CHAPTER ONE
INTRODUCTION

This introductory chapter of the study entitled "Factors Affecting Women's Knowledge, Attitude and Behavior towards HIV/AIDS in Nepal" briefly describes the context, background to the study, research problem statement, research questions, objectives of the study, significance of the study, limitations and chapters outline of the research.

1.1 Contextualizing Study

Human immunodeficiency virus (HIV) and acquired immune-deficiency syndrome (AIDS) are the informed global public health problem. It is not only the public health problem but also problem of social and overall development. The facts of UNAIDS revels that 38 million people were PLHIV globally in 2019. Among the total HIV infected people, 1.8 million were children and 36.2 million were adults whereas 1.7 million persons were newly infected. Most of newly infected children were from the Sub-Saharan Africa estimated as 160,000 in number. HIV infected mother to child transmission is major cause of HIV infection of the children. It is also informed that one fourth of the total HIV infected cases didn't know their HIV status due to the inaccessibility VCT (UNAIDS, 2020).

Globally, 25.4 PLHIV were access the antiretroviral therapy (ART) with increasing trend since 2009 (<6.4 million). It is also estimated that 690000 people died due to the HIV/AIDS in a year 2019. There were 32.7 million people were died from the begging of the epidemic in the mid 80s to end of 2019. The HIV/AIDS is concentrated in low and middle income countries in general and Sub-Saharan Africa in particular. The infection burden is mostly concentrated in Sub-Saharan Africa with 25.6 million people were living with HIV (UNAIDS, 2020). It is also noted that almost two third of newly infected HIV cases were in Sub-Saharan Africa in 2015. Asia remains second rank on HIV cases to the numbers of people infected. After Sub-Saharan Africa comes Asia with the numbers of HIV infection. Despite the scientific understanding of the complexity that AIDS comes with in terms of treatment and responses to the international health community, the governments and NGOs, there is

many people still deprived from the HIV prevention and treatment services with proper care remains the distant dream.

The access of HIV/AIDS services to every needy people is crucial for the overall development of the country. It is found that there are numerous impacts on individuals, communities and households in infectious diseases, food security and other societal problems. Many countries and societies were able to control and manage the newly infected HIV cases in the last decade. However, many sub-group of population still have facing HIV/AIDS problems. The breaking transmission links have been emerged from high risk group to low risk group such as women in general (Kapoor et al., 2018).

Globally, 19.7 million women infected with HIV whereas 16.9 millions of men. At the end of the 2021, there were almost equal number of women and men living with HIV/AIDS (WHO, 2021). UNAIDS facts indicate that 4900 young women infected HIV/AIDS in every week. It is also stated that 63 percent of women and girls were newly HIV infected among the total newly infected HIV cases in Sub-Saharan Africa (UNAIDS, 2020).

As contextualizing women in Nepal, the HIV/AIDS cases are concentrating on women despite the decreasing trends of HIV/AIDS. The previous studies and HIV monitoring facts indicate that 39 percent of HIV cases shared by the women out of the total cases (NCASC, 2018) whereas 35 percent by man including labour migrants and 1 percent of the female sex workers (FSWs). The findings of the past studies informed that women are problematic group for the HIV/AIDs in Nepal. The government responses are also less likely to focused to women for prevention interventions at policy and programs levels (NCASC, 2016). Mass level awareness programs are found effective in terms of the promotion of correct knowledge, accepting attitude and safe sexual behaviors.

Numerous efforts have been made to reduce HIV/AIDS prevalence in Nepal focused to key affected population in Nepal which is found effective (NCASC, 2006; NCASC, 2011; NCASC, 2016; NCASC, 2018). The strategic plans, national action plan and programmes continued to address the problems of key affected populations. However, the general population such women are less likely to address the needs of the HIV services. This less priority of governmental policy and programs to women have been

contributed to continue to increasing trends of HIV prevalence among women in Nepal. For this there is lack of comprehensive knowledge of women, social construction of HIV/AIDS knowledge, perceived risk, stigma and discrimination, and safe sexual behaviors. The factors those constraints the knowledge, attitude, behavior practices (KABP) is crucial to understand the breaking transmission links of HIV transmission (NCASC, 2001; NACAS, 2018; MoHP et al., 2017).

Despite the decline in the HIV prevalence among key affected population, the sexual behaviors are still questionable (NCASC, 2016). The bridge populations such as FSWs have risky sexual behaviors which have affected not only the clients of FSWs but also low risk women. The prevention of HIV among key affected population is not sufficient to reduce risky sexual behavior of women and stigma and discrimination (Suvedi, 2006). In this context, the comprehensive analysis of individual and social-cultural factors affecting women's knowledge (HIV prevention and transmission), attitude towards PLHIV (stigma and discrimination) and behavior (sexual and condom using) of HIV/ASIDS in Nepal is crucial departure to design prevention strategy for the reduction of risky sexual behavior.

1.2 Background to the Study

Since the inception of the HIV/AIDS in early 1990s in Nepal, health researcher have been engaged on KABP (knowledge, attitude and behavior/practice) of HIV/AIDS studies to inform policy and advocacy level for the scientific understanding of prevention programmes (Chan et al., 1997). It is well established that KABP model of HIV/AIDS study is the outcome of health belief model (HBM) of rational action (Ajzen & Fishbein, 1977), the theory of model of planed behavior, social learning theory and social cognitive theory (Bandura, 1976). The propositions of the KABP model describes the spreading of HIV/AIDS, knowledge of prevention and its consequences in the different dimensions of human life. Beside these, it also provides the modifications of sexual behavior and overall prevention methods of the epidemic (Vallerand et al., 1992).

The rationality of KABP model is to acquire the accurate knowledge of epidemic, accepting attitude and safe sexual behavior for the breaking transmission links from high risk group to low risk peoples (Wilson et al., 1991). The prevention of HIV/AIDS related risk behavior are explained in the HBM model (Becker, 1974).

The role of individual is crucial to engage in behavioral change initiatives and become healthy as a desired result. So, each individual participated in behavior change interventions guided by the perception on infection or disease including illness and modified factors that affect the individuals' combat against the it. The model is further explained by the Bastable (1997) indicate that perceived risk is the constraints of the safe healthy behaviors of individuals. The application of the HBM model on HIV/AIDS prevention in six different basics such as knowledge of HIV/AIDS, observed predisposition, self-efficacy, constraints to BCI, alleged usefulness of HIV/AIDS precautionary actions and availability including accessibility of prevention, care and support for safe sexual behaviors (Wilson et al., 1991).

The HIV prevention model including reduction of risk sexual behavior was emerged in 1990s identified three stages of risk reduction of HIV transmission. Behavior labeling, committed to change and action taking for the breaking the transmission links. Knowledge of HIV/AIDS prevention and transmission, perceived HIV vulnerability and aversive feelings could contribute to perceived risk of HIV/AIDS in the first stage whereas second stages explained the four factors such as perceptions of pleasure, self-efficacy social norms and values, and shaped the commitment to change. Finally, aversive emotions, communication of sexual activities, help seeking behavior, and social factors influenced the individuals decision making process (Catania et al., 1990).

The ultimate goal of HBM model is to reduce the risk reduction of HIV/AIDS through changes in the risky sexual behavior. It help individuals to acquire correct knowledge and informed others through sexual education (Bish et al. 2000). The findings of the study were validated from the theoretical understanding of planed behavior, social learning and reasoned action. The facts also indicated that perceived threats also contributed to accepting attitude towards HIV except the social pressure of status disclosure.

The economic aspects of HIV/AIDS study also correlates the individual sexual behavior. The poverty and unemployment are the triggers of the unsafe sexual behaviors (King, 1999). The studies reveled that social support and availability of care services to needy people are the consistent factors affecting the HIV/AIDS behaviors change interventions. The economic status of individuals is the key drivers of the HIV/AIDS and safe sexual behavior (King, 1999).

At the beginning of KABP studies, world health organization (WHO) advocated the culture free bio-medical framework to understand the behavior change interventions which is based on the top down approach (WHO, 1994). The modified WHO model emphasized on holistic approach included socio-cultural construction of HIV/AIDS knowledge in the model. The combination of biomedical reality and socio-cultural construction in HIV/AIDS study contributed to deeper understanding of the issue. HIV/AIDS education, awareness campaign to promote perception and social support for change, and media exposures are consistently contributed to KABP of HIV/AIDS in general and women in particular (UNAIDS, 1998).

It is understood that KABP model of HIV/AIDS is popular to research process. It has strengths to easily interpretate to different contexts/situations and cost effectual also. In any context such as culture, geography, ethnic diversity and religion is useful in the research even recent time as well with some modifications (Morisky et al., 2002). I Therefore the convenience of replicating an existing KABP model has retained its popularity for research even in recent times, though with some modification (Morisky et al., 2002). In this study, factors affecting women's knowledge, attitude and behaviors towards HIV/AIDS could be appropriate under the theoretical model of KABP with supplement of cross-cultural construction of AIDS knowledge.

It is stated that increased awareness is an essential component to combat with epidemic. Several studies have reported success in awareness building in certain population groups (MOHP et al., 2007; MOHP et al., 2012; MOHP et al., 2017; Jha & Madison, 2009; Shakya, 2012; Karki, 2014; Awasthi et al., 2015). However, increased knowledge does not always mean to change behavior among adolescent and low risk women (Aryal, 2000; Sharma, 2008; Jha & Madison, 2009; Roka, 2002). The examinations of knowledge, attitude and behavior/practices are most essential to the fuller understand the gravity of the issues and context among women in Nepal from individual factor to social construction of epidemic in the different situation. Low level of literary, media exposure and access to information related to HIV/AIDS and place of residence are resulting the low level of awareness. Beside this, access to other health services have also contributed to awareness about the HIV/AIDS (NCASC, 2016).

Series of studies by different scholars have identified that education, occupation, wealth status, place of residence and media exposure affected the awareness of

epidemic among young people of Nepal (MoHP et al., 2007; MoHP et al., 2012; Shakya, 2012). Family income, marital status and age are significant contributors to awareness and sexual behavior of HIV and AIDS of women of reproductive age (Jha & Madison, 2009). In addition, alcohol consumption, good relationship with parents, poor peer norms, age at first marriage and first sex, geo-development region and occupational categories of youths have been also contributed to unsafe/safe sexual behavior. Similarly, lack of economic opportunities, youth migration to India, poor education and low awareness level, and low level of campaign activities contributed to situate women and children at risk of epidemic in far-western region of Nepal (Awasthi et al., 2015).

The social construction of women and the power relations explained that women's poor sexual negotiation, lower position in household and society and less likely to media exposure are the factors for the sexual and condom using behavior (Jha & Madison, 2009). The body of knowledge about KAB of HIV/AIDS related to adolescents and youth population, and women of reproductive age are found very few in nationally represented studies. This study is an attempt to fulfill the knowledge gap as a comprehensive analysis of individual factors related with KAB of women from the KABP model aided by supplementation of social construction ideas of HIV/AIDS.

Despite the decreasing trends of new infection of HIV and AIDS in most risk group of people such as FSWs, the sexual behavior is still the risk for HIV transmission (NCASC, 2012; NCASC, 2016). The Western applied anthropological perspective argued that awareness building was the major HIV prevention strategic approach and intervention in the initial phase of governmental initiatives (Beine, 2003). From the very beginning of the HIV/AIDS responses, lack of awareness is considered as a primary factor for breaking transmission links from high risk to low risk population, the education is the primary weapon to fight the spread.

The prevention programs developed from this theoretical paradigm tend to give awareness building. A series of studies have been conducted by the government of Nepal to respond HIV/AIDS among key affected population (KAP) from the beginning of second generation surveillance (NCASC, 2014). The findings of the applied studies such as IBBS have heightened the awareness in fight against HIV/AIDS among FSWs, IDUs, TG and wives of women. The government responses worked successfully too. It is encouraging, that several recent studies among high-risk

group of population have reported success in the awareness building among populations (NCASC, 2009; NCASC, 2012; NCASC, 2016). However, increased awareness does not always mean change in attitude and behavior. These studies are based on the culture free biomedical reality those hinder the socially constructed meanings of HIV and AIDS, positive attitude (reduction of stigma and discrimination), safe sexual behavior and utilization of HIV and AIDS services.

1.2.1 Policy and Strategic Responses

Since the first HIV case identified in 1988, governmental responses started to combat with HIV and AIDS vulnerability and risk reduction.. However, the systematic and policy response was started after the commitments and obligation of ICPD, 1994. The effort of government responses to HIV/AIDS has effectively reduced the risk and vulnerability of high group of population. However, there are still numerous issues and challenges to HIV and AIDS risk reduction of low risk male (including male labour migrants) and low risk women (including wives of migrants) in Nepal. The government has been responding through various policies, structural/institutional mechanics, programs, support system for the risk reduction and creating enabling environment to infected peoples are the key for the governmental responses.

1.2.1.1 Structural Responses

Nepal's policy responses to HIV and AIDS including infectious diseases consistently address the issues in the past three decades and it is found improvements to address the problems. Different school of thoughts on the policy prescription are found in the past but mostly focused to biomedical reality. However, there was consensus among the stakeholders, donor agencies and government officials on the international perspectives effectiveness of the epidemic (NCASC, 2016). There are mainly two types of competing paradigms of policy responses in practice. The popular and first paradigm is related with the social mobilization and bio-medical reality. This paradigm is advancing the medical innovation, diversity in campaigning by different groups, clear and declarative political leadership and utilization and mobilization of available resources to combat with diseases. The ARV is final the result of this paradigms. The role of ARV is best application of PMTCT to risk reduction.

The second paradigm is focused on the STIs treatment, strategic communication approaches, behavior change intervention (BCI), wider marketing of condoms, and life skill education for future life of PLHIVs are introduced at the beginning of the 21st century when second generation surveillance system begins. The major issues related to responses to HIV/AIDS are prevention, comforting care services, improvement in the nutritional status of individuals, traditional medicine practices, provision of social grants and poverty reduction programs (NCASC, 2016). The government of Nepal tries to integrate both paradigms to response epidemic at the policy prescriptions. However, the domination of biomedical paradigms over ameliorative is found in the practice.

The supporters of ameliorative model denied the biomedical reality of ARVs emphasized on the nonconformist research and denied the leadership, vision of strategy and social group mobilization to awareness and prevention (Butler, 2005). The absence of ARV treatment in the paradigm is criticism of the paradigm in the globalized world and rights of the PLHIV. It is clearly understood that there is prolong of life but not full care of the infections.

Governmental responses to HIV and AIDS in Nepal mostly informed by the international policy prescription. The ongoing policy and strategy such as "National Policy on HIV and STI, 2011" and "National HIV/AIDS strategy 2011-2016" including "National HIV/AIDS Strategy 2016-2021" are based on the right based and multi-sectoral approach fight against the HIV/AIDS as a guiding principles of universal access. The government introduced first HIV/AIDS prevention and control programmes in 1988 followed by the policy guidelines in 1995 as a first HIV/AIDS policy in Nepal. There are a lots of improvements in the policy, strategy and programmes to reduce HIV/AIDS and breaking transmission links. The latest strategy is also continuity of the previous strategic approach which has guide the integrated approach. The common objectives of the strategy are joint efforts of stakeholders, civil society organizations, funding agencies and infected and affected people to combat the epidemic. While the national strategic approach to HIV/AIDS introduced, the outcome is positive in prevention, care and treatment of epidemic. However, the behavioral change interventions are also less likely to effective.

As discussing the structural responses to HIV and AIDS, national AIDS council (NAC) was established under the leadership of prime minister. The prime goal of the

council is to overall leadership on policy decisions and provide strategic and programmatic guidelines to responses epidemic in the country. The MoHP is line ministry overall responses to epidemic and progress reporting to NAC. The overall responsibility of the focal ministry is to policy formulation, planning, monitoring, evaluation and preparation of guidelines to implementation at the implementing level. Under the MoHP and the department of health services (DoHS) the national centre for AIDS and STD control (NCASC) is governmental leading agency to policy response, planning and guidance to implementation of prevention, treatment, care and support services to the infected and affected peoples. There is a HIV/AIDS and STI control board (HSCB) known as secretariate of NAC to coordinate the ministries for the multi-sectoral responses to HIV/AIDS including monitoring response activities. For implementation of HIV/AIDS response activities, district AIDS coordination committees (DACCs) leads the district and lower level implementing activities within the district. It has also coordinate the stakeholders at the implementation level (NCASC, 2014). In the changing structure of the government in Nepal, the structural responses are less likely to effective in the changing context. The role of provincial government and local governments to response epidemic are not clearly mentioned.

1.2.1.2 Programmatic Responses

The latest national HIV strategic plan (2016-2021) covered all the prevention, care, support and treatment elements of infected and affected people in the country. The strategy developed to achieve the sustainable development including tuberculosis (TB) and HIV response. This strategic plan focused on the fast-track ending of HIV/AIDS in the country which very ambitious (NCASC, 2017). The past records could not achieved as per the set up targets.

The latest strategic plan of HIV/AIDS response guided by the principles of universal access of HIV/AIDS services, national solidarity, fast-tracking towards ending the AIDS, integration of HIV within health systems, innovation, evidence-based planning, decentralized multisector and interdisciplinary engagement, inclusive approach, advancing human rights and gender justice (NCASC, 2017). Beside these, zero tolerance discrimination against PLHIV and key population, effective prevention and treatment continuum, meaningful involvement of the affected communities in the policy and planning, public private partnership and country stewardship. The guiding

principle is also based on the bio-medical reality but socio-cultural construction of HIV/AIDS and to address it's implication on life of infected and affected people is still absence in the strategic approach of the government responses.

Government of Nepal responses to HIV/AIDS with different programmes. The national strategic plan 2016-2021 is based on the theme of fact-track ending HIV/AIDS included reach, recommend and test, treatment and retention, program enablers and social enablers, system for health , and strategic information along with invest plan (NCASC, 2017). Three fourth of the investment of the total cost of HIV response goes to reach, recommend and test programmes. The priority of programmes are infected and affected people of HIV/AIDS in Nepal.

The strategic plan prioritized the basic programme activities to fast-track ending towards HIV/AIDS. The key affected and sub-population group are major focused groups of the programmatic responses. Facility based and community based modality of HIV testing of the infected and affected key populations in the country. Beside these, utilization of critical program enablers and critical social enablers also the major programme implementing components. As addressing the socio-economic drivers and behavior change interventions are supported by the enablers' role. Development synergies, multisectoral and integrated approaches to implantation of the programmatic responses. In a programmatic responses, utilization of socially constructed knowledge is still absence.

1.2.1.3 Enabling Environment

So far, a lot of initiatives on prevention and treatment to the infected and key affected population has been taken in Nepal. The strategic plan of the government of Nepal created enablers strengthening the responses towards HIV/AIDS. The strengthening health system and community system, ensuring the rights of the individuals, social protection, legal reform and impact mitigation are major issues to the enabling environment (NCASC, 2016). In the societal level, the enabling environment still have been facing issues and challenges to PLHIV and the affected most risk population. The most prominent reason is socially constructed knowledge of HIV/AIDS and its impact (Beine, 2003).

The government policies and strategic plans continued to focused key affected population such as FSW, MSM, IDU, IDUs, TG, migrant population, young

population and wives of the migrants in the key selected areas. As reducing the vertical transmission, the PMTCT services were also available to service centres (NCASC, 2016). This services coverage wide range of people. However, the various constraints (geographic, financial, and capacity of health institutions) are found to utilize the existing services and creating the conducive environment. The stigma and social construction of HIV/AIDS are found to barriers to utilize the services (NCASC, 2001). The women aged 15-49 years old including wives of migrants are less likely to priorities in the government responses of HIV/AIDS across the country.

As global response of HIV/AIDS treatment, Nepal set up ambitious targets such as 90 percent of HIV/AIDS infected people enroll in the ARV treatment. However, the facts of ARV enrollment is only 30 percent of infected people. The facts also indicates that there were significant number of infected people were died. At the end of the 2015, 2263 HIV/AIDS infected people were died due to AIDS related causes. It is evident that 39,397 people were living with HIV in Nepal at the end of 2015. In the same year, 1,331 people were newly infected with HIV and there were 2,263 AIDS-related deaths. The fast tract ending of HIV/AIDS is the key strategic approach of the Nepal's strategic plans. The Covid-19 and its effect is found in wider scale to achieve the goal of fast track ending of epidemic. The achievements of the set up targets guided by the sustainable development goals (SDGs) is questionable due to various reasons. So that the question is raised that whether the existing policies, structural arrangements, strategic plans and programmes effective to HIV prevention and treatments? What are the issues and challenges of government responses to HIV and AIDS in Nepal? The proposed study focused on the exploration of government responses towards HIV/AIDS in Nepal.

1.3 Statement of the Problem

The highest achievement of the biomedical reality of HIV and AIDS is to development and utilization of ARV services. This is one aspects of the HIV and AIDS and socially constructed knowledge of HIV and AIDS another dimensions of the KABP study of HIV and AIDS. The understanding of biomedical reality of HIV prevention and studies in the specialized model known as knowledge, attitude, behavior and perception/practices (KABP) is the product of health belief model (HBM) of reasoned action by Ajzen and Fishbcin (1977), scientific understanding planned behavior by Ajzen and social cognitive model or social learning theory of

Bandura (1976), which explains the preventive ideas of HIV/AIDS. The original World Health Organization (WHO) model during early 1990s introduced culture free biomedical knowledge of HIV/AIDS that communicated by educational achievements which would influence the attitude and promote the safer HIV and AIDS behaviors in different context (WHO, 1994). As improvement in the KABP model, the joint United Nations Programmes on HIV/AIDS (UNAIDS) included cultural in the KABP model which provided the space of socially constructed knowledge of HIV and AIDS known as holistic model of the HIV and AIDS study since 1998.

The holistic approach of KABP study is widely accepted model of HIV/AIDS study which is appropriate for different situations including socio-cultural context, and sub-group of population. The absence of the individual cultural issues context in the model seen as incomplete knowledge in the area of the HIV and AIDS study. There is raised a question whether the individual cultural factors included in the WHO (knowledge, attitude, behavior and practice) model of HIV and AIDS make new direction of the inquiry. Individual cross-cultural issues such as ethnicity, native language and religion included in KAB model of HIV and AIDS study, could those factors contributed to knowledge in the women's context of KABP. Contextualizing the women in KABP HIV/AIDS, bio-behavioral knowledge of HIV and AIDS considered as outcome of the social construction and beliefs (Beine, 2003). Wider level of misconceptions and inaccurate knowledge of HIV and AIDS are responsive to stigmatization of people living with HIV/AIDS. HIV/AIDS is often based on socio-cultural beliefs. Falsified knowledge and social misconceptions are known as physiological and biological complexity of HIV/AIDS those are responsible for stigmatization of PLHIV (Beine, 2003).

Collective consciousness is found to be strong in Nepali society, so that individual ideas could not work alone to communicate the misconceptions and misgivings about the HIV/AIDS which has implications to the people living with HIV. As responding the epidemic with holistic approach, the socially constructed knowledge of HIV/AIDS need to asses and supplement the biomedical reality which are absence in the previous studies (MOHP et al., 2007; MOHP et al., 2012; MOHP et al., 2017; Jha et al., 2009; Shakya, 2012; Karki, 2014; Awasthi, 2015; Aryal, 2000; Sharma, 2008). In this context, what individual factors and socially constructed knowledge have influence to

build correct knowledge, positive attitude, safe behavior and practices in reproductive age women in Nepal is the goal of the current research work.

Studies indicate that adult women are increasingly facing the HIV/AIDS infection since the emergence of it in Nepal (NCASC, 2016; NCASC, 2018; NCASC, 2009; NCASC, 2001). over the time period since the identification of the first case of HIV/AIDS in 1988 (NCASC, 2016). Women aged 15-49 years have been given less priority in governmental responses to HIV/AIDS in prevention programmes. Despite the decreasing trends of HIV prevalence among most risk groups of the population such as sex workers, transgender (TG), heterosexual men (MSW) and women, IDUS (injectable drug users) etc., priority has been given to governmental responses to control HIV prevalence in Nepal. According to NCASC (2016), key risk groups of population are prioritized in policy and strategic plans of the government for the breaking transmission links. Besides these, less research priority is also given to low risk population, such as, out of total 73 prevention researches of HIV/AIDS by the government of Nepal, only 8 are related to low risk group of population (NCASC, 2013).

As an analysis of individual factors, four models such as demographic and socio-economic model (age, marital status, place of residence, education, occupation and wealth index), geo-development model included eco-development region and provinces, cultural model (religion, ethnicity and native language) and media exposure model (frequency of reading newspaper or magazine, frequency of listening radio and watching TV) are developed to identify the most influential factors to affect KABP of HIV and AIDS towards women in Nepal. All those aforementioned individual factors can influence KABP of HIV and AIDS in different situations and contexts.

Various studies on KABP of HIV/AIDS based on the biomedical reality culture free model (MOHP et al., 2007; MOHP et al., 2012; MOHP et al., 2017; Jha et al., 2009; Shakya, 2012; Karki, 2014; Awasthi, 2015; Aryal, 2000; Sharma, 2008), whereas, scholarship on socio-cultural construction of HIV/AIDS (Beine, 2000; Beine, 2002; Beine, 2003; Puri & Busza, 2004; Gupta et al., 2011; NCASC, 2001) contributed to HIV/AIDS knowledge in Nepal. Previous studies have identified demographic, social, economic, media related factors, geo-development factors are as individual factors those affecting the KABP of HIV/AIDS. However, cultural individual factors are not

included in the past study models and alone and none have shown their conglomerate effect.

HIV and AIDS epidemic is largely transmitted through sexual behavior (MOHP et al., 2007; MOHP et al., 2012; MOHP et al., 2017; Jha et al., 2009; Shakya, 2012; Karki, 2014; Awasthi, 2015; Aryal, 2000; Sharma, 2008). Breaking transmission links from high risk group to low risk population is key strategic approach of national responses of HIV/AIDS without convergence the ideas of socially constructed knowledge of HIV and AIDS. Literatures (Beine, 2001; Beine 2002; Beine, 2003; Puri & Busza, 2004; Gupta et al., 2011; NCASC, 2001) suggests that both ideas and convergence of approach would be useful for deeper understanding of issues and to design the appropriate policies and programmes as the response to HIV/AIDS problem in the different situations and cultural context.

Despite decreasing trends of HIV and AIDS among key affected population (KAP), the concentration of epidemic in low risk population is new dimension s of epidemic in Nepal. It is found that the existing policies, strategies and programs do not address problems of HIV/AIDS including low risk women. In this regard, the proposed study is also assess the gaps on policy, structural as well as pragmatic, and research responses towards governmental initiatives on HIV/AIDS. From the aforementioned statement of problem, it carryout the following research questions.

1.4 Research Questions

a. What are the major individual factors those correlated with knowledge, attitude, behavior of HIV and AIDS among women in Nepal?

b. How socio-cultural construction of HIV and AIDS contributed to affect the KABP of HIV and AIDS on women at micro level processes?

c. To what extent the governmental policies, strategic plans, and programmes contributed to HIV/AIDS prevention in different context?

1.5 Objectives of the Study

The general objectives of the proposed research is to identify the most influential factors affecting knowledge, attitude, behavior of women towards HIV and AIDS in Nepal including governmental responses. The specific objectives of the research study are stated as follows:

a. To explore the socio-cultural construction of HIV and AIDS affecting KABP of HIV and AIDS among women,
b. To examine the social, economic, demographic, cultural, geo-development and media exposure individual factors[1] with knowledge, attitude, behaviors of women towards HIV and AIDS in Nepal,
c. To assess the issues of governmental responses to HIV epidemic and its effectiveness.

1.6 Proposition of the Study

As answering the research questions and achieve the objective of the research study, biomedical-epidemiological reality of HIV/AIDS among women is to analyze the individual factors affecting KAB of HIV/AIDS, whereas, socio-culturally constructed meaning of HIV/AIDS is also to explore through micro level process. HIV/AIDS is the idea of biomedical reality and various social characteristics are linked to it. It is well known that education is most influential individual factor of KABP of HIV/AIDS. It is also assumed that cultural individual factors also influenced the KABP of the HIV and AIDS.

In addition to that, socially constructed knowledge also determined the KAB of HIV/AIDS in terms of time, context and nature of society. Societies moving towards quasi modernization process like Nepal have found misconception about mode of HIV transmission due to the socially constructed meaning of HIV/AIDS which has shaped discriminatory attitude and risky HIV/AIDS behavior (Beine, 2003). In this context, the research study has identified the most influential social, economic, demographic, cultural, geo-development and media exposure individual factors towards women's HIV/AIDS knowledge, attitude and behavior. The various studies identified that education of women is the most predictable factor for KAB towards HIV. Along this factor, other factors like ethnicity, media exposure, geo-development etc. have also determined KAB towards HIV/AIDS of women in Nepal.

[1] Demographic and socio-economic such as age, marital status, place of residence, education, occupation and wealth index, geo-development model (eco-development region and provinces), socio-cultural model (religion, ethnicity and native language), and media factors (frequency of reading newspaper or magazine, frequency of listening radio, frequency of watching TV) are individual factors.

There are two folds of the study; one is individual factors identifying of KAB of HIV/AIDS among women including social construction of knowledge, and the other is identifying the issues and challenges of governmental responses. The propositions of study are as follows:

a. The study identified the individual social, economic demographic, socio-cultural, geo-development and media exposure factors those affecting women's KABP towards HIV and AIDS including HIV prevention and transmission. Education is well-established individual factor for KAB of HIV/AIDS. Besides this, other factors like ethnicity, language and media exposure also influence the KAB of HIV and AIDS among women. Social construction of HIV and AIDS knowledge also affects KAB of epidemic among women.

b. There were challenges in governmental responses to prevention, care, support and treatment of epidemic in different high risk population in particular and women in general. The study has critically reviewed the national responses in terms of policy, strategy, institutional arrangement, research strategy and programmes.

1.7 Rationale of the Study

This study is an attempt to include individual cultural factors in KABP model of WHO (Chan et al., 1997) which is the new line of inquiry. Before 1998, the KABP model is culture free scientific study of bio-medical reality of epidemic. The improvement and modification of KABP model of HIV and AIDS in Nepal is provided the deeper understanding of HIV and AIDS from women's perspective as a holistic approach. As an understanding the individual and socio-culture factors of KAB of HIV and AIDS, mixed method research is the methodological contribution of the study.

The ultimate goal of the HIV/ADIS prevention initiatives are to promote safe HIV/AIDS behavior. The major theoretical underpinnings of the behavior promotive theories are health belief model, social cognitive theories, social action theory, theory of reasoned action and information motivation behavior skill model (Traube et al., 2011). As developing the comprehensive model of behavior promotive model, environmental, psychological and social factors need to incorporate the KABP model of HIV/AIDS as holistic approach. This study attempt to incorporate those factors as a underlying factors for the promotive HIV/AIDS behavior as theoretical contribution.

The empirical validation of the theoretical models of promotive behavior, nationally representative surveys would be useful for the generalization of KABP model in the different situations and context. The biomedical modality of the HIV/AIDS couldn't explained the different dimensions of behavioral pattern which was explained in the study (Beine, 2003). The inclusion of individual cultural factors in the model can be more accommodative as explaining holistic in nature. It is well understood that social, economic, demographic, ecological and development region of the country and media exposure influenced the KABP of HIV/AIDS in Nepal (MoHP et al., 2012; MoHP et al., 2017; Jha et al., 2009). Some of the other micro level and cases studies included the cultural issues in explaining the KAB of HIV and AIDS in Nepal (Allen & Fischer, 1994; Gurung, 2004; Gupta et al., 2011; Beinie, 2003; Karki, 2014). These studies have only the gross level analysis of individual factors or analyzed separately. In this context, this study attempt to identify the most influential individual factors from the rigorous multivariate analysis including cultural individual factors. In addition, the study also explores the socially constructed ideas of KAB towards HIV and AIDS of women which is represents the fulfillment of knowledge gap on KABP of HIV and AIDS.

The aim of the study is to explore the most influential individual factors such as social, economic, demographic, ecological and provincial, socio-cultural and media exposure affecting the KABP of HIV and AIDS. Beside these, socially constructed meaning of HIV/AIDS also KABP of HIV and AIDS of women for better culturally informed prevention strategies. In addition, the issues and challenges of governmental responses are also explores to put forth better prevention, care, support, treatment and enabling environment. It is assume that boarder social and environmental factors are also responsible for the effectiveness of HIV prevention. The major socio-environmental barrier to effectiveness of governmental responses to HIV and AIDS is also explore the study. The findings of the study is contributed to policy and strategic interventions towards epidemic.

As observing the women issues of HIV/AIDS, comparatively locally constructed knowledge contribute to shaping attitude towards HIV/AIDS and safe sexual behavior. At the beginning of this study, very few literatures (studies of nationally representative surveys) were related to women's KABP of HIV and AIDS are found very few. However, micro level studies are found as rich literatures on high risk group

of population (NCASC, 2013). The comprehensive analysis of selected social, economic, demographic, cultural, ecological, provinces and media exposure factors in a regression model is put new ideas of the study.

This study investigates the issues by holistic approach of convergence of theoretical, methodological and facts regarding KABP of women in Nepal. In this analysis, selected social, economic, demographic, cultural, media exposure and geo-development individual factors would be analyzed to identify the most influential factors of KAB of HIV/AIDS in Nepal. Nationally represented sample surveys were used to analysis of quantitative aspects of the study from the secondary source of information, which is yet to be analyzed comprehensively. The comprehensive multivariate analysis and identification of the most powerful predictors or factors which are affecting the knowledge, attitude and behavior of women as well as substantial qualitative inquiry as primary source of data on the issues are key ideas in this research. Besides, this study has identified the key issues and challenges of existing policies, programs and strategies for the prevention of infection among different population groups in Nepal.

The major contribution of the study will be to generate knowledge of women on HIV/AIDS in a generalized form at national level. This study provides the critical areas of intervention with evidence based and issues for the national responses. The findings of the study useful to the policy and advocacy, planers and academicians to deeper understanding of the issues. The quantitative lead and qualitative supplement including social construction of ADIS knowledge correlated with KABP of HIV/AIDS is the deeper understanding the methodological contribution as well.

1.8 Limitations of the Study

This research is proposed for the deeper understanding of HIV prevention issues. In the initial phase of the HIV prevention, KABP model is limited as value free. Since 1998, it has been modified as a holistic model. This allowed the issues HIV/AIDS to analyze from the culturally constructed ideas as well. The study is limited with the ideas of HIV prevention. There are limited variables to understand the HIV/AIDS behaviors of the study. The study is limited only to the identification and analysis of those individual factors from the secondary source of data related to KAB of HIV and AIDS among women and is also supplemented by the qualitative data to deeper

understanding of KAB towards HIV/AIDS. The quantitative analysis is based on Nepal Demographic and Health Surveys, 2011 and 2016. Whereas, in-depth interviews and narratives of women as the primary source qualitative analysis. Relevant factors are selected as the use of secondary data for identification of individual factors affecting women's KAB towards HIV/AIDS. This study revisits the national responses (policies, strategies and programs) to identify the response gaps. The complemented and supplemented qualitative data are problematic to generalize the issues nationally.

1.9 Chapters Plan

The dissertation is divided into nine chapters. The introductory chapter of the study included with context and background of the study, research problem, objectives of the research, significance of the study, limitation of study and chapter plan. The second chapter focuses on scientific understanding of study and reviews of relevant literature on HIV/AIDS to conceptualize the study. It has the issues of theoretical understanding empirical reviews and study framework. Chapter three describes about research methodology. It includes design, field research methods, approach to data management and analysis, and preparation of thesis. The fourth chapter attempts to assess of background characteristics of the study population. Chapter five is analysis of factors affecting women's knowledge of HIV/AIDS including socio-cultural construction of HIV/AIDS knowledge. Chapter six analyzes the attitude towards PLHIV. Chapter seven is related to the HIV/AIDS behavior among women. Chapter eight aims to identify issues and challenges of government responses in Nepal. Finally, chapter nine is related to the major findings, conclusions and areas of further study.

CHAPTER TWO
LITERATURE REVIEW

This literature review chapter focuses on the relevant literatures to identify the knowledge gaps in the area of the study. In the first part of the literatures discusses the theoretical perspectives on KABP of HIV and AIDS studies. The substantial empirical studies on KABP of epidemic also reviewed including Nepal studies and finally developed the conceptual framework of the study.

2.1 Scientific Understanding of KABP of HIV and AIDS

As understanding the KABP of HIV and AIDS epidemic with different theoretical perspectives and philosophical stances are being looked upon to frame the issue of the research. It is well understood knowledge of epidemic affect the construction of positive or negative attitude and that attitude enables the behavior change of the individuals. KABP model of the HIV/AIDS study is explained the various theoretical models such as health belief model (Becker, 1974), reason action theory of Ajzen and Fishbcin (1977), planed behavior theory of Ajzen and the social cognitive model of Bandura (1976). The major theme of the model is to understand the causes of spreading of epidemic, consequences of the epidemic in the different dimensions of human life and suggests the measures taken to prevention initiatives (Vallerand et al., 1992).

In a health belief model (HBM), the absence of alternative belief system which has affect the condom using behavior cause the willingness to engaged in the health promotion interventions as an individual being healthy. However, the model identified the underlying issues to barriers to behavior change such as knowledge of AIDS, perception on susceptibility to HIV, perception on effectiveness of HIV prevention interventions, self-efficacy, accessibility and availability of HIV services, and safe sexual behaviors are prioritized (Wilson et al., 1991; Bastable, 1997).

The risk model of HIV and AIDS epidemic was developed in 1990 to promote the preventive behaviors though three different stages (Catania et al., 1990). The risk reduction model of developed on the basis of HBM, social cognitive theory and diffusion of innovative theory focused on the knowledge of epidemic, perceived risk and aversive emotions which has contribute to peoples developing perception

processes. The model and backing up by theories mostly focused individual behavior rather than the group behaviors and perception building process. The KABP model of the HIV study is also focused on the individual behavior which is influenced from the different individual behavior change theoretical models.

HBM has been employed to ascertain sexual behavioral change of individuals to reduce the prevailing HIV and AIDS epidemic. It is noted that findings disclose that Health Belief Model (HBM) components helped people comprehensively understand the sexual behavior that contribute to belief and influence the others. The personal health care practices are affect the others behavior and beliefs as well (Bish et al., 2000). The findings of the study explained that positive attitude contribute the safe behavior and challenges the perceived danger, and social pressure on the epidemic.

Theoretically, it is well understood that HIV and AIDS is economic problem. Numerous efforts have been made to behavior change of individuals. Individual behavior change in the policy context is quite complex. The engagement of complex policy problems, there is need to understand the major determining factors to understand the complexity of the epidemic (King, 1999). For this, social, institutional and cultural context is important to deeper understanding the epidemic not only the individual context. The embedded of the social, institutional and cultural context is crucial for the behavior change interventions.

As revisiting the behavior change intervention models of HIV and AIDS epidemic, knowledge, attitude, behavior/belief and practices model is best known to behavior change intervention for the risk reduction and prevention of the epidemic. Risk calculations, understanding rational behavior, perceived risk were the major contributions of theories. In the theoretical understanding there is some overlapping and absence the major factors within different context is lacking (Traube et al., 2011). The behavior change is determined the cognition process of individual which has developed capacity to individual for rational decision making processes. It is also related with cost and benefits of risk related action (National Research Council, 1989). The claim of individual behavior change is only the matter of risk reduction and control epidemic is questionable by the study (Parker, 2001). In the changing situations and context, the KABP model has been upgraded and modified as per the socio-cultural and environmental situation of study population.

The proponents of the KABP model of HIV epidemic have been claiming correct knowledge of HIV transmission lead to accepting attitude whereas accepting attitude contributed to safe behaviors of HIV and AIDS which is contributed to reducing infections of HIV (King, 1999). In addition, education is viewed as best weapons to combat the epidemic. However, education is not alone contributed to KABP, there other psychological like education on cognition process and development of skill to coping could help to reduce the risk and vulnerability of the epidemic (Prochaska, 1992). The practical skills are based on the reason actions is key for the prevention from the epidemic.

In spite the economic and psychological aspects of KABP of HIV/AIDS, the reasoned action needs to be social relevance under the volitional control (Ajzen & Fishbein, 1980). The social dimensions of the epidemic is understood in functional aspects attitude towards the behavior and subjective norms or social influence affect the personal intentions about the epidemic prevention. In this regard, social influence is developed from social norms and social constructed knowledge of the epidemic. The continuous interaction of human behavior with the cognitive, group behavior and environmental factors (Bandura, 1976) those lead to the stages of behavior change.

As responding to HIV and AIDS epidemic in the past were to collect quantitative data included number of sex partners, risk sexual practices, experiences of STIs and other similar issues to understand the spread of the infection (Carballo et al., 1989). The social and cultural issues are lacking the study and mostly focused on the individuals psychological dimensions. The study model is only based on the value neutral culture free. The psychologist were response very quickly so that the psychological perspectives were more dominant in the study. The policy and pragmatic responses is also guided by the psychological framework individual behavior change interventions only.

During the 1990s the social science research on epidemic started to conduct research activities in different social and cultural contexts by the anthologist (Herdt & Boxer, 1991). The anthropologist has raised the question on the effectiveness of research instruments and methods along with intervention strategies. There is numerous questions adapting research protocols to understand sexual orientation and practices in different cross-cultural context. There is differences in the expression sexual practices in diverse society and cultures along with sub-cultures in the same society (Bolton,

1992). It is claimed that one model of the study does not fit to the different society cultural so that there is need to revisit the modality in research and behavior change interventions. It is also stated that research findings of the early 90s indicate that human behaviors are determined by the set of complex social, economic, cultural, gender and environmental factors mediate to understand the epidemic (Bolton & Singer, 1992). The socially constructed knowledge of HIV/AIDS is existence from those periods.

Much of socio-cultural literatures on HIV/AIDS are built around ethnographic research and small-scale surveys. These studies do an excellent job at identifying micro level processes and local community factors influencing the HIV prevention issues in particular settings. However, there is a lack of comparative benchmarks enabling the creation of more general conclusions, which is the limitation of the cross-cultural studies of HIV/AIDS. This is no criticism of any particular study or perspectives, but is a commentary on the existence of a gap in the literature as a whole. For example, when one can argue that some members of a college religious fellowship are sexually active outside of marriage behavior contrary to the group's professed standards of conduct (Sadgrove, 2007). It cannot make a judgment about the efficacy of the group's religious beliefs and ethnic affiliation on sexual activity because there is no point of reference to sexual behaviors of those outside the group. Even when different religious or ethnic groups are examined in the same study, the kind of diversity needed to test hypotheses about cultural influences usually does not exist because the groups often share normative assumptions due to their daily interactions in the local communities. In this situation, the generalization of knowledge is quite important from the perspective of modified KABP model on HIV and AIDS study in Nepal. The diversity of culture in Nepal should be required to understand HIV/AIDS prevention issues from the generalized form with substantial complement of the socio-cultural construction of HIV and AIDS epidemic.

It is noted that most studies on epidemic have failed to reach a consensus regarding the influence of cultural factors such as language, ethnicity and religion on KABP of HIV and AIDS in social and cultural context. This debate is one of many recent battles over the origins of sexuality, gender, and group identity hole in the ground of individualism and collectivism.

As debating individualism and social collectivism, understanding of culture and its meaning that contributed to construct knowledge differently along with attitude and behavioral aspects of epidemic in specified sub-group of people Culture can be defined as the combination of material items, behaviors, and attitude defining a specific way of life (Wilson & Miller, 2003). Diversity of people along with their caste/ethnicity, language, religion and historical ground known as cultural factors (Ross et al., 2006). In socio-culture analysis of the epidemic is important to ASIA and Africa where Indigenous people (IP) have been given less likely to value on virginity and faithfulness on marital relationship with comparison to Other societies (Caldwell et al., 1998). The findings of the study suggested that culturally sensitive issues would be included in the close cross-cultural context in the third world nations.

2.2 Reviews of KABP Studies

As reviewing the KABP studies, the KABP is known as knowledge, attitude, behavior/belief and practices (Camara, 2006; Khan, 2006; Traube, 2011). In this study, behavior is used instead of belief to understand the influencing factors of the knowledge, attitude, behavior of HIV/AIDS epidemic. As per the requirements of the study what factors are known from the previous studies in the KABP of the HIV and AIDS.

