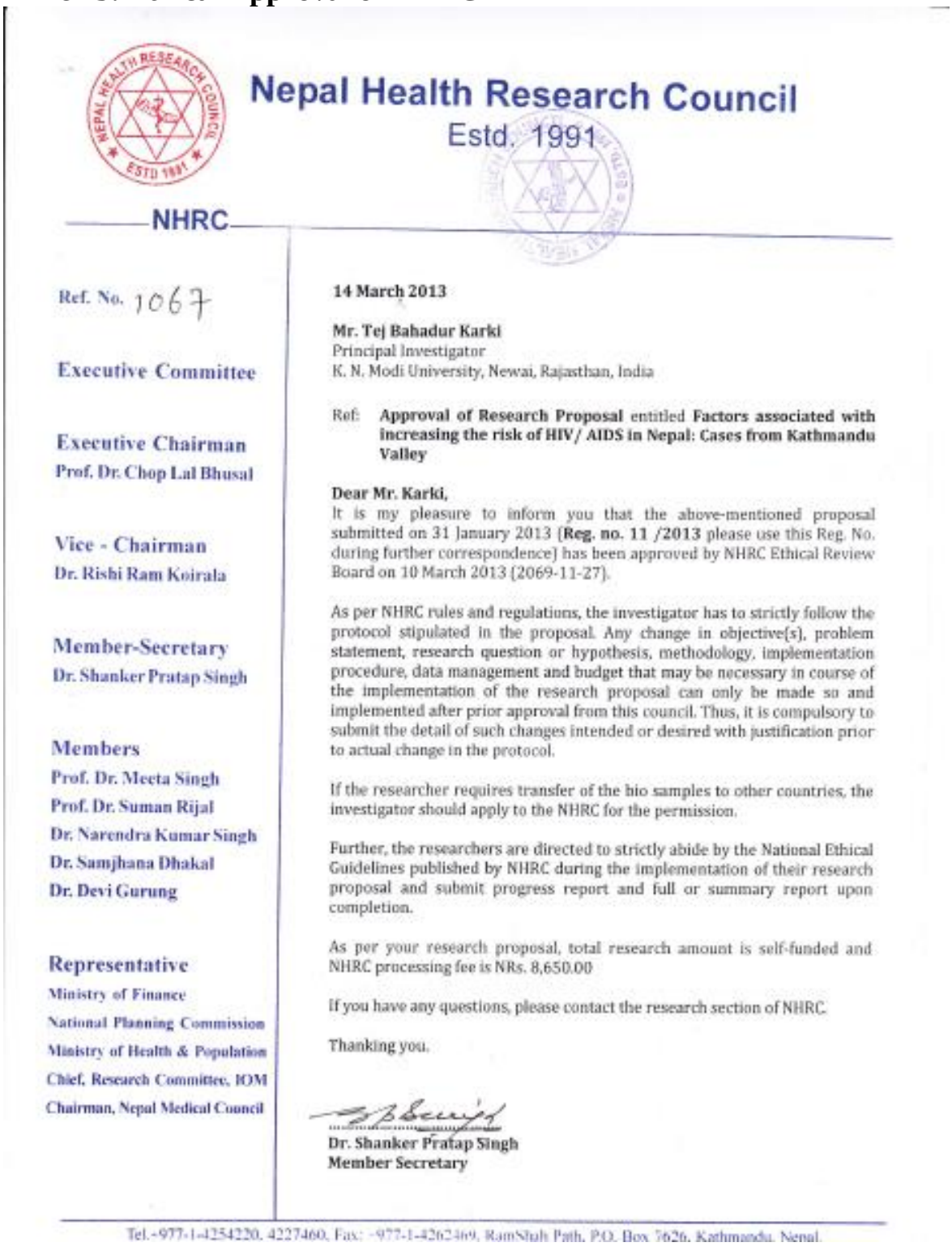
5.1 What was the effect in your life after testing?
5.2 Whom did you say first time about your HIV status?

6. Society's or family's attitude towards you when they know your status
7. What factors make you or your family vulnerable for HIV infection?
8. If you are HIV positive, then how you became HIV positive?
9. present situation
   9.1 What is your occupation now?
   9.2 With whom are you staying now?
   9.3 What is your economic status?
   9.4 What is your social relation?
   9.5 What is your health status?
10. Future plan of your life
11. In your opinion, what are the reasons to increase the HIV and AIDS in Nepal?
12. In your opinion, who is more responsible increasing the HIV and AIDS?
13. In your opinion, is society responsible to be a HIV infected?
14. In your opinion, how can we prevent the HIV transmission?
15. If any other information, feedback or suggestion then let me share
    ……

Annex 4: Observation Checklist for PhD Research

1. Setting of the study
2. Process of study
3. Demographic characteristics of respondents
4. Physical responses and their expression of respondents
5. Interrelationship between the respondents and with researcher
6. Phenomenological experiences of respondents

Annex 5: Ethical Approval of NHRC



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14 March 2013

Mr. Tej Bahadur Karki
Principal Investigator
K. N. Modi University, Newai, Rajasthan, India

Ref: **Approval of Research Proposal** entitled **Factors associated with increasing the risk of HIV/ AIDS in Nepal: Cases from Kathmandu Valley**

Dear Mr. Karki,
It is my pleasure to inform you that the above-mentioned proposal submitted on 31 January 2013 (**Reg. no. 11 /2013** please use this Reg. No. during further correspondence) has been approved by NHRC Ethical Review Board on 10 March 2013 (2069-11-27).

As per NHRC rules and regulations, the investigator has to strictly follow the protocol stipulated in the proposal. Any change in objective(s), problem statement, research question or hypothesis, methodology, implementation procedure, data management and budget that may be necessary in course of the implementation of the research proposal can only be made so and implemented after prior approval from this council. Thus, it is compulsory to submit the detail of such changes intended or desired with justification prior to actual change in the protocol.

If the researcher requires transfer of the bio samples to other countries, the investigator should apply to the NHRC for the permission.

Further, the researchers are directed to strictly abide by the National Ethical Guidelines published by NHRC during the implementation of their research proposal and submit progress report and full or summary report upon completion.

As per your research proposal, total research amount is self-funded and NHRC processing fee is NRs. 8,650.00

If you have any questions, please contact the research section of NHRC.

Thanking you.

Dr. Shanker Pratap Singh
Member Secretary

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Annex 6: Published Research Articles