The first part of the literature review regarding KABP of HIV and AIDS is related with the emergence and modified KABP. The literatures of previous studies those shaping and contributing in the model. Beside these, the relevant issues of body of knowledge. The methodological strengths of the study also assessed. The Nepal studies on knowledge, attitude and behavior practices of HIV and AIDS including women's issues were also reviewed to identify the knowledge gap in the area of research.

2.2.1 KABP Model of HIV/AIDS

At the emergence of the KABP model in the 1990s to addressed issues of HIV prevention intervention and strategic information. The public health researchers conducted research on KABP of HIV/AIDS to develop strategic plan and programs for the risk reduction of HIV/AIDS epidemic. The early research projects contributed to the mass based campaign using KABP centric model (Chan et al., 1997). The model explained that knowledge affect attitude and knowledge and attitude of

epidemic contribute to behavior change (UNAIDS, 1998). The model explained the causes and consequences of HIV spread and promotive sexual behaviors is key for HIV and AIDS control.

The development of ARV treatment of HIV and its widening to needy people is the highest achievement of the biomedical reality of HIV and AIDS model. At the begging of the epidemic KABP model is culture free, education is the best idea to promote the safe sexual behaviors that contribute the risk reduction (WHO, 1994). The expansion of the biomedical model of HIV and AIDS is begin from 1998. Since 1998, the UNAIDS advocating the more comprehensive research approach in KABP model included the cultural factors to understand the epidemic in holistic approach to breaking transmission links. The realization of the limitations of the model, the UNAIDS and health research modified it into more holistic to address the new challenges HIV prevention interventions.

The emergence of KABP model of HIV and AIDS study, it has been relevant in the every situations and context and cost benefit to larger impact, epidemic prevention. As per the needs and implications of model, it has been made some modifications to utilize in the HIV/AIDS study (Morisky et al., 2002; Traube, 2011; Kapoor, 2018).While studying the factors affecting KABP of HIV and AIDS on women, the cross cultural factors also allow to include in the model which has contributed to deeper understanding KABP of HIV/AIDS epidemic.

2.2.2 KABP Studies

It is well understood that the KAB/P surveys is the means of rich body knowledge in the area of HIV and AIDS in the different context and situations. The national level surveys, middle range level studies and micro level surveys contributed to develop policy and strategic plans of the country. It also contributed to sustainable development goals and its achievements. The popular approach to study HIV and AIDS in the developing nations found to be useful in explaining the issues of HIV/AIDS. THE KABP model is utilize everywhere to study of issues and prevention initiatives.

As defining the knowledge in general, “an acquaintance with ascertained truths, facts or principles or condition of understanding, or information acquired by study” (Emily, 2005). It is well understood that true and believed in something and phenomenon is

knowledge. It is biomedical and socially constructed as well. The claiming of truth for some may be deviated from truth which is scientific validated or not.

Attitude is defined as "a mode of regarding the object of thought, either positive or negative views of an object" (Emily, 2005). It is consequent from decision and are likely to modification as a purpose of knowledge. It is also stated that it is a social learning process and learned from the environment where he/she closely associated. Attitude can be change through the influential knowledge. There is also relationship between attitude and behaviors either or positive as per the specificity, relevance, personality, social interaction and time and space. Most of human behaviors and actions determine the attitudinal influences.

Health education is the most influential factor in the areas of HIV and AIDS study and prevention intervention (Huber & Schneider, 1992) which is reflected in the KABP model of WHO in the 1990s. The model applied standardized tools to evaluate and routine monitor the HIV/AIDS programmes. The scientific understanding of the issues from the biomedical reality epidemic those are scientifically proven facts. There is less likely to chance of acceptance by the scientific community. The facts are produced in the social, political and environmental context which are scientific research. It is also known that the research findings are the byproduct of the political, social and economic interest of the time and space (Green & Thorogood, 1998). This is also the cultural product of the scientific investigation. The study also outline the dispute between findings of biomedical reality of epidemic and the other forms of human existence and experiences in their cultural context (Radley & Billig, 1996). The social and cultural traditions could be shape the human behaviors differs to the product of technical and biomedical reality of the epidemic. The utilization of biomedical reality in the advanced and modern society whereas socially constructed knowledge perspective mostly applicable in the developing societies. While doing the study on KABP of HIV/AIDS, the both concepts like biomedical reality and socially constructed knowledge is useful to HIV/AIDS studies.

The science and its knowledge is known as a major sources of instrumental rationality in the modern society (Moatti & Souteyr, 2000). There is quite discrepancies between the biomedical scientists and general people's psychological depiction on well-being and sickness. It is interestingly observed that the no direct association between knowledge and attitude towards epidemic including behavior (Hubert, 1990). It is

well understood that information alone is not sufficient to change the risk behavior of individuals which are well established on human mind and uncertain in nature. It is also argued that knowledge of HIV/AIDS is a necessary condition to change discriminatory attitude and safe sexual behavior but not sufficient because of the other intervening and environmental factors are also exist (Ingham, 1995).

Scholars like Moatti and Souteyr (2000) argue that while scientific knowledge is seen as the main source of instrumental rationality in modem societies, observed discrepancies exist between biomedical experts and lay people's mental representations of health and illness. There are no direct relationships between an individual's level of knowledge and attitude toward a disease, and his or her behavior (Hubert, 1990). Information alone is not sufficient to promote meaningful change in risk behavior, especially when that behavior is immediately reinforcing and well established, and its negative consequences are temporally distant or uncertain. Ingham (1995) also argued that acquiring knowledge of HIV/AIDS is a necessary condition for discriminatory attitude and behavior change; it is not a sufficient condition. It is also argued that the role of socially constructed knowledge affect the attitude and behavior of HIV and AIDS.

The types of surveys and responses in the questions asked in the survey also determine the understanding of behavior patterns of the individuals (Bulmer and Warwick, 1993). There is chances of reported unreability of the responses in the issues asked in the survey as well. The quality of questions and operating mechanism of the survey also compromise the quality of the survey data. There are also limitations of surveys to dig out the in-depth issues of behavioral pattern of individuals and group behaviors (Wellings & Macdowall, 2000). While conducting the behavior related to HIV and AIDS study, the specific social interaction of individuals shape the attitude and sexual behaviors. The social construction of knowledge is import to understand the behavior of HIV/AIDS in the different social cultural context.

Since the emergence of the KABP model and development of global standard tools of KAB/P surveys, the research frequently used those tools to understand the association between knowledge and behaviors of HIV and AIDS with some modifications in (Wellings & Macdowall, 2000). However, anthropologists argued without considering the set of the social, structural and cultural factors, the behavior of individuals could

be seen in detail. The different social settings have different social and cultural distinctiveness which have shape the behavior of people. This indicates that socially constructed ideas would be consider while studying the KABP of the HIV and AIDS in any situation and context.

The HIV and AIDS prevention intervention does not work if the policies and strategic plans don't admit or include the diversity context and risk mitigation approaches (Hubert et al., 1998). It is argued that diverse strategies can contribute to change the individuals construct in which he or she surrounded. The is need to specific theoretical assumptions to address the each of specific context. If one modality is successful in one situation that could be applicable to same type of context and situation. If the situation different then there is need to specific strategy to address the behavior change intervention at least in modality. The frequent interaction between the groups and within the groups have been change their cognitive process to understand the specific problematic issues. In this context. It is argued that there is no knowledge with context free. The growing literatures in the KABP of HIV/AIDS is related to universal and context specific. In further review section how major studies shaping HIV/ADIS knowledge in general and KABP of HIV in particular.

In the context of HIV and AIDS studies, , there is increasing trend to develop the new insights into the deeper understanding of the issue since the identification of the issue till date. At the begging of the 1990s, the HIV and AIDS studies were conducted based on the social, economic, cultural and media context of people in the US and Europe explaining and understanding the epidemic. The studies mostly explained the issues of KABP of HIV/AIDS and it implication to HIV prevention (Peruga & Celentano, 1993). The AIDS knowledge is determined by the individuals' educational attainment, age and white ethnic groups. The study identified that white ethnic group, educated people, younger group of population, affiliated in liberal and secular values in politics were more likely to have AIDS knowledge than their counterparts. In US there were also high risk group people such as lesbian and bisexual women worked in the bars and clubs were more like engaged in unsafe sexual practices that is shaped by the cultural construct of the society (Stevens, 1994). The poor negotiating capacity to safe sexual behavior and social deviance by nature contributed to put most risk of those types of people.

Empirical evidences of study in Central and Eastern Europe indicates that cultural differentiation of people lead to different results in safe sexual behavior (Goodwin et al., 2003). The study focused on the cultural context is the important dimension of assessing the sexual behavior and attitude towards HIV and AIDS significantly differs in individual and group level representation. A study in California on HIV and AIDS prevention intervention indicate that cultural factors were need to incorporate substance abuse prevention programs into a multiple and complex social structures (Aguilera & Plasencia, 2005). It helps to better results of prevention initiatives.

A study in Denmark among migrants Somali and Sudanese people indicate that safe sexual behavior is low as compared to national average (Lazarus et al., 2006). The study concluded that the culturally sensitive issues need to be incorporated while providing the safe sex information. The study in Tanzania also indicated that there is also cultural factors absence in the HIV and AIDS prevention interventions (Lugalla et al., 2004). The prevention initiatives were effective, however, the needs of the culturally friendly services of HIV and AIDS. The study on minors and commercial sex workers (CSWs) in South Africa explored the education is the key effective factor for the behavior change of HIV/AIDS (Campbell, 2003). There was also evidenced that a set social, economic, cultural and demographic context determined the KABP of HIV/AIDS and Prevention interventions (Setel, 1999). The study explored that negotiating power of safer sexual relationships of women, cultural attitude, and social mobility of people contributed HIV/AIDS transmission and vulnerability.

A comprehensive study on modes of dialogue, symbolic communication and symbolized action in relation to sex and health issues in India and South Africa (Lambert & Wood, 2005). The study was conducted used multiple methods to understand the sexual health. The issues related to open discuss about sex in public discourse and private discussion, and how it affect the individuals' sexual health. In everyday life, people interact with each other on sexual issues in symbolic form which is manifested in their actions as well. In India, sexual matters are taboo in public discussion (Kapoor et al., 2018). It means that the culture and social factors contributed to such type of communication actions.

The studies of HIV and AIDS in Asia focused on the social, economic and cultural context. The study on young peoples' sexual health in Mongolia explored that changes in socio-political and cultural context contributed the increasing trends of the

HIV epidemic. In Asian context, unemployment/underemployment, poverty level, disparity in economic dimension, socio-cultural situation of the countries, level of educational attainment and accessibility and availability of services including health system would contribute the risk reduction and prevention interventions (Robert et al., 2005). Knowledge of HIV and AIDS could contribute the exposure of risk behavior is key for the reduction of high risk behaviors

The human interaction on the HIV and AIDS issues is the also the major issues of prevention of epidemic (Cleland & Ferry, 1996). The power and negotiations on sexual issues is the specific social interactions contributed effective strategic planning for behavior change interventions (Roberts et al., 2005). It is identified that decision making in sexual matters, power and negotiations about sex, and power relations essential components to control increasing trends of HIV epidemic. There is risk of negative consequences when using effective tools, HIV education and comprehensive interventions in a modified behavior form of the individuals and groups (Fishbein, 2000). This means if the spirit and norms were breakdown then there will risk of HIV and AIDS in the communities.

The comprehensive understanding of HIV and AIDS in the social context, indigenous knowledge, experimental knowledge and socially constructed knowledge are frequently used in the research study. Such type of knowledge are locally constructed and contributed to challenge medically proven knowledge including building attitude and behaviors of HIV/AIDS. However, the experimental knowledge can contributed to widening the biomedical knowledge of HIV/AIDS and social science research as well (Caron-Flinterman et al., 2005). The study of youths were experiences to change behaviors from the perspectives of reasoned actions where HIV knowledge, decision making strategies, negotiation power and risk assessment plays key role to risk reduction (Patel et al., 2006). The experimental knowledge of HIV can contributed to better understand about epidemic. The alternative position on the knowledge is useful to deeper understand in the field of HIV and ADIS study. In this context the social constructed knowledge of HIV deeply explained the KABP of women in Nepal.

2.2.3 Knowledge, Attitude and Behavior Studies in Nepal

In the context of Nepal, much of the social science research in the early phase conducted on HIV/AIDS has been in the form of knowledge, attitude, and

perception/behavior (KAP/KAB) studies (Allen & Fischer, 1994). The majority of the findings (concerning the socio-cultural construction that contributed to risk of increasing trends of HIV and AIDS) are the result of such KAP/B studies. This type of study is a product of the various models such as HBM (Feldman & Johnson, 1986) and theory of reasoned action that posits lack of awareness as the primary determinant to increase disease and education as the best means to fight it. These types of studies were based on Western anthropological perspective widely used by policy planners for awareness building, which is the Nepal's first prevention strategy and program. It is assumed that lack of awareness is reasoned to be the primary factor contributing to the spread of disease and education is viewed as the primary weapon to fight the spread of disease. The prevention programs developed from this theoretical paradigm tends to give primary focus to "awareness building". For instances, one of the KAB studies done in Nepal concluded that the most effective strategy control over the epidemic and protect women from epidemic is to raise awareness amongst the men (Smith, 1996).

From the previous studies, it cannot be denied that increased awareness is an essential component to combat with HIV and AIDS in Nepal. The findings of several studies have reported success in awareness building in certain population groups. Among FSWs, it has been determined that "HIV messages have been successfully disseminated and understood by the target population (New Era et al., 1997). Among IDUs "all but three (1.5%) had some knowledge of HIV/AIDS and majority study participant knew the modes of HIV transmission (Maharjan et al., 1994). The low level of condom use is found among the FSWs. This means, increased knowledge does not always mean change in behavior. Although these examinations of knowledge, attitude and behavior/practices are most essential to a fuller understanding of HIV/AIDS situation, they are not enough. Therefore, there are some cross-cultural factors important to promote safe sexual behavior.

The study also indicates that sufficient knowledge is not always only the means of promotive HIV?AIDS prevention intervention (Meadows et al., 1993). An analysis of HIV/AIDS issues of women by Aryal (2000) from DHS data in Nepal indicates the awareness dimension of HIV prevention. Low level of literary, access to information related HIV/AIDS and place of residence were the factors of low level of awareness. Beside this, access to other health services also contributed to awareness about the

HIV/AIDS (Aryal, 2000). Similarly, Roka (2002) analyzed that the socio-economic and demographic variables are the most affected variables for the HIV/AIDS knowledge among adolescents. The study found that education is the most powerful predictor of the HIV/AIDS knowledge of school adolescents (Roka, 2002). The relevant cross-cultural factors were not assessed to affect the knowledge of HIV/AIDS.

Similarly, other KABP studies in Nepal also suggested that demographic and socio-economic aspects of human life contribute KABP of HIV and AIDS especially sexual behavior. A study conducted by Gurung (2004) among 90 teenagers in Kathmandu, has identified that significant number of street teenagers have lower level of knowledge about HIV prevention and transmission. Of the total, sixty percentages have misconception about HIV transmission. The teenagers varied in gender and also had varying sources of HIV/AIDS information acquisition. Similarly, Suvedi (2006) has identified the HIV/AIDS infection as high among women than high risk group of women such as FSWs. The risky sexual behavior has contributed to the situation. The lack of women focused initiatives promoting safe sex are the factors for the high-risk behavior of women in Nepal.

Post 2006 studies have contributed more comprehensively than the post 1990s to 2006. A study Sharma (2008) identified that media exposure is the main source of the HIV and AIDS knowledge. There significant differences in before awareness programme intervention and post intervention findings of the study among the people in HIV knowledge promotion activities. The study also indicated that awareness building prevention intervention are more effective among young people. In conclusion, education is the best means to promote knowledge and the chance to involvement in risk behavior might be reduced (Sharma, 2008). It is argued that education and media exposure are critical factors for acquiring knowledge and safe sexual behavior among adolescents.

A nationally representative study among 5423 people in 2007 conducted by SAARC TB and HIV/AIDS Centre in two different ecological regions of Nepal. The study highlighted on the multiple sexual practices. About 14 percent unmarried and 2.2 married women were engaged in high risk sexual behaviors (Jha & Madison, 2009). Beside the higher level of HIV and AIDS knowledge, there were wider misconception about the modes of HIV transmission and lower level of condom using practices both

married and unmarried women. The study found that age, income and literary were the major factors affecting sexual behavior of women. Findings of FGDs of the same study revealed that there higher level of stigma and discriminatory attitude towards PLHIV (Jha et al., 2009). The aforementioned study does not analyze the cultural individual factor regarding the knowledge, attitude and behavior of women.

Systematic reviews by Upreti et al., (2009) have identified three prominent factors for the HIV/AIDS knowledge among young peoples in Nepal. Education, place of residence and gender factors were the determinants of high and low level of knowledge. The cultural factors as ethnicity and religion were not considered. The study also found that knowledge about condom is high and consistent condom use is still low in premarital and extra marital sexual affairs. A study among nursing students in Nepal conducted on HIV/AIDS knowledge and attitude has identified the large knowledge gaps regardless of the level of education in nursing students. The students have negative attitude towards HIV/AIDs (Mahat & Eller, 2009). Similarly, a study among school adolescent students showed that significant number of students have knowledge about STIs/HIV/AIDS (Gupta et al., 2011). It noted that higher level of knowledge does not always translate into safe behavior of HIV/AIDS. Health education and media exposure were the major factors of the knowledge. However, there was a lack of comprehensive analysis of other several factors in an integrated form on knowledge of HIV/AIDS.

Similarly, a nationally representative study, Nepal Adolescent and Youth Survey (2011) also assessed the STI and HIV/AIDS knowledge on HIV/AIDS among adolescents and youths. About 73 percent of adolescent having knowledge any one form of STIs and had AIDS knowledge on 99 percent. The major factors affecting STIs and HIV/AIDS knowledge are; age, place of residence, caste/ethnicity and educational status of the adolescents and youths (MoHP, 2012). A comprehensive analysis done by Shakya (2012) has identified some socio-economic, media exposure, cross-cultural, demographic factors affected the knowledge of HIV and AIDS among young people in Nepal. The data of NDHS, 2006 were used which provides the nationally representative youths status on HIV/AIDS knowledge, attitude and behavior. The analysis indicates that females having primary education, with the status of non-poor, and listening to radio less frequently are responsible for lower level of HIV knowledge and its related issues. Similarly, low years of education,

female with poor status, male living in rural area and involved in non-agriculture activities are more likely to have misconception that HIV virus transmitted through mosquito bite (Shakya, 2012). It is also identified that education, wealth index, occupation and media exposure especially television were the predictable factors for the HIV/AIDS related knowledge among youth in Nepal. The individual cultural factors were also missing in the analysis.

A study of 230 college youths conducted by B.C. and Basel (2012) identified the issues of pre-marital sexual behavior. Of the total, about 20 percent of youth were engaged in pre-marital sexual practices. Alcohol drinking behavior/practices contributed to the pre-marital sexual practices. The youth having mixed perception on pre-marital sexual behavior according to their background. Relationship with parents is also the key factor for the engagement in the pre-marital sexual practices along with good and poor peer norms (BC & Basel, 2013). Individual behavior, social norms and values and cultural orientation at household level were factors for the pre-marital sexual behavior.

A study among 404 people from different occupational groups indicated that almost universal of HIV and ADIS knowledge only one fourth having used condom their first sexual intercourse (Karki, 2014). The occupation of respondents, age at first marriage and age of first sexual intercourse and negligent on safe sexual behavior are the determinants of KABP of HIV and AIDS.

A comprehensive review about HIV/AIDS persistent issues on women and children in Far-Western region of Nepal. The study revealed that male labour migrants and its impact of women and children put most risk of HIV and AIDS (Awasthi et al., 2015). The wives of migrants more risk because of the unprotected sexual behavior returnee migrants. The lower level of education and lack of comprehensive knowledge of HIV/AIDS is the key triggers of risk of HIV infection among the wives of migrants and their children. The open boarder constitutes the high mobility of the people risk of expansion of HIV and AIDS in the both countries. The collective HIV screening programmes are essential to risk reduction among the migrant workers. Lack of economic opportunities, education, awareness about HIV/AIDS, risk sexual practices are responsible to put women and children at high risk (ibid). The HIV prevention initiative in large scale for women is needed to address the problem as per the locally constituted ideas.

Knowledge of HIV and AIDS among women (heard of AIDS, HIV prevention methods and comprehensive knowledge) were studied in different rounds of Nepal demographic and health surveys (NDHS). The findings from NDHS 2006 to 2016 on HIV/AIDS knowledge indicates that there is a significant change in the awareness level of women. The facts of series of NDHS reveled that the compositive index of HIV and AIDS prevention and transmission of women is almost constant (20%) from 2006 to 2016. Similarly, knowledge of AIDS is also have decreased in the period between 2011 and 2016. The facts of NDHS (2006-2016) raised the questions about the factors responsible for the low levels of compositive index of HIV and AIDS knowledge of HIV transmission. The different rounds of NDHS reports have analyzed the different individuals such social, economic, demographic and geo-development determinants. How much those factors correlate to knowledge (outcome variables) is still questionable. The theories and past studies have identified that education is the most affecting factor for HIV/AIDS related knowledge. Not only the education, but also the social constructed knowledge of AIDS and other individual factors should be determinants of correct knowledge and misconceptions of HIV/AIDS transmission.

The discriminatory attitude towards PLHIV are also studied in periodical surveys in Nepal. According to NDHS, 2006 to 2016, the accepting attitude are found to have increased. However, there is also a wide range of discriminatory attitude towards PLHIV in different context of women. The cross-cultural determinants such as caste/ethnicity, religion and linguistic affiliation are not analyzed in the findings of the study. Beside these, there is a lack of statistical correlation among the different social, economic, demographic and development region determinants with the accepting attitude towards PLHIV.

The nationally reprehensive sample survey among women aged 15-49 years like NDHS from 2001 to 2016 in different rounds have been collected women's HIV/AIDS behavior. Very few issues are analyzed for exploring the situation towards HIV and AIDS behaviors of women in Nepal. Among the analyzed indicators of HIV/AIDS related behavior, HIV testing behavior is one of the important aspects towards HIV prevention intervention. The test of HIV and know the result among women in Nepal is in increasing trend since 2006. The reflection of prevention intervention of HIV/AIDS is seen. However, prevention initiatives to women seen less priorities in the HIV/AIDS programmes. The NDHS of different rounds have

collected the information regarding multiple sexual partners and condom using practices. The NDHS reports have not analyzed such important indicators of HIV/AIDS behavior. This raised the question about individual and social factors affecting the women's sexual and condom using behavior.

For designing HIV intervention prevention among women in Nepal, the necessary facts should be documented. The government policy, strategic approach and programs related to HIV/AIDS prevention among women is given low priority. The growing HIV cases is largely shared by women aged 15-49 years old (NCASC, 2016).

2.2.4 Governmental Responses to HIV/AIDS

As responding the HIV and AIDS epidemic, Nepal government adopted various policy decisions and strategic approaches to combat the epidemic. As per the global responses, Nepal started prevention efforts to formation of sexually transmitted disease (STD) and AIDS control committee before the first HIV case identified in 1988 (Suvedi, 1999). It is revealed that the initial first short term AIDS prevention and control program was implemented in 1987/88. This was followed by the first three-year mid-term programme that was implemented for STIs and ADIS control in 1990-1992, which was primarily focused on awareness raising interventions. This was followed by a five-year medium term plan was implemented in 1993-1997 and developed to create awareness about HIV/AIDS and health workers in its clinical management. The aforementioned response is identified as the first phase of HIV/AIDS responses that targeted to male sex worker according to influences of Western approach and experiences of the other countries. In addition, Blood safety policy was introduced in the first phase of HIV/AIDS responses. During this phase of responses, information, education and communication programs were implemented. The beginning of 1993, blood safety programme is also prepared and implemented. It was developed to contain the rapidly spreading epidemic, strengthen epidemiological surveillance activities, screening the blood and blood products, strengthen diagnosis and infection control, and set up systems for monitoring and evaluation (Suvedi, 1999).

The second phase of HIV/AIDS responses beginning since 1995, the systematic and policy response was started after the commitments and obligation of ICPD, 1994. The efforts of government responses to HIV/AIDS have been effective in reducing the risk

and vulnerability of high-risk group of population. In 1995, the Parliament adopted national AIDS STD control policy that addresses all the major components of sexually transmitted infection prevention efforts which was accepted globally (Suvedi, 1999). From that phase of HV/AIDS response, all prevention activities were coordinated through NACC (national AIDS coordination committee) chaired by Health Minister and comprised of representative from NGOs, international non-government organizations (INGOs), key ministers, donors and others involved in fight against AIDS. The District AIDS Coordination Committee has also been formed to carry out major AIDS prevention activities at the local level.

In 1997, the first strategic plan was introduced with the highlighting the systematic factors including socio-cultural norms and values, women's status in the society and higher geographic mobility people to create the risk of epidemic in the country. Beside these, economic, educational, cultural, social legal and political system creates the structures which facilitated risk of HIV infection (Allison & Gruskin, 2003). In the strategic plan stressed on the creating enabling environment such as ethical strengthen, legal reformation and ensuring human rights to PLHIV. The strategic plan had less likely to coordination with development institutions including national planning commission and sectoral development agencies (DoHS, 1999).

In 2000, the government of Nepal, Department of Health Services, NCASC conducted situation analysis of HIV and AIDS study which is the milestone for the deeper understanding of epidemic. From this point of departure of HIV/AIDS initiatives, the second phase of response started. Similarly, in 2000, NAC (national AIDS council) was established under the chairmanship prime mister which was also a high level structure to implement and monitored the HIV/AIDS programmes. This high-level political commitment followed by the second National Strategic Plan introducing second generation of HIV/AIDS surveillance system developed among the risk group of population.

Nepal's National HIV/AIDS strategy, 2002 (2002-2006), identified the major age group of HIV/AIDS concentrated. According to strategy, focused on the youth population. It is because the low moderate growth of epidemic could contributed to higher levels of death among youth population of the country. As addressing the youth HIV problem and reducing the vulnerability, the NCASC prepared and implemented five year strategic plan 2002-2006 including operation work plan 2003-

2007. NCASC developed a second National Strategic Plan for 2002-2006 and included a five-year HIV and AIDS operational work plan (2003-2007). The risk reduction among key affected population was main objectives of the strategic plan. Control over the epidemic and new infection, the research, programme monitoring and evaluation programs are prioritize in the strategy.

The strategic plan of HIV/AIDS 2006-2011 had set up the objective of program coverage and reduction of new HIV infection among population with high risk. The prevention objective of the national strategy is 70-80 percent coverage of most at risk population in the HIV services at the end of 2011. The strategic plan focused on awareness building, reduction of discriminatory attitude, appropriate and accepted services` and accessibility to the marginalized group of population. Risk reduction of key population and promotive behavior change intervention are the major themes of the strategic plan.

The 2006-2011 strategic plan based on the 11 points principles focus on the prevention, care, support and treatment of HIV/AIDS to the needy people. The major cross-cutting issues are replicated in the strategic plan. For the first time in HIV and AIDS responses, this plan developed and implemented basic service package and specialized service package to various types of population as per the requirements (NCASC, 2007). In the meantime, the NAP (national action plan) included migrant males and wives of the migrants as a high risk group of HIV and AIDS. Since 2007, the third phase of HIV and AIDS responses began in Nepal.

The effective implementation of the national strategy, NAP 2008-2011 developed and implemented action plan to achieve the set up targets. The mobile population and their spouse were target to plan for the risk reduction activities of HIV and AIDS. Management and reintegration of returnee infected people in community and interventions focused on the time of risk exposure. Migrants mapping and developed need of the services to achieve the national goals of HIV and AIDS reduction control over it (NCASC, 2009).

The NSAP (national strategy and action plan) with collaboration with PRSP (poverty reduction strategic paper and UNDP assistance frame work included the HIV and AIDS as development component of national plan which is continuous prioritized in development interventions in Nepal. In the first phase and second phase of NHSPIP

(Nepal health sector program implementation plan, 2005-2010 and 2010-2015), the parallel programmes to most a risk of HIV migrants and their spouses in the priority based. During the period, Millennium Declaration stressed on the review and needs of the new policies to combat HIV/AIDS to reduce the epidemic by 2015 to each country.

The current national HIV/AIDS strategy (2016-2021) is guiding document to all stakeholders and institutions involved in the HIV and AIDS responses. It has set up targets to reduce new infection 50 percent and reduce HIV related death 25 percent by 2021 (NCASC, 2016). The strategic document focused on the decentralized and multisector collaboration to implement the HIV responses. Effective implementation of programmes and regular motoring of the activities are key for the strategy. The strategy covered the all dimensions of prevention, care, support and treatment of HIV/AIDS in the country. In the successive years of implementing national policy of HIV/AIDS in Nepal continuous improvement in the HIV responses. From the first AID policy, 1995 to national strategy 2016, there is lacking to achieve the target goal due to various reason such as financial responses, effective implantation and sufficient human resources in the field as per the requirements (NCASC, 2005; NCASC, 2011; NCASC, 2016).

The current strategic plan is based on the universal equitable access to prevention, care and treatment HIV/AIDS services. The standard set of reach, treat and retain the cases in the holistic approach is the key the interventions. The governmental responses to HIV is to implement as per decentralized, multi-sector and interdisciplinary engagement aimed fast-tracking end of HIV/AIDS. Current strategic plan has clearly setup goals to achieve HIV vision 2020 and end HIV/AIDS in 2030.

The national strategic plan 2016-2021 is based on the broad concept and approaches to set up goals of po percent. This mean 90 of PLHIV know their HIV status, 90 percent those who knew their HIV positive status were access to ART services and 90 percent suppressed the viral loads (NCASC, 2016). The exiting capacity and mechanics can achieved the set up goals is questionable. Such types of ambitious goals are limited only in the strategic plans and programmes but not in reality.

Despite the decline of HIV and AIDS incidence on key affected people, the KABP of HIV and AIDS is still questionable among such types of groups (NCASC, 2018). The

growing HIV cases among women and males aged 15-49 years considered as low risk population are still less likely to fall under priorities of governmental responses. There are still numerous challenges to achieve the targets set up by the government that is the question under study.

2.3 Conceptual Framework

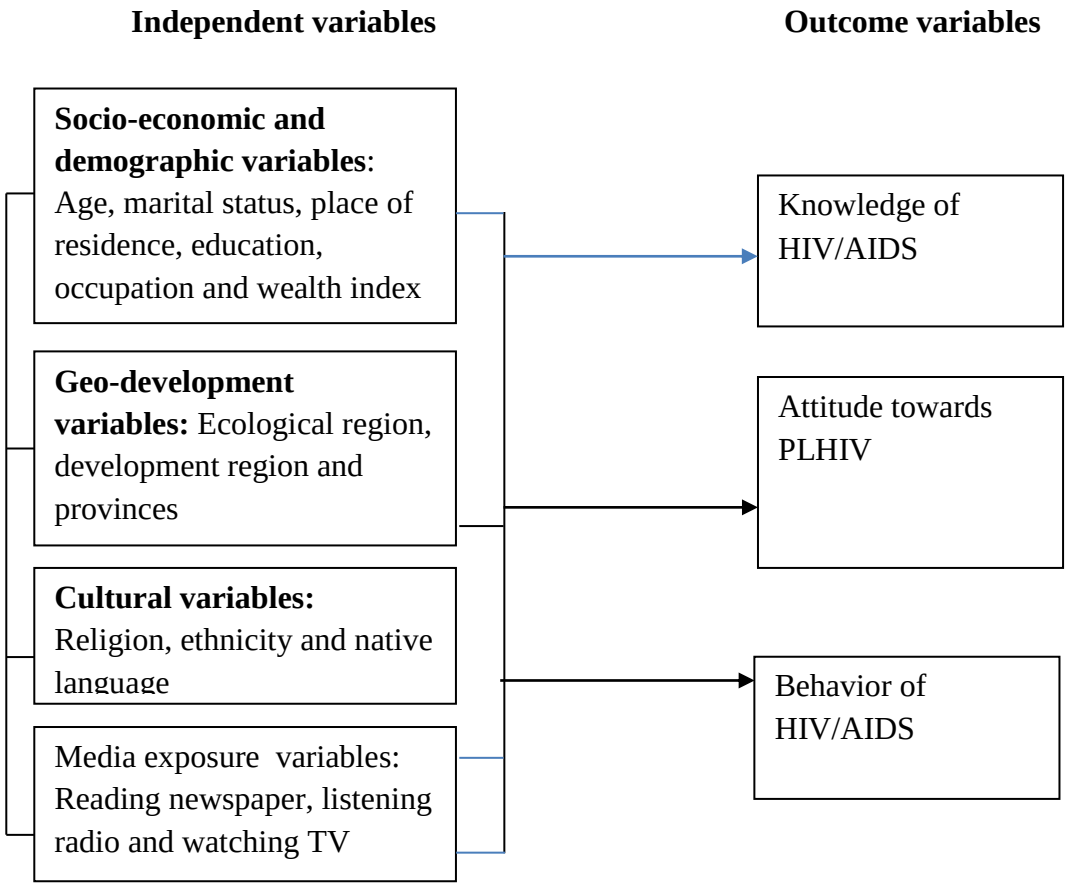
The review of relevant literatures that emphasize the needs to further study in different social, economic, demographic and cultural context of the women to understand issues in the details. Previous studies and theoretical models less likely to be sufficiently considered in research and HIV prevention. From the ideas of the theory, global and Nepali literatures, conceptual model for the factors affecting women's KAB study is developed (Figure 2.1). The theoretical understanding of the KABP model mostly excluded in the biomedical reality of the epidemic which is knowledge gap in the existing Nepalese study. The cultural factors are included to understanding the underlying factors of KABP of HIV and AIDS among the low risk women in Nepal. The socially constructed knowledge of epidemic is the another one dimension of understanding the KABP of HIV and AIDS in developing societies like Nepal.

It also identified that Discriminatory attitude towards PLHIV not only affect by the biomedical knowledge of HIV transmission it also influenced by the socio-cultural construction of HIV and AIDS. Thus, knowledge, attitude and behavior need to be assessed within the individual context including cultural factors quantitative facts. The socially constructed knowledge and it influence of KABP of HIV and AIDS would be assessed by the qualitative information. The findings of the empirical review of literatures, the social, economic, demographic, cultural and media exposure contexts are better explanation of the KABP of Epidemic. The individual factors such regional/ecological differences, age, education, occupation, language, ethnicity, religion, media exposure are assumes as determinants of KAB of women regarding the epidemic.

The evaluation of the determining factors from the studies indicated that there were some of the social, economic, ecological and cultural factors consistently affect the KABP of HIV/AIDS among the key affected and general population (Rehle et al., 2006). The studies of HIV/AIDS are drawn from Nepal and these studies indicated

that the individual social, economic, demographic, ecological and media exposure factors explained the knowledge of HIV discriminatory attitude towards PLHIV and sexual behavior of key populations and women. The biomedical study of HIV/AIDS mostly focused on the individual factors whereas socio-cultural construction of knowledge shape the group behavior.

Figure 2.1: Conceptual Model of Analysis of Women's Knowledge, Attitude, and Behavior of HIV and AIDS in Nepal



Source: Based on Literature Review.

The bio-behavioral model of KABP of HIV/AIDS has been developed on the basis social, economic, cultural and environmental context of the people shaping behavioral pattern suggested by the literatures (Vallerand et al., 1992; Wilson et al., 1991; UNAIDS, 1998; UNAIDS 2015; King, 1999; Morisky et al., 2002; Camara, 2006; Sadgrove, 2007). Some of the studies separately analyze the individual underlying factors related to social, economic, demographic and cultural context on KABP of HIV/AIDS. But this study has analyzed the combined effects of the four models in an

analysis. The results of the analysis are different in partial model and integrated model.

As deeper understanding of HIV and AIDS knowledge and practices, the adequate and reliable information is lacking to shape the human action that needs to assembling the information in a holistic approach (Hubert, 1990). The proposed model the complex interaction of different categories of the people tend to identified the behavior patterns of HIV and AIDS in the different context. The quantifying data alone don't explain the different aspects of human behavior that is why different methodological approach can contribute to better explanation of practical problems ground in the data (Anderson, 1992). The sexual behavior is defined communities its by their norms and values. In this context, social constructed knowledge can useful for understanding the issues.

It is also suggested that KABP of HIV/AIDS directly related to the socio-cultural context. There is also wider tradition to cross-product of different approaches and methods to understand the issues (Huygens et al., 1996). The research ususes the different methodologies and epistemologies to integrate quantitative and qualitative methods of inquiry (Moatti & Souteyr, 2000) and modeling the social and sexual networks to better understand the influencing factors to risk behavior of HIV and ADIS in the different context. In the study, it is assume that the KAB of HIV and AIDS are determined by the different individual and socio-cultural context of women.

In a changing context of the HIV and AIDS research, research scholars have been converged the quantitative and qualitative methods for evaluate the HIV and AIDS interventions (Bajos & Marquet, 2000). The qualitative research in HIV/AIDS explained the social and cultural issues in-depth of the behavioral dimension of prevention and utilization of services. The studies mostly focused on the deviant behaviors of HIV and stigma related issues. In the generalization of the findings of the study, the common sexual behaviors are identified from the quantitative study and micro level process of concept constructed contributed by qualitative study in the behavioyr and social phenomenon under study (Kapoor, 2018; Booysen & Amtz, 2003). There was clear distinguished between the individual and group behavior in the studies of HIV and AIDS the global and local context. Methodologically, statistical power is seen the quantitative analysis and in-depth analysis in the

qualitative studies. So the complementation of qualitative aspects in the quantitative is the key methodological strengths in the study.

As identifying the factors affecting women's knowledge, attitude, behavior towards HIV and AIDS including responses to epidemic, the individual factors correlates with KAB of epidemic on women to analysis of national data file of women in NDHS, 2011 and 2016. The selected factors were grouped (as modeling of socio-economic and demographic, geo-development, cultural and media related factors) for identification of most affecting determining factor in a set of analysis on KABP of HIV among women. The social construction of concepts such as social norms and values and environmental factors should be complemented to KABP of epidemic in the context of women.

Finally, research study analyzes the HIV and AIDS responses regarding of policy, strategic plan, institutional framework, financial responses, research policy and programs related prevention, care, support and treatment. How the national responses address problem of key affected population and low risk population like women in the local context which is important departure to response the epidemic in Nepal for achieving the set up goals and targets 90-90-90 up to 2020. It is assume that there may be numerous issues and challenges to government responses to HIV/AIDS for achieving the targets of SDGs by 2030. The proposed study tries to identify the issues and challenges of governmental responses to HIV/AIDS in Nepal.

CHAPTER THREE

RESEARCH METHODOLOGY

In this chapter, research philosophy, research design, sources of data, methods of data collection research and analysis are discussed. The measurements of key indicators and approaches to analysis, assessing data quality ethical clearance of study are presented.

3.1 Philosophical bases of Mixed Method Approach to Study

Philosophically, HIV/AIDS research has been conducting different methodological approaches. Positivism, post positivism, socially constructed, advocacy/participatory and pragmatic approaches are major the philosophical stances of the social science research. The nature and requirements of the research questions, a post positivism methodological base is applied in the study. The ontological position of the study, the multiple reality is exist because of biomedical reality and socio-cultural construction of the study. The study also required multiple methods to achieve the objectives of the study.

Research on HIV and AIDS in Nepal has been conducted as following the KABP model to understand the bio-behavioral reality of epidemic since the 1990s. In the beginning of the research tradition, bio-medical reality and its leading causes are assessed from the quantitative and qualitative approach separately (Maharjan et al., 1994; Sattar, 1996; Smith, 1996; Dixit, 1996; Seddon, 1995; Bhatt et al., 1993; New Era, 1997; Fedrick, 1999; Bhatta et al., 2013). The quantitative approach of the KABP study is based on the positivist approach whereas qualitative studies are found on the interpretative perspectives. Nepal has begun to conduct nationally representative sample surveys those included limited issues of epidemic related to knowledge/perception, attitude, condom using behavior among women based on the guidelines of ICPD. Before that, the national survey on DHS, 1991 has not incorporated the issues of HIV/AIDS. Those nationally representative surveys based on the positivist ideas.

Since 1996, every five years, the DHS survey has included more comprehensively the knowledge, attitude, behavior dimensions to HIV and AIDS of women and men in surveys which is an ongoing process. In those nationally representative surveys, only

one dimension of facts has been provided as bio-medical reality of HIV/AIDS including the issues of behavioral. Similarly, when the second generation surveillance survey about key affected people on HIV related issues in an integrated form of biological and behavioral aspects of the issues were studied quantitatively (NCASC, 2003; NCASC, 2007; NCASC, 2009; NCASC, 2012; NCASC, 2016; NCASC, 2018). Nowadays national surveys like Nepal Living Standard Survey, 2010/11, Nepal Multiple Indicator Cluster Survey, 2014 (CBS/UNICEF, 2014), Nepal youth survey which is nationally representative survey included the issues HIV and AIDS for quantitative analysis.

The mixed approaches of quantitative and qualitative studies began from 2000 (Beine, 2003; Puri & Busza, 2004; Suvedi, 2006; Sharma, 2008; Jha & Madison, 2009; Mahat & Eller, 2009; BC & Basel, 2013; Karki, 2014). However, all those studies have one paradigm led and supplemented by another paradigm. Regarding the study of HIV/AIDS from mixed method design, the history and practices should be understood with the philosophical stance.

It is well understood that positivism and interpretative paradigms are dominant in the social science research and involve in the disputes as well. The debate between the philosophical and theoretical understanding to conducted research study to know the reality from different perspectives (Guba & Lincoln, 1989). According to Ayer (1959), positivist paradigm having expressive assumptions on the specific social phenomenon, heath issues and presenting the quantitative as natural science way. The quantitative paradigms of research believe in the observed phenomenon treating and validating as natural science phenomenon. In the quantitative research, observation is made separate from the entities those are subject to observation. The positivist research scholars emphasize the objective inquiry in the social science research which is time and context free generalization (Newman & Benz, 1998) are the reality and validation of scientific outcomes.

In the studies of HIV and AIDS in the international perspectives, KABP model of WHO (World Health Organization) assumes the culture free biomedical reality of the study of object phenomenon (WHO, 1994). According to this paradigm, researcher free from any biasness on the study phenomenon, the is continue to the remain fervently indifferent and scholarship with object study, and finally tested the state hypothesis which were empirically rationale. The research those favoured the

paradigm, conventionally, it is a metaphorical unbiasedness. The writing on the issues is based on the impersonal passive voice including technical terminology which are based on the description of social laws focused (Tashakkori & Teddlie, 1998). However, the modified model of KABP has been changed since 1998 in a holistic approach including context and situation to understand issues qualitatively as well.

The qualitative study HIV/AIDS is started since the 1990s which is paradigm shift from quantitative to qualitative as interpretative philosophical stance. This paradigm of social science research is called the constructivists and interpretative which is rejects the positivist paradigm of research. The scholars of the interpretative research paradigm explained the construct of the theoretical perspectives related to constructivism, idealism, humanism, hermeneutics, and even post modernism to understand the issues of study methodologically (Guba & Lincoln, 1989). The advocates the paradigms struggling the established the multiple construct of reality are related with each other those are not allowed to time and context free generalizations of the findings of the research. It is well understood that the research is value based and are difficult to causal explanation of the phenomenon. There is common understanding that the societies of third world countries are not value free. The logic of the research findings generally understood from specific to general which are inductive from data which is outcome of knower and known relationship. It is also stated that subject knower is only reality of the situation under study (Guba, 1990). As study the KABP of HIV and AIDS having biomedical and social construction of the reality, so that multiple realities are identified from the multiple theoretical and methodological orientation.

In the line of qualitative inquiry, Parker (2001) stated that HIV/AIDs research heavily has stress on the quantitative research methods calculating individual behavioral patterns which is contribution the in the area of HIV/AIDS as a biomedical reality. There were disagreements in the quantitative paradigm by qualitative research in the end of the 20^{th} century. The major differences between the two paradigms in the research cultures are one admitting the in-depth description of the issues whereas another focused on the generalization of facts (Sieber, 1973). The two positions clearly mentioned that HIV/AIDS research having the both paradigms in the context and nature of the study.

As per the nature of the study, MMR (mixed method of research) is widely used to understand issues. MMR is the methods of combining concepts, methods, quantitative and qualitative data and writings of the research study. Principally, it the third wave movement in the social science research included inductive, deductive and abductive approach to set of explanation of research findings (Creswell, 1994). In a HIV/AIDS study, the deeper understanding of the issues like biomedical reality and social construction of HIV/AIDS in a single study is highly applicable. Understanding of KABP from the biomedical reality and social construction, the post positivism philosophy is applied in the study.

3.2 Research Design

As a design of the study, MMR is the applicable to answer the research questions and achieving the objectives of the study. The study is mixings in concepts, methods and writings the findings. The findings of the quantitative analysis were supplemented by the primary qualitative findings. The biomedical reality is understood from the quantitative approaches whereas social constructed knowledge and its function is outlined from the qualitative study of the HIV/AIDS in the form of KABP model. The factors affecting KABP of HIV/AIDS, individual factors were identified from the rigorous analysis of the NDHS data sets while locally constructed knowledge from the primary qualitative in-depth interviews. The MMR in the this study provides the holistic understanding of HIV and AIDS in Nepal.

As per the requirements of the study, quantitative and qualitative paradigms are needed for answering research questions. The quantitative dominant and qualitative supplement is the features of the methodological issues of this study. However, some of why and how questions are answered from qualitative analysis. In this empirical study, the aim is to identify most predictable individual factors such as social, economic, geo-development, cultural and media exposure factors those affecting KABP of HIV/AIDS among women in Nepal. The modified WHO model of KABP study utilized in the study.

Population based surveys conducted during the 70s in Nepal and nationally representative surveys such NDHS, NFS, NLSS, IBBS and other survey to understand the demographic and health related issues are based on modified World Health Organization (WHO) model and have been examined. It is also understood that

survey data could not collect the textured data to deeper understand the phenomenon. In this context, the researchers are make efforts to combine the quantitative and qualitative data to understand the reality (Caldwell et al., 1998). Therefore, NDHS, 2011 and 2016 based on the WHO standardized questionnaire format to collect the information with women aged 15-49 years in 2011 and 12,862 in 2016. The comprehensive analysis of that data sets offers of better understanding of HIV and AIDS related KAB of the studied population. The aim of the study is not only identifying the KAB related factors but also the validation of facts from the qualitative in-depth study of the issues as well. According to Robson (1993), combined quantitative and qualitative facts could contributed to understand factors affecting KAB of HIV and AIDS study population to better understand factors which have directly and indirectly affected. In the qualitative purpose of the study to contextualize the issues in the local construction of the epidemic.

KABP research in a developing country like Nepal is a problem of contextualizing the issue. The better understand the KAB of HIV and AIDS is designing the study as descriptive as well as explanation of the factors those affect the knowledge construction and its utilization. The quantitative data does not fulfill the requirements of the cross-cultural interpretating the facts ((Bulmer & Warwick, 1993). Hence, researchers have added open-ended field research guidelines for low risk women in the study site to obtain depth facts to better understand the epidemic.

3.3 Sources of Data

As achieved the objectives of this research, quantitative data is essential to identify most influential individual factors such as demographic and socio-economic (age, education, rural/urban place of residence, occupation, wealth index and marital status), geo-development (ecological region and provinces), cultural (ethnicity and native language) and use of media (reading newspaper, listening radio and watching TV) that considered could be affected the KAB of HIV and AIDS. Despite these, the description of socially constructed knowledge of HIV and AIDS, accepting attitude towards and PLHIV and sexual behavior including condom using behavior of women those explained by the quantitative and qualitative data of. In this situation, identification of issues and challenges of national responses to HIV/AIDS are based on the official documents and qualitative information collected from the different institutions and health personnel at field level and national advocacy level. As per the

explanatory as well as descriptive nature of the study, primary data is needed to address the research questions.

3.3.1 Secondary Sources of Data

The available national surveys related to KAB of HIV/AIDS among women in Nepal, data related to sexual behavior and condom using behavior of FSWs such as IBBS and official records which are related to national responses as policies and strategic plan and programs related to HIV/AIDS could be answered. Review of the secondary sources of nationally representative surveys indicates that Nepal Demographic and Health Survey data are more applicable to this research study. It is because NDHS data such as NDHS, 2011 and 2016 have provided the four modeling variables as proposed in the study regarding KAB of HIV and AIDS of women while other sources facts have limited information compared to NDHS Data (Appendix-VI).

While using the secondary source of information, there are data limitations. However, the available data from the appendix-VI mentioned sources have answered the research questions related to the factors affecting women's KAB of HIV and AIDS of women. From table appendix-VI, it is identified that HIV/AIDS related issues are introduced in nationally representative DHS program among low risk women since 1996 with just the limited knowledge of related information. The 2001 NDHS included the a lots of KABP of HIV and AIDS related issues than NFHS, 1996. The men are also included in the sample of DHS program since 2001. The issues of attitude towards PLHIV related information was not included in the NDHS, 2001 but multiple sexual partner behavior was included. Since 2006, the DHS program has comprehensive information on HIV and AIDS related to KAB that are found in the survey. However, in this study,

Map 3.1: Nationally representative surveys across the country, NDHS, 2011 and 2016

NDHS, 2011 and 2016 data file are used to identify the most predictable factors of KAB of HIV and AIDS. These data files are recent than 2006 and these data files are more applicable to analyze knowledge, attitude and behavior indicators for the study. The issues of social, economic, demographic, geo-development, cultural and media related individual determinants of HIV and AIDS of women aged 15-49 available in these data sets that are not found in the data sets like Multiple Indicator Cluster Survey, 2014 and Nepal Living Standard Surveys. Thus, NDHS, 2011 and 2016 data sets are used in this study for individual factor analysis of KAB of HIV/AIDS among women in Nepal. Beside these, very limited studies are found in Nepal among low risk women about KAB of HIV/AIDS in nationally represented survey for the generalization of knowledge at national level. The quantitative answer of research question of biomedical reality of HIV/AIDS is found in these data sets.

In case of governmental initiatives to HIV and AIDS, some secondary sources of information were used published governmental documents such as department of health services and NSACS and primary data are used alongside the in-depth interviews with service providers and health personnel from the policy maker's level. Government policies, structure, programmatic documents and international publications are the major secondary sources of information.

3.3.2 Primary Sources of Data

The secondary quantitative data and available data sources only are not able to answer the socially constructed reality of women's knowledge, attitude and behavioral aspects of HIV/AIDS as well as social factors that affected the risky sexual behavior of FSWs. If we observe the data of NDHS and IBBS, a wide gap between general knowledge (heard of AIDS) of HIV prevention and transmission is discovered. For the understanding of socio-cultural dimensions, the deeper understanding of KAB of HIV and AIDS including socio-cultural ideas that shape the sexual behavior from social construction of issues are needed. Therefore, primary data source is essential to answer the aforementioned social construction ideas of HIV/AIDS among women in Nepal.

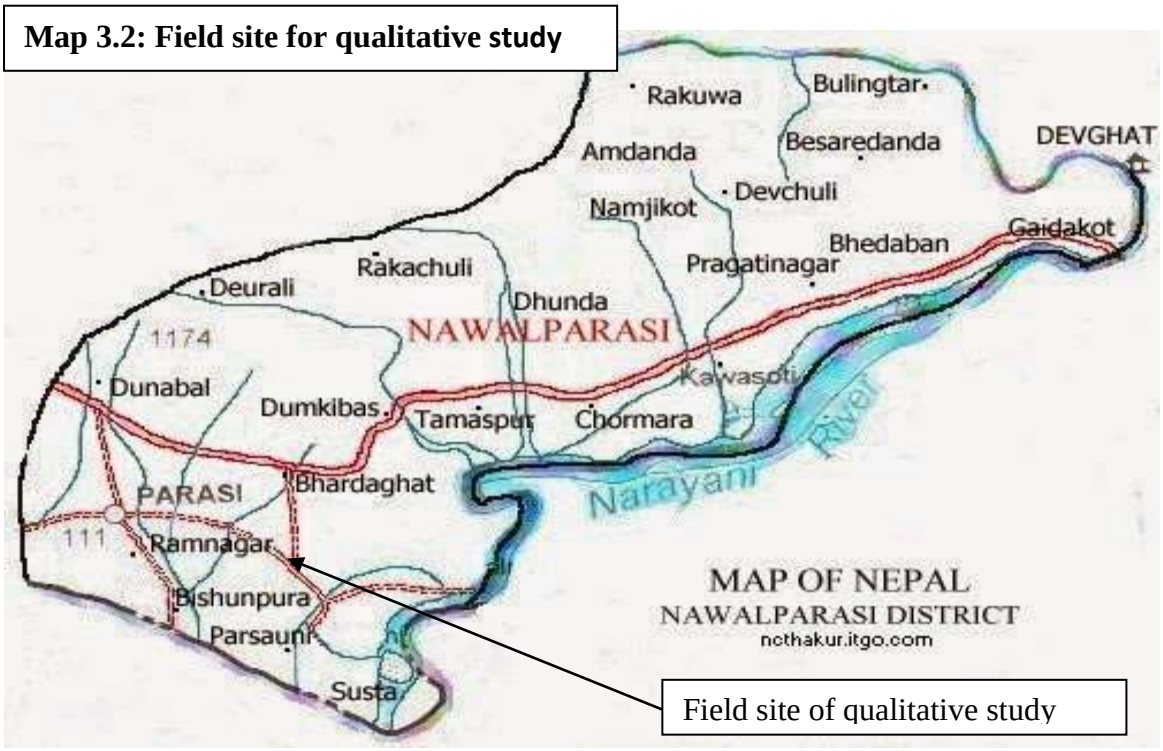
As a second aim of the study, official records like policy, strategic plan, program and institutional framework, financial response to HIV/AIDS and issues including challenges of national responses are used as secondary sources of information. Beside

these, key issues and challenges of national responses to HIV/AIDS are also assessed from the primary information collected from the advocacy and policy level, district level, program level i.e. service providers, stakeholders and clients of HIV/AIDS services are selected and interviewed. It is argued that there is a need for new qualitative data to meet the objectives of the research.

3.4 Selection of Field Sites and Justification

The qualitative aspect of this study is based on the primary data. The exploration of socially constructed knowledge of HIV and AIDS, attitude towards PLHIV and sexual as well as condom using behavior of women, the Ram Nagar VDC (currently-restructured Ramgram Municipality, Susta West of Nawalparasi) was selected as the location of study area, which is also one of the multicultural and multi-ethnic VDC in the district (CBS, 2014).

Map 3.2: Field site for qualitative study



It is close to district headquarters and located almost 10 kilometers north-east. The east-west highway passing through this VDC divides it into two halves to the north and south. The following are the main reasons for selecting this VDC.

- This VDC has a mixed population composition and a larger number of different caste/ethnic groups (34) from both Hill and Terai-Madhesh origin. Almost three ecological regions originated people are represented in the study (Appendix-IV, table 2).

- Considerable number of Dalits from both Hill and Terai origins are found in the VDC that is significantly associated with HIV and AIDS issues.
- This VDC is one of the 20-20 VDCs[2] of HIV/AIDS program implemented by FHI 360 among low risk women aged 15-49 with coordination of DHO Nawalparasi.
- Ram Nagar has a high level of labor migration to India and other countries like Gulf, Malaysia, UAE etc. i.e. at least a member of almost each household has migrated.
- This VDC is adjoining VDC to hotspot area of East-West highway, for the study of high group of population as well.
- Nawalparasi is the home district of researchers, thus, it is easy to approach the organizations and potential respondents familiar persons with the study site.

The aforementioned reasons motivated researcher to choose the study site for qualitative data. The field study and selection of potential research participants for the in-depth interviews are applied as a process.

3.5 Fieldwork Process

The study was conducted Ramnagar of Nawalparasi of Lumbini province. It is located north and south along the east-west highway. Multicultural characteristics of the people living in the setting. The initial phase of field work was completed in the January-February in 2015. That was contact building with community people and organization working in the field of HIV/AIDS in the district. Two small workshop was conducted to share the issues of research including findings of the quantitative analysis of NDHS, 2011. The tools were pretest during the period. In the second phase of the field work was conducted with stakeholders and organization working in the HIV/AIDS. Discussion with community volunteers and outreach workers to the issues of study. The final phase of the study was conducted after the ethical approval obtained from the NHRC. All total 31 in-depth interviews were conducted with the women aged 15-49 years in the field setting. It took almost two months to complete

[2] NCASC and FHI 360 have been implementing HIV prevention program for women in the 20 districts and 20 VDCs from each district in Nepal. Nawalparasi is one of the districts of the 20-20.

the field work. The follow up field work was conducted November and December of 2015.

In-depth interviews (including director of NCASC, Programme Manager of Global Fund working for NCASC) was conducted in 2015. The programme level health personal were also contacted to informed about study and further field work process inJanuary, 2015 including *Sath Sath* project, DPHO, Nawalparasi, and program officer of local organization working in the field. A follow up visit was made field setting Nawaparasi in December, 2015 which was verification of the findings of the study. The further updated and available issue related documents were also collected.

As collection of the primary data, ethical approval has been granted by the NHRC as per request of the researcher. The ethical review committees at NHRC has to approve in the 19th April 2015 for this research proposal formally. After the ethical approval, the field work was carried out at different levels of research participants in May-July, 2015. As a Ph.D. supervisor T.U. has granted permission to the field study.

3.5.1 Research Tools and Orientation of Field Research Assistants

The field research guidelines were designed as tools of qualitative data collection to conduct fieldwork. The field research guidelines cover the issues of research questions concerned to the KABP of HIV and AIDS including perceptions of operating level health personnel in the field of HIV and AIDS to policy. The field research guidelines were revised and finalized before the final fieldwork. The pilot in-depth interview helped to revise and finalize the field research guidelines. Once it was corrected it was assumed ready for final field work.

In the final phase of data collection, the researcher has selected three research assistants to collect qualitative data among women aged 15-49. All the three research assistants were girls holding Bachelors level degree and with good command over the local language. Three days intensive orientation on the in-depth interview, content of questions and field procedures was given to them. During the orientation, they interviewed with women for pilot test at the Ram Nagar VDC. The orientation was conducted on the last week of April, 2015.

3.5.2 Selection of Research Participants for Qualitative Study

According to nature of the study, quantitative data are extracted from NDHS, 2011 which has 12,674 women in the nationally representative survey. For the qualitative aspect of the study, 31 women aged 15-49 are selected from a village of Ramnagar VDC Nawalparasi district. The potential respondents were diverse in their age, ethnicity, religion, occupation, economic class, participation in local organizations, place of origin etc. The list prepared from the data of two villages counted total of 198 women 15-49 aged. Before the selection of women, social mapping was developed in terms of their mix composition. Among 198 listed women aged 15-49 from the specific located mapping (Vatualiya and upper Bhumai), 31 were selected purposively with representing different social strata. The qualitative data were supplementary for the quantitative data for women's KABP of HIV/AIDS in most of the cases. However, the issues of social construction KAB of HIV/AIDS, qualitative information are critical. The issues of KAB of HIV and AIDS on women were described sufficiently and explained with the results of NDHS, 2011 and 2016 (N=12862) in the further analytical chapters.

3.5.3 Collection of Qualitative Data

The data collection started in the beginning of May, 2015. The researcher conducted interviews with staffs of service centers such as DPHO, focal person of district AIDS Coordination Committee, chief of VCT center of district hospital, partner organization of FHI 360 coordinator, Bardghat and project coordinator of 20-20 district of HIV/AIDS program at Bharatpur. In the meantime, the research assistants carried in-depth interview with selected women. The interviews were carried over the four weeks in the field. The researcher regularly monitored data collection of research assistants and has provided inputs to maintain the quality of data collection. Each interview was scheduled. The final task of fieldwork was accomplished by the end of May, 2015. The central level interviews were conducted in August, 2015 after the development of the narrative analysis of field data.

During the qualitative data collection, as researcher, all the collected data by research assistants were cross checked whether the answers of the potential respondents have fulfilled the requirements of the research questions and study theme. All total 10 participants were re-interviewed by the researcher (me) as consent of the research

participants. Almost all pragmatic level and policy and advocacy level interviews were conducted by the researcher. All the thematic and narrative analysis is done by the researcher.

3.6 Indicators and Measurement

The measurements of knowledge, attitude and behavior are measured as per the requirements of the study. The UNAIDS/Global AIDS response progress report (2015), MoHP et al., 2012, IBBS (2012) and NCASC (2014) provide the indicators and measuring methods for the KAB of HIV/AIDS. In this study, secondary data were measured as per the following global standardized measurement methods.

a) Knowledge Related Indicators

Knowledge of AIDS, comprehensive knowledge of HIV transmission and knowledge of HIV prevention

Numerator: Number of sampled population of defined age group who have ever heard or known the each case separately

Denominator: Total number of sample population

Calculation: (Numerator/ Denominator)*100

b) Attitude Related Indicators

Accepting attitude towards in each cases of measurement

Numerator: Number of sample population who have accepting attitude in the cases separately

Denominator: Number of sample population who had heard of AIDS.

Calculation: (Numerator / Denominator)*100

c) HIV/AIDS Behavior Related Indicators

Ever had two or more multiple sexual partners measurement

Numerator: Number of sample population to have 2 or more sexual partners in lifetime.

Denominator: Total number of sample population who ever had sex.

Calculation: (Numerator / Denominator)*100

Condom using behavior measurement

Numerator: Number of sample population those condom used in the last sex with most recent partner

Denominator: Total number of sample population those had ever sex.

Calculation: (Numerator / Denominator)*100

3.7 Analytical Approach

The quantitative data set of NDHS, 2011 and 2016 are obtained and cleaned as per the requirement of the study. The quantitative analysis is based on the ideas of facts that support the claims in the research. As for the qualitative aspects of the study, all the interviews were analyzed and narrative summaries were developed. As answering the qualitative aspects of the issues is approach of qualitative analysis.

3.7.1 Analysis of Quantitative Data

As analyzing the quantitative data, a statistical analysis of factors those selected individual factors such as social, economic, demographic, cultural, geo-development and media use affecting the knowledge, attitude and behavior of women are identified as the per the requirement of the study. In bi-variate analysis, cross-tabulation analysis including $\chi 2$ association is performed between dependent (outcome) and independent variables (factors affecting the dependent variable). The results of the cross tabulation analysis are distributed in percentages. For further analysis, to identify the significance association between outcome variables and independent variables, the $\chi 2$ association is calculated in 5 percentage and 1 percentages which are presented in chapters 5, 6 and 7. Before the analysis of relationship between independent (input variables) and outcome variables (output variables), the association between the dependent and independents variables were performed in the data analysis for the multicollinearity test(Appendix-VII).

In this study, weighted analysis of NDHS, 2011 and 2016 is performed. The quality of data seemed high which is useful to understand whether HIV/AIDS knowledge HIV/AIDS is affected by the level of education of women in Nepal (i.e., the dependent variable is comprehensive knowledge of HIV transmission and level of education is independent variable. The bivariate test results are explained the gross

effect of the independent variable to dependent variables which is presented in the analytical chapters in explained the women's KABP of HV and AIDS.

The analysis of quantitative data is based on the NDHS, 2011 and NDHS, 2016. The variables related to women's KAB of HIV and AIDS are analyzed with the different social, economic, cultural and environmental characteristics of women were analyzed using crosstabulation and multivariate analysis to identify the most influential factors. The binary nature of the outcome variables, the logistic regression is used to identify the net effect of the independent variables to outcome variables. The independent fitting to a regression equation from the given data to logit function. The appropriateness of the logistic regression techniques. The equation is fitted ass follows in form of odds ratio:

$\text{Log } (P/1\text{-}P)=A+\sum(B_k, X_k)$,

Where, p indicates the probability of exposure of to outcome variable, P/1-P indicates the odds of exposure, A is the constant factor, X_k indicates the explanatory variables and B_k represents the effect parameters associated with the explanatory variables.

There are 13 variables such as women's age, marital status, place of residence, education, occupation, wealth index, ecological zone, provinces, ethnicity, native language, reading newspaper, listening radio and watching television are introduced in equations as confounding factors, even if they have no significant association with the dependent (outcome) variables.

3.7.1.1 Logistic Regression Model

It is well known that the regression analysis provides the net effect of the outcome variables. In the study, the understanding of the KABP of HIV/AIDS in the context women's individual social, economic, cultural, geo-development and media exposure contexts is analyzed in regression equation. As answering the research question and achieving the objectives, empirical and analytical analysis are made in the next subsections and also the regression analysis of data for women for the years 2011 and 2016 is utilized to identify the most influential factors.

3.7.1.2 Analytical Statistical Model

The binary nature the outcome variables such as have knowledge (yes or no), have accepting attitude (yes or no) and having practice safe HIV behavior (yes or no), the binary logistic regression model is used to better explained the issues. In the logit function, it is explained that logistic regression predict the chance of occurrence of the response variables on the basis of the explanatory variables. As per the nature of the outcomes variables, the FHI(2000) developed the regression model is better explained the KABP of HIV/AIDS in the comprehensive analysis of the quantitative data.

Binary Logistic regression for continuous explanatory variables

As analysis of binary nature of the study, y_j is the outcome variables whereas x_{ij} are the explanatory variables. Where, i=1, 2,3,…….., m and j=1,2,3……..,n

It is also assume that $I_j=P(x_{ij})$ is understand as success probability where x_{ij} takes the values X_{ij}. The probability model $E(Y)= X_{\beta,}$ where β is the vector parameter. The probability value $II_{j=} P(y_j=1)$, with in the interval of 0 and , whereas $E(y_j)$ isn't so limitation. The transformed quantity Ln (IIj/(I-II_j) which is lies in the interval (-∞ to ∞) and modeling as

$$Logit(II_j)=\ln(II_j/(1- II_j))= \beta_0+ \beta_1X_{1j}+ \beta_2X_{2j}+...+\beta_mX_{mj} \text{ ----------(1)}$$

Through algebraic manipulation

$$II_j = \exp (\beta_0+ \beta_1X_{1j}+ \beta_2X_{2j}+...+\beta_mX_{mj})/\{1+ \exp (\beta_0+ \beta_1X_{1j}+ \beta_2X_{2j}+...+\beta_mX_{mj})\}\text{---(2)}$$

Parameter B_i indicates the coefficient of the parameter to be estimated.

3.7.1.3 Binary Logistic Regression Model for Categorical Predictors

It is understood that LR (logistic regression) is the predictors of the categorical variables. The binary response of the y and I predictors x_i where $_i$=1,2,3…, m where predictors may be more than two categories.

x^r_{ij}= 1,2,3,….,m, j= 1,2,3,…..n and r=1,2,3…, k_i-1

where, i is the number of factors in the model and j represents the number of observations.

Where i is the number of variables (factors) included in the model and j is the number of observation. x^r_{ij} represents the r^{th} level of the factor.

The regression equation is stated as follows:

$$P(Y=1)= \beta_0+\{ \beta^1{}_1X^1{}_{1j}+ \beta^2{}_1 X^2{}_{1j}+\ldots+ \beta_1{}^{k}{}_1{}^{-1} X_{1j}{}^{k1-1}\}+ \{ \beta^1{}_1X^1{}_{2j}+ \beta^2{}_1 X^2{}_{2j}+\ldots+ \beta_1{}^{k}{}_2{}^{-1} X_{2j}{}^{k}{}_2{}^{-1}\}+\ldots +\{ \beta^1{}_1X^1{}_{mj}+ \beta^2{}_1 X^2{}_{mj}+\ldots+ \beta_1{}^{k}{}_m{}^{-1} X_{mj}{}^{km-1}\}\text{----------(3)}$$

As using the equation 3 for the study, the social, economic, cultural, geo-development and media related variables are fitted in the regression equation which is expressed as in the following.

General Regression Model

In the study, the following explanatory variables are used to identify the most influential factors towards KABP of HIV/AIDS among women in Nepal.

$$Logit\ (II_j) = ß_0 + ß_1 * age_+ ß_2 * marital\ status_+ ß_3 * place\ of\ residence_+ ß_4 * Education_+ ß_5 * Occupation_+ ß_6 * wealth\ index_+ ß_7 * ecological\ region_+ ß_8 * geo\text{-}development\ region_+ ß_9 * ethnicity_+ ß_{10} * Native\ Language_+ ß_{11} * reading\ newspaper_+ ß_{12} * listening\ radio_+ ß_{13} * watching\ radio$$

In this study, all total 12 partial regression equations (4 for knowledge of HIV/AIDS, 4 for accepting attitude towards PLHIV and 4 for condom using behavior) and 3 general regression model for comprehensive knowledge, accepting attitude towards PLHIV and safe sexual behavior of HIV and AIDS to identify the most influential factors.

Table 3.1: Dependent (outcome) and independent (explanatory) variables used for logistic regression models, women aged 15-49, NDHS, 2011 and 2016

Dependent (outcomes) Variables	**Independent (explanatory) variables**
Partial Regression Model of Knowledge, Attitude and Behavior of Women	
Model #1: Demographic and Socio-economic Model	Demographic (age, marital status, place of residence), Socio-economic (education, occupation and wealth status),
Model #2: Geo-development Model	Geo-development (ecological zone, and provinces)
Model #3: Cultural Model	Cultural Variables (ethnicity and native language),
Model #4: Media Exposure Model	Media related variables such as reading newspaper, listening radio and watching television.
General Model: Knowledge,	Demographic (age, marital status, place of

Attitude and Behavior of Women	residence), socio-economic (education, occupation and wealth status), geo-development (ecological zone and provinces), cultural (ethnicity and native language), media related factors such as reading newspaper, listening radio and watching television.

The factual information related to governmental responses to HIV/AIDS are taken from the government analyzed and published documents for the quantitative analysis. The facts of the nationally representative studies among high risk group of population and general population are used for the identification of issues and challenges.

3.7.1.4. Interpretation of Coefficients

As interpretating the coefficients of the regression model, first or last category of the categorical variables is selected as reference category. It is supported to interpreted the effects of explanatory variables to outcome variables. It is assume that the probability of outcome variables is determined the explanatory variables. The positive and negative regression coefficient is interpreted differently. The big regression coefficients indicate the outcome occurrence is strong whereas small coefficients has the opposite effect.

3.7.2 Qualitative Data Analysis

As deeper understanding of KABP of HIV and AIDS, the qualitative data collection and analysis is used. The aim of the qualitative analysis to construct the meanings of HIV knowledge, reflection on the attitude towards PLHIV and practice of sexual behavior. It also contribute to supplement the quantitative analysis (Thomas, 2007). The qualitative data links with quantitative data and its interpretation (Robson, 1993). The trustworthiness of the quantitative findings also assessed from the qualitative analysis.

The in-depth interviews with policy and program level health personnel and women aged 15-49 were transcribed and developed in the word documents. The transcribed documents were coded as the per the themes. There are three themes regarding knowledge, attitude and behaviors of HIV/AIDS and utilization of HIV and AIDS services. The key quotations were selected to explained the themes and answering the

research questions. The thematic analysis of the key issues for the study is outlined and describe the KABP of HIV/AIDS.

As analysis of qualitative data in this study, six steps from familiarization to write up are applied. In the first step of the data analysis, the data were read carefully and forms were developed as per the themes. The next step is code the data in the different defined content. The phereses and sentences were developed as per the shorthand labels or codes. The third step is looked to check the codes those were created to identified key issues of analysis along with themes. . In the fourth step, the themes of analysis is reviewed. After reviewed the themes, it is defined and naming themes. Finally based on the analyzed data, the write up of the text in the dissertation was included.

Here, the method suggested by Robson (1993) is followed to analysis of the exploratory issues in the well-developed framework . The analysis is based on the set themes or areas as per the requirements to answer the research questions. It asked to potential respondents about the safe sexual behavior. The responses were analyzed in the line of socio-cultural constraints to utilize the services. Besides, these how social constructed knowledge contributed to accepting attitude towards PLHIV in the local context as well.

The decision of the qualitative finds were made as along with frequently asked about the same to potential respondents to verification thematic issues. The group discussion was made to verify the findings and write up the narrative analysis. It is highly labour intensive work as well as stressful. The respondents sometimes did not respondent the key issues due to the cultural constraints and left the issues. There may some chances of inaccuracy in the saying of the respondents it is because the status of the respondents is some times. In those case, researcher carefully analyzed those issues from the another cases as well.

3.8 Ethical Concerns

As a mixed research, the trustworthiness was maintained among supervisors, research participants, lay people, colleagues and professors. Researcher frequently submitted updates to supervisors about the research work. The researcher has been well informed to the potential respondents about the research study. As Elliot (Apentiik,

2005 & Parpart, 2006) argued that there the findings of the study should be approved from the study population after the completion of the study.

As a researcher, it is expected that the styles of presentation and dealing do not harm and do not defame the cultural values and norms of the studied population. Also, the self-esteem and dignity of every individual of the research areas, research participants and researched people were respected. No one was discriminated against on the basis of gender, caste, creeds and class during the research process. The local people, such as women, children, youths and elderly people were equally treated, greeted and respected in the course of research. No one was underestimated based on social, economic and educational status. As Apentiik and Parpart (2006) opine that nevertheless, learning (and using) basic greetings and courtesies are essential.

This research study maintained the confidential issues of researched communities. The fieldwork is conducted after the ethical approval (Reg. 40/2015) of Nepal Health Research Council (NHRC). Likewise, intellectual comments, suggestions and feedback of folks fully grasped. Moreover, all the literature cited are original and they are used according to the ethics of academic credentials.

3.9 Quality of Data

The DHS program to generate quantitative data is based on the demographic methods and techniques which is applicable globally. The DHS country specific surveys have been conducted in the standardized format uniformity. The framework of survey in terms of procedure and measurement of indicators provides the position of the countries' health and demographic processes. It is well understood that the DHS data is the high quality data to measure the major indicators of the health and related factors.

There are study steps to ensure the quality ensure. The monitoring approach during data collection is the important aspects of minimizing non-sampling error. There may be some misinterpretations and patterns of errors of fieldworkers. The month long training to enumerators and regular supervision of progression is assessed. The pilot test of instruments and capacity of field workers are also evaluated. Theoretical, methodological and empirical evidences in the training course content enhanced the capacity of the field workers which is the comprehensive package to ensure the quality of data.

It is also ensures to avoided the errors in the data such as missing values , response rate, editing policy, the reflection of the population under studied. Beside these, sampling weight, media calculations, tools of demography and calculating the wealth indexes are carefully handled including ensuring the accuracy. The statistical analysis including measures of standard deviation, dispersion, confidence interval, correlation and regression analysis can used to understand the quality of data in the study.

The overall quality of the data is found good for the analysis of indicator. However, the perception is measured from hypothetical which is not reliable for the to identify the reality of the issues. There is also some of the questions relating measurement. The comprehensive knowledge is measured only the those who knows the AIDS. The multiple sexual activities outside the marriage is lacking in the data sets. If the questions related multiple sexual partner included in the survey that will provided the accurate measurement of the changing social dynamics of the study settings.

The quality of qualitative data has been ensured in many ways. The findings of the surveys analysis is found to be less likely related to perceptions, feelings, emotions and lived experiences about the HIV/AIDS among women from the qualitative inquiry. It is noted that the issues of human side is often contradictory behaviors, beliefs, opinions and relationship with the individuals on the sensitive sexual issues (FHI, 2012)

The application of method, data collection procedures, in-depth interviews as well as analysis of data carefully have been done during the field study. Some of the interviews are repeatedly done. Ethical guidelines provided by NHRC were strictly followed including the issues of respect of induvial rights, beneficence, doing good, non-malfeasance, autonomy, not doing harm, justice and particular equity. Local language proficiency of interviewers and transcribes are the keys for the construction of meanings of the sensitive issues like sex and HIV/AIDS issues.

CHAPTER FOUR

CHARACTERISTICS OF STUDY POPULATION

This chapter presents the social, economic, cultural, geo-development and media related background profile of the study population. The background profile of study population are grouped in four broad categories; demographic and socio-economic geo-development, cross-cultural and media related background characteristics to analyze background profile of reproductive age women in Nepal.

4.1 Socio-demographic and Economic Characteristics

In this analysis, social, economic and demographic characteristics are presented. Table 4.1 is to create facts related to age, marital status, place of residence, education, occupation and wealth index of women. The information help to interpret the findings in chapters of bivariate and multivariate analysis of knowledge, attitude and behavior of HIV/AIDS.

Table 4.1 shows that 40 percent women were youths aged 15-24 in 2011 and were 38 percent in 2016. According to marital status, 21 percent of them were never married and 2 percent were widowed in both the years 2011 and 2016. The married women and divorced women were same in both surveys. The place of residence is quite different between the survey years, 2011-2016. The urbanization has increased significantly over the period.

According to education of women, the no educated women have decreased over the period of five years. Table 4.1 reveals that 40 percent women were not educated in 2011 while its proportion to decreased 33 percent in 2016. The women with SLC and higher education have is increasing order from 2011 to 2016. The national census, 2011 also indicates that literacy rate among women have increased (CBS, 2012). Educational background of the people is key factor for the KABP of HIV/AIDS in Nepal.

According to CBS (2014), the education system of Nepal based on the home and *Gurukulam* for long time in the history. The first formal school was established 1853 to provide education for elite family children. The access of formal education to mass population was available post 1951 when democracy established in Nepal. The

literacy rate was 14 in 1971 which is increased 67 percent in 2011. The government of Nepal set up a goal to access quality primary education for all till 2015. The goal is not achieved during that period.

Table 4.1: Percent distribution of women with selected social, economic and demographic characteristics, Nepal Demographic and Health Surveys, 2011 and 2016

Social, demographic and economic characteristics	DHS, 2011		DHS, 2016	
	%	N	%	N
Age				
< 25 Years	39.80	5050	37.70	4849
25 and above	60.20	7624	62.30	8013
Marital Status				
Never Married	21.40	2708	20.80	2669
Married	75.80	9608	76.80	9875
Divorce/Separated	0.80	100	0.80	105
Widowed	2.00	258	1.7	213
Place of Residence				
Urban	14.40	1819	62.80	8072
Rural	85.60	10855	37.20	4790
Education				
No education	39.80	5045	33.30	4281
Primary	17.40	2209	16.70	2150
Some Secondary	24.40	3088	25.60	3291
SLC and Above	18.40	2331	24.40	3140
Occupation				
Not Work	24.70	3127	33.10	4259
Professional/Managerial	3.30	414	3.80	487
Clerical	0.90	108	1.30	172
Agricultural	56.6	7172	46.70	6011
Service	9.10	1154	8.80	1137
Skilled Manual	3.40	428	3.80	491
Unskilled Manual	2.00	253	2.30	293
Others	0.10	18	0.10	12
Wealth Quintile				
Lowest	16.70	2120	16.90	2176
Second	18.90	2393	19.60	2525
Middle	20.50	2600	20.20	2595
Fourth	21.50	2722	21.50	2765
Highest	22.40	2839	21.80	2801
Total	**100.00**	**12674**	**100.00**	**12862**

Source: NDHS data files, 2011 and 2016

The agricultural occupations have declined over the five years period (Table 4.1). However, the proportion of not-working women has increased. The other categories of occupation of women are same in 2011 and 2016. According to wealth quintile of women, 17 percent women are in the lowest strata of economic well-being in both the

periods. Similarly, 22 percent women are also richest category of wealth index over the past five years.

Nepal is a poor country and its position of HDI has been declining due to the lack of better job opportunities and income generating employments. According to Living Standard Survey report 2010/11, 25 percent of population is in below poverty line. Nepal is an agrarian society, however, the farm income is declining. The man and median households income of the country were 202, 374 and 127,281 respectively whereas mean per capita income were 41,659. There was difference in non-farm and farm income among the households. Non-farm incomes was high than the farm income. About 17 percent of non-farm income is contributed by the remittances. Self-employment was about 38 percent whereas 26 percent were wage employment. The poorest 10 percent population having only 6,222 nominal per capita income whereas 10 percent richest population having 164, 401 per capita income which were twenty six fold more. The facts of CBS also indicates that 80 percent of the bottom people earns 44 percent of the total income whereas 20 percent richest people earn 56 percent of the total income (CBS, 2012).

4.2 Geo-Development Characteristics

In this analysis, ecological zone, development region and 7 provinces are included to find out the existing characteristics of geo-development. For this purpose, women are categorized on the basis of their living standards that include development regions and provinces.

Of the total women, more than 50 percent (53.50% in 2011 and 50.80% in 2016) are representing from the Terai region (Table 4.2). It is found that the population of women have slightly increased in hilly region over the period of past five years (40% in 2011 and 43% in 2016). The facts of the surveys shows that reverse migration from the Terai to Hill is in ongoing process too.

The Far-Western Development Region and *Sudur Pacchim Pradesh* are same administrative and political boundary of Nepal. Far-Western region having small number of women's representation in the sample than that of the other regions (Table 4.2). According to federal state, very small size of women are represented in both of

the surveys (4% in 2011 and 6% in 2016) while, highest percent of women (22% in 2011) are representing province#1 and province #3 (21% in 2016) in comparison to other federal states.

Table 4.2: Percent distribution of women with selected geo-development characteristics, Nepal Demographic and Health Survey, 2011 and 2016

Geo-development Characteristics	DHS, 2011		DHS, 2016	
	%	N	%	N
Ecological Zone				
Mountain	6.40	805	6.00	775
Hill	40.20	5,090	43.20	5,556
Terai	53.50	6,779	50.80	6,531
Development Region				
EDR	24.40	3,057	22.50	2,900
CDR	33.40	4,236	35.50	4,569
WDR	21.00	2,660	20.20	2,597
MWDR	11.70	1,478	12.80	1,650
FWDR	9.80	1,242	8.90	1,145
Provinces				
Province #1	22.20	2,811	16.90	2,173
Madhesh	16.70	2,117	19.90	2,563
Bagmati	18.70	2,365	21.20	2,732
Gandaki	9.10	1,147	9.70	1,249
Lumbini	19.20	2,436	17.70	2,274
Karnali	4.40	555	5.60	724
Sudur Paschim	9.80	1,242	8.90	1,145
Total	**100.00**	**12,674**	**100.00**	**12,862**

Source: NDHS data files, 2011and 2016

The area of Nepal is 1,47,181 square kilometers. Nepal's altitude ranges from about 200 meters in the south to 8,848 meters at the peak of Mt. Everest in the North. According to CBS, 2012, Nepal having three topographical and ecological region: 1) the Mountain, which is sparsely populated 6.7 percent of total population and difficult to farm (5% of the total cultivated land), 2) the Mid-Hills (the middle area of country), 43 percent of total population live there and low agriculture yields on traced farms and 3) the Terai (the third lower plain bordering with India) where population density is high (50.3% people reside) and agricultural production is high (65% of cultivable land). The geographical constraints is the reality of Nepal to transport and access to services along with delivery of agricultural production. The steep terrain also exacerbates deforestation and erosion.

The current constitution of Nepal has declared the government system is federal government system. Population, geography and identity are the major bases of federal state in Nepal. Among the seven provinces, Karnali is small in population in comparison to other states. Province *Bagmati* has the largest population (21%) compared to 5.8 percent in province *Karnali* (Ministry of Law, Justice, Constitutional Assembly and Parliamentary Affairs, 2015).

4.3 Cultural Characteristics

Religion, ethnicity and native languages are the features of cultural aspects of the people of Nepal. In the Third World countries, ethnic culture cannot be discussed separately from religious beliefs and practices (Regnerus and Salinas, 2007). Religion and ethnicity are considered as cultural factors. Similarly, Byram (2008) conceptualize the culture as shared beliefs, values, and behavior of a social group that is family is social group at micro level whereas nation is at macro level. Similarly, Kramsch (2002) stated that language is cultural construct which is established the relations and culture among the peoples. Beside this, language is not only the means of communication but also the tools of shaping the symbolic system of cultures, power, realities, values and identities by discourses. It means that native language of the people is also known as culture. The aforementioned concept of religion, ethnicity and native language are the cultural factors of Nepali people.

Table 4.3 shows Hinduism as the pre-dominant religion among women in Nepal. Similarly, people from the hills such as Hill Brahmin/Chhetri and Hill Janajati have been shared more than 50 percent of women in the NDHS, 2011 and 2016. Majority of women are the native speaker of Nepali. The speakers of Maithili and Bhojpuri have increased over the last five years.

Nepal is multicultural and secular democratic country. Caste/ethnicity were introduced to enumerate in the census 1991 in the first time of census history. There were 60 caste/ethnicity were identified in the census, 1991 whereas 125 in the 2011 census. During the period of 1991 to 2011, the government of Nepal established the institutional set up of the cate/ethnicity such as National Dalit Commission and National Federation of Indigenous Nationalities to promote the caste ethnic issues in Nepal. There are sub-groups of indigenous nationality. In a ethnic group such as Rai

are in twelve sub-groups. Those sub-groups were separately enumerated in the census, 2011. Some of the caste/ethnic group in Nepal are very marginal. The issues of identity are major socio-political agendas of those marginal groups.

Table 4.3: Percent distribution of women with selected cultural characteristics, Nepal Demographic and Health Survey, 2011 and 2016

	DHS, 2011		DHS, 2016	
Cultural characteristics	**%**	**N**	**%**	**N**
Religion				
Hindu	84.20	10,672	85.80	11,040
Buddhist	8.80	1,112	5.10	652
Muslim	3.70	470	5.00	644
Kirat	1.50	195	1.40	177
Christian	1.70	220	2.70	346
Others	0.00	5	0.00	3
Caste/Ethnicity				
Hill Brahmin	14.20	1.805	11.80	1,512
Hill Chhetri	19.20	2.436	18.20	2,343
Terai Brahmin/Chhetri	1.20	156	1.70	217
Other Terai Caste	7.90	1,003	14.80	1,908
Hill Dalit	9.60	1,214	8.10	1,042
Terai Dalit	4.40	559	4.30	554
Newar	4.30	541	5.00	639
Hill Janajati	24.90	3,154	20.90	2,694
Terai Janajati	10.40	1,313	9.80	1,266
Muslim	3.70	468	5.00	643
Others	0.20	25	0.30	43
Language				
Nepali	51.30	6,505	48.80	6,280
Bhojpuri	5.60	706	8.90	1,142
Other	32.80	4,154	27.50	3,532
Maithali	10.30	1,307	14.80	1,908
Total	**100.00**	**12,674**	**100.00**	**12,862**

Source: NDHS data files, 2011 and 2016

Nepal is multi-religious country. Hindu is the predominant religion constitutes 81 percent of total population. Buddhist comprises the 9 percent of the total population whereas 4 percent of Islam. There is 1 percent of Christian population and less than one percent were other religions in Nepal (CBS, 2012). The census, 2011 also revealed that almost 125 linguistic groups were found in Nepal. It is noted that 19 native language groups were spoken by 96 percent of country's population whereas 104 languages were spoken by 4 percent of people. The majority of the population (59%) reported monolingual and 41 percent speak at least one language.

Caste/ethnicity is a dominant discourse in political and socio-cultural dimensions. The concept of purity and pollution, which is the core of the caste structure is proved to be the integral part of cultural schemas that underlies cultural models. One's caste/ethnicity has traditionally determined access to education, employment and participation that contribute to expanding the HIV and AIDS in Nepal. AIDS was viewed by some as the problem of low caste and low class (Beine, 2003).

4.4 Media Exposure of Women

Media exposure is a vital means of awareness on health issues in all societies. It is well known that mass awareness on epidemic is only possible when media access to people is easily available. The demographic and health survey collected information about practices of newspaper reading, listening radio and watching television among the women.

Table 4.4: Percent distribution of respondents with media exposure, Nepal Demographic and Heath surveys, 2011 and 2016

	DHS, 2011		DHS, 2016	
Media Exposure	**%**	**N**	**%**	**N**
Reading Newspaper or Magazine				
Not at All	65.10	8,250	69.60	8,950
Less than once a Week	22.30	2,827	21.70	2,793
At least once a week	12.60	1,597	8.70	1,119
Listening to radio				
Not at All	18.80	2,379	43.20	5,558
Less than once a Week	37.00	4,694	29.10	3,738
At least once a week	44.20	5,601	27.70	3,566
Watching Television				
Not at All	25.50	3,230	28.80	3,700
Less than once a Week	27.10	3,434	20.90	2,692
At least once a week	47.40	6,009	50.30	6,470
Total	**100.00**	**12,674**	**100.00**	**12,862**

Source: NDHS data files, 2011 and 2016

The table 4.1 reveled that about two third of women never read newspaper and magazine which increased from 2011 to 2016. This indicates that there popularity of social media and its utilization in the recent years visible. Regarding radio listening behavior of women, significant number (44%) of women have listened radio at least once a week in 2011 whereas it was only 28 percent in 2016. The trend of women's listening radio is decreasing over the past 5 years, in spite of the increase in the numbers of local radio stations.

Table 4.4 also shows that television watching behavior is higher among women than that of reading newspaper and listening radio. Almost fifty percent (47.40% in 2011 and 50% in 2016) of women have watching TV at least once a week, whereas 27 percent watching television less than once a week and 26 percent never watching television at all. It is also found that out of 31 total potential research participants, 20 women used online media for information.

The government of Nepal has straightforward strategy to utilize the existing medias on mass communication and campaign to aware people about the epidemic. There are different channels to communicate about the social health security along with HIV and AIDS in Nepal. Social change through mass communication and health campaign are the essential health communication strategy. The IEC materials are produced and advertise the messages through media for BCI. As raising the awareness to people, media campaign contributed to major roles to aware people about communicable diseases and sexually infected infections.

The development of mass media in Nepal since 1990 after the restoration of multi-party democracy. The positive effects of the mass media to express the views of people and their agendas. The constitution of Nepal was also guarantee the freedom of expression. The private medias were also rapidly growth in the country which is contribution of political change of 1990s. The mainstream print and visual media's role in awareness building is crucial in the Nepal's overall change.

Women do not have a long history of participation in the Nepalese journalism. Women's participation in Nepalese media can be observed only publication women magazine "Mahila" in 2008 B.S. in 2008 B.S. Since that time the women's movement rise in the different time of the history as the media contribution. Since the 2013, Nepal enter into online publication which provide the larger space to all sections of the society in the media. The progress of mass media in Nepal seen visibly in development process. The development of technology also contribute to Nepali people to access and reach to knowledge of the different dynamics of the society and different epidemics in the country.

4.5 Discussion and Summary

It is evident that Nepali society witness as modernization process. The theme of every democratic movement is to promote individualism as that of concept of international democratic practices. The modernization process and individualistic ideas reject the traditional norms and values that are in practice in the third world countries like Nepal. The ignorance of social dimension of any problem further created another one.

Social, economic and demographic context of women, out of the total almost 40 percent are young women (age 15-24 years old). Similarly, women education increased over the five years. About 33 percent of women are illiterate in 2016, which is against the 40 percent in 2011. Women's economic characteristics such as not working women have increased between 2011 and 2016. In case of wealth index, more than one third of women are in poorer and poorest category. The overall socio-economic condition of women till date is still low in Nepal.

As per the geo-development characteristics, women from the Terai have decreased and increased in the Hill region. In the federal structure of Nepal provinces #1, Madhesh, Bagmati and Lumbini have large population compared to state Gandaki, Karnali and Sudur Paschim. This new dimension of analysis is introduced since the declaration of new constitution in 2015.

In the context of cultural characteristics of women in Nepal, women from Buddhist religion have been decreased significantly over past five years. Hinduism is the predominant religion in Nepal. Similarly, Nepali is the mother tongue of 50 percent of women. However, it is in decline from 2011 to 2016.

Media exposure is one of the influential factors for the awareness building in any social phenomenon. The media exposure including print and visual such as magazine, radio and television are major means of communication mass population. The uses of aforementioned media by women have declined over the past five years (2011-2016 A.D.). This means that the social media are becoming popular.

Consideration of the facts and life style of people in a different context and situation has contributed to handle the situation effectively. In context of HIV/AIDS in Nepal, political system and instability contributed to the spread of diseases. The growing

labor migration, unemployment, skillful education and economy of country are the factors for HIV/AIDS in Nepal. All dimension of HIV prevention in Nepal are still problematic due to socio-political aspect of the polity. The overall prevention strategies from HIV among women in Nepal is still a challenges.

In a changing society i.e. moving towards modernization, individual factors for the prevention initiatives are crucial. In this situation, individuals like demographic, socio-economic, cultural, and media exposure shape for knowledge and behavior of low risk as well as high risk population. The research participants of the in-depth interviews are also representing from different context such as age, marital status, education, caste/ethnicity, religion, media exposure and occupation. The aforementioned individual and broad base factors affect the women's KABP of HIV and AIDS in Nepal. The upcoming chapters of analysis are based on these individuals, along with the socially constructed knowledge those affect board prevention model from the epidemic among women in Nepal.

CHAPTER FIVE
FACTORS AFFECTING KNOWLEDGE OF HIV/AIDS

This chapter analyzes the social, economic, demographic, cross-cultural, geo-development and media related factors affecting women's knowledge on HIV and AIDS. The knowledge of HIV and AIDS is examined in the form of heard of AIDS, HIV prevention method and comprehensive knowledge of HIV transmission. Besides these, qualitative data are supplement of quantitative data on HIV and AIDS knowledge related factors affecting the epidemic knowledge.

There are two levels of quantitative analysis in this chapter. Bi-variate analysis assesses the association between HIV/AIDS related knowledge and social factors and multivariate analysis identifies the most influential individual factors affecting the comprehensive knowledge of HIV transmission. The qualitative data supports to assessing the in-depth knowledge of HIV/AIDS regarding socio-cultural construction and its meanings of HIV/AIDS at the societal level. Finally, the chapter summarizes key factors of knowledge.

5.1 AIDS Knowledge

In NDHS, 2011 and 2016, women were asked about heard of AIDS. The response AIDS knowledge is analyzed with selected individual factors such as social, economic, cultural geo-development and media exposure context of women. The analyzed data sets of NDHS, 2011 and 2016 revealed that the AIDS knowledge is decreased over the five years period among the women in Nepal. This indicates that governmental efforts to mass awareness campaign to HIV/AIDS was seen less effective.

5.1.1 Knowledge by Demographic and Socio-economic Factors

The association between the AIDS knowledge and some selected socio-economic, demographic, cultural, geo-development and media exposure factors are analyzed on the basis of NDHS, 2011 and 2016 surveys among women in Nepal. The statistical significance of association is found between AIDS and other selected variables are found P value.

Table 5.1: Percentage distribution of women with AIDS knowledge by selected socio-economic and demographic factors, Nepal Demographic and Health Surveys, 2011 and 2016

Socio-economic and demographic characteristics	DHS, 2011		DHS, 2016	
	%	N	%	N
Age				
< 25 Years	88.97***	5,050	83.60***	4,849
25 and above	84.61***	7,624	78.60***	8,013
Marital Status				
Never Married	91.70***	2,708	89.90***	2,669
Currently Married	85.00***	9,608	78.00***	9,876
Divorce/Separated	90.90***	100	79.00**	105
Widowed	78.30***	258	75.10***	213
Place of Residence				
Urban	94.70***	1,819	85.30***	8,072
Rural	85.00***	10,855	72.40***	4,790
Educational Status				
No Education	71.20***	5,045	59.80***	4,281
Primary	89.80***	2,209	74.60***	2,150
Some Secondary	98.30***	3,088	93.20***	3,291
SLC and above	99.90***	2,331	99.20***	3,140
Occupational Status				
Not Working	84.30***	3,127	75.70***	4,259
Professional/Managerial	100.00***	414	99.20***	487
Clerical	99.10***	108	96.50***	172
Sales/Service	94.70***	115	93.10***	1,137
Skilled Manual	96.00***	428	88.00***	491
Unskilled Manual	86.60***	253	76.80***	293
Agriculture	84.30***	7,172	79.00***	6,011
Others	88.90***	18	91.70***	12
Wealth Quintile				
Poorest	77.90***	2,120	83.60***	2,176
Poorer	79.10***	2,393	76.50***	2,525
Middle	82.60***	2,600	68.40***	2,595
Richer	91.60***	2,722	79.10***	2,765
Richest	97.10***	2,839	94.00***	2,801
Total	**86.40**	**12,674**	**80.50**	**12,862**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

The cross tabulation analysis and chi-square connection between AIDS knowledge and women's education revealed significant associations. It is found that SLC and above education of women is most influential factor for the AIDS knowledge. The occupation and wealth index of women also contributed to AIDS knowledge.

Most of the studies indicate that education is the most crucial factor for AIDS knowledge (Jha & Madison, 2009; Shakya, 2012; Karki, 2014; Awasthi, 2015). With the increasing educational attainments, the knowledge of AIDS increases too. The findings of studies also indicate that SLC and above educated respondents have almost all the universal knowledge of AIDS. The studies in US and Europe was explained the significance of social, economic and demographic context of people explained the knowledge AIDS, discriminatory attitude and sexual behavior (Peruga & Celentano, 1993). The studies and US explained that higher level of educated people and young people are more likely to have ADIS knowledge than less educated and adult people. The socio-economic and demographic differentials of people also was found to differentials in knowledge of AIDS.

The studies by different scholars have identified education, occupation, wealth index, place of residence and media related factors to affect the knowledge of HIV/AIDS among Nepalese youth (Shakya, 2012), and family income, marital status, age have significant contribution on knowledge of HIV/AIDS. Similarly, lack of economic opportunities, youth migration to India, poor education and low-level awareness campaign activities were responsible to women's risk of HIV and AIDS in Far-Western areas of Nepal (Awasthi et al., 2015). It is argued that social, economic and demographic factors of women contributed to knowledge of AIDS.

5.1.2 Knowledge on AIDS by Geo-Development Factors

Nepal has diverse geography. People are residing with diverse ecological regions including different socio-cultural settings. This natural physical ecology and administrative regions and federal state characteristics of women impact the AIDS knowledge. The association between geo-development characteristics of women and AIDS knowledge is found to be statistically significant.

Table 5.2 shows that physical settings of women, development regions and federal state characteristics and AIDS knowledge are significantly associated ($p<0.01$) in most of geo-development factors. Women from the Terai have low-level AIDS knowledge than women from the Mountainous and Hilly ecological zone. Similarly, the women of province#2 have lower level of knowledge in comparison to the women from other provinces of Nepal.

Table 5.2: Percent distribution of AIDS knowledge and selected geo-development characteristics, Nepal Demographic and Health Surveys, 2011 and 2016

Geo-development characteristics	DHS, 2011 %	N	DHS, 2016 %	N
Ecological Zone				
Mountain	86.00***	805	85.80***	775
Hill	93.90***	5,090	94.40***	5,556
Terai	80.70***	6,779	68.00***	6,531
Development Region				
EDR	91.50***	3,057	74.90***	2,900
CDR	78.70***	4,236	73.90***	4,569
WDR	90.20***	2,660	86.70***	2,597
MWDR	84.90***	1,478	91.80***	1,650
FWDR	93.20***	1,242	90.50***	1,145
Provinces				
Province#1	93.80***	2,811	85.90***	2,173
Madhesh	58.50***	2,117	42.80***	2,563
Bagmati	95.40***	2,365	94.50***	2,732
Gandaki	92.90***	1,147	95.20***	1,249
Lumbini	86.90***	2,436	84.10***	2,274
Karnali	84.90***	555	91.40***	724
Sudur Pachim	93.20***	1,242	90.50***	1,145
Total	**86.40**	**12,674**	**80.50**	**12,862**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* $\square 2$ association

As analysis of AIDS knowledge (Beine, 2003) stated about the moral geography; the connection between geography and idea of illness, the villagers of *Saano Dumre* also practice a kind of moral geography in which they attribute less morality to lower regions than to their own and higher places.

The analysis of both sets of NDHS, 2011 and 2016 data indicate that the knowledge of AIDS is determined by ecological regions, development region and federal structure of the Nepal. The previous studies also indicate that ecological and development regions affect women's AIDS knowledge (MoHP et al., 2012; Jha & Madison, 2009; Mahat & Eller, 2009; MoHP et al., 2017).

Federal state characteristic of women has contributed to the knowledge of AIDS. Province#2 is an identity based political unit among other federal states in Nepal. Madheshi identity such as plain land, Maithali and Bhojpuri native language, caste/ethnic social structure are the major characteristics of women. Women from

province#2 have low level of AIDS knowledge compared to that of other federal states (MoHP et al., 2017).

5.1.3 Knowledge on AIDS by Cultural Factors

Nepal is multi-ethnic, multilingual and multi-religious country. It is assumed that cultural traditions of specific groups provide the early schooling of learning. At the household level, custom of openly discussing sex and sexually transmitted infections are not in practice. Cross-cultural determinants such as caste/ethnicity, religion and native language of women are considered cultural individual factors in the analysis.

Table 5.3: Percent distribution of women with knowledge of AIDS by selected cultural factors, Nepal Demographic and Health Surveys 2011 and 2016

Cultural Factors	DHS, 2011		DHS, 2016	
	%	N	%	N
Religion				
Hindu	86.76***	10,672	81.40***	11.040
Bouddhist	92.80***	1,112	94.00***	652
Kirat	96.92***	195	92.10***	177
Christian	97.27***	220	91.60***	346
Muslim	52.12	470	41.60	644
Caste/ethnicity				
Hill Brahmin	97.80***	1,805	97.40***	1,512
Hill Chhetri	93.60***	2,436	93.20***	2,343
Terai Brahmin/Chhetri	87.80***	156	77.40***	217
Other Terai Caste	58.40***	1,003	46.10***	1,908
Hill Dalit	91.80***	1,214	92.80***	1,042
Newar	98.20***	541	95.90***	639
Hill Janajati	93.50***	3,154	93.10***	2,694
Terai Janajati	82.60***	1,313	82.70***	1,266
Muslim	51.70***	468	40.90***	643
Others	80.00***	25	90.70***	43
Terai Dalit	41.70***	559	37.50***	554
Native Language				
Nepali	95.10***	6,505	94.60***	6,280
Bhojpuri	54.46***	706	42.40***	1,142
Others	89.21***	4,154	88.10***	3,532
Maithali	50.80***	1,307	42.50***	1,908
Total	**86.40**	**12,674**	**80.50**	**12,862**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

Women from Muslim minority group have low level of AIDS knowledge compared to that of other religious groups in both the NDHS surveys (MoHP et al., 2012; MoHP et

al., 2017). Similarly, Terai Dalits are less likely to have knowledge of AIDS than other caste/ethnic group. The findings of analysis also showed that Maithali and Bhojpuri mother tongue have lower levels of knowledge of AIDS than women with Nepali as native language. The $\chi 2$ association between the AIDS knowledge and cultural factors statistically significant ($p<0.01$).

Very few studies are there in Nepal on AIDS knowledge and individual cultural factors. Among them, cultural factors like ethnicity and religion have affected AIDS knowledge of young people in Nepal (Uprety et al., 2009; Shakya, 2012). Similarly Beine (2003) has identified that HIV/AIDS as a *saruwa*/communicable diseases. There seems to be conflict between the traditional category of *saruwa/* communicable and knowledge about how AIDS is spread. The study shows that almost all research participants (87%) understand AIDS as *saruwa*/communicable disease while remaining other participants have an accurate understanding of AIDS.

Culture is defined as a combination of material items, behaviors, and attitude defining a specific way of life (Wilson & Miller, 2003). Ethnicity and religion are two of the most important aspects of culture under consideration in HIV research. Ethnic cultural is important dimension for the ASIA and Africa to determine the KABB of HIV and AIDS. The religious affiliation of individual have affected the construction and de-construction of AIDS knowledge (Thomas, 2007). Poudel (2008) has stated that language of people is most crucial means to knowledge acquiring of AIDS in Nepal. On the basis of aforementioned empirical evidences, it is argued that ethnicity, religion and language of women affect knowledge of AIDS.

5.1.4 Knowledge on AIDS by Media Exposure Factor

It is expected that persons those expose the media having wider level of AIDS knowledge. In this analysis, reading newspaper, listening radio and watching television of women and AIDS knowledge is assessed. The two data sets of NDHS, 2011 and 2016 revealed that there is statistically significant association ($p<0.01$).

Table 5.4 reveled that women who used to read newspaper, listen radio and watching television frequently have higher level of AIDS knowledge than those not reading, listening and watching at all. The mean differences assess that the mass media exposure of women have significant contribution to AIDS knowledge ($p<0.01$).

Table 5.4: Percentage distribution of women who are aware about AIDS and the variables of their media exposure 2011 and 2016 Nepal Demographic and Health Surveys

Media exposure	DHS, 2011		DHS, 2016	
	%	N	%	N
Reading Newspaper				
Not at All	79.40***	8,250	72.40***	8,950
Less than once a week	99.10***	2,827	98.90***	2,793
At least once a week	99.70***	1,597	99.90***	1,119
Listening radio				
Not at All	69.70***	2,379	65.90***	5,558
Less than once a week	85.70***	4,694	90.20***	3,738
At least once a week	93.94***	5,601	93.00***	3,566
Frequency of watching Television				
Not at All	70.50***	3,230	66.60***	3,700
Less than once a week	85.90***	3,434	82.70***	2,692
At least once a week	95.10***	6,009	87.40***	6,470
Total	**86.40**	**12,674**	**80.50**	**12,862**

Source: NDHS Data Files, 2011 and 2016
*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

The studies from post 2006 have contributed more comprehensively than the post 1990s to 2006. Findings of the study by Sharma (2008) indicates that knowledge of AIDS is determined by the access and use of radio and television of people as source of information. The study identified that before intervention of AIDS awareness campaign and after intervention, there were significant differences in the mean knowledge of the people. It was found that there were 1.3 percent mean knowledge before intervention whereas after intervention there were increased 2.4 percent in the mean knowledge.

The NDHS, 2006, 2011 and 2016 provide the national facts of youth status on HIV/AIDS knowledge. According to analysis, females not listening radio frequently less likely to have knowledge of HIV and AIDS related issues. Similarly, It is also identified that media exposure especially television were the predictable factors for the HIV/AIDS related knowledge among youth in Nepal (Shakya, 2012). It is argued that media exposure of women is major means of acquiring AIDS knowledge.

5.1.5 Socially Constructed Knowledge of AIDS

After analysis individual factors of AIDS knowledge, this sub-section incorporates qualitative findings of AIDS knowledge in general socially constructed knowledge in emphasized The socially constructed knowledge HIV and AIDS emerges from narrative analysis of women, their understanding of HIV/AIDS as fatal, infectious, communicable and sexually transmitted disease. Significant women (20 out of 31 women) irrespective of their different backgrounds such as media exposure said that "Once if somebody gets infected, he/she can't get cured."

It was also discovered that only 5 out of 31 women who were educated, young, from hill castes/ethnic groups, and had participated in development activities correctly reported HIV and AIDS as infectious and transmitted from one person to another through infected person, malnutrition, use of infected blood, use of unsterilized injections, and unsafe sexual practices. Life of PLHIVs is prolonged if they are in care, support and take medicine. It indicates that there was a difference among the women about the bio-medical knowledge and social construction of HIV/AIDS. A married 25 years old young woman living in rural area said:

> *AIDS is communicable disease. It happens because of uncleanness of sexual organs, use of unsterilized injections and unsafe sexual practices. The infections are generally found in women than in men. The HIV/AIDS are high among the young women involved in sexual activity such as CHADA KETI HARU (girls those are undisciplined in the society)*

As understanding to HIV and AIDS is related to sex. The infection is caused by unsafe sexual practices, which is socially unacceptable. It is the disease of certain sexually active and socially unacceptable group of population like young in illegitimate sexual practices i.e. pre-marital and extramarital sexual activity and socially deviant modern boys and girls. The findings indicate that age, marital status and place of residence are the factors related with the acquiring knowledge and constructing meaning of AIDS at local level. The aforementioned issues also indicate that AIDS is also social construction.

Narratives of qualitative data identify that Madheshi and Muslim were less aware about HIV/AIDS in Ramnagar of Nawalparasi. They have misconception that HIV/AIDS is similar to other diseases like TB and cancer. The close socio-cultural interaction affects the meaning construction. A Muslim woman reacted that "I don't know STIs but have heard about AIDS".

The in-depth analysis also assesses that women's informal interaction about health in their group meetings and out of group is also found in the community level. Sometimes they discuss informally about the AIDS before and after group meeting. Socially constructed meaning and understanding of AIDS are found regardless of women's affiliation to group. They think that HIV/AIDS are the result of the bad activities by the young boys/girls and less moral character of the girls.

The narratives the comes from the women indicates that most of women (25 out of 31women) have heard of AIDS from the TV and radio. Beside these, women also know about AIDS from the peer groups and friends. Women heard of STIs from the popular media however, the meaning of HIV/AIDS is constructed locally. Women from different socio-cultural groups stated that AIDS is caused by the unsafe sexual behaviors. According to narratives of in-depth interview, the infections are common among the lower class, young and lower caste girls due to their valueless thought on social norms. The role of media is to contribute to acquisition of knowledge of AIDS but peer, friends and relatives were constructing the meaning of AIDS.

5.2 Knowledge of HIV Prevention Methods

As analyzing the factors associated factors of HIV prevention method, ABC is the best known formula for HIV prevention. In this part of analysis, A(Abstinence from sex), B (sexual relationship with uninfected faithful partner) and C (consistent condom use during sex) are composite index for the prevention method.

5.2.1 Socio-economic and Demographic factors of HIV Prevention

Table 5.5 revealed that individual demographic and socio-economic factors are associated with knowledge of HIV prevention methods which are statistically significant ($p<0.01$).

Table 5.5 showed that education is the most influential factor for the HIV prevention knowledge of among women among women in Nepal. Out of total, 93 percent of SLC and above educated women had HIV prevention knowledge in 2011 whereas 91 percent in 2016. Similarly, women from professional/managerial occupation and richest wealth index were also more likely to know HIV prevention method than other category of women in both surveys (NDHS, 2011 and NDHS, 2016).

Table 5.5: Percent distribution of women with HIV prevention knowledge and selected demographic and socioeconomic variables in both surveys

Demographic and socio-economic variables	DHS,2011		DHS,2016	
	%	N	%	N
Age				
< 25 Years	76.60***	5,050	72.80***	4,849
25 years and above	67.41***	7,624	67.90***	8,013
Marital Status				
Never Married	80.83***	2,708	78.40***	2,669
Married	68.73***	9,608	67.70***	9,875
Divorce/Separated	69.00***	100	56.20***	105
Widowed	55.81***	258	61.70***	213
Place of Residence				
Urban	81.51***	1,819	73.90***	8,072
Rural	69.32***	10,855	62.80***	4,790
Education				
No Education	50.11***	5,045	48.40***	4,281
Primary	73.52***	2,209	61.70***	2,150
Some Secondary	87.20***	3,088	82.50***	3,291
SLC and above	92.61***	2,331	90.90***	3,140
Occupation				
Not Working	70.57***	3,127	65.00***	4,259
Professional/Managerial	92.27***	414	81.80***	487
Clerical	89.81***	108	82.60***	172
Sales/Service	81.29***	1,154	84.00***	1,137
Skilled Manual	82.66***	428	77.10***	491
Unskilled Manual	65.07***	253	59.00***	293
Agriculture	67.59***	7,172	68.10***	6,011
Others	83.33***	18	75.00***	12
Wealth Quintile				
Poorest	55.61***	2,120	69.70***	2,176
Poorer	62.70***	2,393	66.70***	2,525
Middle	67.23***	2,600	58.10***	2,595
Richer	77.91***	2,722	68.00***	2,765
Richest	86.64***	2,839	84.00***	2,801
Total	**71.10**	**12,674**	**69.70**	**12,862**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

Knowledge about HIV prevention methods was evaluated in Nepalese periodic surveys such as the NDHS (Nepal Demographic and Health Surveys). Nepal Multiple Indicator Cluster Surveys (NMICS) and other cross-sectional surveys. The findings of NDHS 2006 to 2016 on knowledge of HIV prevention have increased (55% in 2006 and 70% in 2016). However, the prevention method is consistent in trend over the past five years or even has declined.

A comprehensive study on the HIV prevention method, the series of surveys outlines the consistent facts. However, It is also found that inconsistencies in the reported age of the data were some problematic to reach in conclusions. The knowledge of HIV prevention were slightly declined in some period of the surveys. The intervention strategies on mass campaign and promotion of education is still ineffective for the promotive activities of HIV and AIDS among women. The prevention and promotive measures is required especially women in the whole life cycle is crucial (Nketiah-Amponsah & Afful-Mensah, 2013).

The national HIV strategic plan (2011-2016) set up targets to fight against stigma and discrimination and mass communication about HIV prevention to women population. However, the progress still very low. The latest strategic plan (2016-2021) also focused as mass level and some specific programmes are in priority to promote knowledge of HIV prevention and transmission in the ambitious strategy 90-90-90. Due to the various reason that also be questions in effective implementation. The access to services and minimum level of information to women is key for the strategic approach to HIV prevention (NCASC, 2011).

5.2.2 Geo-development and HIV Prevention

The geo-political boundary and ecological region factor can be contributed to knowledge acquisition on HIV prevention method. The diversity of physical situation and people living in different ecology having also different socio-cultural background. The eco-regions, different administrative regions and federal state structure played crucial role for the knowledge of HIV prevention method. The analysis of Nepal demographic and health surveys (NDHS), 2011 and 2016 showed that women from Terai region, central development and Madhesh province have low level of HIV prevention knowledge. The findings also revealed that HIV prevention knowledge

and geo-development characteristics of women is found statistically significant at 1 percent and five percent level of chi-square association.

Table 5.6: Percent distribution of women with HIV prevention knowledge and selected geo-development characteristics, Nepal Demographic and Health Surveys, 2011 and 2016

Geo-development Factors	DHS, 2011		DHS, 2016	
	%	N	%	N
Ecological Regions				
Mountain	68.80**	805	75.50***	775
Hill	77.30**	5,090	82.00***	5,556
Terai	66.70**	6,779	58.60***	6,531
Development Regions				
EDR	73.71***	3,057	63.90***	2,900
CDR	62.64***	4,236	63.50***	4,569
WDR	76.91***	2,660	76.70***	2,597
FWDR	72.50***	1,478	78.90***	1,650
MWDR	79.30***	1,242	80.80***	1,145
Provinces				
Province#1	77.40***	2,811	73..00***	2,173
Madhesh	45.10***	2,117	35.70***	2,563
Bagmati	77.90***	2,365	82.5***	2,732
Gandaki	82.50***	1,147	83.00***	1,249
Lumbini	75.70***	2,436	74.80***	2,274
Karnali	64.50***	555	76.80***	724
Sudur Pachim	79.30***	1,242	80.30***	1,145
Total	**71.10**	**12,674**	**69.70**	**12,862**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

The physical diversity, development regions and provincial characteristics of women can be HIV prevention knowledge towards women. The NDHS, 2011 and 2006 also indicate women from Terai were having less knowledge of HIV prevention. The cultural constraints like language, less exposure to outside households and low level of women's positions are the factors for the lower level knowledge of HIV prevention (Amtya, 2005). The eco-development factors have been contributed to HIV prevention knowledge of HIV and AIDS in Nepal.

5.2.3 Cultural Factor and HIV Prevention Knowledge

Nepal is a country of diverse culture having more than nine religions, 125 caste/ethnic and linguistic group of people and diverse cultural ecology. The native language of people, caste/ethnicity and religion are the cultural factors to understand the

individual knowledge of HIV prevention methods.. Table 5.7 reveled that the differences on HIV prevention knowledge and cultural characteristics of women is found significant chi-square association at 1 percent level.

Table 5.7: Percent distribution of women with HIV prevention method and cultural factors, Nepal Demographic and Health Surveys, 2011 and 2016

Cultural Factors	DHS, 2011		DHS, 2016	
	%	N	%	N
Religion				
Hindu	71.83***	10,672	70.60***	11,040
Boudhist	72.30***	1,112	80.50***	652
Kirat	81.02***	195	85.30***	177
Christian	81.81***	220	80.60***	346
Muslim (RC)	41.27***	470	33.40***	644
Caste/ethnicity				
Hill Brahmin	87.09***	1,805	87.50***	1,512
Hill Chhetri	79.22***	2,436	82.30***	2,343
Terai Brahmin/Chhetri	64.10***	156	66.80***	217
Other Terai Caste	41.97***	1,003	40.20***	1,908
Hill Dalit	72.65***	1,214	77.20***	1,042
Newar	85.39***	541	81.10***	639
Hill Janajati	75.93***	3,154	81.00***	2,694
Terai janajati	69.15***	1,313	70.00***	1,266
Muslims	40.81***	468	32.70***	643
Others	72.00***	25	81.00***	43
Terai Dalit	22.71***	559	30.10***	554
Native Language				
Nepali	80.86***	6,505	82.50***	6,280
Bhojpuri	49.21***	706	38.50***	1,142
Others	72.65***	4,154	76.30***	3,532
Maithali	28.99***	1,307	34.20***	1,908
Total	**71.10**	**12,674**	**69.70**	**12,862**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* $\square^2$ association

According to bivariate statistic, Muslim, Terai Dalit, and Maithali local language women have a poor level of HIV preventive knowledge (Table 5.7). Open discussion about sex and sexuality transmitted infections is not practiced due to some socio-cultural taboos. The social norms, values and cultural practices among the different groups of women have contributed to low level of knowledge. The theory of social cognition also highlights human behavior as a continuous interaction between cognitive, behavioral and environmental determinants shaping the HIV prevention knowledge. (Bandura, 1977). When different religious or ethnic groups are examined in the same study, the kind of diversity needed to test hypotheses about cultural

influences usually do not exist because the groups often share normative assumptions due to their daily interactions in the local communities.

The theme of HIV/ AIDS education - ABC formula (Abstinence, Be faithful, Condom use) is a widely accepted compromise of the individualism and collectivism positions (Halperin et al., 2004). However, extreme voices polarize public discussion of intervention strategies. Some preferring condom use insists that abstinence and fidelity are limited or fruitless strategies. At the other extreme are those who claim that condoms are ineffective and/or that spreading knowledge of condom use encourages sexual promiscuity. The less interaction on the issues of HIV prevention among women from Terai Dalit, Muslims and Maithali native language is major cause of low level of HIV prevention knowledge.

5.2.4 Media Exposure and Knowledge of HIV Prevention

The mass media considered as an effective means of awareness building about the epidemic in all settings of the country and globally. The mean of mass media mostly related with the print, audio and visual modes of providing messages to people. The study analyzed the mass media campaigns and it effectiveness on the women knowledge of HIV prevention.

Table 5.8 showed that there a significant association between mass media exposure and knowledge of HIV prevention method ($p<0.01$). Radio and television are popular media to acquire knowledge of HIV in both surveys of NDHS. The analysis also shows that frequency of using media have affected knowledge of HIV prevention methods. A study by Sharma (2008) showed that knowledge of means of HIV prevention is determined by frequency of use of radio and television. There is significant changes in the knowledge level before and after mass campaigns at the community level. There is also seen to change in behavior from risk to safe (Sharma, 2008). It is argued that education and media exposure are critical factors for acquiring the knowledge of HIV prevention and transmission as well as safe sexual behavior among adolescents in Nepal.

The role of media to promote knowledge of HIV prevention is examined by analyzing how the mass media have influenced the knowledge of HIV prevention globally. It is

found that increased awareness creates the environments of partner fidelity and use of condom as per the risk reduction of different sexually transmitted infection including AIDS to response the epidemic (Chan et al., 1997). The wider use and access to newspaper, radio and television have been played greater role to promotive behavior of HIV from the knowledge point of view.

Table 5.8: Percent distribution of women with HIV prevention knowledge and media exposure factors, Nepal Demographic and Health Surveys, 2011 and 2016

Media Exposure factors	DHS, 2011		DHS, 2016	
	%	N	%	N
Frequency of Reading Newspaper				
Not at All	60.29***	8,250	60.80***	8,950
Less than once a week	90.51***	2,827	89.40***	2,793
At least once a week	92.46***	1,597	91.70***	1,119
Frequency of Listening Radio				
Not at All	50.56***	2,379	54.30***	5,558
Less than once a week	68.59***	4,694	79.30***	3,738
At least once a week	81.82***	5,600	83.70***	3,566
Frequency of watching Television				
Not at All	50.49***	3,230	54.70***	3,700
Less than once a week	69.59***	3,434	72.40***	2,692
At least once a week	82.94***	6,009	77.20***	6,470
Total	**71.10**	**12,674**	**69.70**	**12,862**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* χ^2 association

As a means of preventing HIV, media have campaigned through education and promotion of preventive knowledge of HIV/AIDS. There is also the debates on the sources or modes of knowledge received of HIV and AIDS. But studies indicates that mass media is the key factor for the positive influence of knowledge of epidemic (Goodwin et al., 2003). Effective flow of messages also supportive for the utilization of HIV services at the different levels.

The facts and empirical evidences, argues that mass media is the powerful tool for promotion of HIV prevention knowledge among women in Nepal. The mode of mass media has been changing in the context of Nepal from radio, magazine and TV to social media.

5.2.5 Socially Constructed Knowledge of HIV Prevention

The knowledge of HIV prevention is a bio-medical reality and socio-cultural construction of the epidemic. Of the total women those heard of HIV/AIDS reported that safe sex practice is the major issue for prevention of HIV. Most of adult women (10 out of 13) said that if pre-marital and extra marital sex is reduced then men and women can be prevented from the HIV/AIDS. According to them, sexual relations should be done only between husband and wife. However, young women argued that condom use is the means of HIV prevention that is consistent condom use must prevent from HIV/AIDS. Young educated women of high hill caste from Ram Nagar of Nawalparasi said that there should not be more than one sex partner, "If s/he has more than one sex partner consistent use of condom during every sexual act is must."

> *I am unmarried girl. I have pre-marital sexual experience. I have a boyfriend. We use condom consistently during sexual intercourse. We are aware about the STIs and HIV/AIDS, so we have the understanding about safe sexual behavior. Our relationship as boyfriend and girlfriend is confidential and our sexual relationship is also confidential and safe (a 24 years old educated unmarried women).*

Aforementioned issues indicate that abstinence from sex, faith between partners and condom use are the means of HIV prevention. However, age, marital status, education, cultural norms and values are the key issues for shaping the knowledge of HIV prevention.

5.3 Comprehensive Knowledge of HIV transmission

The complete HIV transmission knowledge is a composite indication of the three accurate HIV prevention and transmission knowledge, as well as avoiding the two HIV transmission myths. This is calculated from all sampled women and represents the degree of HIV knowledge among Nepalese women. This types of knowledge is associated with individual social, economic, cultural, geo-development and media exposure factors.

5.3.1 Socio-economic and Demographic Factor and Comprehensive Knowledge

The study of Nepal demographic and health surveys conducted between 2011 and 2016 indicated practically consistent full information of HIV transmission. Over a five-year period (2011-2016), comprehensive knowledge of HIV transmission decreased among educated, professional, and wealthy women.

Table 5.9: Percent distribution of women with complete knowledge of HIV transmission and selected socioeconomic and demographic characteristics, NDHS, 2011 and 2916

Socio-economic and Demographic Factors	DHS, 2011		DHS, 2016	
	%	N	%	N
Age				
< 25 years	25.76***	5.050	20.70***	4,849
25 and above	17.26***	7,624	18.70***	8,013
Marital Status				
Never Married	32.42***	2,708	27.30***	2,663
Currently Married	17.58***	9,608	17.70***	9,875
Divorced/Separated	13.00***	100	15.20***	105
Widowed	14.34***	258	7.90***	214
Place of Residence				
Urban	34.90***	1,819	24.00***	8,072
Rural	18.25***	10,855	11.80***	4,790
Educational				
No Education	4.87***	5,045	5.00***	4,281
Primary	11.49***	2,209	11.80***	2,150
Some Secondary	28.32***	3,088	24.80***	3,291
SLC and Above	53.38***	2,331	48.10***	3,140
Occupation				
Not Working	27.15***	3,127	20.40***	4,259
Professional/Managerial	60.38***	414	50.90***	487
Clerical	51.85***	108	41.90***	172
Sales/Service	31.08***	1,154	32.90***	1,137
Skilled Manual	24.35***	428	23.80***	490
Unskilled Manual	10.31***	253	14.30***	293
Agriculture	13.46***	7,172	13.00***	6,011
Others	44.44***	18	33.30***	12
Wealth Quintile				
Poorest	5.79***	2,120	9.90***	2,176
Poorer	11.00***	2,393	13.70***	2,525
Middle	14.21***	2,600	13.60***	2,595
Richer	25.90***	2,722	18.90***	2,765
Richest	48.80***	2,839	38.20***	2,801
Total	**20.70**	**12,674**	**19.50**	**12,862**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

This indicates that the mass awareness campaign were less likely to effective among those types of women. The HIV interventions among the marginalized and decentralized activities were not reach to those types of women.

However, previous studies revealed that education intervention was important dimension for the improvement of comprehensive knowledge (Sharma, 2008). It is noticed that there were wider misconceptions about the HIV transmission among women which indicated by the study. The study among street children of Kathmandu valley were also supported by the above arguments (Gurung, 2004). Beside the decreasing in the trends comprehensive knowledge in the educated, richest and professional category of women, the level of comprehensive knowledge were higher than other categories of women as well. It is also argued that individual social, economic and demographic characteristics of women have been played greater role to comprehensive knowledge of HIV transmission in women.

The occupation of people is also determined the comprehensive knowledge of HIV transmission. According to one study, carpet industry workers were less likely to be aware of HIV transmission (Karki, 2014). According to the survey, managerial worker women are more likely to have comprehensive knowledge than manual and other categories of women.

Wealth index of women contributed to comprehensive knowledge of HIV transmission which was found in the analysis of 2011 and 2016. The richest category of women having more comprehensive knowledge than poorer and poorest women. It is observed that social and economic position of women associated with the knowledge of HIV prevention and transmission.

The socio-economic and demographic differentials is found to affect the comprehensive knowledge of HIV transmission. Adults, widows, illiterates, unskilled manual laborers, and the poorest women were less likely to have a thorough understanding of HIV transmission.

5.3.2 Geographical Development Factors and Comprehensive HIV/AIDS Knowledge

Nepal's geographical variety and political administrative divisions are also linked to complete understanding of HIV transmission in women. Nepal's political and natural landscape reflects the country's different socio-cultural situations. The analysis of NDHS, 2011 and 2016 showed that there were highly significant association between the geo-development factors of women and comprehensive knowledge of HIV/AIDS.

The analysis of NDHS data sets revealed that there was decreasing on comprehensive knowledge of HIV transmission among women in Madhesh province as compared to Mountain and Hill in the period of 2011 and 2016. As analysis of comprehensive knowledge, Madhesh province is less likely to have comprehensive knowledge due to the various geographic and cultural land scape of the province.

Table 5.10: Percent distribution of women who are well-versed on HIV transmission and geo-developmental factors, 2011 and 2016 NDHS

Geo-development Factors	DHS, 2011		DHS, 2016	
	%	N	%	N
Ecological Zone				
Mountain	9.93***	805	16.50***	775
Hill	22.27***	5,090	25.00***	5,556
Terai	20.69***	6,779	15.10***	6,531
Development Regions				
EDR	20.29***	3,057	16.10***	2,900
CDR	20.28***	4,236	20.60***	4,569
WDR	23.58***	2,666	22.60***	2,597
MWDR	16.30***	1,478	16.50***	1,650
FWDR	21.59***	1,242	20.90***	1,145
Provinces				
Province#1	20.40***	2,811	20.00***	2,173
Madhesh	11.50***	2,117	5.20***	2,564
Bagmati	26.10***	2,365	30.70***	2,732
Gandaki	23.70***	1,147	26.30***	1,249
Lumbini	25.30***	2,436	18.60***	2,274
Karnali	12.80***	555	14.90***	724
Sudur Paschim	22.40***	1,242	20.90***	1,145
Total	**20.70**	**12,674**	**19.50**	**12,862**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

In three subsequent surveys, 2006, 2011, and 2016, the degree of complete awareness of HIV transmission was practically consistent (20%) (MoHP et al, 2007; MoHP at al,

2012; MoHP et al, 2017). This indicates that the awareness building programmes among women in Nepal less effective. The mass awareness campaign from the different media sources are less due to the language of HIV/AIDS messages to provide the diverse community in Nepal.

This types of comprehensive knowledge on adolescent and women have been contributed to safe sexual behavior (Wasti, 2015). Study on garment and factory workers were mostly adolescent boys and girls in Kathmandu valley. The sexual behavior are found risk of HIV infection (Karki, 2014). The study also indicates that knowledge of HIV is highly significant correlates with the safe sexual behaviors. The early attempt to sexual intercourse such as 13 years old were observed among the adolescent girls, and very less likely to use condom in first sexual intercourse. As analysis of women's comprehensive knowledge, ecological regions, development regions and provincial characteristics are influence the comprehensive knowledge.

5.3.3 Cultural Factors and Comprehensive HIV/AIDS Knowledge

HIV awareness varies across the country in multicultural contexts. The analysis of NDHS data sets of 2011 and 2016 surveys showed that there was significant association between the comprehensive knowledge of HIV transmission and individual context of the women in Nepal.

Table 5.11 reveals that women of Muslim faith, Maithali local language, and Terai Dalit were less likely to know than other groups of women in the same category. Individual cultural characteristics (faith, ethnicity, and native language) and complete HIV transmission knowledge are statistically significant ($p<0.01$).

Individual cultural characteristics are connected with thorough knowledge of HIV/AIDS transmission, according to an examination of NDHS data from 2011 and 2016. The eight US based studies explores the White ethnic groups were more like to have knowledge of HIV/AIDS prevention and transmission than the other ethnic groups (Peruga & Celentano, 1993). The reviewed studies also indicates that HIV/AIDS knowledge is correlated with the strong religious belief and conservative political ideology. It is argued that the ethnicity and religion are strong individual factors affect the comprehensive knowledge of HIV and transmission.

Table 5.11: Percent distribution of women with thorough knowledge of HIV transmission and cultural aspects Nepal Demographic and Health Surveys, 2011 and 2016

Cultural factors	DHS, 2011		DHS, 2016	
	%	N	%	N
Religion				
Hindu	21.61***	10,672	19.70***	11,040
Boudhist	16.81***	1,112	24.10***	652
Kiant	22.56***	195	20.20***	177
Christian	21.81***	220	28.90***	346
Muslim	5.95***	470	5.30***	644
Ethnicity				
Hill Brahmin	37.39***	1,805	35.40***	1,512
Hill Chhetri	24.63***	2,436	24.60***	2,343
Terai Brahmin/Chhteri	25.00***	156	23.00***	217
Other Terai Caste	7.27***	1,003	5.60***	1,908
Hill Dalit	13.34***	1,214	17.70***	1,042
Newar	37.33***	541	33.50***	639
Hill Janajati	19.87***	3,154	21.90***	2,694
Terai Janajati	15.15***	1,313	14.30***	1,266
Muslim	5.76***	468	4.80***	643
Other	16.00***	25	46.50***	43
Terai Dalit	1.78***	559	3.20***	554
Native Language				
Nepali	26.24***	6,505	26.70***	6,280
Bhojpuri	8.36***	706	4.00***	1,142
Others	19.32***	4,154	19.30***	3,532
Maithali	3.67***	1,307	5.30***	1,908
Total	**20.70**	**12,674**	**19.50**	**12,862**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

It is also plainly stated that in sexual interactions, African indigenous tribes place less significance on virginity and marital faithfulness than Europe and the United States (Caldwell et al., 1989). It is also suggested that genetic predispositions influence infection rates across racial groupings. In this context, culturally sensitive messages to responses the epidemic as awareness building (Wilaon et al., 2003).

The Joint United Nations Program on HIV/AIDS to improve comprehensive knowledge emphasized on the promotion of education activities to fulfill the individuals needs in a particular settings where abstinence and faithfulness are normative (UNAIDS, 2015). It means that socially constructed knowledge of HIV could be prevention from wider level of awareness campaigns. The cross-cultural factors is highly sensitive to promote the misconceptions of epidemic.

5.3.4 Media Exposure and Comprehensive Knowledge

It is well understood that media related individual factors are crucial to promote HIV/AIDS knowledge. The frequency of reading newspaper, listening ratio and watching TV of women are found significantly associated with the comprehensive knowledge of HIV transmission.

Table 5.12: Percent distribution of women with complete HIV/AIDS awareness and media exposure, Nepal Demographic and Health Survey, 2011 and 2016

Media exposure	NDHS, 2011		NDHS, 2016	
	Percent	Number	Percent	Number
Frequency of reading newspaper or magazine				
Not at All	9.97***	8250	11.70***	8950
Less than once a week	36.35***	2827	32.10***	2793
At least once a week	49.34***	1597	50.40***	1119
Frequency of listening radio				
Not at All	11.89***	2379	13.50***	5558
Less than once a week	18.44***	4694	22.80***	3738
At least once a week	26.22***	5600	25.30***	3566
Frequency of watching TV				
Not at All	6.62***	3230	9.20***	3700
Less than once a week	14.90***	3434	14.90***	2692
At least once a week	31.46***	6009	27.30***	6470
Total	**20.70**	**12674**	**19.50**	**12862**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* $\square 2$ association

According to the examination of NDHS, 2011 and 2016 data sets, the greater the media consumption, the greater the complete knowledge of HIV and AIDS (Table 5.12). The use of media and its implications on the knowledge of HIV/AIDS in educating people about the HIV prevention and transmission mode among low literacy people are found to be effective (Amatya, 2005). The media exposure women have been contributing to avoid the misconceptions of the epidemic. The low levels of media campaigns, lower level awareness among the people, the cultural model of the knowledge were effective and promotes the socially constructed knowledge. Previous study also indicates that the mass media is effective to enhance the scientific knowledge and avoiding the misconception about the HIV transmission (Shakya, 2012).

The media successfully spreads information about HIV/AIDS prevention and transmission. The function of print media is to educate people about epidemic prevention strategies. It is also argued that avoiding misconceptions are the challenges to HIV prevention and awareness strategy in the context of women. Most of the locally constructed knowledge are widely spread in the community level due to different cultural constructs. The social settings and the lower level of economic status of people is also issues of the access to mass media.

5.3.5 The Social Construction of HIV/AIDS Comprehensive Knowledge

The social construction of the pandemic is a crucial facet to a greater awareness of the issue, as measured by the individual elements determining complete knowledge of HIV/AIDS. It is well explained that the wider misconception about the HIV and AIDS in Nepal determined by the diverse concepts constructs. The locally constructed meaning of the epidemic is cause of the low level of comprehensive knowledge. In some of the cases, the locally constructed meaning of HIV/AIDS were also influenced by the previous references of infectious diseases.

The findings of the in-depth interview suggested that the were significant misconception about HIV transmission. Out of the total women (20 out of 31) participating in in-depth interviews reported HIV is transmitted through mosquito bite which is a communicable disease. However, very few (5 out of 31) women from the local setting those belongs to high Hill caste, education and participated in development activities having misconceptions that the HIV is transmitted from eating together with infected persons. The wider misconceptions were created through socially constructed knowledge HIV which differently understand to biomedical reality of HIV.

According to the narratives of the in-depth interviews, the majority of the women (25 out of 31) feel that unmarried boys and girls abstain from sex is the best strategy to prevent HIV transmission. It is argued that the cultural value of before marriage sexual act is restricted in principally but not in the practice. Almost half of the research participants reported that abstinence and fidelity are the major ideas of prevention and transmission of HIV. However, some of the potential respondents

opined that changing socio-cultural dimensions of Nepal such type of preventive does not work. A school teacher women viewed as:

> *I think, the wives of the migrants are seen as negative attitude towards sexual activities in the community. Most of young wives of migrants engage in unprotected sexual intercourse with you boys. Unemployed young boys urge to make relationship with the wives of the migrants through different types of support provided in the household works and out of household works. Most of the such types of relationship are not disclosed. But fewer cases are disclosed publicly. There were practices of unprotected sexual activities between them those are the risk communicable diseases. Most of those type of women and men were aware about the risk of infection but they didn't received the services due to various types of obstacles (A women teacher from Bhatauli Ram Nagar, Nawalparasi).*

The socially constructed knowledge provide the local construction of HIV which is communicable and dangerous diseases. If anyone infected from the HIV/AIDS, the ultimate result is early death . It means there is no any options of better future of life. The locally constructed knowledge of HIV and AIDS quite different from its biomedical reality. The wider misconceptions of the epidemic is also the determinants of the HIV and AIDS.

The wider misconceptions about the HIV/AIDS transmissions is accepted by the women in the local settings. The role of social and community leaders are important to promote knowledge of HIV transmission and prevention. The role of mass communication and interaction with each other of community people towards the avoiding misconception of HIV transmission still problematic. The locally constructed knowledge of misconception is only be reduced through the policy and strategic responses of the epidemic.

5.4 Multivariate Analysis of Comprehensive Knowledge of HIV Transmission

In order to achieve the objectives of the study, a logistic regression model is used to identify the most influential individual factors affect the comprehensive knowledge of HIV/AIDS. The particular outcome come variables is determined the social-

economic, demographic, cultural, geo-development and media exposure variables in a given data to logit function.

5.4.1 Partial Regression Models Knowledge of HIV

The result of extensive knowledge is comparable to the composite index of HIV prevention and transmission knowledge as those who have heard about AIDS. That is why regression analysis requires a thorough understanding of HIV. In this investigation, all four models are used. Modeling elements that affect women's HIV/AIDS knowledge (composite index of heard of AIDS, HIV preventive knowledge, and complete knowledge) include demographic and socioeconomic characteristics (model 1), geo-development (model 2), cultural (model 3), and media exposure (model 4).

Demographic and Socio-economic Model: #1

In this partial regression model, the comprehensive knowledge of HIV transmission as a outcome variables is fitted into regression equation with the socio-economic and demographic factors of women as independent or explanatory variables. Some of the estimated coefficients of the demographic and socio-economic model indicate that some of the influential factors to determine the comprehensive knowledge of HIV transmission as expected theoretically.

Table 5.13: Logistic regression analysis on comprehensive knowledge of HIV transmission and socio-economic and demographic characteristics , Nepal Demographic and Health Survey, 2011 and 2016

Factors	NDHS, 2011			NDHS, 2016		
		CI 95%			CI 95%	
Age	Odds ratio	Lower	Upper	Odds ratio	Lower	Upper
<25 years	0.109	0.71	0.92	0.58***	0.51	0.66
25 and Above Years (RC)	1.00			1.00		
Marital Status						
Never Married	1.06	0.69	1.63	2.02**	1.17	3.51
Married	0.90	0.60	1.34	1.64*	0.96	2.81
Divorce/Separated	0.58	0.30	1.41	1.69	0.78	3.68
Widowed (RC)	1.00			1.00		
Place of residence						
Urban	1.02	0.90	1.17	1.34***	1.18	1.50
Rural (RC)	1.00			1.00		
Education						
No Education (RC)	1.00			1.00		

Primary	2.32***	1.92	2.80	2.55***	2.10	3.10
Some Secondary	6.35***	5.38	7.50	6.39***	5.41	7.55
SLC and above	13.80***	11.51	16.54	13.55***	11.22	16.38
Occupation						
Not Working (RC)	1.00			1.00		
Professional/Managerial	1.57***	1.24	1.97	1.48***	1.19	1.82
Clerical	1.94***	1.25	3.01	1.49**	1.06	2.10
Sales/Service	1.02	0.90	1.23	1.44***	1.23	1.69
Skilled Manual	1.04	0.89	1.16	1.24*	0.99	1.57
Unskilled Manual	0.78	0.50	1.20	1.27	0.88	1.82
Agriculture	1.95	9.66	5.79	1.02	0.90	1.15
Others	1.02	0.69	1.24	1.10	0.29	3.41
Wealth Quintile						
Poorest (RC)	1.00					
Poorer	1.58***	1.25	2.01	1.12	0.92	1.35
Middle	1.69***	1.34	2.11	1.15	0.94	1.35
Richer	2.59***	2.08	3.23	1.20*	1.00	1.46
Richest	3.16***	2.50	4.00	1.81***	1.48	2.20

**** indicates p<0.01, ** p<0.05 and * p<0.10*
Note: RC denotes reference category.

In the partial regression analysis of the NDHS, Table 5.13 demonstrates that education, wealth index, and professional/managerial occupation of women are the most predicted individual characteristics to impact comprehensive knowledge of HIV/AIDS, 2011 and 2016. SLC and higher educated women were almost 14 times more likely to have comprehensive knowledge than women without (formal) education [OR=13.80 (11.51-16.54)] in 2011 and [OR=13.55 (11.22-16.38)] in 2016. Education is the consistent socio-economic individual factor affecting the comprehensive knowledge of HIV transmission over past five years.

According to logistic regression outputs, Table 5.13 also reveals that wealth index is second most predictable factor to promote the comprehensive knowledge of HIV among six variables of demographic and socio-economic models. The women in the richest category were 3 times more knowledge than women in the poorest category in 2011 whereas, almost 2 times in 2016 [OR=3.16(2.50-4.0) in 2011 and OR =1.81 (1.48-2.20) in 2016]. The results of partial regression analysis indicate that women's wealth index varies to comprehensive knowledge of HI/AIDS.

The professional/managerial job is also predictable individual factor having effect on comprehensive knowledge. Women from professional/managerial occupations having one half times more likely to have comprehensive knowledge than not working (unemployed) women [OR =1.57 (1.24-1.97) in 2011 and [OR =1.48 (1.19-1.82) in

2016. The professional/managerial occupation is consistent individual factor affecting the women's comprehensive knowledge of HIV transmission.

As partial regression analysis of both sets of NDHS data, major demographic factors such as age, marital status, and place of residence have also contributed to the comprehensive knowledge of HIV. The earlier studies also indicate the demographic factors, mentioned above affecting the HIV/AIDS knowledge in Nepal (Shakya, 2012; Karki, 2014; Jha & Madison, 2009).

Geo-development Model: #II

Factors affecting women's HIV/AIDS knowledge are examined with geo-development (ecological region and development region) factors in this model. In this analysis, only 2 variables are introduced in regression equation. The analysis indicates that sub-region is the most predictable factor for the HIV/AIDS knowledge. The logistic regression analysis indicates that individual geographical factor has affected women's HIV/AIDS knowledge.

Table 5.14: Logistic regression analysis of comprehensive knowledge of HIV transmission by geo-development factors, Nepal Demographic and Health Survey, 2011 and 2016

Factors	NDHS, 2011			NDHS, 2016		
Ecological Zone	Odds ratio	CI 95% Lower	Upper	Odds ratio	CI 95% Lower	Upper
Mountain (RC)	1.00			1.00		
Hill	2.40***	2.04	2.80	1.46***	1.19	1.80
Terai	3.40***	2.88	4.01	1.57***	1.26	1.94
Provinces						
Province #1 (RC)	1.00			1.00		
Madhesh	0.35***	0.28	0.43	0.20***	0.16	0.25
Bagmati	1.60***	1.39	1.83	1.84***	1.57	2.10
Gandaki	1.24***	1.07	1.45	1.42***	1.19	1.70
Lumbini	0.89*	0.76	1.01	0.90*	0.75	1.02
Karnali	0.74*	0.58	0.93	0.76**	0.60	0.97
Sudur Paschim	1.02	0.89	1.17	1.10	0.92	1.31

**** indicates p<0.01, ** p<0.05 and * p<0.10*
Note: RC denotes reference category.

Table 5.14 identified ecological area as a personal factor influencing women's HIV/AIDS awareness. Terai women were nearly three times as likely than Mountain women to have a thorough understanding of HIV transmission. Hill women were 2

times more likely to have knowledge than women from Mountain which are statistically significant ($p<0.01$).

According to the provinces of federal Nepal, there is a strong relationship between provinces and comprehensive knowledge of HIV transmission among women in Nepal. The women's position at Madhesh Province is poor as compared to other regions in terms of social, economic and political spheres which have contributed to low levels of comprehensive knowledge of HIV transmission. The wider misconceptions on HIV prevention and transmission among women in Madhesh province are the outcome of low level of comprehensive knowledge.

Cultural Model: #III

Individual cultural characteristics such as religion, caste/ethnicity, and native language of women correspond with complete HIV awareness. In this analysis, 2 variables are introduced in regression equation. The analysis indicates that caste/ethnic background of women is the most predictable factor for the comprehensive knowledge of HIV. The analysis also found that the native language of a woman is the predictor of the comprehensive knowledge.

Table 5.15 revels that ethnicity is the consistent cultural factor which affects the comprehensive knowledge. In the 2011 and 2016 NDHS surveys, women from Hill Brahmin, Hill Chhteri, Terai Brahmin/Chhetri, Hill Dalits, and Newar were more likely than Terai Dalit women to have complete knowledge. However, the knowledge trend has been in decline over past the five years. According to analysis of 2016, Hill Brahmin, Terai Brahmin/Chhetri and Newar women were 6 times more comprehensive knowledge of HIV transmission.

Table 5.15: Logistic regression investigation of complete HIV transmission information based on cultural characteristics, Nepal Demographic and Health Survey, 2011 and 2016

Factors	NDHS, 2011			NDHS, 2016		
Ethnicity	Odds ratio	CI 95% Lower	Upper	Odds ratio	CI 95% Lower	Upper
Hill Brahmin	10.64***	5.37	21.10	6.81***	4.04	11.48
Hill Chetri	5.97***	2.99	11.73	4.12***	2.45	6.91
Terai Brahmin/Chetri	13.09***	6.26	27.38	6.13***	3.42	10.91
Other Terai Caste	3.43***	1.74	6.76	1.84**	1.10	3.07
Hill Dalit	2.78***	1.38	5.58	2.70***	1.58	4.61
Newar	12.38***	6.19	24.77	6.85***	4.02	11.65
Hill Janajati	5.01***	2.54	9.86	3.85***	2.30	6.43
Terai Janajati	4.43***	2.24	8.75	2.94***	1.75	4.94
Muslim	2.33**	1.09	4.96	1.50	0.82	2.72
Others	5.25***	1.53	8.08	2.25***	1.53	3.08
Terai Dalit(RC)	1.00			1.00		
Native Language						
Nepali	4.61***	3.14	6.75	2.90***	2.17	3.85
Bhojpuri	2.25***	1.49	3.38	0.83	0.58	1.20
Others	3.61***	2.49	5.22	-	-	-
Maithali (RC)	1.00			1.00		

**** indicates p<0.01, ** p<0.05 and * p<0.10*
Note: RC denotes reference category.

A woman's native tongue appears to be an important factor in HIV/AIDS understanding. In 2016, women speaking Nepali/ese were three times more likely to have complete knowledge than Maithali native language women. In 2011, however, it was nearly 5 times more likely to know. According to the findings of the investigation, the majority of HIV/AIDS awareness messages are generated and presented in Nepali. According to Macdonald (1996), cultural elements such as ethnicity and societal norms and values have contributed to Botswana's understanding of HIV transmission. In several circumstances, the social construction of HIV has been the most significant way of fostering societal misunderstandings about HIV/AIDS.

Model of Media Exposure: #IV

Individual media exposure elements impacting women's HIV/AIDS awareness include reading newspapers, listening to radio, and watching television. In this analysis, 3 variables are introduced in regression equation. The analysis indicates that frequency reading newspaper or magzine among women is the most predictable factor

for the comprehensive knowledge of HIV/AIDS in the NDHS surveys, 2011 and 2016.

Table 5.16: Logistic regression study of complete HIV/AIDS knowledge based on media exposure, NDHS, 2011 and 2016

Factors	NDHS, 2011			NDHS, 2016		
Reading Newspaper	**Odds ratio**	**CI 95% Lower**	**Upper**	**Odds ratio**	**CI 95% Lower**	**Upper**
Not at All(RC)	1.00			1.00		
Less than once a week	3.80***	3.38	4.24	2.66***	2.38	2.97
At least once a week	5.63***	4.93	6.44	5.40***	4.68	6.21
Frequency of listening radio						
Not at All(RC)	1.00			1.00		
Less than once a week	1.24***	1.06	1.46	1.49***	132	1.67
At least once a week	1.34***	1.19	1.61	1.47***	1.30	1.65
Frequency of watching television						
Not at All(RC)	1.00			1.00		
Less than once a week	1.62***	1.36	1.93	1.21***	1.03	1.42
At least once a week	2.80***	2.36	3.29	2.12***	1.85	2.42

**** indicates p<0.01, ** p<0.05 and * p<0.10*
Note: RC denotes reference category.

The analysis of partial regression model indicates that the frequency of reading newspaper at least once a week was 5 times more likely to provide comprehensive knowledge of HIV transmission to women than those of not reading at all (Table 5.16). However, the trends of frequency of exposing media and the comprehensive knowledge of HIV transmission have declined last five years of 2016.

Table 5.16 shows that the frequency of watching television has also affected the comprehensive knowledge of HIV transmission. Women watching television at least once a week were 3 times more likely to know comprehensive knowledge of HIV transmission than women not watching at all in 2011 and 2 times more like to know in 2016. The findings of analysis suggested that other means of media exposure may be in use except newspaper, radio and TV. The means of media is powerful tool to communicate health related message to people (King, 1999).

5.4.2 General Regression Model of Comprehensive Knowledge of HIV/AIDS

All variables are included in the partial regression model in this broad model. The examination of NDHS data sets from 2011 and 2016 found education to be the most

influencing factor in women's complete knowledge of HIV, which is statistically significant (p0.01).

According to the general regression model, women's educational attainment has positively contributed to HIV knowledge as a complete understanding of HIV transmission and prevention. Table 5.17 reveals that SLC and higher educated women in Nepal were 8 times more likely to have full knowledge of HIV transmission and prevention than illiterate women in both periods [OR= 8.0 (6.96-10.59) in 2011 and OR= 7.82 (6.33-9.66) in 2016].

Wealth index is also a consistent socio-economic factor explaining the comprehensive knowledge of HIV/AIDS. Table 5.17 reveals that women from richest category were 2 times more likely to possess comprehensive knowledge of HIV transmission than poor women [OR= 2.65 (2.01-3.50) in 2011 and OR= 2.01 (1.60-2.60) in 2016]. In case of occupation of women, skilled manual and professional/managerial occupations have been contributing to knowledge of HIV/AIDS.

Table 5.17: Logistic regression analysis of individual characteristics influencing complete HIV transmission knowledge (General Model)

Factors	**NDHS, 2016**			**NDHS, 2016**		
Age	**Odds ratio**	**95% CI Lower**	**Upper**	**Odds ratio**	**95% CI Lower**	**Upper**
<25 years	1.109	1.75	1.98	1.48***	1.30	1.90
25 and Above Years (RC)	1.00			1.00		
Marital Status						
Never Married	1.23*	0.83	1.90	1.96**	1.12	3.40
Married	0.94	0.62	1.40	1.78**	1.04	3.03
Divorce/Separated	0.58	0.27	1.28	1.67	0.77	3.65
Widowed (RC)	1.00			1.00		
Place of Residence						
Urban	1.00	0.87	1.16	1.11*	0.99	1.26
Rural (RC)	1.00					
Education						
No Education (RC)	1.00			1.00		
Primary	1.86***	1.53	2.26	2.03***	1.69	2.48
Some Secondary	4.20***	3.58	5.18	4.20***	3.50	5.03
SLC and above	8.00***	6.96	10.59	7.82***	6.33	9.66
Occupation						
Not Working(RC)	1.00			1.00		
Professional/Managerial	1.33**	1.05	1.68	1.19	0.96	1.50
Clerical	1.69*	1.08	2.63	1.20	0.84	1.71
Sales/Service	0.83***	0.72	0.95	1.08	0.91	1.27
Skilled Manual	0.91*	0.77	1.09	0.83***	0.73	0.95

Unskilled Manual	0.90	0.70	1.17	1.11	0.87	1.41
Agriculture	0.58	0.37	0.90	1.05	0.73	1.52
Others	2.57*	1.05	5.11	0.92	0.26	3.16
Wealth			.			
Poorest (RC)	1.00			1.00		
Poorer	1.60***	1.26	2.03	1.31***	1.07	1.60
Middle	1.64***	1.28	2.09	1.59***	1.27	1.97
Richer	2.34***	1.82	3.02	1.53***	1.22	1.92
Richest	2.65***	2.01	3.50	2.04***	1.60	2.60
Ecological Region						
Mountain(RC)	1.00			1.00		
Hill	1.63***	1.25	2.13	1.06	0.84	1.33
Terai	1.66***	1.26	2.19	1.03	0.80	1.33
Provinces						
Province #1 (RC)	1.00			1.00		
Madhesh	1.23	0.94	1.63	0.76*	0.55	1.04
Bagmati	1.20**	1.04	1.40	1.16**	0.97	1.37
Gandaki	0.92	0.74	1.40	1.17	0.97	1.43
Bagmati	1.36***	1.16	1.58	1.14	0.96	1.35
Karnali	1.00	0.77	1.29	1.11	0.85	1.46
Sudur Paschim	1.81***	1.50	2.17	1.62***	1.31	2.00
Ethnicity						
Hill Brahmin	1.90**	0.90	3.96	1.74**	1.10	2.74
Hill Chetri	1.93*	0.92	4.04	1.77**	1.29	2.78
Terai Brahmin/Chetri	2.31**	1.04	5.11	1.25	0.74	2.15
Other Terai Caste	1.31	0.65	2.66	0.90	0.58	1.40
Hill Dalit	1.59	0.77	3.28	1.81**	1.13	2.90
Newar	2.03*	0.98	4.20	0.83	0.45	1.55
Hill Janajati	1.93*	0.96	3.89	1.76**	1.10	2.82
Terai Janajati	1.82	0.91	3.67	1.93***	1.24	3.00
Muslim	1.71	0.78	3.77	1.51*	0.97	2.34
Others	0.91	0.25	3.40	-	-	-
Terai Dalit (RC)	1.00			1.00		
Native Language						
Nepali	3.34***	2.21	5.05	1.47***	1.01	2.13
Bhojpuri	1.56***	1.05	2.82	0.81	0.55	1.19
Others	2.73***	1.83	4.08	1.42*	0.99	2.05
Maithali(RC)	1.00			1.00		
Reading Newspaper						
Not at All (RC)	1.00			1.00		
Less than Once a Week	1.38***	1.21	1.58	1.10	0.98	1.25
At least Once a Week	1.41***	1.19	1.167	1.49***	1.24	1.77
Listening Radio						
Not at All	1.00			1.00		
Less than Once a Week	1.23*	1.04	1.45	1.21***	1.07	1.38
At Least Once a Week	1.41**	1.19	1.67	1.24***	1.09	1.41
Frequency of Watching TV						
Not at All(RC)	1.00			1.00		
Less than once a week	1.18	0.98	1.43	1.06	0.84	1.33
At least once a week	1.27**	1.04	1.54	1.03	0.80	1.33

**** indicates p<0.01, ** p<0.05 and * p<0.10*

Note: RC indicate reference category.

According to geo-development regions of women, women in province *Sudur Paschim* were almost 2 times more likely to have comprehensive knowledge than women of province#1. However, the odds ratio of the logistic regression probability has decreased over past five years from 2011 to 2016. It is said that women from different provinces varied in knowledge of HIV transmission./

The analysis was also carried out between the ethnicity and composite knowledge of HIV transmission and prevention. Women from the Terai ethnic (Janajati) were more likely to know the comprehensive knowledge of HIV than Terai Dalit women. Similarly, Nepali native language of women is the dominant cultural determinant to acquire the knowledge of HIV transmission and prevention. The cultural individual factors like ethnicity and native language are also crucial individual factors to explain the comprehensive knowledge of HIV.

The logistic regression analysis also shows that media exposure such as higher frequency of reading newspaper and listening radio have also increased the knowledge of HIV prevention and transmission. The role of media in educating individuals on HIV/AIDS issues is uncertain. Media sources such as newspapers, radio and television constantly attempt to increase HIV/AIDS knowledge through advertisements, shows, and movies. Several government program and organizations working in HIV/AIDS field utilize media to convey AIDS information to citizens. However, at the same time, numerous newspaper, radio and television broadcasts increase misconceptions about AIDS by providing inaccurate or exaggerated AIDS information. Therefore, even though media has potential to educate people on HIV issues, the current impact of media on HIV knowledge is indeterminate (NCASC, 2016).

5.5 Discussion and Summary

The knowledge of HIV/AIDS prevention and transmission is a precondition of behavioral change of key affected population in particular and low risk population in in general for promotive interventions. The is not always direct relationship between AIDS knowledge and behavior (Mondal et al., 2012). This means that knowledge is

necessary condition but not sufficient for behavioral change (Kayode et al., 2002). However, research suggest that people those are informed knowledge having more likely to engage in safe behaviors of HIV/AIDS in different context and situations (Anderson, 1992; Moatti & Souteyr, 2000). It is argued that knowledge is necessary condition for the action taken to behavior change in different settings of developing world and Nepal as well.

Knowledge itself is not enough to behavior change of individuals. But, knowledge of how infection is transmitted and prevented is the starting point of promotive behavior change. The bio-medical reality and social construction of HIV/AIDS shaped the behavior of individual. The various factors have affected the women's HIV/AIDS knowledge, mode of transmission, prevention methods and related knowledge. In this part of discussion, demographic and socio-economic, geo-development, cultural and media exposure as individual factors for the HIV/AIDS related knowledge and broader socio-cultural context has also constructed the meanings of AIDS locally.

Analysis of NDHS, 2011 and 2016 shows that the comprehensive knowledge is almost constant (20 %) which has also same result of the NDHS, 2006 as well (MoHP et al., 2007). Education is the most influential factor to acquire comprehensive knowledge. But it is not sufficient to address the low level of comprehensive knowledge. It is argued that there are wider misconception about the HIV prevention and transmission among women in Nepal with different socio-cultural context. This misconception is the result of the socially constructed knowledge of HIV/AIDS. This socially constructed knowledge has not sufficiently addressed the existing strategic approaches and pragmatic approaches.

The analysis of NDHS, 2011 and 2016 showed that demographic-age, marital status, and place of residence, and socio-economic such as education, occupation and wealth index factors have affected different forms of HIV/AIDS knowledge. Age is consistent demographic factor for the knowledge of HIV prevention and transmission. Series of studies indicated that there were strong relationships between the underlying factors (KABP) of risk of HIV infection. The proximate determinants such as demographic (age, sex, marital status, human mobility and place of residence) , socio-economic (income, education and occupation) and cultural (religion and

ethnicity) individual factors have affected the KABP (Carael & Holmes, 2001; Jha & Madison, 2009; Gurung, 2004; Kapoor, 2018).

It is well known that awareness building is focused strategic approach to Nepal's prevention of HIV and AIDS which is essential elements to combat with HIV and (Beine, 2003). It is emphasized that lack of awareness, there is only acting stigma i.e. acting only cultural model. The understanding of the biomedical reality of infection can contributed to reduce the HIV infection among any affected and key populations. However, awareness building can increase knowledge, but cannot guarantee the reduction of stigma, it is because the principle cause of low levels of awareness is education level of people.

Past studies also showed that lower levels of comprehensive knowledge of HIV transmission among women in Nepal including key affected populations with different socio-demographic factors (MoHP et al., 2002; MoHP et al., 2007; MoHP et al., 2011; NCASC, 2006; NCASC, 2009; NCASC, 2012; MoHP et al., 2017). The findings of the MoHP (2017) reveled that 80 percent of had AIDS knowledge (MoHP et al., 2017). This analysis shows that knowledge was high and low according to their characteristics of individual background. Comprehensive knowledge of HIV transmission were high among young, educated, media exposed, economically advanced group of population; Hill originated ethnic groups, Nepali native language and socio-economically empowered women.

The rural women and established socio-cultural norms contributed to developed misconceptions of major modes of HIV transmission (Beine, 2003), significant number of women viewed that wider level of misconception on HIV transmission were prevalent such as HIV could be transmitted through mosquito bite, sharing food with infected people and hand shaking with infected people. The mass campaign about the reducing misconceptions about the HI transmission still problematic in the context of women in Nepal. However the past literatures suggested that mass. Media contribute to promoting HIV knowledge and safe behaviors are expected (Wellings & Macdowall, 2000). Among the mass media mean television seen as effected means to promote knowledge any kinds of affected and infected people to HIV and AIDS.

The exposure of women outside the households and interaction with other has contributed to the HIV/AIDS knowledge prevention and transmission. The interaction and intercommunication between women also construct the meaning of AIDS. They construct the meaning of HIV/AIDS as a big, transmissible, fatal and final disease. Such disease means the end of life to everyone. The perceived causes of HIV/AIDS are bad deeds (*kharab karma*), bad luck, spoiled planets (*graha bigresi*). HIV/AIDS was outcome of proximity which is related to SWs and persons engaged in unsafe sexual acts.

The deeper understanding of HIV related prevention and transmission knowledge on biomedical reality, promote the comprehensive knowledge and utilized cultural ideals as rival approach to prevention from HIV/AIDS. Ethnicity and religion as cultural factors have shaped the locally constructed knowledge of AIDS rather than bio-medical reality of AIDS. In some cases, experimental knowledge of HIV is crucial for the HIV prevention and Transmission. The wider societal structure and beliefs can also contributed to spreading of HIV in the spousal relations. The experimental also shapes the socially constructed knowledge of AIDS than biomedical reality. The misconception of HIV/AIDS transmission contributed to the low level comprehensive knowledge of HIV/AIDS. Cultural factors have affected the HIV/AIDS knowledge.

The experiential knowledge contributed to building local knowledge systems and transactions for HIV prevention. While the experimental knowledge translated to specific context, then it would have the negative consequences to HIV prevention and transmission (Caron-Flinterman et al., 2005). However, the literature was found that relation between knowledge, decision-making strategies and risk assessment about epidemic by women are involving risk of HIV infection to male partner because of the socio-cultural barriers. The married women do not want to disclose of HIV/AIDS in the society. Women can negotiate the properly with spouse and made some justification about the experimental knowledge about the HIV and AIDS can contributed to reduce the HIV infections (Patel et al., 2006).

Geo-development characteristics of women have also contributed to the HIV/AIDS related knowledge. Beine (2003) has described that moral geography has is also contributed to build perception on HIV transmission. The low land people (Terai) had

less morality and high land people (Hill and mountain) had high morality so that HIV/AIDS is problem in the Terai. This indicates that geography has also contributed knowledge of AIDS among women.

It is also found that the social arrangements, social customs, social laws, state laws, policies and practices can contribute to engage the promotive behaviors to use the biomedical technologies and services to avoid the HIV and AIDS. In the recent times, the use of biomedical knowledge of HIV effectively supported to reduce the HIV infections in the developed societies but less likely to developing societies (Khan, 2002). The association between knowledge and demographic & socio-economic, geo-development, cultural and media exposure individual factors and socially constructed knowledge is quite useful to deeper understanding to the HIV/AIDS in Nepal.

While discussing about the IEC/BCIs to combat HIV/AIDS, these are the important elements to promoting knowledge. However, these would be culturally sensitive message those influence the attitude of the people (Rogers et al., 2006). In some cases, the direct prevention messages creates negative attitude about the condoms and their uses. The understanding of the infection link with the sex workers and young as well as key affected peoples. The conveyed messages would not be able to reduced stigma and discrimination and promoting the biomedical knowledge instead of socially constructed knowledge of the HIV/AIDS.

CHAPTER SIX
FACTORS AFFECTING ATTITUDE TOWARDS PLHIV

This chapter analyzes the factors affecting the attitude towards people living with HIV (PLHIV). Widespread stigma and discrimination are the major socio-cultural problems PLHIV have been facing. Fear, anxiety and prejudice are outcome of HIV/AIDS epidemic. In this chapter, factors affecting accepting attitude are analyzed as a composite index willing to care a family member, buying vegetables from shopkeeper with AIDS infected, female teacher with HIV should be continued to teach and disclosure of HIV/AIDS cases of the family members. Demographic and socio-economic, geo-development, cultural and media exposure individual factors are analyzed with composite index of accepting attitude towards PLHIV in Nepal. In addition, the social norms, values and practices for exploration of the issues of stigmatic discriminations towards PLHIV in micro level are explored.

6.1 Accepting Attitude towards PLHIV

Four indices of accepting attitude are analyzed as composite index in 2011 NDHS while 2 indices in 2016 NDHS. The accepting attitude towards PLHIV are found moderate among women in Nepal. In this sub-section of the analysis, $\chi 2$ association of response variable such as composite index of attitude towards PLHIV with demographic and socio-economic, geo-development, cultural and media exposure individual factors are analyzed. About fifty percent women have accepting attitude towards PLHIV in 2011 whereas it was 60 percent in 2016.

6.1.1 Demographic and Socio-economic Factors Affecting Accepting Attitude

Table 6.1 reveals that education is consistent individual factor to shape the accepting attitude towards PLHIV among women in Nepal. However, the level of accepting attitude has changed from 2011 to 2016 NDHS. SLC and above educated women have more accepting attitude than other socio-demographic categories of study population.

Table 6.1: Percent distribution of women with accepting attitude towards PLHIV and demographic and socio-economic characteristics, Nepal Demographic and Health Survey, 2011 and 2016

Demographic and socio-economic characteristics	NDHS, 2011		NDHS, 2016	
	Percent	Number	Percent	Number
Age				
< 25 Years	54.49***	4,493	61.90***	4,052
25 years and above	46.21***	6,451	58.80***	6,296
Marital Status				
Never Married	58.94***	2,484	68.10***	2,401
Married	46.98***	8,167	57.70***	7,705
Divorce/Separated	38.89***	91	60.20***	83
Widowed	44.06***	202	51.60***	159
Place of Residence				
Urban	54.60***	1,722	6882***	6,882
Rural	48.60***	9,222	3467***	3,467
Education				
No Education	33.10***	3,596	42.60***	2,559
Primary	43.50***	1,984	49.70***	1,605
Some Secondary	58.90***	3,036	63.20***	3,068
SLC and above	67.90***	2,329	85.20***	3,116
Occupation				
Not Working	56.40***	2,636	63.00***	3,226
Professional/Managerial	66.30***	414	86.10***	483
Clerical	64.20***	106	83.10***	166
Sales/Service	43.30***	1,093	78.80***	1,058
Skilled Manual	59.70***	410	65.90***	431
Unskilled Manual	55.10***	218	56.90***	225
Agriculture	41.10***	6,048	50.10***	4,747
Others	47.10***	16	64.50***	431
Wealth Quintile				
Poorest	31.40***	1,651	39.10***	1,820
Poorer	39.70***	1,892	52.80***	1,932
Middle	48.30***	2,149	54.40***	1,775
Richer	56.90***	2,494	65.00***	2,188
Richest	61.50***	2,758	79.60***	2,634
Total	**49.60**	**10,944**	**60.00**	**10,348**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* $\square 2$ association

Note: Total cases included only those who have HIV/AIDS knowledge.

The bi-variate analysis of NDHS, 2011 and 2016 shows that the association between accepting attitude towards PLHIV and demographic and socio-economic, geo-development, cultural and media exposure individual factors is high (p<0.01). The

individual factors of women have affected the accepting attitude towards PLHIV in Nepal. The earlier studies have also indicated the similar findings (Karki, 2014; BC & Basel, 2013; Jha & Madison, 2009; Mahat & Eller, 2009).

Empirical applications of theories of health belief model (HBM) in socio-economic dimension on attitude towards PLHIV assessed that socio-economic factors predominantly affected the accepting attitude towards PLHIV (King, 1999). It is suggested that social support to PLHIV and accessibility health care services also contributed to outcomes of the measures undertaken to control epidemic (Wilson, 1991). It is also understood that AIDS campaign meaningfully contributed to normative support to the affected people for the accepting attitude by the face-to face AIDS education to small groups through the media campaign have been emphasized. The education, social support and wealth index are the major individual factors that have been affecting the accepting attitude towards people living with HIV (King, 1999).

Discrimination results the breakdown of the social fabric which was also the social fabrics of the society contributed to the violations of the human rights (Parker & Aggleton, 2007). Fear of the discrimination constraints the living normal life of PLHIV. The life after disclosing the HIV status resulted the discriminatory towards the PLHIV (NCASC, 2001. The discriminatory attitude towards PLHIV contributed to stress, low-self-esteem, suicide, job losses, unemployment and dislocations of the PLHIV along with largely social inequality (Arachu & Farmer, 2005). The right information on HIV/AIDS and internalization of information into life of the individuals support to reduce the vulnerability of the PLHIV.

6.1.2 Geo-Development Factors Affecting Accepting Attitude

Geo-development factors have been affecting the accepting attitude towards PLHIV. Table 6.2 reveals that ecological zone and provinces have affected the accepting attitude towards PLHIV among women in Nepal which is statistically significant ($p<0.01$). Women from Madhesh province were less likely to have accepting attitude towards PLHIV than from other provinces in 2011 and 2016 except Karnali province. This indicates that the differentiation of women's geo-political, cultural, social

relations and interactions seen as a useful explanation of accepting attitude PLHIV among women in Nepal.

Table 6.2: Percent distribution of women with accepting attitude towards PLHIV and geo-development characteristics, Nepal Demographic and Health Survey, 2011 and 2016

Geographical characteristics	NDHS, 2011 Percent	Number	NDHS, 2016 Percent	Number
Ecological Zone				
Mountain	32.70***	692	50.10***	665
Hill	47.10***	4,782	62.10***	5,343
Terai	53.90***	5,470	59.20***	4,441
Development Region				
Eastern	49.60***	2,798	54.50***	2,171
Central	52.60***	3,335	65.70***	3,378
Western	52.90***	2,398	61.60***	2,251
Mid-western	39.80***	1,255	52.40***	1,514
Far-western	44.60***	1,159	61.00***	1,037
Provinces				
Province #1	50.10***	2,610	56.10***	1,867
Madhesh	45.50***	599	47.10***	1,098
Bagmati	50.20***	1,960	71.10***	2,582
Gandaki	48.20***	818	61.00***	1,190
Lumbini	53.60***	2,370	58.20***	1,913
Karnali	32.00***	691	51.40***	662
Sudur Paschim	46.20***	1,896	61.00***	1,037
Total	**49.60**	**10,944**	**60.00**	**10,348**

Source: NDHS Data Files, 2011 and 2016
*Note *** denotes p<0.001 and ** denotes p< 0.05 in* $\square^2$ association
Note: Total cases included only those who have AIDS knowledge.

The study is found that there is a significant association between geo-development characteristics of women and accepting attitude toward PLHIV. The accepting attitude is found in all categories of ecological zone, development region and federal state. Women in province#2 have lower level of accepting attitude towards PLHIV. The provincial characteristics of people having different attitude found in the Pakistan study, participants in different federal state provinces were associated with increased risk of more discrimination (Khan & Abbas, 2017).

6.1.3 Cultural Factors Affecting Accepting Attitude towards PLHIV

Region, ethnicity and native language of women have affected women's accepting attitude towards people living with HIV. The association between the cultural factors and accepting attitude towards PLHIV is found statistically significant ($p<0.1$ and $p<0.05$). Table 6.3 shows Christian and Kirant women have higher level of accepting attitude towards PLHIV than women of other religions.

Table 6.3: Percent distribution of women with accepting attitude towards PLHIV and cultural Factors, Nepal Demographic and Health Survey, 2011 and 2016

	NDHS, 2011		NDHS, 2016	
Cultural factors	**Percent**	**Number**	**Percent**	**Number**
Religion				
Hindu	49.90***	9,259	60.30***	8,986
Buddhist	48.40***	1,032	60.70***	613
Kirat	59.30***	189	57.90***	164
Christian	50.70***	214	69.80***	318
Muslim	34.70***	246	40.40***	267
Ethnicity				
Hill Brahmin	60.40***	1,766	72.40***	1,473
Hill Chetri	48.80***	2,280	61.40***	2,183
Terai			70.20***	168
Brahmin/Chetri	43.80***	137		
Other Terai Caste	34.80***	586	43.80***	879
Hill Dalit	45.30***	1,115	52.20***	966
Newar	61.20***	530	73.90***	614
Hill Janajati	50.30***	2,948	60.10***	2,508
Terai Janajati	47.00***	1,084	58.00***	1,047
Muslim	34.30***	243	39.90***	263
Others	55.00***	20	66.70***	39
Terai Dalit	27.00***	233	48.10***	208
Native Language				
Nepali	53.50***	6,186	64.20***	5,942
Bhojpuri	52.60***	385	51.20***	484
Others	47.10***	3,706	58.80***	3,112
Maithali	25.00***	664	39.90***	810
Total	**49.6**	**10,944**		**10,348**

Source: NDHS Data Files, 2011 and 2016
*Note *** denotes p<0.001 and ** denotes p< 0.05 in* $\square 2$ association
Note: Total cases included only those who have HIV/AIDS knowledge.

Based on the background of ethnic and native language of women, women of Newar and Nepali native language are more likely to have accepting attitude. However, the

discriminatory attitude are common among Nepali Women. Discriminatory attitude towards PLHIV is fueled by the inappropriate social and cultural beliefs and assumptions. Socially and personally, people tend to associate HIV with moral integrity (Beine, 2003). These types of beliefs are common in Nepal as indicated by the analysis of NDHS, 2011 and 2016.

6.1.4 Media Exposure Factors Affecting Accepting Attitude towards PLHIV

Media exposure is an important factor affecting accepting attitude towards PLHIV among women in Nepal. The analysis of NDHS, 2011 and 2016 reveals that there is an association between media exposure and accepting attitude towards PLHIV which is statistically significant at $p<0.01$. Among media exposure sources, reading newspaper or magazine among women consistently affects the accepting attitude towards PLHIV in 2011 and 2016. However, other media like radio and TV also have effect on attitude towards PLHIV. The association between media exposure and attitude towards PLHIV is found significant ($p<0.01$).

Table 6.4: Percent distribution of women with accepting attitude towards PLHIV and media exposure, Nepal Demographic and Health Surveys, 2011 and 2016

Media exposure	NDHS, 2011		NDHS, 2016	
	Percent	Number	Percent	Number
Frequency of Reading Newspaper				
Not at All	40.20***	6,549	50.00***	6,479
Less than once a week	61.80***	2,802	74.10***	2,762
At least once a week	66.60***	1,594	83.60***	1,107
Frequency of listening radio				
Not at All	38.10***	1,659	54.10***	3,664
Less than once a week	48.90***	4,023	62.70***	3,370
At least once a week	53.70***	5,262	63.90***	3,314
Frequency of watching Television				
Not at All	32.20***	2,279	41.00***	2,465
Less than once a week	46.50***	2,950	60.10***	2,226
At least once a week	58.10***	5,715	68.30***	5,657
Total	**49.60**	**10,944**	**60.0**	**10,348**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

Note: Total cases included only those who have HIV/AIDS knowledge.

It is well understood that the mass media production and broadcasting is greatly varies across different metropolitan cities. The effect of the newspaper, listening radio and

watching television on promoting HIV/AIDS knowledge. The mass media campaigns provide the accurate and objective information related to HIV/AIDS to individuals, or even small group of people for awareness building processes. Hence, the increment of social media and accessibility contributed to accepting attitude as well (Khan & Abbas, 2017). Previous studies of Nepal also indicate that media exposure among youth adolescent and high risk population have been affected to accepting attitude towards PLHIV (Shakya, 2012; Roka, 2002; Aryal, 2000; Gurung, 2004; Jha & Madison, 2009).

The results of the analysis indicates that the role of media on educating accepting attitude towards PLHIV. Media sources such as newspapers (printed or online) are helpful in improving positive attitude. Radio and television have a weaker influence on teaching people about minimizing stigma and prejudice. However, the role of media on reducing the discriminatory attitude towards PLHIV is found to low in the study. In the context of Nepal, the lack of culturally sensitive messages were the major cause of the low levels of effect on the reducing stigma and discrimination towards PLHIV.

6.1.5 Socially Constructed Knowledge and Attitude towards PLHIV

The accepting attitude towards PLHIV are determined by the individual demographic and socio-economic factors in quantitative analysis. The qualitative analysis also identifies that socially constructed factors have affected the accepting attitude towards PLHIV. The educated, economically middle class and young women have higher level of accepting attitude towards PLHIV. Majority of women perceived that PLHIVs should be accepted in the society. However, women of different characteristics irrespective of their ethnicity, religion, economic class have identified the prevalence of negative attitude towards PLHIV in the society till date. There is a contrast between what people of the community utter in public and do/prefer in private.

Most of the women (25 out of 31) viewed that the response of family and the wider society towards PLHIV is crucial. Most of women with clear understanding that HIV and AIDS are a stigmatized disease and the PLHIV were treated with disdain and hatred. Most of women perceive that AIDS is the result of *karma* (*Kharab Karma*).

The narrative analysis of potential respondents of in-depth interview indicates that majority of the research participants (18 out of 31) have accepting attitude towards caring a family member with AIDS in home. However, all except a woman reported that the social perception is negative towards people living AIDS. So, the woman was unwillingly attending the family member with AIDS. The in-depth insights of qualitative information suggested that there were widespread stigmas and discriminations in the society. The study also found that educated and young women had more accepting attitude than older women of lower educational status did. A 12 class passed, educated 22 years old woman stated:

> *If I have a family member living with AIDS, I will take care of him/her properly without any hesitation regardless of what society thinks. I think, the society will degrade our social status. Why just me, I encourage others to properly care the members with AIDS at their homes too. I believe, if people with AIDS are the victims of their immoral deeds, an innocent child would never have acquired AIDS. Children should be protected if the PLHIV should accept in the household and community.*

However, the social perception towards PLHIV is not positive. Most of the community people still stigmatize and discriminate PLHIV if the status is revealed.

Another potential respondent from the Tharu community mentioned that she would not voluntarily take care family members infected with AIDS. This indicates that there is wide spread fear of stigma and discrimination in the society. The social constructive knowledge of AIDS is more responsible for such stigmatization.

The accepting attitude towards buying vegetables from shopkeepers with AIDS were also found in qualitative analysis similar to quantitative. Potential respondent from the field site stated that there were practices of buying vegetables in the community. She told that:

> *We have a family in our village. Husband was HIV positive. Husband also infected the wife. After husband died, the family started growing vegetables. Almost every member of the community buys vegetables from the infected*

family. Here, we have no problem buying vegetables from HIV infected people (A 28 years old Yadav woman).

The in-depth interview with women revealed that the women of higher economic status and education reported the desire to keep HIV positive cases secret. They believe that disclosure of HIV/AIDS cases will compromise their social status and dignity. A high caste Brahmin women holding bachelor's degree of education presented her view as follows:

If we have a HIV positive case in our house, we conceal it from society. We treat it in a distant hospital. Our social status is high and people respect us. If the case is disclosed, we will lose our respect. Disclosure will not only bring disrespect but also we will have to face stigma and discrimination (Ghrina, Chi chi ra Dur Dur). So, we will keep it secret.

In contrast to the aforementioned issues, people of lower economic class and socially excluded do not keep HIV positive cases secret. According to them, they do not feel any matters of encounter regarding any stigma and discrimination. A literate woman of Dalit community stated;

We don't have any hesitation to disclose the HIV positive cases to the society. The society does not take our matters seriously, as we are already discriminated by the society. The people of society consider AIDS the disease of the poor like us. Why do we need to disclose it?

The in-depth analysis suggested that various social norms, values and cultural practices affect the accepting attitude towards PLHIV. Broader socio-cultural factors are found to be the important aspects for the accepting attitude towards PLHIV.

6.2 Multivariate Analysis of Accepting Attitude towards PLHIV

To identify the factors with significant effect on the accepting attitude towards HIV/AIDS, partial and general statistical models have been used. Due to the binary nature of outcome variable on accepting attitude towards PLHIV, the binary logistic regression analysis is employed in the study. To explain the out factors, the key

explanatory variables are chosen from broad areas such as demographic and socioeconomic, geo-development, cultural, and media exposure.

6.2.1 Partial Regression Models of Accepting Attitude towards PLHIV

In total, four models are employed in this analysis. Modeling elements that influence women's views regarding PLHIV include demographic and socioeconomic characteristics (model 1), geographic development (model 2), cultural factors (model 3), and media exposure (model 4). Finally, a general model fitted for the net effects among the different variables is included in partial regression model.

Demographic and Socio-economic Model: #1

In this model of analysis, six socio-economic and demographic factors such as age, marital status, place of residence, education, occupation and wealth index are introduced as explanatory variables to identify the effect on accepting attitude towards PLHIV among women in Nepal. This partial regression model shows the effects of the broader social factors on attitude towards PLHIV.

The factors affecting women's attitude towards safer sex are examined with demographic variables age, marital status and place of residence) and socio-economic (education, occupation and wealth quintile) factors in a model. In this analysis, 6 variables are introduced in regression equation. The analysis indicates that education is the most predictable factor for attitude towards PLHIV.

Table 6.5 shows that education of women is most influential factor to affect women's attitude towards PLHIV ($p<0.01$). The women with SLC + educational attainment were five times more likely to have accepting attitude towards PLHIV than women with no education in 2016 whereas 3 three times like to have accepting attitude in 2011.

Table 6.5: Logistic regression analysis on accepting attitude towards PLHIV by demographic and socio-economic factors, Nepal Demographic and Health Surveys, 2011 and 2016

Factors	NDHS, 2011			NDHS, 2016		
		CI 95%			CI 95%	
Age	Odds ratio	Lower	Upper	Odds ratio	Lower	Upper
<25 years	21***	0.81	1.01	0.80***	0.70	0.90
25 and Above Years (RC)	1.00					
Marital Status						
Never Married	1.06	0.77	1.45	1.19	0.83	1.70
Married	0.97	0.72	1.3	0.98	0.70	1.37
Divorce/Separated	0.58	0.46	0.86	1.14	0.64	2.01
Widowed (RC)	1.00			1.00		
Place of residence						
Urban	0.77***	0.68	1.17	1.12**	1.02	1.23
Rural (RC)	1.00			1.00		
Education						
No education (RC)	1.00			1.00		
Primary	1.48***	1.31	2.97	1.25***	1.10	1.43
Some Secondary	2.57***	2.28	2.89	2.01***	1.30	3.11
SLC and above	3.38***	2.93	3.90	4.96***	4.17	5.91
Occupation						
Not Working (RC)	1.00			1.00		
Professional/Managerial	1.45**	11.24	1.97	1.68***	1.26	2.24
Clerical	1.40**	0.50	3.92	2.01***	1.30	3.11
Sales/Service	1.77	0.60	5.24	1.96***	1.65	2.33
Skilled Manual	1.40	0.51	3.83	1.21*	0.97	1.51
Unskilled Manual	1.62**	0.59	4.47	1.29*	0.97	1.72
Agriculture	1.54	0.55	4.29	1.05	0.94	1.17
Others	1.34	0.47	3.82	0.36	0.10	1.25
Wealth Quintile						
Poorest(RC)	1.00			1.00		
Poorer	1.28***	1.11	1.48	1.47***	1.28	1.68
Middle	1.65***	1.43	1.90	1.55***	1.35	1.78
Richer	2.08***	1.80	2.40	2.05***	1.77	2.36
Richest	2.07***	1.75	2.45	3.04***	2.58	3.59

**** indicates p<0.01 and **indicates p<0.5*

Similarly, women's wealth index also determined the accepting attitude towards PLHIV. The analysis of NDHS, 2011 and 2016 indicates that women from the richest category were three times more likely to have accepting attitude towards PLHIV than the poorest women in 2016 whereas 2 times likely in 2011.

Geo-Development Model: #II

Geo-development (ecological region and development region) factors are examined with attitude towards PLHIV in this model. In this analysis, 2 variables are

introduced in regression equation. The logistic regression analysis indicates that individual geo-development factors have affected women's attitude towards PLHIV.

Table 6.6: Logistic regression analysis on accepting attitude towards PLHIV by geo-development factors, Nepal Demographic and Health Surveys, 2011 and 2016

Factors	NDHS, 2011			NDHS, 2016		
		95%CI			95%CI	
Ecological region	Odds ratio	Lower	Upper	Odds ratio	Lower	Upper
Mountain(RC)	1.00			1.00		
Hill	1.79***	1.56	2.05	1.50***	1.26	1.77
Terai	2.69***	2.33	3.11	2.02***	1.70	2.42
Provinces						
Province #1 (RC)	1.00			1.00		
Madhesh	0.49***	0.40	0.59	0.57***	0.50	0.68
Bagmati	1.10	0.96	1.25	2.19***	1.91	2.50
Gandaki	1.21***	1.05	1.41	1.34***	1.14	1.57
Lumbini	0.72***	.63	0.83	1.01	0.90	1.15
Karnali	0.57***	0.46	0.70	1.01	0.83	1.21
Sudur Paschim	0.77***	0.68	0.90	1.28***	1.10	1.50

**** indicates p<0.01 and **indicates p<0.5*

Table 6.6 reveals that women in the Terai were three times more likely to have accepting attitude towards PLHIV than women from the Mountain in 2011 whereas two times more likely to have accepting attitude towards PLHIV in 2016. The aforementioned results predict that ecological zone have consistently affected accepting attitude towards PLHIV over the period of five years. The analysis also suggested that women's accepting attitude towards PLHIV is also determined by the federal state characteristics.

Cultural Model: #III

Women's individual cultural factors like caste/ethnicity and native language are the factors affecting women's attitude towards PLHIV. In this analysis, 2 variables are introduced in regression equation. The logistic regression analysis indicates that ethnicity as individual cultural factor has affected women's attitude towards PLHIV ($p<0.01$).

The cultural factors such as ethnicity and native language are found to be explained the outcome. It is to say that individual cultural factors of women Nepal have critical to the accepting attitude towards PLHIV. In general negative attitude link with the

social construction of HIV knowledge rather than the biomedical reality of HIV and AIDS.

Table 6.7: Logistic regression analysis on accepting attitude towards PLHIV by cultural factors, NDHS, 2011 and 2016

Factors	NDHS, 2011			NDHS, 2016		
		95% CI			95% CI	
Ethnicity	Odds ratio	Lower	Upper	Odds ratio	Lower	Upper
Hill Brahmin	3.13***	2.09	4.72	2.00***	1.43	2.81
Hill Chetri	1.94***	1.30	2.92	1.24	0.90	1.71
Terai Brahmin/Chetri	2.07***	1.26	3.42	2.34***	1.50	3.62
Other Terai Caste	1.02	0.70	1.49	0.90	0.66	1.23
Hill Dalit	1.67**	1.10	2.53	0.84	0.60	1.18
Newar	3.90***	2.54	6.00	2.40***	1.67	3.42
Hill Janajati	2.33***	1.57	3.46	1.28	0.93	1.76
Terai Janajati	1.96***	1.32	2.91	1.37*	1.01	1.90
Muslim	0.99	0.63	1.56	0.67**	0.46	0.97
Others	3.06**	1.15	8.20	-	-	-
Terai Dalit(RC)	1.00			1.00		
Native Language						
Nepali	2.21***	1.62	3.04	2.08	1.67	2.58
Bhojpuri	3.66***	2.69	4.98	1.84	1.45	2.33
Others	1.54***	1.14	2.09	1.68	1.37	2.06
Maithali (RC)	1.00			1.00		

**** indicates p<0.01 and **indicates p<0.5*

Table 6.7 shows that the Newar women were almost four more time likely to have accepting attitude towards PLHIV than Terai Dalit women in 2011 whereas more than 2 times in 2016. It is also found that the Hill Brahmin women were also twice more likely to have accepting attitude towards PLHIV than the Terai Dalit women. The partial regression analysis indicates that ethnicity is the predictable factor for the accepting attitude towards PLHIV.

Media Exposure Model: #IV

Individual media exposure variables for women, such as reading newspapers, listening to radio, and watching television, influence women's views on PLHIV. In this analysis, 3 variables are introduced in regression equation. The analysis indicates that reading newspaper by women is the most influential factor among media exposure factors for the attitude towards PLHIV. The partial logistic regression

analysis indicates that individual newspaper or magazine reading factor has affected women's attitude towards PLHIV.

Table 6.8: Logistic regression analysis on accepting attitude towards PLHIV by media exposure, Nepal Demographic and Health Surveys, 2011 and 2016

Factors	NDHS, 2011			NDHS, 2016		
	Odds ratio	95% CI		Odds ratio	95% CI	
Frequency of Reading News Paper		**Lower**	**Upper**		**Lower**	**Upper**
Not at All(RC)	1.00			1.00		
Less than once a week	1.54***	1.39	1.72	2.27***	2.05	2.52
At least once a week	1.64***	1.43	1.88	3.91***	3.29	4.64
Frequency of listening radio						
Not at All(RC)	1.00			1.00		
Less than once a week	1.38***	1.21	1.57	1.20***	1.09	1.33
At least once a week	1.37***	1.20	1.55	1.17***	1.05	1.30
Frequency of watching Television						
Not at All(RC)	1.00			1.00		
Less than once a week	1.54***	1.35	1.75	1.77***	1.57	2.00
At least once a week	2.20***	1.95	2.48	2.16***	1.95	2.40

**** indicates p<0.01 and **indicates p<0.5*

Table 6.8 revels that reading newspaper and watching television are the consistent media exposure factors for the women's attitude towards PLHIV. Women reading newspaper at least once a week almost 2 times more likely to have accepting attitude towards PLHIV than those not reading at all in 2011 and almost four times in 2016. In case of watching television, women who watch television at least once a week were 2 times more likely to have accepting attitude towards PLHIV than those who do not watch at all. The socio-economic levels of the different section of society have been deterring the constructing the attitude towards PLHIV. The translation of English materials into Nepali language are quite problematic and broadcasting those resource or promoting information to common people viewed different as per the requirements. It can said that knowledge of HIV/AIDS always does not translated into constructing positive attitude in different sections of society and ethnic groups (Beine, 2003).

6.2. 2 General Regression Model of Accepting Attitude towards PLHIV

To identify the factors affecting women's attitude towards PLHIV, 13 demographic, social, economic, cultural, geo-development and media exposure variables are

examined with accepting attitude towards PLHIV. The analysis of this general regression model has also identified socio-cultural and economic factors of women as the most influential factors of women's accepting attitude towards PLHIV those are statistically significant ($p<0.01$).

The general model of logistic regression analysis suggests that education of women is most influential factor for the attitude towards PLHIV among the women aged 15-49 years. Among the 13 different individual factors, education, wealth index and ethnic characteristics are the most influential factors for the accepting attitude towards PLHIV. Table 6.9 shows that SLC and above educated women were almost 3 times more likely to have accepting attitude towards PLHIV than women with no education in 2011 whereas almost 4 times more likely to have accepting attitude towards PLHIV in 2016. The aforementioned facts suggest that education is the key factor for accepting attitude towards PLHIV among women in Nepal.

Table 6.9: Logistic regression analysis on composite index of accepting attitude towards PLHIV (General model) by selected factors, Nepal Demographic and Health Surveys, 2011 and 2016

Factors	NDHS, 2011			NDHS, 2016		
	Odds	95.0% CI		Odds	95.0% CI	
Age	**ratio**	**Lower**	**Upper**	**ratio**	**Lower**	**Upper**
<25 years	0.145	0.84	1.07	1.19***	1.05	1.34
25 and Above (RC)	1.00			1.00		
Marital Status						
Never Married	3.03	1.67	2.57	1.15	0.80	1.65
Married	1.94	1.62	2.40	1.04	0.74	1.46
Divorce/Separated	0.58	0.27	1.28	1.21	0.67	2.17
Widowed (RC)	1.00			1.00		
Place of Residence						
Urban	0.75***	0.67	0.91	0.98	0.89	1.08
Rural (RC)	1.00			1.00		
Education						
No Education (RC)	1.00			1.00		
Primary	1.34***	1.17	1.53	1.12	0.97	1.27
Some Secondary	2.21***	1.90	2.58	1.67***	1.46	1.91
SLC and above	2.74***	2.25	3.33	3.71***	3.06	4.50
Occupation						
Not Working (RC)	1.00			1.00		
Professional/Managerial	0.74	0.55	1.00	1.49***	1.10	2.01
Clerical	1.23	0.72	2.13	1.87***	1.19	2.93
Sales/Service	0.82***	0.71	0.95	1.60***	1.34	1.92
Skilled Manual	1.06	0.88	1.27	0.90*	0.80	1.01
Unskilled Manual	0.92	0.70	1.20	1.01	0.80	1.01

Agriculture	0.61***	0.43	0.87	1.06	0.80	1.01
Others	1.39	0.33	5.74	0.38	0.10	1.36
Wealth Index			.			
Poorest (RC)	1.00			1.00		
Poorer	1.28***	1.08	1.54	1.53***	1.32	1.78
Middle	1.71***	1.42	2.06	1.78***	1.51	2.10
Richer	2.07***	1.69	2.54	2.40***	2.01	2.85
Richest	1.91***	1.65	2.41	3.23***	2.64	3.97
Ecological Region						
Mountain(RC)	1.00			1.00		
Hill	1.78***	1.44	2.22	1.27**	1.05	1.53
Terai	2.40***	1.91	3.02	1.36***	1.09	1.67
Provinces						
Province #1 (RC)	1.00			1.00		
Madhesh	1.19	1.04	1.38	1.39***	1.09	1.79
Bagmati	1.20	1.04	1.40	1.34***	1.15	1.56
Gandaki	0.70***	0.57	0.86	1.06	0.90	1.26
Lumbini	1.97	1.60	2.43	1.16**	1.00	1.35
Karnali	0.66***	0.53	0.83	1.57***	1.27	1.95
Sudurpacchim	1.21***	1.01	1.44	1.72***	1.43	2.07
Ethnicity						
Hill Brahmin	1.62**	1.05	2.53	1.82***	1.28	2.60
Hill Chhetri	1.62*	1.05	2.52	1.84***	1.30	2.60
Terai Brahmin/Chettri	1.23	0.71	2.16	1.48*	0.93	2.35
Other Terai Caste	0.58*	0.40	0.88	1.03	0.76	1.41
Hill Dalit	1.82**	1.18	2.85	1.80***	1.25	2.57
Newar	2.24***	1.40	3.59	1.91***	1.29	2.85
Hill Janajati	2.08***	1.37	3.17	2.07***	1.41	3.05
Terai Janajati	1.41*	0.94	2.14	2.17***	1.55	3.02
Muslim	0.82	0.51	1.31	1.97***	1.42	2.72
Others	1.48	0.52	4.23	-	-	-
Terai Dalit (RC)	1.00			1.00		
Native Language						
Nepali	2.48***	1.77	3.48	1.99***	1.48	2.66
Bhojpuri	3.44***	2.47	4.80	2.00***	1.53	2.58
Others	111***	1.37	2.61	1.85***	1.40	2.45
Maithali (RC)	1.00			1.00		
Media Exposure						
Frequency of Reading Newspaper						
Not at All (RC)	1.00			1.00		
Less than Once a Week	1.19**	1.04	1.37	1.31***	1.16	1.48
At least Once a Week	1.24**	1.02	1.53	1.32***	1.08	1.61
Frequency of listening radio						
Not at All (RC)	1.00			1.00		
Less than Once a Week	1.39***	1.21	1.61	1.45***	1.27	1.65
At least Once a Week	1.45***	1.26	1.67	1.26	1.11	1.43
Frequency of Watching Television						
Not at All(RC)	1.00			1.00		
Less than once a week	1 .21**	1.05	1.40	1.27**	1.05	1.53
At least once a week	1.24**	1.05	1.45	1.36***	1.09	1.69

**** indicates p<0.01 and **indicates p<0.5*

Cultural factors like ethnicity and native language of women were also the important factors affecting women's attitude towards PLHIV. According to ethnic background of women, Newar and Hill Janajati women were 2 times more likely to have accepting attitude towards PLHIV than Terai Dalit women. Furthermore, Hill Brahmin and Hill Chhetri women were almost 2 times more likely to have accepting attitude than Terai Dalit women. According to native language of women, Bhojpuri speaking women were three times more likely to have accepting attitude towards PLHIV than Maithali speaking women in 2011 whereas 2 times more likely to have accepting attitude towards PLHIV in 2016. Similarly, in both polls (2011 and 2016), Nepali native language women were about twice as likely than Maithali native speaker women to hold opinions concerning PLHIV. The aforementioned facts indicate that ethnicity and native language are the influential factors for attitude towards PLHIV.

Wealth quintile factor also contributed to accepting attitude towards PLHIV. Women from richer, richest and middle class were almost 2 times more likely to have accepting attitude towards people living with HIV than poor women in 2011 whereas 3 times more likely in 2016. The aforementioned facts indicate that wealth index is also the predictable factor for the accepting attitude towards PLHIV.

The logistic regression analysis shows that media exposure, provincial state, ecological zone and occupations are influential factors for attitude towards PLHIV. It is argued that individual social, economic, demographic, geo-spatial, ethnicity, native language and print and visual media factors are the major determinants to perceive and accepting attitude towards PLHIV among in Nepal.

6.3 Discussion and Summary

The research of views about PLHIV reveals that they are connected to demographic and socioeconomic characteristics, as well as geo-development, cultural, and media exposure. According to the findings, a considerable majority of women have positive opinions regarding PLHIV. However, composite index of all four indicators (willing to care HIV infected people at home, buy vegetables from shopkeepers with AIDs infected, allowed to HIV infected female teacher continue to teach and disclosure of

HIV cases) is found low (50%) in 2011 compared to in 2016. The in-depth interviews indicate that almost all the research participants do not have positive attitude towards PLHIV but many of them have accepting attitude. The accepting attitude vary with varying/different socio-cultural background and context. The wide spread stigma and discrimination to PLHIV is common in Nepal.

As discussing the accepting attitude towards PLHIV, it is quite common in Nepal. It is well understood that the lack of cultural understanding paradoxically enlarge the problem. Some prevention efforts aimed to reduce the stigma and discrimination, however translated into result is still problematic. The discrediting the persons were deeply rooted in the society (Goffman, 1963). Prejudice, negative attitude, abuse and maltreatment are the common features of the attitude towards PLHIV. The common attitude generally constraints to utilize the available services of HIV and AIDS along with violation of rights of the individuals in the context of PLHIV.

The severity of problem of accepting attitude towards PLHIV seen as challenges to scholars to produce culturally sensitive ideas to respondent the epidemic. It identified that the stigma and discrimination as serious problem need to be more understanding and attention to combat with HIV and AIDS (Beine, 2001; Beine, 2003; Jha & Medisin, 2009; Mahat & Eller, 2009; Ross, 2010; USAID, 2004; Wasti et al., 2009; Nepal & Rose, 2010). The results of the studies indicates that cultural should be taken seriously and culturally informed model of HIV prevention is crucial for the further policy debate (USAID, 2004; Wasti et al., 2009; Poudel et al., 2005). The cultural construction of HIV is major causal explanation of accepting attitude towards PLHIV.

The HIV/AIDS scholars of Nepal emphasized the term mechanism which is creates the stigmatization towards PLHIV. The common people understand that the HIV and AIDS is the outcome of *kharab karma* (bad activity) is the key theme with regarding the HIV/AIDS in Nepal (Beine, 2002). The concept of hate is powerful tools to describe the HIV and AIDS in Nepal. In some cases, the media is also played significant role to promote negative attitude towards PLHIV. The media advertisement on condom and sexual activities, IDUs and transgender sexual activities seen as negatively in the Nepali society. This also helps to building negative attitude towards PLHIV and utilizing the HIV services.

In the recent times, there is growing awareness on the cultural matters incorporated in the prevention models of HIV and AIDS. The condom use is best means to prevention from the AIDS which rejected by the cultural constructs of the HIV. Nepali society is not open as assumed. The cultural friendly knowledge and its utilization in the prevention model which is best idea to prevention (Beine, 2003; Wasti et al., 2009; Pokharel, 2008). In the late 1990s, it is set out to define a cultural model of HIV and AIDS in Nepal. It is also suggested that because of resident elements (cognitive schema) of this cultural model, the prevention strategies were actually contributing to the growth of the problem (and stigma) rather than reducing it.

Native language of people is an important cultural factor affecting the women's attitude towards PLHIV. The medically technical meanings of HIV/AIDS are problematic due to translation of English language into Nepali language. The understanding of HIV/AIDS is quite differently by the local people. Furthermore, the most of HIV/AIDS messages are in Nepali language where only 45 percent of Nepali people (CBS, 2012) having Nepali native language. The other linguistic group of people little bit understand the Nepali translated messages of HIV/AIDS except Nepali native language. Linguists have also discovered peculiar colloquial dialects of Nepali in use among the rural primary speakers of Nepali known as local languages rather than formal Nepali language. This indicates that the HIV/AIDS messages in the "*Gaunle*" (village language) would contributed to promotion the accepting attitude towards PLHIV.

CHAPTER SEVEN

FACTORS AFFECTING BEHAVIOR OF HIV/AIDS

This chapter focuses on the sexual and condom using behavior of the women age 15-49. It is believed that lack of awareness and misconceptions about HIV/AIDS have contributed to spreading epidemic. It is understood that information dissemination, education and communication continue to play major roles in the prevention of HIV/AIDS. In this context, individual and social factors, sexual and condom using behaviors of women were with demographic, social-economic, cultural, geo-development, and media exposure factors.

7.1 Factors Affecting Multiple Sexual Partners

Multiple sexual partners of a woman in Nepal is a key factor for the risk sexual behavior of HIV/AIDS. There are various typologies of individual factors affecting sexual behavior. The NDHS, 2011 and 2016 have collected multiple sexual practices data. The analysis of NDHS, 2011 and 2016 found that in 2011, 4.1 percent of women having multiple sexual partners in 2016 it was 3.2 percent. It indicates that there is an existence of multiple sexual practices among married and unmarried women in Nepal.

7.1.1 Demographic and Socio-economic Factors Affecting Multiple Sexual Partner of Women

About four percent of women ages 15-49 years old in 2011 and three percent in 2016 had 2 or more sexual partners. A significant number of women have multiple sexual partners in their lifetime, though it varies with their individual characteristics. In this sub-section of analysis, multiple sexual partners are analyzed with demographic and socio-economic factors. Table 7.1 shows that age, marital status, education, occupation, and wealth index of women determining the sexual behavior of women which are statistically significant ($p<0.01$ and $p<0.05$). These indicate adult women, never married and divorce/separated women, unskilled manual worker and poor women having more numbers of sexual partners than no educated, rich, managerial worker, married and young women.

Table 7.1: Percentage distribution of women with multiple sexual partners and selected demographic and socioeconomic factors, NDHS, 2011 and 2016

Demographic and socio-economic characteristics	NDHS, 2011 Percent	Number	NDHS, 2016 Percent	Number
Age				
< 25 Years	1.60***	2,576	1.30***	2,425
25 years and above	5.00***	7,391	3.8***	7,783
Marital Status				
Never Married	16.70***	18	13.60***	22
Married	4.00***	9,595	3.10***	9,871
Divorce/Separated	10.30**	97	10.90***	101
Widowed	6.20***	259	4.70***	213
Education				
No Education	5.70***	4,809	4.50***	4,164
Primary	4.00***	1,895	3.70***	1,924
Some Secondary	3.10***	1,879	2.00***	2,955
SLC and above	0.40***	1,384	0.90***	1,163
Occupation				
Not Working	2.60***	2,265	2.30***	3,198
Professional/Managerial	0.40***	274	1.50***	341
Clerical	2.60***	76	4.30***	116
Sales/Service	2.70***	968	4.30***	943
Skilled Manual	4.10***	315	4.40***	4,976
Unskilled Manual	16.70***	210	6.00***	383
Agriculture	4.70***	5,848	3.60***	251
Wealth Quintile				
Poorest	7.70***	1,735	6.30***	1,760
Poorer	4.90***	1,913	3.20***	2,024
Middle	3.40***	2,094	2.80***	2,140
Richer	3.10***	2,127	2.90***	2,180
Richest	2.10***	2,098	1.60***	2,102
Total	**4.10**	**9,968**	**3.20**	**10,206**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

Note: Total cases included only those who have ever sexual intercourse

Age and marital status of women are consistent demographic factors affecting women's sexual behavior. Women of lower level of education, never married and divorced/separated women having multiple sexual partners. The sexual proximate to normative values of society. However the transformation society from oriental values to modern values which is indicated by the facts of the NDHS, 2011 and 2016. The unmarried and divorced women were significantly associated with multiple sexual partners.

Economic and occupational factors are also key aspects of multiple sexual partners among women in Nepal. The findings also indicate that poor women are involved in manual skilled occupation and their involvement in multiple sexual partners is usual as the past studies (Jha & Madison, 2009; Karki, 2014; Uprety et al., 2009; Kapoor et al., 2018) also supported for the sexual behavior.

7.1.2 Geo-Development Factors Affecting Multiple Sexual Partners of Women

Geographical factors are identified to have significant contribution for women to have multiple sexual partners. As analysis of geo-development characteristics of women, women from Hill, Mid-western region and province Karnali were more likely to have multiple sexual partners in comparison to women from Terai, Eastern region and Madhesh province respectively.

Table 7.2: Percentage distribution of women with multiple sexual partners and selected geo-development variables, NDHS, 2011 and 2016

Geographical characteristics	NDHS, 2011 Percent	Number	NDHS, 2016 Percent	Number
Ecological Zone				
Mountain	4.40***	655	3.00***	602
Hill	5.00***	3,947	3.60***	4,322
Terai	3.40***	5,365	3.00***	5,283
Development Region				
Eastern	3.20***	2,369	2.70***	2,319
Central	3.40***	3,315	2.90***	3,604
Western	4.20***	2,114	3.500***	2,064
Mid-western	8.90***	1,197	5.00***	1,335
Far-western	2.90	975	2.90	884
Provinces				
Province #1	3.40***	2,155	2.60***	1,710
Madhesh	1.90***	861	2.30***	2,205
Bagmati	4.40***	1,586	3.40***	2,007
Gandaki	5.20***	726	4.10***	987
Lumbini	5.90***	2,153	3.50***	1,808
Karnali	9.30***	742	6.00***	604
Sudur Paschim	2.80***	1,620	2.90***	884
Total	**4.10**	**9,968**		**10,206**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

Nepal's geo-development diversity is associated with the sexual behavior of women in the country. The Mid-western region, Karnali province and Hill region of Nepal are linked with poverty and lower position of women. Labor migration to India is higher

in the aforementioned geo-development regions (NSASC, 2008). There is a huge chance of having multiple sexual partners to the migrant workers. Besides, access to HIV/AIDS services, basic information on remote areas of Nepal and availability of HIV prevention services are related with geographical constraints. The social economic development of state#6 lagging behind other provinces is the cause of practice of multiple sexual partners among women.

7.1.3 Cultural Factors Affecting Multiple Sexual Partners of Women

Cultural factors are also predictors for multiple sexual partners among women in Nepal. There is association between individual cultural factors and lifetime multiple sexual partners. Table 7.3 shows that Christian women have the highest (13%) multiple partners in their lifetime in 2011 whereas 10 percent of Kirant women have multiple sexual partners in 2016. In terms of ethnicity, Hill Dalit and Hill Janjati women have multiple sexual partners as compared to Hill Brahmin and Muslim. According to native language, women from Nepali native language are more likely to have multiple sexual partners as compared to Maithali Speaker women. However, in 2016 NDHS, higher percent of Maithali native language women have multiple sexual partners over 5 years period which is statistically significant.

Religion and ethnicity have effects on the sexual behavior of people. A study by Sadgrove identified that some members of a college religious fellowship are sexually active outside of marriage-behavior contrary to the group's professed standards of conduct (Sadgrove, 2007). Even when different religious or ethnic groups are examined in the same study, the kind of diversity needed to test hypotheses about cultural influences usually does not exist because the groups often share normative assumptions due to their daily interactions in the local communities. However, individual behavior is determined by the social, norms and values where the women are affiliated. The study of Caldwell (2000) also identified that the indigenous women do not have belief in virginity, so that multiple sexual partners exist in the indigenous and Janajati women. From the Caldwell's study, it is argued that Janajati women have more multiple sexual partners than other group of women in Nepal.

Table 7.3: Percentage distribution of women with many sexual partners and selected characteristics of culture, NDHS, 2011 and 2016

Cultural factors	NDHS, 2011		NDHS, 2016	
	Percent	Number	Percent	Number
Religion				
Hindu	3.80***	8,448	3.00***	8,835
Buddhist	6.80***	823	4.30***	483
Kirat	4.20***	143	9.90***	131
Christian	13.10***	175	5.40***	241
Muslim	1.60***	375	3.10***	515
Ethnicity				
Hill Brahmin	2.00***	1,400	1.10***	1,159
Hill Chetri	5.00***	1,943	2.90***	1,859
Terai Brahmin/Chetri	0.00***	111	2.30***	171
Other Terai Caste	1.90***	851	2.10***	1,630
Hill Dalit	6.10***	993	4.00***	830
Newar	3.50***	403	5.00***	464
Hill Janajati	5.70***	2,391	5.20***	2,079
Terai Janajati	4.10***	988	3.20***	984
Muslim	1.60***	374	3.10***	515
Others	0.00***	21	-	-
Terai Dalit	2.80***	494	2.90***	485
Native Language				
Nepali	4.90***	5,090	3.40***	4,884
Bhojpuri	2.80***	572	2.50***	1,622
Others	4.20***	3,177	1.60***	987
Maithali	1.00***	1,128	3.90***	2,714
Total	**4.10**	**9,968**	**3.20**	**10,206**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

Dalits in Nepal are living at the lowest strata of socio-economic dimensions. Whatever Dalit community women do, the community does not take it as the issues of prestige and social dignity. The non-Dalit community people think that it is common to have multiple sexual partners to a Dalit woman. However, in the Madheshi Dalit community women this case is hardly seen as they believe in close social norms. That is why Madheshi Dalit community are less likely to have multiple sexual partners as compared to Hill Janajati women.

7.1.4 Media Exposure and Multiple Sexual Partners of Women

Media exposure is known as the major factor to affect the HIV/AIDS behavior of people. Frequency reading newspaper or magazine, listening radio and watching TV have determined the multiple sexual partners of women. The analysis of NDHS data,

2011 and 2016 have found that there is an association between media exposure and multiple sexual partners of women which are statistically significant ($p<0.01$).

Table 7.4 reveals that reading newspaper or magazine is effective factor to less likely to have multiple sexual partners. In both NDHS (2011 and 2016) surveys the analysis indicates that only 1.6 percent of women among those reading newspaper or magazine have multiple sexual partners. It is also found that 6.3 percent of women have multiple sexual partners among those not watching television at all in 2011 whereas 4.4 percent in 2016.

Table 7.4: Percent distribution of women having more than one sexual partners and media exposure characteristics, NDHS, 2011 and 2016

Media exposure	NDHS, 2011		NDHS, 2016	
	Percent	Number	Percent	Number
Frequency reading newspaper				
Not at All	4.90***	7,268	3.70***	7,714
Less than once a week	2.10***	1,802	1.80***	1,790
At least once a week	1.60***	897	1.60***	702
Frequency of listening radio				
Not at All	4.70***	2,101	3.60***	4,714
Less than once a week	4.50***	3,847	2.80***	2,889
At least once a week	3.50***	4,019	3.10***	2,604
Frequency of watching TV				
Not at All	6.30***	2,826	4.40***	3,196
Less than once a week	3.90***	2,762	3.50***	2,117
At least once a week	2.90***	4,380	2.30***	4,895
Total	**4.10**	**9,968**	**3.20**	**10,206**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

The effectiveness of mass media to utilize the knowledge promotion behavior change intervention is found quite significant. As utilization of mass media campaign to disseminate the knowledge HIV prevention and transmission, commination of outreach workers and local print, audio, visual broadcasting contributed to interpersonal and source of knowledge in different settings and context. Condom pricing and distribution in local settings are the key strategic approach to utilize the mass media (Andreasen, 1995; Kotler et al., 2008) along with advocacy for policy reformulation. Furthermore, the mass media also contributed to reducing sex partners and prevention from the infections (Kotler et al., 2008).

It is also understood that the duration of campaign also effects the outcome of reducing the multiple sexual partner, however it is also conflicting with previous research (Snyder & Hamilton, 2002). The study indicates that a year or a less than year media campaign more than those more than year. In the developing nations, 18 months and more duration were more effective than less than one year in health promotion. Based on the aforementioned analysis and facts from the NDHS, 2011 and 2016, it is argued that the promotion of mass media might be helpful to reduce the trend of having multiple sexual partners among women in Nepal.

7.1.5 Multiple Partners Sexual Practices

The NDHS, 2011 and 2016 has identified that women have been practicing multiple sexual partners in Nepal. Among the total of 31 in-depth interviews from Ram Nagar of Nawalparasi in this study, 4 women having sexual relationship with more than partner in the past 12 months. Among the 4 women, two were the wives of migrants and 2 were unmarried. However, Dalit women, young aged and women involving in social media and internet have engaged in multiple sexual partners. In some cases, the study is found that wives of migrants are at risk of HIV infection. A literate woman (wife of migrants-worked in Qatar) of age 28 years have more than 4 sex partners in the past 12 months. She said that:

> *After a month of my husband's departure to Qatar for employment, I had sexual intercourse (sexual/intimate/physical relation) with a man from the same village. I used to have sex with that man at least once a week. Later on I had to migrate/go to another village as my extra marital sex was known to a third person. I had sex with unknown person in exchange of good gift hampers as well. I had sex with regular partner and non-regular partner. Two months back, I tested positive. I have abstained from extra marital sex at this time. I will keep this status secret from other people of the community and as well as my husband.*

The aforementioned case indicates that the wives of the migrants have multiple sexual partners and unsafe sexual practices resulting into HIV infection. The social attitude towards extra marital sex is very negative more than the pre-marital sex. The study also found that extra marital and pre-marital sex of socially deprived, especially Dalit

women are taken as a common matter by other group of people. The persons working in the field of HIV/AIDS have acknowledged that unsafe and multiple sexual partners exist among married and unmarried women in the community.

7.2 Factors Affecting Condom Using Behavior

Condom using behavior among women having multiple sexual partners is most effective preventive method for HIV. In this section, the factors affecting women's condom using behavior is being analyzed. In the last sex with most recent partner, only six percent of women have condom used. The purpose of condom use differ among the women, it's either for contraception or prevention of sexually transmitted infections.

7.2.1 Demographic and Socio-economic Factors and Condom Use

Condom use during sexual intercourse is the key strategic approach for the prevention of HIV/AIDS. In this sub-section of the analysis, condom using behavior of women has been analyzed with socio-economic and demographic factors. Table 7.5 reveals that young, never married, urban residents, SLC and above educated, professional/managerial occupation categories and the richest women are more likely than adult, married, rural, agricultural occupation/farmer, and poor women to wear a condom during their most recent intercourse. The association between this socio-demographic variables and condom use is statistically significant.

Condom use behavior is determined by male partner. It is found that males were more likely to report the condom use (MoHP et al, 2012; MoHP et al., 2017) than females in this study. Furthermore, the young peoples were reported to use condom for the avoidance of pregnancy rather than prevention from infections. The people get older age may switch to alternative modern non-barrier contraception method (Ngubane et al., 2008) that require less, if any negotiations with a male partner. Intra-conjugal transmission can be occur in either direction where male partner is infected by his (NCASC, 2008). It is argued that the role of male to prevention from the infection is crucial. The power relations of male and female is also indicative to understand the shaping behavioral pattern of condom use.

Table 7.5: Percentage distribution of women with condom use behavior and selected demographic and socioeconomic factors, NDHS, 2011 and 2016

Demographic and socio-economic characteristics	NDHS, 2011		NDHS, 2016	
	Percent	**Number**	**Percent**	**Number**
Age				
< 25 Years	8.50***	2,266	6.80***	2,046
25 years and above	5.40***	6,222	5.00***	6,469
Marital Status				
Never Married	50.00***	12	66.70***	9
Married	6.20***	8,452	5.30***	8,476
Divorce/Separated	16.70***	6	25.00***	12
Widowed	0.00***	18	5.60***	18
Place of Residence				
Urban	11.20***	1,165	6.20***	5,217
Rural	5.40***	7,323	4.30***	3,298
Education				
No Education	2.80***	4,069	2.60***	3,442
Primary	4.40***	1,588	4.50***	1,563
Some Secondary	9.50***	1,589	7.00***	2,472
SLC and above	15.60***	1,243	12.30***	1,039
Occupation				
Not Working	8.00***	1,996	4.90***	2,719
Professional/Managerial	16.70***	239	14.40***	298
Clerical	13.80***	58	5.30***	95
Sales/Service	8.70***	824	7.80***	812
Skilled Manual	5.40***	259	5.40***	313
Unskilled Manual	6.60***	183	3.40***	208
Agriculture	4.50***	4,920	4.80***	4,070
Others	25.00***	8	-	-
Wealth Quintile				
Poorest	2.60***	1,474	4.20***	1,441
Poorer	4.40***	1,644	4.80***	1,678
Middle	4.60***	1,782	4.40***	1,769
Richer	6.50***	1,747	3.90***	1,793
Richest	12.10***	1,840	9.50***	1,834
Total	**6.20**	**8,488**	**5.40**	**8,515**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* $\square^2$ association

Note: total cases included who have ever had sexual intercourse and missing values in the analysis

Young people were more likely to use condom in the last sex with most recent partners those were not co-resident and independent of age. It is determined by the length of residence and trust with the partner. In some of the cases, young people

were assess the risk of HIV infection during the relationships. Condom use is related with higher education attainment. The higher educational attainment is also linked with professional occupation and the richest category of wealth index which is significantly associated with the safe sexual behavior (Jha & Madison, 2009). From the bi-variate analysis, it is identified that socio-economic and demographic individual factors affect women's HIV/AIDS behavior.

7.2.2 Geo-Development Factors Affecting Condom Use

As examine the findings of NDHS, 2011 and 2016, it is found that there is association between provincial factor of women and condom use with recent partner in the last sex. According to ecological zone, women from the Hill region were more likely to use condom with recent partner in the last sex. It indicates that geography is one of the influential factor to women's condom using behavior.

Table 7.6: Percentage distribution of women with condom use behavior and selected geo-development variables, NDHS, 2011 and 2016

Geographical Factors	NDHS, 2011		NDHS, 2016	
	Percent	Number	Percent	Number
Ecological Zone				
Mountain	4.70***	578	4.30***	517
Hill	7.30***	3,307	6.40***	3,571
Terai	5.70***	4,604	4.80***	4,427
Development Region				
Eastern	5.50***	1,910	2.40***	1,884
Central	5.10***	2,933	4.40***	3,048
Western	6.00***	1,717	5.90***	1,660
Mid-western	7.10***	1,071	8.80***	1,145
Far-western	11.30***	859	10.70***	778
Provinces				
Province #1	5.70***	1,744	3.10***	1,395
Madhesh	1.90***	1,550	1.50***	1,835
Bagmati	8.10***	1,549	6.50***	1,703
Gandaki	6.30***	1,094	5.20***	781
Lumbini	7.20***	1,307	8.80***	1,491
Karnali	3.90***	386	5.10***	533
Sudur Paschim	11.30***	859	10.70***	778
Total	**6.2**	**8,488**	**5.40**	**8,515**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

Note: total cases included who have ever had sexual intercourse and missing values in the analysis

Geo-political factor like federal state characteristics of women also affected the women's condom using behavior. The analysis of NDHS, 2011 and 2016 reveals that 11 percent of women from Far-western province were condom use with most recent partner in the last sex while only about 2 percent of women from province#2 have used condom. The government response to HIV/AIDS among wives of migrants in far-western province have been implementing since II National Strategy, 2007 (NCASC, 2011). The strategic and programmatic initiatives have been effective to promote safe sexual behavior among women in Nepal.

The geography of Nepal is linked with its social-cultural and economic dimensions. The Hill region of Nepal, the open socio-cultural aspects of people have been contributing to women's sexual behavior. The couples are more likely to buy condom and are more aware about the infections. However, in Terai region, there is less likeness to buy condom and less awareness among the women and perceived less risk of HIV and AIDS. That's why women from Hill were more likely to use condom than Terai and Mountain regions.

In case of geo-political characteristics of women, women from Madhesh province were less likely to use condom with compared to the women of other provinces. It is argued that the lower position of women and the closed societal characteristic may be contributing factor for the low level of condom using behavior. The HIV/AIDS initiative among women in far-western province has indicated higher level of condom using behavior.

7.2.3 Cultural Factors and Condom Using Behavior

It is found that there is relationship between individual cultural factors such as religion, ethnicity and native language and condom use during last sex with most recent partner are found statistically significant ($p<0.01$). Table 7.7 shows that the women from Christian religion were more likely to use condom than other religious group of women. It is also found that Newar ethnic group and Nepali speaker also significantly condom use during last sex with most recent partner. The ethnicity of women is the consistent cultural factor which is affect the HIV/AIDS behavior in Nepal. The ethnicity emerges as individual factors which contributed women's

behavior. It is suggested that ethnicity will be a consistent cultural factor to introduce in the HIV preventions intervention in Nepal.

Table 7.7: Percentage distribution of women with condom use behavior and selected cultural factors, NDHS, 2011 and 2016

Cultural factors	NDHS, 2011		NDHS, 2016	
	Percent	Number	Percent	Number
Religion				
Hindu	6.30	7,256	5.60***	7,402
Buddhist	6.80	662	3.10***	386
Kirat	6.10	99	0.90***	109
Christian	9.90	141	9.20***	196
Muslim	3.10	326	4.30***	419
Ethnicity				
Hill Brahmin	9.70***	1,201	8.90***	984
Hill Chetri	7.20***	1,652	6.60***	1,528
Terai Brahmin/Chetri	8.20***	98	4.50***	154
Other Terai Caste	2.70***	740	2.10***	1,370
Hill Dalit	3.40***	843	4.50***	663
Newar	13.10***	360	7.90***	406
Hill Janajati	5.20***	1,926	4.40***	1,676
Terai Janajati	8.30***	889	9.10***	864
Muslim	3.10***	325	4.10***	417
Others	13.60***	22	20.00***	30
Terai Dalit	0.70***	433	0.00***	421
Native Language				
Nepali	6.30***	4,311	6.60***	4,043
Bhojpuri	3.00***	526	1.40***	1,298
Others	8.10***	2,685	2.40***	884
Maithali	2.50***	966	6.90***	2,291
Total	**6.20**	**8,488**	**5.40**	**8,515**

Source: NDHS Data Files, 2011 and 2016
*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association
Note: total cases included who have ever had sexual intercourse and missing values in the analysis

The findings indicate that condom use is determined by religion of individuals. The religion and ethnicity are interrelated with each other. Most of the Hill Dalits and Hill ethnic group women belong to Christianity. The accesses to services and open socio-cultural status of women have also contributed to safe sexual behavior. Viability, affordability and free access to condom services are also contributed to women's condom using behavior. Most of the non-governmental organizations are condom distributed free of cost through health services institutions at people's level. The socio-cultural constraints surrounded to them also contributed low levels use of

condom. The low risk perceived of the women with their partners, negotiating power, gender inequality and poverty are major reason behind condom using behavior.

7.2.4 Media Exposure Factors Affecting Condom Use

Media exposure is decisive factor for the condom use during the last sex with most recent partner. Table 7.8 shows that higher the media exposure, higher the condom use during the last sex with most recent partner. Among the media exposure factor, reading newspaper or magazine is most influential factor to promote condom using behavior.

Table 7.8: Percent distribution of women with condom using behavior and selected media exposure factors, NDHS, 2011 and 2016

Media exposure	NDHS, 2011		NDHS, 2016	
	Percent	Number	Percent	Number
Frequency of reading newspaper or Magazine				
Not at All	3.50***	6,168	4.00***	6,378
Less than once a week	11.10***	1,526	8.60***	1,511
At least once a week	17.80***	794	12.30***	625
Frequency of listening radio				
Not at All	4.00***	1,800	4.20***	3,901
Less than once a week	5.60***	3,273	5.90***	2,417
At least once a week	8.00***	3,415	7.20***	2,198
Frequency of watching Television				
Not at All	2.70***	2,415	3.70***	2,637
Less than once a week	5.10***	2,327	6.30***	1,747
At least once a week	9.30***	3,747	6.20***	4,131
Total	**6.20**	**8,488**	**5.40**	**8,515**

Source: NDHS Data Files, 2011 and 2016

*Note *** denotes p<0.001 and ** denotes p< 0.05 in* □2 association

This analysis provides the critical evidence on the effect of mass-media campaign exposure on condom using behavior. The findings of the study indicated that proactive mass media contributed aware to women and people about the mean of contraception as well as protecting from sexually transmitted infection (Jha et al., 2009) The role of newspaper, radio and Televisionon are crucial mean of proactive mass media. The finding of the study in Kenya is also found similarity in exposure and role of media to promote personal efficacy on condom use (Agha, 2003).

7.2.5 Condom Using Practices

The in-depth interviews with women aged-15-49 years conducted in Ram Nagar of Nawalparasi identified that there are very few women (only 4 out of 31) using condom during last sex. The use of permanent and a temporary contraceptive by some of the women is reason for low level of condom use. Generally, women consider the use of contraceptive as just the means of delaying child birth. Among the total research participants, very few acknowledged that the condom protects from the sexually transmitted infections (STIs) and HIV/AIDS. The use of condom is determined by sex partner's condom carrying behavior. If the sex partner does not carry out condom, the sexual intercourse is sure to go without the condom. There is also perceived risk of condom using behavior among young girls. The young girls do not use condom during sex even if they have multiple sexual partners. However, educated and urban women consistently used condom in pre-marital sexual activities. A 26 years master degree student said:

> *I have used condom in every sex with my boyfriend. Condom prevents risk of STIs and pregnancy. On few occasions, my boyfriend have requested/insisted/urged not to use condom but I always enforced the use and advised him for future planning. But at villages, socio-cultural restrictions limit the access. All the unmarried girls are not only unable to buy but also hesitation restricts the access to it at health service centers. Any unmarried girl having affairs with condom is against the social standards.*

The aforementioned case suggests that educations, urban place of residents and perception on condom are the factors for condom using behavior. The availability, accessibility, perceived risk and socio-cultural restrictions are the major factors for low use of condom in the rural community women.

7.3 Socio-cultural Aspects of HIV/AIDS Behavior

The quantitative portion of the study discovered that individual cultural characteristics influence KABP towards HIV and AIDS among Nepalese women. The socially constructed ideas have affected sexual and condom using behavior. It is found that there is an extra marital and multiple sexual partners in the study site. The safe sexual

practices still challenges in the community level due to various socio-cultural practices and beliefs.

There is a belief among women in Ram Nagar of Nawalparasi district that sexual relationship between husband wife or boyfriend and girlfriend is the safeguard for the HIV transmission whatever sexual activities outside household. A wife of transport worker (driver) stated that

> *We don't use condom any times sex with my husband. I hear about the sexual relationship with other girls but I don't believe. During working time, my husband is away from the home for a week. I think husband does not have any sexual infections. That is why we never use condom.*

Similarly, a married Dalit girl from field said "My husband worked in India. I have multiple sex partners. Most of time, I request to sex partners to use condom. But some time we have sexual intercourse without using condom with men other than husband. During the sexual intercourse with husband we never used condom". It is believed that there is no chance of infection transmission while sexual intercourse between husband and wife. The beliefs and perception on HIV transmissions is still question some of women in the field raise.

This case indicate that the wives of the migrants have multiple sexual partners and having risk sexual practices in some cases. The perceived risk HIV and AIDS is quite low among women in some cases. There is still risky sexual behavior among women of Ram Nagar, Nawalparasi. It is also identified that social perception, relationships and faith on partners are the major issues of sexual and HIV/AIDS behavior at local processes.

The aforementioned case suggests that perception of safe sexual practices, perceived risk and perception on condom are the factors for HIV/AIDS behavior. The availability, accessibility, perceived risk and socio-cultural restrictions are the major factors for lower safe behavior of HIV/AIDS.

7.4 Multivariate Analysis of Condom Using Behavior

A statistical model is employed to identify the individual factors having significant effect on the condom using behavior. The binary nature of the variable such as condom use during last sex with most recent partner (no=0 and yes=1) is as outcome and social, economic, demographic, geo-development, cultural and media exposure variables are explanatory variables fitted in the regression equation. The odds ratio is calculated to identify the net effects explanatory variables in the outcome variables.

7.4.1 Partial Regression Model of Condom Using Behavior

All total four models are employed in this analysis. Modeling elements that influence women's condom use include demographic and socioeconomic factors (model 1), environmental and political factors (model 2), cultural factors (model 3), and media exposure (model 4). Finally, a general model is also fitted for the net effects among the different factors.

Demographic and Socio-economic Model: #1

In this analysis, the output of logistic regression analysis is employed to measure the relationship between the condom using behavior and key independent variables are discussed those are significantly at 10, 5 and 1 percent level of significance. Some of variables in the socio-economic and demographic model predicting the theoretically and empirically.

The factors affecting women's condom using behavior are examined with demographic variables (age, marital status and place residence) and socio-economic (education, occupation and wealth quintile) factors in a model. In this analysis, 6 variables are introduced in regression equation. The analysis indicates that education is the most predictable factor for the condom using behavior among women in Nepal.

Table 7.9 demonstrates that in 2011 and 2016, SLC and above educated women were four times more likely to use a condom in the last intercourse with their most recent partner than no educated women. Similarly, some secondary educated women were almost 3 times in 2011 and almost 2 and half times in 2016 more likely to have condom using behavior than illiterate women which is statistically significant.

Table 7.9: Logistic regression analysis on condom use during last sex with most recent partner by demographic and socio-economic factors, NDHS, 2011 and 2016

Factors	NDHS, 2011			NDHS, 2016		
	Odds	95% CI		Odds	95% CI	
Age	**ratio**	**Lower**	**Upper**	**ratio**	**Lower**	**Upper**
<25 years	1.31***	1.07	1.61	1.21	0.96	1.52
25 and Above Years (RC)	1.00			1.00		
Marital Status						
Never Married	2.06	1.77	3.45	12.81**	1.22	28.00
Married	1.97	1.72	2.33	0.54	0.08	3.32
Divorce/Separated	7.87	4.05	10.9	2.07	0.20	20.87
Widowed (RC)						
Place of Residence						
Urban	1.267	0.92	1.60	1.08	0.86	1.35
Rural(RC)	1.00			1.00		
Education						
No Education(RC)	1.00			1.00		
Primary	1.41**	1.03	1.92	1.67***	1.13	2.53
Some Secondary	2.77***	2.10	3.65	2.40***	1.80	3.19
SLC and above	4.13***	3.05	5.58	3.80***	2.70	5.28
Occupation						
Not Working (RC)	1.0			1.00		
Professional/Managerial	1.26	0.84	1.87	1.70**	1.13	2.53
Clerical	1.27	0.58	2.77	0.76	0.30	1.90
Sales/Service	1.06	0.83	1.36	1.31*	0.96	1.81
Skilled Manual	0.97	0.72	1.31	1.12	0.67	1.90
Unskilled Manual	0.70	0.40	1.25	1.14	0.69	1.93
Agriculture	1.59	0.84	2.98	1.41**	1.08	1.83
Others	3.08	0.51	18.69	0.95	0.42	2.13
Wealth Quintile						
Poorest (RC)	1.00			1.00		
Poorer	1.53**	1.02	2.29	1.03	0.72	1.46
Middle	1.35	0.90	2.02	0.98	0.69	1.40
Richer	1.55**	1.03	2.33	0.75	0.51	1.10
Richest	2.27***	1.47	3.49	1.59**	1.07	2.33

*** indicates p<0.001, ** indicates p<0.05 and * indicates p<0.10.

Wealth index of women also contributed to women's condom using behavior. The richest women have 2 times more likely to have condom using behavior than the poorest women in 2011 (p<0.01) whereas one and half times more likely to use condom in 2016 (p<0.05). Similarly, in 2011, affluent women were 1.5 times more likely than poorer women to use codom in their last intercourse with their most recent partner, which was statistically significant (p0.01).. However, this does not exist in 2016 survey.

Among the variables of demographic and socio-economic model, age and marital status are also individual factors affecting condom using behavior. Young and never married women were more likely than adult and married women to wear a condom in their most recent intercourse (p<0.01).

Geographical Model: #II

The factors affecting women's condom using behavior are examined with geo-development (ecological region, development region and federal states) factors in this model. In this analysis, 2 variables are introduced in regression equation. This analysis indicates that a geo-development characteristic of women is the most predictable factor for the condom use in the last sex with most recent partner.

Table 7.10: Logistic regression analysis of condom use during last sex with most recent partner by geographic factors, NDHS, 2011 and 2016

Factors	NDHS, 2011			NDHS, 2016		
	Odds ratio	95% CI		Odds ratio	95% CI	
Ecological Region		**Lower**	**Upper**		**Lower**	**Upper**
Mountain(RC)	1.00			1.00		
Hill	1.76***	1.32	2.34***	1.16	0.70	1.94
Terai	1.77***	1.30	2.40	1.47	0.85	2.54
Provinces						
Province #1 (RC)	1.00			1.00		
Madhesh	0.45***	0.27	0.72	0.80	0.52	1.21
Bagmati	1.45**	1.08	1.93	1.48*	0.99	2.46
Gandaki	1.07	0.76	1.51	1.72**	1.09	2.73
Lumbini	1.39**	1.05	1.83	1.28	0.87	1.90
Karnali	0.83	0.53	1.30	2.78***	1.70	4.54
Sudur Paschim	2.05***	1.58	2.67	1.13	0.70	1.87

*** indicates p<0.01 and ** indicates p<0.05 * indicates p<0.10.

Logistic regression analysis also indicates that individual geographical factor affected women's condom using behavior. Table 7.10 shows that geo-development as an individual factor affected women's condom using behavior. The women from the Hill were almost 2 times more likely to have condom using behavior than the Mountain women (p<0.01) in 2011 and 2 and half times more likely to condom use in 2016.

It was also shown that women from the far-western province in 2011 and province #6 in 2016 were twice as likely as women from province #1 to wear a condom during their most recent intercourse.

Cultural Model: #III

Women's individual cultural factors like caste/ethnicity and native language are the factors affecting women's condom using behavior. In this analysis, 2 variables are introduced in regression equation. The analysis indicates that caste/ethnic background of women is the predictable factor for the condom use in the last sex with most recent partner.

Table 7.11: Logistic regression study of condom usage during last intercourse with most recent partner by cultural characteristics, NDHS, 2011 and 2016

	NDHS, 2011			NDHS, 2016		
Factors	**Odds ratio**	**95% CI**		**Odds ratio**	**95% CI**	
Ethnicity		**Lower**	**Upper**		**Lower**	**Upper**
Hill Brahmin	14.45***	4.22	49.42	0.72**	0.53	0.97
Hill Chetri	9.97***	2.93	33.92	0.84	0.38	1.84
Terai Brahmin/Chetri	11.50***	3.02	43.74	0.55*	0.31	0.97
Other Terai Caste	3.51**	1.05	11.76	0.49***	0.32	0.75
Hill Dalit	4.69**	1.32	16.64	0.87	0.56	1.34
Newar	14.50***	4.21	49.93	0.47***	0.33	0.66
Hill Janajati	5.55***	1.65	18.73	1.33	0.90	1.97
Terai Janajati	8.69***	2.62	28.86	0.94	0.49	1.80
Muslim	4.30**	1.18	15.72	0.94	0.49	1.80
Others	13.77***	2.40	79.06	-	-	-
Terai Dalit(RC)	1.00			1.00		
Native Language						
Nepali	1.05	0.57	1.91	4.52***	2.48	8.22
Bhojpuri	1.01	0.52	1.96	1.96**	1.02	3.75
Others	1.72*	0.98	2.99	4.38***	2.51	7.64
Maithali(RC)	1.00			1.00		

*** indicates p<0.01 and ** indicates p<0.05 * indicates p<0.10.

Table 7.11 shows that Newar and Hill Brahmin women were 14 times more likely to have condom using behavior than Terai Dalit women in 2011 whereas less likely to use in 2016. Similarly, Terai Brahmin/Chhetri women were 11 times, Hill Chhetri almost 10 times, Terai Janajati almost 7 times, in 2011, Hill Janajati women were

approximately 6 times more likely to use a condom in their most recent intercourse with their most recent partner than Terai Dalit women. There is also a significant relationship between Hill Dalits, Muslims and Terai other caste/ethnic women and condom using behavior ($p<0.05$) in 2011.

Native language of women is also a factor affecting the women's condom use in the last sex with most recent partner (Table 7.11). In 2011, other native language women were about twice as likely ($p<0.1$) than Maithali native language women to use condoms. The results from the 2016 NDHS analysis indicate that Nepali and other language speaking women are 4 times more likely to use condom than Maithali speaking women.

Media Exposure Model: #IV

Individual media exposure characteristics for women, such as reading newspapers or magazines, listening to radio, and watching television, influence women's condom use habits with their most recent sex partner. In this analysis, a total of 3 variables are introduced in regression equation. The analysis indicates that frequency of reading newspaper or magazine is the most influential among media exposure factors for the condom using behavior among women.

Table 7.12: Logistic regression analysis of condom use during last sex with most recent partner by media exposure factors, NDHS, 2011 and 2016

Factors	NDHS, 2011			NDHS, 2016		
	Odds ratio	95%CI		Odds ratio	95%CI	
Frequency of Reading News		**Lower**	**Upper**		**Lower**	**Upper**
Not at All(RC)	1.00			1.00		
Less than once a week	2.74***	2.19	3.43	2.02***	1.60	2.57
At least once a week	4.40***	3.41	5.69	3.17***	2.36	4.25
Frequency of listening radio						
Not at All(RC)	1.00			1.00		
Less than once a week	1.17	0.87	1.56	1.15	0.90	1.47
At least once a week	1.34**	1.01	1.77	1.33**	1.05	1.69
Frequency of watching Television						
Not at All(RC)	1.00			1.00		
Less than once a week	1.47**	1.07	2.03	1.45**	1.09	1.94
At least once a week	1.85***	1.37	2.50	1.15	0.87	1.49

*** indicates $p<0.01$ and ** indicates $p<0.05$ * indicates $p<0.10$.

Table 7.12 reveals that the women those read newspaper or magazine at least once a week were almost 4 times more likely to use condom than those who do not read at all in 2011 whereas 3 times more likely to use condom in 2016 . Similarly, the women having read newspaper or magazine less than once a week were almost 3 times more likely to use condom using behavior than those who do not read at all in 2011 while 2 times more likely to use in 2016. It indicates that the frequency of reading newspaper is most powerful predictor of women's condom using behavior in media exposure factor which is statistically significant ($p<0.01$).

Television is also a predictable factor for the promoting condom using behavior. Women watching television at least once a week were almost 2 times more likely to use condom than not watching at all in 2011 while this type of significant result is not found in 2016 analysis. The analysis of NDHS, 2011 and 2016 also shows that the women whose more time exposure was in media is also more likely to use condom in the last sex with most recent partner.

7.4.2 General Regression Model of Condom Using Behavior

Total 13 variables (demographic and socioeconomic, geo-development, cultural, and media exposure factors) are studied with condom usage in order to determine the factors influencing women's condom using behavior (safe sexual conduct). In this general model, all the variables are included in regression which is analyzed in the different partial regression model. The analysis of this general model also identified that education is the most predictable factor of women's condom using behavior which is statistically significant ($p<0.01$).

The general model of logistic regression analysis suggests that demographic and socio-economic factors are predictable for condom using behavior among women aged 15-49 years. Table 7.13 demonstrates that in the NDHS, 2011 and 2016, SLC and higher educated women were three times more likely than no educated women to use a condom in their most recent intercourse with their most recent partner.

The provincial characteristic of women is also consistent predictor for safe sexual behavior. Table 7.13 shows that women from Far-Western province have 2 and half times more likely to use condom than in 2011 whereas it increased 4 and half times

more likely to use condom in 2016. This indicates that far-western province has more exposure to HIV/AIDS initiatives since the 2006. According to Beine (2003), if HIV/AIDS initiatives are not operated at community level among specific group of people there is an effect of cultural model only. Hence the culture is crucial and related to provinces as well contributing to safe sexual behavior among women in Nepal.

Table 7.13: Logistic regression study by chosen characteristics on condom usage during last sex with most recent partner (generic model), NDHS, 2011 and 2016

Factors	NDHS, 2011			NDHS, 2016		
	Odds ratio	95% CI		Odds ratio	95% CI	
Age		Lower	Upper		Lower	Upper
<25 years	1.30***	1.06	1.58	0.77**	0.60	0.99
25 and Above (RC)	1.00			1.00		
Marital Status						
Never married	0.19	0.06	0.66	0.07***	0.01	0.31
Married	0.67	0.06	7.56	0.24	0.30	2.11
Divorce/Separated	0.58	0.23	1.49	0.12	0.01	1.44
Widowed (RC)	1.00			1.00		
Place of residence						
Urban	0.98	0.78	1.21	0.97	0.76	1.24
Rural(RC)	1.00			1.00		
Education						
No education (RC)	1.00			1.00		
Primary	1.50***	1.11	2.03	1.64***	1.17	2.29
Some Secondary	2.17***	1.60	2.95	2.06***	1.50	2.86
SLC and above	2.90***	2.04	4.11	2.87***	1.93	4.26
Occupation						
Not Working (RC)	1.00			1.00		
Professional/Managerial	0.92	0.61	1.37	1.45*	0.94	2.22
Clerical	0.52	0.35	1.69	0.67	0.26	1.72
Sales/Service	0.81	0.62	1.06	1.09	0.78	1.33
Skilled Manual	0.74	0.54	1.02	1.00	0.75	1.33
Unskilled Manual	0.58*	0.32	1.04	0.94	0.55	1.62
Agriculture	1.10	0.57	2.12	0.63	0.27	1.44
Others	2.75	0.40	19.06	-	-	-
Wealth Quintile						
Poorest (RC)	1.00			1.00		
Poorer	1.41*	0.91	2.02	1.11	0.75	1.61
Middle	1.49	0.96	2.33	1.10	0.72	1.67
Richer	1.69**	1.06	2.72	0.90	0.57	2.91
Richest	2.29***	1.43	3.65	1.80**	1.10	2.91
Ecological Region						
Mountain(RC)	1.00			1.00		
Hill	1.21	0.77	1.89	1.39	0.85	2.27
Terai	0.78*	0.48	1.25	1.02	0.58	1.77
Provinces						
Province #1 (RC)	1.00			1.00		
Madhesh	0.97	0.55	1.68	1.19	0.61	2.32
Bagmati	1.06	0.77	1.46	1.52*	1.00	2.34
Gandaki	1.01	0.70	1.44	1.54*	0.95	2.50
Lumbini	1.86***	1.37	2.52	3.33***	2.27	4.88
Karnali	1.28	0.80	2.07	2.12***	1.22	3.68
Sudur Paschim	2.48***	1.78	3.44	4.50***	2.93	6.89
Table 7.14 Continued…						
Ethnicity						

Hill Brahmin	3.38***	1.95	5.78	0.64	0.31	1.31
Hill Chetri	3.13*	0.89	11.07	0.58	0.28	1.18
Terai Brahmin/Chetri	2.95	0.75	11.62	0.44	0.16	1.18
Other Terai Caste	1.83**	0.54	6.23	0.53**	0.28	1.01
Hill Dalit	2.18	0.60	7.96	0.54	0.25	1.17
Newar	3.30*	0.93	12.26	-	-	-
Hill Janajati	2.80	0.81	9.73	0.74	0.34	1.61
Terai Janajati	4.67**	1.39	15.71	0.56**	0.28	1.10
Muslim	3.00	0.81	11.12	1.42	0.75	2.67
Others	3.93	0.64	23.98	-	-	-
Terai Dalit(RC)	1.00			1.00		
Native Language						
Nepali	0.69	0.36	1.29	1.70	0.79	1.43
Bhojpuri	0.96	0.48	1.92	1.23	0.61	2.50
Others	1.05	0.58	1.91	1.68	0.80	3.52
Maithali(RC)	1.00			1.00		
Frequency of Reading Newspaper or Magazine						
Not at All (RC)	1.00			1.00		
Less than once a week	1.56***	1.20	2.04	1.14	0.87	1.51
At least once a week	2.84***	1.34	2.53	1.38**	0.94	2.03
Frequency of listening radio						
Not at All(RC)	1.00			1.00		
Less than Once a week	1.12	0.83	1.51	0.85	0.66	1.10
At least once a week	1.22	0.91	1.63	1.06	0.81	1.37
Frequency of watching Television						
Not at All (RC)	1.00			1.00		
Less than once a week	1.28	0.91	1.80	1.40	0.85	2.27
At least once a week	1.40	0.98	2.01	1.02	0.58	1.78

*** indicates p<0.01, ** indicates p<0.05 and * indicates p<0.10.

In 2011, Hill Brahmin women were about three and a half times more likely than Terai Dalit women to use condoms in their most recent intercourse (p0.01), however there was no significant connection in 2016. Similarly, Hill Chettri and Newar women were 3 times more likely to use condoms than illiterate women(p<0.1). The aforementioned facts suggest that ethnicity is also the key factor of condom use among women in Nepal.

Wealth quintile as economic factor also contributes to safe sexual behavior among women in Nepal. Women in the richest group are twice as likely as poorer women to have used a condom in their most recent intercourse (p0.01). This socio-economic factor is consistently affecting women's sexual behavior.

The logistic regression analysis shows that media exposure factors too are the influential for safe sexual behavior as condom use in the last sex with most recent partner. Women those read newspaper or magazine at least once a week were almost 3 times more likely to have a condom use practices than those do not read at all in

2011 whereas one and half times more like to use condom in 2016. It is argued that the frequency of reading newspaper or magazine is consistent individual mass media factor to promote safe sexual behavior.

7.5 Discussion and Summary

HIV and AIDS are increasingly become public health concern in many of the third world countries. Nepal is experiencing concentrated HIV epidemic, which is mostly driven by the risky sexual behavior of most at risk populations and bridge population (Suvedi, 2006). Surprisingly, a significant proportion of HIV/AIDS epidemic is concentrated in general women aged 15-49. The national estimates of HIV/AIDS in 2016 shows that 35 percent women shared HIV positive cases among the total cases of HIV in Nepal. Male labor migrants (particularly migrated to high prevalence areas of India) and clients of female sex workers (FSWs) are the major bridging population of HIV transmission from high risk population to low risk general population.

The main route of transmission is heterosexual among general population. According to national estimates, 2013, there were 50,200 adults and children living with HIV and estimated prevalence was 0.30 percent among adult population age 15-49 years. Out of total HIV positive people, 58 percent were male adults and 28 percent were female adult and 8 percent were children under age 15 years. This indicates that increasing proportion of female adult like wives of migrants are going to be more vulnerable than other general population. The national responses of Nepal mostly prioritized most risk population for reduction of HIV transmission from high risk behavior group to low risk population.

As the framework of analysis on sexual, human sexuality involve an intricate mix of biological response, psychological meaning and societal/cultural overlays and are expressed through various types of sexual behavior. The studies indicates that there is significant relationship between the risk of HIV infection and underlying factors such as socio-economic, demographic and cultural factors (Carael & Holmes, 2001; Thomas, 2007). In the context of Nepal, various social and cultural factors have affected women HIV/AIDS behavior.

Age is the consistent demographic variable which affects the women's HIV/AIDS behavior such as sexual behavior. The analysis of NDHS, 2011 showed that adult women have more than one sexual partners in a lifetime than young women. However, the condom use in the last sex with most recent partner is higher among young with compared to adult women. Jha & Madison (2009) identified that more than 2 percent of married have extra marital sexual affairs and 14 percent of unmarried adolescent women had pre-marital sex. Out of total extra marital sex experienced women, 27 percent of them having multiple sexual partners and having sex with multiple numbers which is risk of HIV. According to the same survey, 50 percent of women who have numerous sexual partners did not use a condom during their most recent intercourse with a partner other than their husband. The high risk sexual behaviors among were identified the study conducted in the two ecological regions of the country(Jha & Madison, 2009).

Education is the most influential social factor for the multiple sexual partner and safe sexual behavior of women which is statistically highly significant ($p<0.01$). Awasthi et. al. (2015) argued that education and increased awareness contributed to promote safe sexual behavior among women in Nepal. In addition, the study suggested that women from rural settings and illiterate must be focued the HIV/AIDS promitive intervention to risk reduction of HIV and AIDS (Awasthi, et al., 2015). Wealth index is another factor affecting risky HIV/AIDS behavior among women in Nepal which is statistically significant ($p<0.01$). Earlier studies also highlighted that HIV and AIDS were associated with poverty of women (Poudel, 1994). It is also identified that poverty is the major trigger to HIV infection in Nepal (Dixit, 1996).

Geographical and federal state factors of women have also affect the women's HIV/AIDS behavior in Nepal. Women from the Hill region were more likely than women from the Mountain region to wear a condom during their most recent intercourse. According to geo-political administrative unit, women from Far-western region were more likely to have condom using behavior due to HIV program initiatives focused on the wives of migrants (NCASC, 2008). The difficulty of geographical constraints of country has posed serious problems in transporting, infrastructures and problems of subsistence resulted high level of labour migration to India. The unprotected sexual behavior continued in the mountain region.

Cultural such as religion, ethnicity and language factors are affecting the women's multiple sexual partner sexual relationships and condom using behavior and other HIV/AIDS related behavior. Ethnicity and religion are important aspects of culture under consideration in HIV research (Ross et al., 2006).

The overall positions of women and unequal gender relations determined the HIV/AIDS behavior especially multiple sexual partners and consistent condom using behavior. The logistic regression analysis shows that the women who had faced intimate partner violence have multiple sexual partner and risky sexual behavior. The gender based violence and less power in the negotiating with the male partner is one key drivers of unsafe sexual behavior (Desai, 2005).

The television and newspaper are effective means of promoting safe sexual behavior and reduction of multiple sexual partners. Government policy and strategic approach are also media campaign for the risk reduction of HIV and AIDS (NCASC, 2011). The same study also identified that blooming number of social media are also promoting the safe sexual behavior by providing preventive measures.

In the context of Nepal, sexual behaviors, namely heterosexual intercourse, has been identified as the foremost cause of transmission (UNAIDS, 2015), when they maintain that the study of sexual behavior lies at the heart of understanding the transmission dynamics of sexuality transmitted infections/ The recognition of transmission dynamics acknowledges that there are various underlying factors to exhibit different behaviors. In fact, Brown and Xenos (1994) highlights the need for understanding the larger social environments that influence the spreading of HIV and AIDS. Brooke (2001) further opens that the patterns of sexual-reproductive behavior cannot be understood without reference to their meanings for those individuals who are engaged with them. Thus, the socio-demographic and cultural factors are influential determinants of HIV/AIDS behavior.

CHAPTER EIGHT

NATIONAL RESPONSES TO HIV/AIDS

In this chapter, the analysis are included prevalence of HIV and AIDS epidemic, policies, strategies, plans and programs on HIV prevention, care, treatment and support as a national response. The guiding principles of strategic approach has analyzed the continuum of prevention to treatment care and support. Finally, the analysis of the national responses has identified the key issues and challenges in policies, programs and overall interventions.

AIDS is bio-medical reality and it is a socio-cultural construction. It is also argued that it is socio-economic disease as well. As responding to HIV/AIDS in Nepal, various policies, strategies and program have been intervening at the beginning of first case was detected in 1988. In the initial period of the response, Nepal did not have any idea what to do and what were the initiatives. According to Beine (2003), one Nepali doctor working on the prevention side of the epidemic in Nepal, told that "when AIDS first came, we didn't know what to do, so a Western dominated approach was used" under the international guidelines of the HIV response. It indicates that Nepal depends heavily upon the West for help in fighting newly emerging epidemic. Funding was from West, AIDS prevention ideas, and prevention workers who really didn't want to take sexual issues to public debate, were forced to do so by donors. This is reality of point of departure to Nepal's HIV/AIDS response.

8.1 Situation of HIV/AIDS in Nepal

The prevalence of HIV prevalence of Nepal has been declining from 0.42 percent in 2005 to 0.22 percent in 2014 among 15-49 years age group. HIV prevalence is decreased over the time, it is still 0.2 percent in 2018 (NCASC, 2014; NCASC, 2018). The prevalence is dropped 0.42 (highest level) to 0.2 over the two decades (DoHS, 2017). The results of the national estimates shows that 0.13 percent or 37,596 (reported cases) of people are living with HIV in 2020 (NCASC, 2020). The new infections from 8,039 to 1408 in 2013 which is the achievements of country. The most of the prevalence of HIV/AIDS was observed in key population over the period. The

clients of SWs, male labour migrants, injectable drug users (IDUs), female sex workers (FSWs), MSM, MSW etc.

According to NCASC (2014), there were 3281 number of children were infected with HIV in 2013 which was 8 percent of total infected people. It is found that 92 percent of infected cases were youth and adult people. The infection among male and female, the male population were predominant in HIV infection. In the recent times the growing HIV infections among adult women including wives of migrants is major challenges of the national responses of HIV/AIDS in Nepal.

8.1.1 Trends of HIV epidemic

Nepal has been witness concentrated epidemic of HIV and AIDS. The dynamics and concentrated epidemic, people who inject drugs (PWID), men who have sex with men (MSM), and TG, FSWs, and male labor migrants (MLMs) are the most impacted and at risk populations. Despite the decreasing trends of HIV prevalence among most risk population, the epidemic is driven by largely sexual transmission which account 4 out of 5 infections were heterogenous sexual transmissions.

As discussing the trends of HIV and AIDS in Nepal, It is found that reporting of HIV/AIDS was low and underestimated (Suvedi, 1998), reports that "there can be no doubt that there have been deaths in Nepal from AIDS which were not recognized" and "there are probably people ill with AIDS today whose condition has not been diagnosed". In fact, the trends were analyzed by the reporting cases of HIV and Sero-Prevalence Survey among the key population. According to NCASC (2014), 0.02 percent of people living with HIV in 1992, age group 15-49 years exceed 0.42 in 2004 with the highest level. This scenario has been declining from that peak point of prevalence. In 2006, it was 0.39 and 0.23 in 2013.

Figure 8.1 reveals that the injectable drug users (IDUs) were the most problematic group for HIV and having the highest prevalence. In 2000-2002, among the total IDUS, the HIV prevalence was above 70 percent. However, trend is declining in 2013. MSWs, TG and clients (MTC) were still problematic groups among the risk groups of population. The trend is slightly increasing from 2002 to 2013. Similarly, other types of MSM were also in increase. However, HIV prevalence among FSWs is

also in a declining trend. Male labor migrants have been high HIV prevalence in 2003-2006 which is declined in 2013.

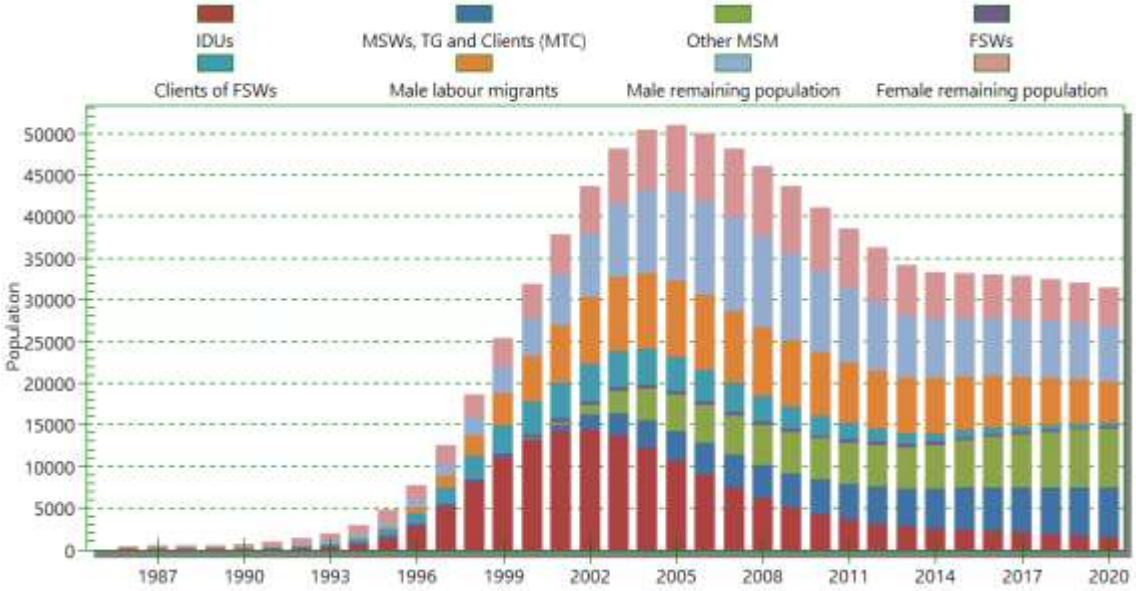


Figure 8.1: Trend of HIV Prevalence among Key Affected Population (KAP) 2014

Source: NCASC, 2014.

Low risk male population is also decline and it was 19 Percent in 2013. Similarly low risk female population has also in declined however, 30 percent shared among the HIV positive in the country. Among the risk group and low risk population, low risk female population were constitute the highest share of HIV and prevalence. The trend of HIV and AIDS indicates that there were major five groups of population identified as the group with the highest prevalence among the key affected and general population. The clients of SWs, migrant labor, male general population, MSM and housewives were the most affected population.

8.1.2 HIV/AIDS Prevalence

Prevalence studies have been conducted among various "high risk groups". There have been four proposed worldwide pattern of HIV spread. According to Gurubacharya (1996), in the beginning of late 1970's and early 1980s, HIV spread mainly among homosexual males and IDUs in pattern I countries. This was the main pattern initially identified in the US, Canada and Australia. In the pattern II countries, HIV affected the general population beginning about the same time period, but it has

mainly been spread heterosexually and the perinatal period. This is the main pattern found in the sub-Sharan Africa, Latin America and the Caribbean (Beine, 2003). Pattern III identified as beginning in the late 1980's is characterized by infection generally being contained within high risk groups such and SWs and IDUs. This is the main pattern identified in Asia, Eastern Europe, some Pacific countries and the Middle East. A fourth pattern has been for the parts of Asia. According to Brown and Xenos (1994), pattern IV comprises of five wave of infection. The first wave was among homosexual or bi-sexual men contact with foreigners. The second wave was among IDUs. The third wave was among SWs and their clients. The fourth wave concerned with girlfriends and wives of FSWs clients. And the final wave among the children of these women. The fourth wave is closely fitted in the case of Nepal with some modifications.

According to Dixit (1996), the first wave of HIV and AIDS in Nepal was among Western tourists and female sex workers returning from India. The third wave spread to the clients of SWs such as transport workers, soldiers, police and others mainly Nepali men. Since then the number of males infected has increased dramatically. HIV spread to the IDU population and has spread rapidly among this group. After 2000 A.D., Nepal identified the fifth pattern of HIV transmission. This pattern comprises the wives of migrants who are seasonal workers in India. This migration is mainly found in Far-western hill region. There is still a need to develop the sixth pattern of spread of HIV/AIDS which is related to clients of sex workers and their wives/husband and wives/husband/boyfriend/girl friend of labor migrants of Arab world, Malaysia and other destinations of labor migrant countries. From the aforementioned conceptual understanding, Nepal has reported cumulative HIV/AIDS published by NCASC in every month.

According to Table 8.1, the clients of sex workers had the highest HIV prevalence. Among the total HIV infected, 37 Percent were clients of sex worker. The second largest number of HIV infected was other groups such as housewives, male partners, prison inmates, and children and not identified sub-population. This group of population shared 34 percent of total HIV infected people. The third largest group of key affected population was people who inject drugs (PWID). It shared 12 percent of total HIV infected. The migrant workers and spouse of migrants also have a

significant number of HIV infections. Similarly, the sex workers and MSM also shared countable number of HIV infection in the country.

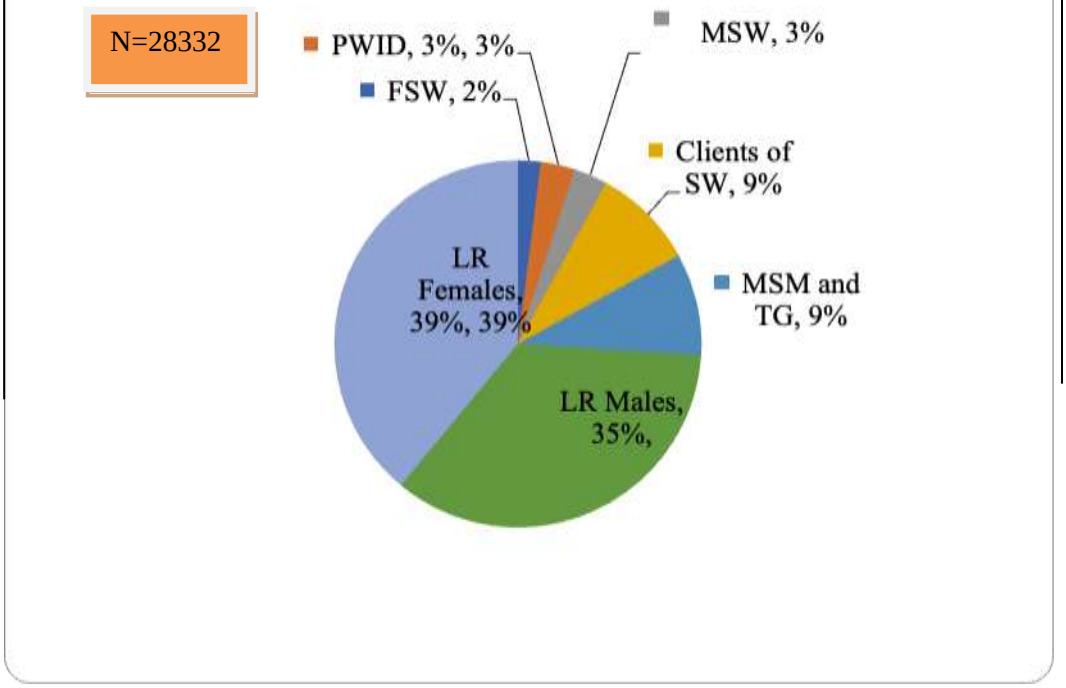
Table 8.1: Distribution of HIV/AIDS infection by sub-groups, age and sex, July, 2020

Subgroup	Male	Female	TG	Total	
	Number	Number	Number	Number	Percent
Sex Workers (SWs)*	221	1,969	68	2,258	6.6
People Who Inject Drugs*	3,212	112	9	3,333	8.9
Men Having Sex with Men (MSM)//Transgender*	845	5	263	1,113	3.0
Blood or Organ Recipients	93	43	4	140	0.4
Clients of Sex Worker*	11,659	214	7	11,880	31.6
Migrant Workers	3,859	339	2	4,200	11.2
Spouse/Partner of migrants*	250	2,910	3	3,163	8.4
Others**	2,795	8,708	6	11,509	30.6
Age in year					
0-4	541	361	0	902	2.4
5-9	635	444	0	1,079	2.9
10-14	341	260	0	601	1.6
15-19	581	555	29	1,165	3.1
20-24	2,361	1,895	92	4,348	11.6
25-49	16,789	9,949	226	26,964	71.7
50 and Above	1,886	836	15	2,537	6.7
Total	**22,934**	**14,300**	**362**	**37,596**	**100.00**

Source: NCASC, 2020.
**Mode of transmission injection or sexual*
***Others included housewives, male partners, prison inmates, children and not identified sub-group*

The reported HIV prevalence cases by age indicates that prevalence is concentrated in age agroup 25-49 years of old (Table 8.1). About 71 percent were age 25-49 years of old. Among the total HIV infected people, almost one-third were clients of sex workers. About 31 percent of other categories people including housewives and male partners were infected with HIV. Based on the reported cases of HIV and AIDS, the clients of SWs, housewives and migrant workers are the most infected. It is also reveals that six percent of children (< 15 years) were infected with HIV/AIDS.

Figure 8.2
Distribution of People Living with HIV (15 years and above, 2019



Source: NCASC, 2020.

The facts of national estimates of HIV and AIDS by NCASC (2020), low risk female including wives of migrants has the highest (39%) HIV infected among total HIV people living with HIV, followed by low risk male (35%) shared among the total estimated HIV infected people, MSM and TG (9%), clients of SW (9%), MSW (3%), PWID (3%) and 2 percent were female sex workers.

The aforementioned facts indicate that the three fourth of the HIV infection comprises with the low risk population. However, wives of migrants and labor migrants were also included in the low risk population which is also key affected population. Among the key affected population, MSM and IDUs have shared significant proportion of the HIV infection among the total HIV infected people.

The predominant discourse in literature of HIV/AIDS in Nepal is related to sex workers (SWs). The commercial sex workers have been identified as the main route through which HIV infection has transmitted to general population (New Era et al., 1997). This is caused by three ways: 1) Nepali women those are trafficked to India

usually to Mumbai where they work as commercial sex workers for some years then either after retired or being HIV infected, they returned to Nepal (Smith, 1996). After return to Nepal, they continue to work as sex workers, thus spreading the "AIDS virus" to the remote areas of Nepal (Sattar, 1996). 2) Migrant workers in search of work migrated in large numbers to India and further abroad where they get sex services from the infected sex workers (Smith, 1996). When they returned to home, the chance of HIV transmission to their wives/partner, who subsequently passes the virus to their unborn children (Poudel, 1994). 3) Truck drivers and soldiers are well known for their promiscuity and preference for unprotected sex (Sattar, 1996). These factors coupled with the transient nature of their occupations, make soldiers and truck drivers for the HIV spread along the roads and trails and into remotest corners of Nepal.

According to NCASC (2016), about 52 percent of businessmen and 43 percent of transport workers were the major clients of FSWs. Whereas IBBS of FSWs (2012) also identified that about 59 percent of transport workers, 33 percent of businessmen, 25 percent of police/soldiers, about 24 percent service holders such as doctors, officers, and other professional occupation etc., 23 percent of migrant/industrial wage labor, 16 percent mobile businessmen, 14 percent each foreign employer and contractor, 6 percent of each of rickshaw puller and students, and 5 percent farmers were most frequently visited FSWs. The aforementioned facts indicate that every sections of society people frequently visited FSWs which are bridge population of HIV infection from high groups to low risk women population.

The trends of HIV/AIDS in most at risk/key affected population and general population indicate that there is needed responses to combat of it. Governments of Nepal and international agencies have been taking initiatives for reducing vulnerability and infection among key affected population. The following part of analysis focused on the national responses of HIV/AIDS.

8.2 Analysis of HIV/AIDS Prevention Initiatives

As analysis of HIV/AIDS prevention programs, three distinct strategies has been identified on AIDS prevention model in Nepal (Wasti et al., 2015). These are: 1) multi-sector involvement, 2) targeting specific "high risk" groups, and 3) awareness

raising. Multi-sector involvement looks for the active participation in planning, implementation and evaluation of HIV/AIDS program by local bodies in cooperation and supervision of national planers. This is a “bottom up” approach rather than top down model. The goal of the program is capacity building and sustainability of prevention activities at the local level. At the second phase of HIV/AIDS response, would be the strategy of income generating projects for women to keep going to India in search of work, female sex workers “rehabilitation” activities like sewing classes, education camp held for local kids and local adult literacy classes which build practical skills while introducing AIDS education. A number of youth related intervention also contributed to response the HIV/AIDS service needs.

The second type of strategy has been targeting to high risk groups such as FSWs and their clients, IDUs, MSM, TG, and wives of migrants. On this basis of strategy, different programs has been implementing in major cities, highway routes and semi-urban centers in almost all districts. There is a gap on prevention activities that reach to most risk population yet to be addressed. The HIV/AIDS prevention initiatives to all the population groups, the issues of most at risk population are the obstructing the HIV prevention services (Wasti et al., 2009). The HIV and AIDS services to FSWs still problematic to safer sex practices focusing on the condom using behavior.

8.2.1 Awareness Building

The third strategic intervention is awareness building which is most visible. NCASC under the direction of the NACC, has implemented many national programs designed to increase public awareness. These have included the mass media campaign in which AIDS awareness messages have been dispersed widely across the country via signboards, newspapers, radio, TV and the production of AIDS awareness pamphlets distributed to local level health service centers. The government sponsoring public events like AIDS day has been displayed play cards and messages of HIV/AIDS prevention. Information about HIV/AIDS is also included in school health education curriculum from lower secondary level. The aforementioned facts indicated that the people had heard of HIV/AIDS and are aware of it which was found also in field visit of the study. Various studies (Pokharel et al., 2008; Karki, 2014; Wasti et al., 2015) suggested that the awareness raising model that create awareness/knowledge among

the general population will greatly reduce the vulnerability to high risk behavior activities. However, this is not always the case.

The HIV/AIDS awareness campaign have also developed misconception existing HIV/AIDS awareness model (Beine, 2003). According to him the traditional health belief model posits gods or "ill fate" as a fundamental cause for illness, not germ theory.

At the beginning of awareness program while talking about sex is taboo in Nepal, prevention workers decided to translate "intercourse" euphemistically as "physical contact" in the AIDS literature which was distributed to people regarding HIV/AIDS information. A martial art instructor who told that he would get HIV because he had taught judo to HIV infected people. The instructor had read the material and was afraid since in teaching those people judo, he had had "physical contact" with them. Similarly, when it was found that there was an increase in HIV/AIDS among IDUs, the use of disposable syringes was promoted through an education campaign. People got the messages that disposable syringe cannot transmitted HIV/AIDS. Therefore, they were using disposable syringe, believing that they could not be transmit HIV in that way. Again, the rural people also concluded that AIDS was a brand of beer because the HIV/AIDS advertise began to broadcast on the radio immediately after the news, a time slot formerly filled with beer advertisement (Beine, 2003). However, beer and cigarette advertisement is not allowed in radio, TV and print media after 2008. It is also found that rural women have also misconceptions about the HIV/AIDS prevention methods.

The campaigns of awareness program had led to nation-wide multimedia advertising to promote condom use and discourage intravenous drug use. The condom promotion activities publicly display of topics considered too taboo to even speak of by the wider society. Billboards displaying and condom advertisement on side and drug awareness messages on the other every tenth of a mile of ring road of Kathmandu and every few miles along highways contributed to construction AIDS as disease of sex worker and IDUs. According to building activists, the once taboo topic of sex is now prominently displayed throughout the country. However, these types of awareness campaign have to be modified as per the requirement of socio-cultural context.

The aforementioned awareness program has raised some of the questions related to linkage between HIV/AIDS and wider society. What were the possible implications of such public promotion of topics considered taboo by the society? Something is not wrong or bad until it brought into the open such as could this also be true, then, of the open display of condoms and discussion of sex in public, as practiced by the HIV/AIDS campaign? It may be that far from liberating people to discuss sex more freely, the approach actually made sex appear sinful. It had reinforced the perception that 'bad people' get HIV/AIDS and that those teaching about it is also bad. If so, this has serious implications for the HIV/AIDS education campaign. From this study it is also found that almost all research participants said that the HIV/AIDS is the matter of those people who have been involved in bad sexual activities.

Further it is elaborated that person who has good handle on Nepali culture, suggested that the use of condom as a "campaign symbol" has the negative repercussion of "alienating certain groups" and further "fuels the idea that AIDS is bad". In case of IDUS, prominent display of anti-intravenous drug use messages on the billboards as well. It has been reported that the campaign launched to promote injecting drug use abstinence in Nepal actually lead "a rapid switch from oral to injecting drug use" as the advertising campaign apparently "peeked the curiosity of oral drug users". It seems that many prevention strategies design to lessen the impact of the spread of HIV and AIDS in Nepal actually had delicious affects. Even so, "awareness building" a product of the West assume that the unsafe behavior will change by the acquired knowledge via awareness building initiatives that remain a major strategy for fighting against AIDS in Nepal.

The effectiveness of Nepal's HIV/AIDS awareness initiatives is found questionable from findings of the knowledge level related to HIV and AIDS among most risk as well as general population. The comprehensive knowledge of HIV transmission is low among FSWs and women age 15-49 years old. Less than one fourth of women and FSWs had comprehensive knowledge of HIV transmission including avoiding misconceptions. However, the knowledge of HTC was found significantly higher among FSWs (85%) as compared to that of low risk women (40%). The efforts of HIV/AIDS awareness among general women are found to be less effective. However,

the awareness building strategy of HIV prevention, HIV testing and counselling along with are also included in the prevention strategy.

8.2.2 HIV Testing

In order to achieve the goal of universal access to HIV services , Nepal has been adopted international perspectives as strategic approach at beginning of HIV and AIDS national responses (NCASC, 2007). The first HTC services was established in 1995 as CITC. The more comprehensive methods of CITC was expanded community in 2003 and updated in 2007, 2009 and 2011. It is on progress and easy access to needy people of HIV services. In 2014, separated guidelines were developed as integrated comprehensive guidelines for treatment and prevention methods. National HIV testing and treatment guidelines, 2017 implemented through community led testing approach to maximize the HIV testing (DoHS, 2017). Most of the community led HIV testing were supported by NGOs.

Box 8.1

Trends of HIV and AIDS prevention and Intervention

- SACC (STD/AIDS Control Committee) organization was established in 1986
- Sort-term national AIDS prevention and control program was launched for period 1987-1988
- First HIV case was detected in 1988
- Medium term plan of HIV prevention was implemented in 1990-1992
- Formation of NCASC in 1992
- Donated blood screening policy was adopted in 1993
- The second medium term policy implemented in 1993-1997
- First National AIDS policy was developed in 1995
- The first HIV/AIDS strategic plan was implemented in 1997-2001
- IBBS was started since 1999
- National AIDS council formed in 2002
- The second national strategic plan of HIV/AIDS was implemented in 2002-2006
- Operational plan implemented for HIV and AIDS control in place in 2003
- VCT guidelines adopted in 2003
- National ARV guidelines developed/adopted in 2004
- Standard operating procedure on ARV for Sukraraj Tropical Hospital developed in 2004
- The third national HIV/AIDS strategic plan was developed and implemented in 2007-2011
- The NAP formed in 2008-2011
- National M&E guidelines developed in 2006
- The M&E operational plan drafted in 2009 and implemented in six districts
- The fourth national HIV/AIDS strategic plan was developed and implemented in 2011-2016
- The fifth national HIV/AIDS strategic plan was developed and implemented in 2016-2021

Source: MoHP et al. 2007; NCASC, 2007 cited in Wasti et al.2009; NCASC, 2007; NCASC,2008; NCASC,2009; NCASC, 2010; NCASC,2011; NCASC, 2014; NCASC, 2016

The implementation of detection of STIs along with HTCs were the strategic focus of HIV?AIDS response as integral part. Such type strategic approach started to implemented at the beginning of the HIV response in Nepal. It has also been discovered that STI clinics around the country retain links to KAP based on national case management criteria. The guidelines were revised in 2009, 2011 and 2014.

The response of HIV/AIDS in Nepal since the beginning of the case detected, the outcome found to effective in terms of reducing the HIV prevalence in high risk groups of HIV such as FSW, IDUS, MSW, MSM, TG, mane Male labour migrant groups in the country. However, the behavior change interventions are still numerous challenges to high risk groups and low risk population in Nepal.

Table 8.2: Trends of HIV tested and counseled all types of population groups, NCASC, 2014

HIV Tested and Counseled	Year of HTC						
	2008	2009	2010	2011	2012	2013	2017
Pre-tested Counseled	65,167	71,377	1,15,013	1,01,063	1,26,511	1,46,706	-
Tested HIV	53,309	62,672	1,06,325	95,501	1,20,450	1,39,566	1,76,228
HIV positive	2,387	2,110	2,015	2,060	2,433	1,426	1,781
Post-test Counselled	51,845	61,170	1,04,666	94,190	1,18,570	1,37,928	-

Source: NCASC, 2014

Routine monitoring data indicates that 139,566 people were tested and took counselling services in 2013. Out of total HIV tested people, 99 percent received their results. Similarly, 1,76,228 are tested HIV in 2017, among them 1,781 are HIV positive. The HIV testing trends found to be increased in the every year (NCASC, 2014). From Table 8.2, it was identified that there was more than one percent HIV infected population among that reported HTC. The aforementioned number also suggested that there was very few HIV testing and counseling as per the number of key affected population.

According to NCASC (2016), it is found that HTCs services were effective to utilized the services among high risk population. The coverage and captured to the male labour migrants are still problematic due to the only 319 VCT were established across the country. High risk group of population have been utilizing the services in the past

12 months reference period. The fact indicates that the HIV prevention activities like HTC found discouraging and challenges to prevention of HIV transmission from high risk to low risk as strategic approach.

Prevention of mother to child transmission (PMTCT) services of HIV/AIDS was introduced in Nepal since 2005 with setting up of three site BPKIHS, Dharan, Bheri zonal hospital, Nepalgunj and Maternity hospital in Kathmandu (NCASC, 2005). PMTCT service guidelines were created, updated on a regular basis, and implemented, including free maternal ART and baby prophylaxis. Comprehensive of maternal and child health care incorporated the HTC, PITC and PMTCT.

The targets set up to reducing infection to children which was the strategic approach of the strategic plan. The comprehensive and integrated approach of PMTC are as follows:

- Primary prevention of HIV/AIDS,
- Prevention of uninfected pregnancy from infected mother
- Provision of care, support and treatment of women living with HIV
- Integrated package of HIV infected women including ANC, during delivery and postnatal care
- Infant feeding information, counseling and support
- Referrals services to infected women and families on overall HIV services

The government of Nepal started CB-PMTCT services with the collaboration of non-governmental organizations beyond hospitals reaching remotes areas. This program support and provide successfully services of ANC, HTC and PNC to local women (UNICEF, 2012). The continuum care of ART to infected pregnant women is found to effective as per the requirements. PMTCT services are integrated with KAP target intervention, family planning, SRH and counseling services.

The achievement of PMTCT services also has low coverage. There is a gap on estimated HIV infected pregnant mothers and services the mothers need. According, DOHS, commitments of reducing 90 percent of new infections among children by 2016 with compared to baseline value 2010. The scale up of PMTCT services across the country for easy access of the services (NCASC, 2013). There were significant mothers were have been increasingly taken the services. A significant number of HIV infants have taken the ARV services. The early infant diagnosis were established to effective services (DoHS, 2017).

The overall HIV/AIDS prevention program are not encouraging. There are a lot of gaps on implementation of prevention activities. The strategic approach of HIV prevention priority to high risk groups is not sufficient to risk reduction of low risk population. It indicates that there is a need of prevention intervention to low risk population. Beside the prevention intervention, national responses also included treatment, care and support initiatives of HIV and AIDS.

8.3 Treatment, Care and Support

As treatment of HIV positive people, government of Nepal started to provide free of cost ARV services. This services contributed to lowering mortality. Wide range of ARV services contributed to people living with HIV for the prolong life and integrated into the care, support and treatment services of the country. The strengthening of ARV services, CD4 machines and viral load machines have been shown to be useful in tracking treatment adherence. A monitoring system for tracking treatment adherence has been implemented.

The maximization of treatment of the key affected regardless the CD4 count, WHO HIV treatment guidelines leverages the befits to the people those are in under treatment. The scale up of ARV treatment for all those are needy people are the major achievements of treatment in the country. The community-led HIV testing and treatment competence (CTTC) approach supported to effectiveness and coverage of wider scale of the key affected people. Most of key affected the infected people were reach to treatment services provided by the government of Nepal.

The national strategy emphasizes essential steps such as, but not limited to:

- Expand ART treatments to specified districts, PHCs, and teaching hospitals, with the overarching goal of lowering HIV-related mortality by 25 percent by 2016 compared to the baseline year of 2010.
- Increasing national capacity for adult and pediatric treatment;
- Established links between HIV care and other health services. The role of widening and reach to people of ART services, the role NGOs are crucial,
- Provide Cotriomoxazole prophylaxis,
- Established and strengthening linkage among TB centre and HTC, PMTCT and ART sites, and
- Expand role of TB/HIV program

Furthermore, national HIV and AIDS responses included free highly effective ARV, clinical follow-up, M&E, nutrition support, and TB screening, as well as Isoniazid preventive therapy (IMPT). Furthermore, CHBC components include primary care of PLHIV in their homes and community settings by trained CHBC workers for positive living, stigma and discrimination reduction, and community and ARV adherence support (NCASC, 2016).

In every year, there were increased in ARV services. Out of 8860 infected people, there were only 1086 PLHIV with their viral load suppressed (NCASC, 2013). It was increased 9818 in 2015 (DoHS, 2015). The significant number of TGs were also utilized the services. The report of the year 2014/15 indicates that 15 percent were died those are admitted in ART services, 9.2 follow up, 76 percent were in under treatment and 0.2 percent stop their treatment.

8.4 Financial Reposes

The Nepal HIV Investment Plan, 2014-2016, is based on the principles of the UNAIDS Investment Framework, the National Strategy Plan 2011-2016, and the recommendations of the comprehensive national review (2013), and it makes a strong

case for strategic investments in Nepal's HIV response. The inclusion of a three-year operational plan and budget in the NHIP will guide the implementation of the National Strategy, 2011-2016, throughout the 2014-2016 timeframe. This NHIP works to ensure that resources are aligned with the objectives and goals of Nepal's HIV program, as well as to contribute to the overall effectiveness and efficiency of the national HIV response in order to achieve the three Zeros: zero new HIV infections, zero discrimination, and zero AIDS-related fatalities.

The NHIP 2014-2016 is structured around the rapid scale-up of HIV testing and Antiretroviral Treatment (ART), with the guiding principles of shared government and community leadership in a true public-private partnership, evidence-informed policies, and outcome and impact-driven public health approaches. The approach combines Nepal's 'test, treat, and retain' paradigm and focuses on HIV Prevention of Mother to Child Transmission (PMTCT), with the objective of guaranteeing that no HIV-positive child is born in Nepal and that mothers are kept alive and healthy. This plan calls for antiretroviral treatment to be provided to all population groups identified in Nepal as key populations, regardless of CD4 count, in accordance with UNAIDS' 'Treatment 2015' (UNAIDS, 2015) and the June 2013 WHO HIV treatment guidelines (with an update in March 2014). This NHIP promotes innovation, such as the use of the 'Community Test and Treat Competence (CTTC)' model to drive community-led HIV testing and treatment. It is built on a solid health economics model.

The NHIP emphasizes that TG SW, FSW who inject drugs on a regular basis, street-based FSW, and MSW are the highest priority for investing in foundational program activities and critical enablers to achieve HIV prevention among Nepal's most vulnerable key populations. NHIP, 2014-2016, isolates these harder-to-reach sub-groups, which are currently underserved, from the larger FSW and MSM populations to ensure that HIV interventions reach them. NHIP also emphasizes migrant and mobile persons and their families, particularly in the country's Farwest and Midwest, female sex workers and female drug users whose partners are male drug users; and gay men and other men who have sex with men (MSM).

Nepal's HIV program is mostly reliant on international development partners for the resources required to combat HIV. The tracking of financial resources invested in the

national response to HIV has clearly indicated that nearly 90 percent of resources for the national response originated from foreign sources, with domestic resources accounting for around 10 percent of total resources over the preceding three years. To be clear, the domestic resource listed here does not include contributions from other ministries, such as the Ministries of Education and Sports, Labor, and Local Development, as well as other local resources created through DACCs.

Table 8.3: Financial Resource Supported by Government and External Agencies on HIV/AIDS Responses in Nepal:2011/12-2014 (in US$)

Financial Support	**2011/12**	**2012/13**	**2013/14**
External Support	2,10,35,345	2,04,34,649	2,20,63,289
Domestic Support	22,61,976	22,49,417	25,00,772
Total Support	2,32,97,321	2,26,84,066	2,45,64,061
% of Government Support in Total	**9.7**	**9.9**	**10.1**

Source: NCASC, 2014.

The Global Fund, bilateral agencies such as USAID and GIZ, UN agencies, pool fund partners of NHSP-II (the World Bank, DFID of the United Kingdom, AusAID, and KfW), sector wide approach (SWAp) on HIV/AIDS, and INGOs all contribute to the national HIV response. Despite the involvement of a number of external development partners, the national HIV response has been effective in ensuring that expenditure is mostly aligned with the national strategy, due to strong coordination between the government and external development partners.

8.4.1 Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM)

According to the most current Global Fund portfolio report, Nepal signed a USD 60,331,527 contract with GFATM for the national HIV response, with about USD 50,283,885 disbursed (portfolio.theglobalfund.org). GFATM assistance focuses on building the capacity of the government and key organizations, including civil society, as well as mobilizing a sector response that enhances and contributes to the achievement of Nepal Health Sector Program (NHSP) II implementation for increased access to prevention and care services for key populations at risk, migrants, and women of reproductive age in priority districts. Aside from that, work is underway on a new proposal to be submitted to GFATM based on the new funding mechanism.

Table 8.4: Financial resources contributed by GFATM in Nepal:2011/12-2014 (in US$)

Financial Support	2011/12	2012/13	2013/14
GFATM NEP-H-NCASC	30,73,875	42,79,048	60,58,776
GFATM NEP-H-SCF	42,27,093	46,02,930	57,89,036
GFATM NEP-708-411-H	17,77.26	17,96,574	6,56,545
GFATM NEP-708-409-H	41,47,552	-	-
GFATM (PSI)	66,875	1,43,022	-
Total Contribution by GFATM	**1,32,93,311**	**1,08,21,574**	**1,25,04,357**

Source: Global Fund R10 Phase II in HSCB, 2010.

A huge amount of GFATM contributed to national response of HIV/AIDS in Nepal. In 2011/12, GFATM has financial supported in response to HIV/AIDS with US$ 13293311 which was decreased in 2012/13. However, it was increased in 2013/14 with compared to 2012/13. It seems that GFATM is going to decrease fund in Nepal. Beside the GFATM, other bi-lateral and multi-lateral agencies have been also supported Nepal's HIV/AIDS response.

8.4.2 Bilateral Organization

The United States Agency for International Development's (USAID) efforts to decrease the repercussions of HIV in Nepal began in 1993 with the introduction of the country's first HIV-related project, AIDSCAP I. Since then, USAID has spent more than $80 million in the nation on six consecutive, focused, and evidence-based HIV programs. Building on more than two decades of effective partnership with the Government of Nepal to support the national HIV response, USAID launched its five-year HIV and FP initiative, the 'Saath-Saath Project (SSP)' in October 2011. The project's purpose is to reduce the transmission and impact of HIV/AIDS while simultaneously improving reproductive health in at-risk areas. The initiative works with the Government of Nepal on a national and local level to deliver HIV prevention, care, support, and treatment services, as well as family planning services, to critical groups (FSWs and their clients, migrant workers and their spouses, and PLHIV) in 33 districts across Nepal. The SSP is managed by FHI 360 Nepal, with the Association of Medical Doctors of Asia as a core partner and more than 40 local NGO and national network partners carrying out project activities in the districts. The German Development Cooperation (GIZ) has been supporting the National Opioid

Substitution Therapy (OST) program in collaboration with GFATM and the Nepalese government.

8.4.3 Pool Funders

Since fiscal year 2011/12, the Nepalese government has contributed to the national HIV response in two ways: (a) through regular funding to NCASC and (b) through the Pool Fund. The Pool Fund, which is funded by both the government and international sources such as the World Bank, KfW, AusAID, and DFID, supplements the whole health sector budget as part of a sector-wide plan. This is part of NHSP II, for which KfW, AusAID, and DFID have allocated USD 19 million over a five-year period for efforts ranging from aiding with the implementation of focused intervention programs to enhancing the national surveillance system.

8.4.4 UN Organizations

Over decades, the UN system has supported Nepal's HIV response in a variety of ways, including the development of a national strategy, the estimation of the size of key affected populations, the development of guidelines and directives, and the expansion of PMTCT services. For this reporting period, the main activities it supports are: NHIP preparation, Midterm Review, guidelines of HIV drug resistance early warning indicators, composite guidelines on treatment (as it relates to HIV) and vertical transmission elimination, support to OST program (Buprenorphine), and expansion of service coverage for vertical transmission elimination. UNAIDS, the Joint United Nations Program on HIV/AIDS Secretariat, collaborates with all stakeholders to coordinate and give technical assistance on strategic problems such as resource mobilization, national response evaluation, civil society participation, and strategic information generation.

8.4.5 Other Organizations

Care International receives funding from the UK Lottery Fund to carry out the Emphasis Project, a cross-border intervention for labor migrants. Similarly, through its primary funding, the Family Planning Association Nepal (FPAN) contributes to the national HIV response. Aside from the resources provided by GFATM, Save the Children contributes its own funds to the fight against HIV in Nepal.

Table 8.5: Financial resources contributed by EDPS (except GFATM in US$) in Nepal for HIV/AIDS response:2011/12-2014

EDPs Support (in US$)	2011/12	2012/13	2013/14
Care International	6,10,663	5,97,545	3,69,609
FPAN	2,36,878	2,07,448	4,44,951
GIZ	2,66,000	7,98,000	9,31,000
Pool Fund (EDPs Portion only)	3,92,668	4,70,676	5,97,386
Save the Children	50,000	1,80,439	55,000
UNAIDS Secretariat	3,00,000	95,000	95,000
UNICEF	5,56,783	5,69,795	3,83,000
UNODC	10,53,609	4,87,515	3,37,200
USAID	39,23,250	59,46,893	59,70,755
WHO	3,52,183	2,59,764	3,75,031
Total EDPs Financial Support	**77,42,034**	**96,13,075**	**95,58,932**

Source: DoHS, 2015.

Table 8.5 shows that external development partner's financial support to national responses of HIV/AIDS is increased from 2011/12 to 2013/14 period. However, it is decreased in 2013/14 with compared to 2012/13. USAIDS is the main funding agency to HIV/AIDS response with other compared other EDPs. The history of USAIDS fund in HIV/AIDS response is long than other funding agency which is consistently fund for the national response.

8.5 Monitoring and Evaluation System

As the coordinating department, the National Centre for AIDS and STD Control (NCASC) monitors relevant activities from the central to the peripheral implementing levels and reports relevant national and international committed indicators to support the implementation, monitoring, and oversight of activities under the MoHP. There is a pervasive lack of monitoring of the national response that extends beyond the health sector.

NCASC has built a strong Monitoring and Evaluation (M&E) system that has followed the HIV pandemic to inform national HIV response over the years. In partnership with the NCASC's Strategic Information (SI) Unit, a data collection, management, and analysis system encompassing district, regional, and central levels has been created. NCASC is in responsible of all HIV-related M&E systems, tools, and operations, as well as managing a large number of stakeholders and carrying out

capacity building initiatives to improve the strategic information system. With all of this systemic architecture in place, the strategic information-related activities envisioned in the National HIV/AIDS Strategy, 2011-2016, have made progress. This reporting cycle has witnessed some significant advancements.

8.5.1 Surveillance for HIV and STIs

Nepal has been tracking the HIV/STI epidemic by regularly collecting data from the following sources:

Case Reporting for HIV and STDs: Normal STI and HIV case reporting from HIV testing and counseling and PMTCT sites, as well as other standard programmatic data, continues. Nepal has been closely monitoring the HIV situation among the country's numerous major groupings. Monthly, quarterly, and annual reviews of HIV and STI reporting from sites are conducted.

Integrated Biological Behavioral Surveillance: For more than a decade, Nepal has been undertaking HIV/STI surveillance, focusing on important populations such as PWID, FSW and clients, MSM/TG, and male labor migrants, with the goal of tracking changes in HIV and STI prevalence as well as behavioral components such as condom usage. In 2012, NCASC conducted IBBS surveys among MSM/TG (Kathmandu Valley), Male Labor Migrants (Western to Mid and Far Western regions), FSWs (22 Terai Highway districts), and PWID (Eastern and Western Terai Highway districts). In the same way, NCASC has completed all preliminary work for past IBBS cycles.

Monitoring of HIV Drug Resistance: In this section of the study, preparations for establishing a system for monitoring HIV drug resistance and early warning indications are ongoing. In November 2013, guidelines for monitoring HIV Drug Resistance Early Warning Indicators were released.

Estimation and Projection of HIV Infections: NCASC conducted epidemic analysis and modeling, as well as refining and updating existing surveillance data, to estimate and project HIV infections on an annual basis, and to disseminate the results to its national and worldwide partners. Based on these yearly evaluations and projections,

Nepal has contributed to regional and global estimates of epidemic updates via the UNAIDS/WHO calendar.

NCASC has issued strategic information factsheets containing epidemic updates and programming achievement on an annual basis. During the same reporting period, over 100 health workers, monitoring personnel, district and regional managers, and program focal persons from public, private, and academic institutions were trained on national systems, key activities, functions, and roles for HIV and STI surveillance.

8.5.2 Program Monitoring

Monitoring is routine work that the NCASC does on a regular basis through monthly (all programming) and biweekly (DACC and logistical) reports, regular site visits for supportive monitoring, and a yearly thorough assessment of programs by districts.

A mid-term review of the national HIV/AIDS strategy plan 2011-2016 was completed in the middle of 2013, with the intention of assessing progress toward the objectives. The study generated a number of recommendations for keeping the national response up to date with medical breakthroughs. Nepal also performed a midterm evaluation of High Level Meeting (HLM) Targets, which emphasized Nepal's progress toward the 10 HLM Targets established by the United Nations General Assembly Political Declaration on HIV.

The National Centre for AIDS and STD Control (NCASC) revised the National Guidelines for Monitoring and Evaluating HIV Response in November 2013. The Guidelines, which were recently amended, are in accordance with the primary monitoring and evaluation requirements as well as the demands of the Nepalese government. The NCASC has made efforts to integrate routine recording and reporting of key programs such as HTC, PMTCT, STI, ART, TB-HIV, and OST through the Health Management Information System (HMIS) as part of the larger Health Information System, and as a result, related preparation and training for health workers has been conducted. To efficiently track TB-HIV co-infections, a TB-HIV registry has been established. TB cases are also included in ART patient and opportunity infection databases (SEARO 2013 Status Report on TB-HIV). Similarly, an EID registry has been set up to follow pediatric ART instances.

Annual Data Quality Assessment (DQA): As a regular monitoring activity in the districts, annual Data Quality Assessment (DQA) was done. DQA was done in 19 districts in 2012, in 2013, 50 districts are expected to participate. DQA is conducted at the service site level by trained DACC coordinators, HIV focal individuals, and regional HIV/AIDS Officers who report to the NCASC.

Monitoring and Evaluation Training: During the reporting year, approximately 150 employees, including DACC coordinators, HIV-focal individuals, Regional HIV/AIDS Officers, Regional HIV-focal persons, and important representatives of non-governmental organizations, were taught on National M&E of HIV Response. It was primarily concerned with monitoring systems, frameworks, tools, indicators, methods of recording and reporting, data analysis and usage, and data quality assessment. Approximately 150 health workers were also trained in strategic information areas such as data analysis and use, data quality assessment and improvement, geographical information systems (GIS), and monitoring of targeted prevention interventions among key populations at higher risk during the reporting period.

Financial Monitoring: Nepal has performed annual National AIDS Spending Assessments (NASA). NASA 2014 is officially underway, thanks to the aid of NCASC.

8.5.3 Research

Research is used in the national HIV response as a technique for gathering evidence to improve programmatic efficacy and providing input into policy processes. A national HIV research agenda was designed and identified 102 research priority topics from July 2014 to July 2016. The national HIV research agenda has prioritized closing information gaps in order to increase the coverage, quality, and efficacy of its programs. During the reporting period, Save the Children conducted a rapid assessment of the situation of children afflicted by AIDS in nine areas across the country. Similarly, the Saath-Saath Project conducted baseline research among labor migrants and their wives in four regions throughout this reporting period (DoHS, 2015).

8.6 Effectiveness of Governmental Responses to HIV/AIDS

Despite the reduction in HIV/AIDS in Nepal, The are still problems in behavioral change and program effectiveness in prevention. It is noted that the new cases are found in every year despite the success of HIV reduction. From reviews of national responses and facts of the national studies, it is found that there are gaps in national responses.

Although first case of HIV/AIDS was not detected in Nepal until 1988, prevention efforts (in response to the growing global AIDS epidemic) were begun in 1986 with the formation of a STD and AIDS control committee (Suvedi, 1999). The prevention efforts have been made in this initial phase of national response. The aforementioned response is identified as the first phase of HIV/AIDS responses and it was seen more as a disease that targeted male homosexuals in the West and people from other countries. During the first phase of responses, information, education and communication program were introduced. However, the prevalence of HIV has been increased. The coverage of program and actual facts of the incidence was lacking at that period.

Table 8.6: Efforts and achievements of governmental responses to HIV/AIDS

Year	Policy and Program Efforts	HIV Prevalence (%)
1987/88	First National Prevention and Control Program	0.04
1990-1992	First Medium Term Plan	0.06
1993-1997	Second Medium Term Plan	0.09
1993	National Policy on Blood safety	0.09
1995	First National Policy of HIV/AIDS	0.10
1997-2001	National Strategic Plan for HIV/AIDDS Prevention	0.11
2000	Situation Analysis of HIV/AIDS in Nepal	0.16
2002-2006	National Strategic Plan for HIV/AIDS	0.26
2003-2007	National HIV/AIDS Operational Plan	0.28
2006	National Workplace Policy	0.34
2006	National Policy on Drug Control	0.34
2006-2008	National HIV/AIDS Action Plan (NAP-I)	0.34
2006-2011	National Strategic Plan for HIV/AIDS	0.34

2007	National HIV/AIDS and STI Control Board (Institutional Form)	0.33
2008	Nepal Policy Advocacy Panel on HIV and AIDS	0.32
2008	Nepal Leadership Forum on HIV/AIDS, HIV/AIDS and Human Rights Forum	0.32
2008-2011	National HIV/AIDS Action Plan(NAP- II)	0.32
2011	New National Policy on HIV and STI	0.27
2011-2016	National Strategic Plan for HIV/AIDS	0.27
2014-2016	Nepal HIV Invest Plan	0.22
2016-2021	National Strategic Plan for HIV/AIDS	0.13

Source, NCASC, 2011; NCASC, 2006; NCASC, 2011; NCASC, 2016; NCASC, 2020 and DoHS, 2073/74(2016/2017)

In the second phase of HIV/AIDS responses beginning since 1995 which is based on systematic and policy response was started after the commitments and obligation of ICPD, 1994. The HIV/AIDS prevalence was in increasing. The effective implantation programs and limited resources and lack of trained human resources are key issues for the HIV prevalence. The awareness building efforts has also been weak at that period as well due to the social and cultural norms and values which is not supportive to national responses.

The period of 2002-2006 is very crucial in terms of HIV prevalence. The HIV prevalence reached to the highest level (2004-2006). The seroprevalence study among different high risk groups were done and developed prevention and control programs. The national HIV/AIDS strategy has been seen as effective policy response to prevent and control HIV/AIDS. However, the awareness building and prevention initiatives were not effective to reduce new infections. The care and support to PLHIV is also challengeable to protect the rights of PLHIV

The National HIV/AIDS Strategy (2006-2011) had set up the objective of program coverage and reduction of new HIV infection among most at risk population. The prevention objective of the national strategy is "By 2011, HIV program coverage will be 70-80 percent among the MARPs and reduction of new HIV infection among general population." The strategic outcomes were improved knowledge and safe

behavioral practices of all target groups (safer sex practices and safer injecting practices), increased availability and access to appropriate and differentiated prevention services, increased acceptance of HIV and AIDS and enhance must of non-discriminatory practices affecting marginalized and most at risk populations, and reduced risk and vulnerability to HIV infection of all target populations. The HIV prevalence is decreasing but awareness initiatives seem weaker. The PMTCT was introduced in this period which has positive effect on prevention of HIV/AIDS.

After 2006, the government responses were operationalized through the National HIV & AIDS Strategy, both the NAP 2006-2008 and the NAP 2008-2011. This has articulated the actions necessary to achieve universal access to prevention, treatment, care and support. After the implementation of the action plan, HIV prevalence has been reduced. The coverage of program and behavior change modality is also questionable.

The comprehensive strategic approach to prevention and treatment of HIV/AIDS was introduced as the HIV/AIDS strategy (2011-2016) is the milestone for HIV/AIDS reduction. However, this strategy is less likely to focus on low risk population in practice. Following the implementation of the National Policy on HIV and STI in 2011, the fourth phase of HIV/AIDS responses began in 2011. Three strategic plans have been implemented in accordance with the policy's recommendations, and large-scale work in the HIV/AIDS and STI sectors has been completed. As a result, HIV infection prevention and control programs are being conducted in high risk groups as well as related sectors of the country. Success has been achieved in controlling the infection rate among some high risk groups and meeting the target set by Millennium Development Goal (MDG) to reduce HIV infection rate. But there have been great changes in the prospect, its situation, infection rate, view and concept towards HIV at present stage since the first implementation of the National Policy on AIDS and STD Control 1995.

The ongoing National HIV Strategic Plan (2016-2021) is based on the guiding principles of “universal equitable access to services for HIV prevention, treatment, care and support”. Prevention and treatment continuum using to identify, reach, recommend, test, treat and retain approach. The governmental responses of HIV is

implement as per decentralized, multi-sector and interdisciplinary engagement to fast-tracking towards ending the AIDS epidemic as a public health threat. The strategic plan has clearly setup goals to achieve HIV vision 2020 and ending HIV/AIDS in 2030. This high ambition strategic approach is also questionable in terms of general population point of view.

Despite the declining of HIV/AIDS incidence among key affected population, the KABP of HIV/AIDS is still questionable among such types of groups (NCASC, 2018). The growing HIV cases among women and males aged 15-49 years considered as low risk population still less likely in priorities of governmental responses. There are still numerous challenges to achieve the targets set up by the government which is question under the study.

8.7 Challenges of National Responses to HIV/AIDS

The government of Nepal has made various efforts to combat HIV/AIDS in Nepal under the support by international funding agencies. The reductions of HIV positive cases among the high risk groups indicate the effectiveness of national responses to HIV/AIDS. However, the high risk behavior of HIV/AIDS are still in practice in the country among high and low risk population. The effectiveness of policy, strategies, programs are still mostly guided by individual behavior change model. The socio-cultural dimensions of HIV/AIDS prevention in policy, strategy and program gaps are visible in the national responses. There are numerous challenges to behavioral change initiatives in Nepal.

The government of Nepal initiates policy response to HIV/AIDS in 1995. Under this policy, strategic plan for prevention, operational plan, structural arrangements and programs were developed. According to policy advocates, government officials/planners and funding agencies argued that there is no gaps in policy and strategic plan. There is a problem in implementation of the responses. Advocacy and policy level government and non-government officials said that all the policies and programs related to HIV/AIDS prevention, care, support and treatment are international standards and based on the evidence based. According to a government official:

> *The government of Nepal developed policies and programs to combat HIV/AIDS on the basis of research based findings and international practices. The initiatives towards HIV/AIDS prevention and management are successfully handled. The HIV prevalence rate is decreasing in high risk group of population. The effectiveness of HIV/AIDS programs have seen in the regular monitoring facts. However, the geographical difficulties, inadequate human resources and limited services centers are the challenge of HIV prevention and treatment (interview with Director, NCASC).*

It is evident that the advocacy and policy level government and non-government officials have Western influenced prevention modality on policy and programs of HIV/AIDS. The district and program implementation level officials have quite different ideas on the HIV/AIDS prevention and treatment. The activist and local level program implementers have been facing unexpected issues related to cultural and environmental context. A HIV/AIDS program staff from Burdghat of Nawalparasi commented:

> *Wives of labor migrants practice unsafe extra marital sexual behavior. We have a case about unsafe sexual behavior which is opposite the existing HIV transmission. A woman has tested HIV and received results and after knowing the HIV positive she was very depressed. She told us she used condom most of time. Again she told, but during some sexual intercourse, "I did not use condom because we don't have condom. Before my husband going to Qatar, we didn't have problem because we tested HIV". We counseled post-test or post received result to that woman. The women replied "I will keep it secret". Again the women said, "after the sexual intercourse when my husband comes, we will come to HIV test. After that my husband will be infected. In this way a woman plans transmit HIV to her uninfected husband.*

The aforementioned case is unique for wives of migrants. The general knowledge of understanding was that labor migrant husband, transmit HIV to her wife, but in this case woman tends to transmit it to his husband. The fear of stigma and discrimination towards HIV is applicable in this case. The HIV positive woman again said that if HIV had been disclosed, she would be nowhere neither at home nor in the society.

The ongoing program is targeted to the wives of migrants. However, the programs are not reached to all the wives of migrants in the program and other non-program districts. The socio-cultural dimensions of HIV/AIDS programs are still questionable.

In-depth interview with focal person of district AIDS coordination committee identified the issues and challenges of HIV/AIDS program. The non-government organizations and funding agencies have been dominated in the modality of program implementation. Most of the NGOs working in the field of HIV/AIDS are ignoring the district and local level government institutions. NGO workers and program managers of NGOs are reporting to their national managers and national mangers report to NCASC. The district level government officials and workers do not have roles in NGO implementing prevention programs. NGOs invite government officials in training programs as a resource person only. The focal person of district AIDS coordination committee of Nawalparasi commented:

> *We don't know exactly what types of activities are conducted by NGOs. The NGOs invite us in training program as a resource person. We go to training venue and handle one session. We receive remuneration and return to the office. When we ask about the details of programs, they reply that they had already reported it to national office. I think funding agencies and INGOs totally control the all levels of HIV/AIDS policy and programs in Nepal.*

It is argued that HIV/AIDS policy and programs are heavily influenced by funding agencies and INGOs. The evidences were collected for policy formulation and program design from the international practices (western model). In some cases, the policy and programs are fit and result oriented but the diverse culture and structure of society do not accept the individual behavior change model only. There is a need to develop policy and programs that is socio-culture and environment friendly in the HIV/AIDS realm in Nepal.

It is evident that HIV prevention especially awareness building programs are still found ineffective in Nepal. The facts of lower comprehensive knowledge, stigma and discrimination among different groups of high risk population are common. The prevention efforts faced many challenges, among them HIV testing and counseling also has low coverage as per the requirement. According to the DoH Services

Annual Report (2014/2015), There was a significant data gap in the HIV program, particularly reports from hospitals (regional/subregional, zonal, and district) that had yet to be covered by the computerized HMIS system. There was also a lack of cooperation in data exchange between the DPHO and hospitals. The HMIS database system does not cover all HTC sites in NGO settings. It is also discovered that inadequate HIV testing coverage among KAPs has long been a concern in the HIV response. Among all KAPs, the problem of inadequate coverage is most acute for returning labor migrants. This study also discovered that HIV testing among migrant spouses in hotspot locations is quite low. Only a few women aged 15 to 49 have tested positive for HIV. There were insufficient staff members, particularly certified HIV counselors, in government settings, particularly at PMTCT facilities. Over the years, the zero has counseled and tested in some service sites that have functionally challenging issues for funding agencies. The service gap among KAPs, which is largely evident at pool funder locations (DoHS, 2015).

The MPTCT services have been initiated in 2005. The governments of Nepal and non-government organizations are working in the field of PMTCT for HIV. However, the effectiveness of PMTCT is also challengeable. There were not enough laboratory staff in the PMTCT sites, and there were not enough PMTCT sites. As a result, no one is being tested for HIV at the ANC, delivery, or Postnatal Clinic (PNC). Aside from that, there is a reluctance to deliver cases due to a tendency to refer cases to other centers due to a lack of PMTCT knowledge (DoHS, 2019).

As identifying the issues and challenges of HIV treatment, care and support services, stigma and discrimination are big challenges to combat with HIV/AIDS. The government of Nepal identified that there is a low access to CD4 Count and Viral Load machines. There is a need for continuous and dependable access to viral load tests and CD4 count. Even in Kathmandu, there are just a few viral load facilities. Its expansion is very crucial. There is a problem of lost or deteriorating medical records (recording and reporting) that means electronic system of recoding and reporting is still lacking. Beside these, there is a poor supply of OIs medicines as per demand, inadequate financial support for the clients, inadequate training and staffs working in the clinic and poor monitoring and supervision of the ART programs (DoHS, 2017). The effectiveness of treatment service are still problematic in the services sites.

8.8 Discussion and Summary

The assessment of governmental responses to HIV/AIDS, prevention, care, support and treatment are major dimensions of analysis. In the aforementioned dimensions, policy, strategic plan and program on awareness building, HIV testing, care support and treatment of PLHIV along with low risk people are assessed. For the analysis, the governmental data are used as secondary sources of information and qualitative data which are collected from policy and advocacy level as well as implementation level personnel from centre to local level.

Nepal began policy actions to address HIV/AIDS in 1995, following the discovery of the first case in 1988. The updated version of the global goal of 90-90-90 explained that by July 2021, 90 percent of all PLHIV will know their HIV status, 90 HIV diagnosed people will get ART to viral suppression. The National Policy on HIV and STDS, 2011 is a policy guideline for overall responses to date. The National Strategic Plan 2016-2021 is developed and implemented to achieve.

The commitments of Nepal on "UNAIDS strategy 2016-2021" and "Sustainable Development Goal" to fast-tracking for ending the AIDS epidemic as a public health threat by 2030 which is an ongoing implementation process. The outcomes seem to be most challengeable. However, the policy and strategic plan are quite impressive to control HIV infection in Nepal. Awareness building is the key strategic approach to prevent, care and support people and PLHIV. The commitments of set goals should be achieved through the effective awareness building campaigns.

The effectiveness of Nepal's HIV/AIDS awareness initiatives is found questionable from findings of the knowledge related to HIV/AIDS among most at risk as well as the general population. The comprehensive knowledge of HIV transmission is low among FSWs and women aged 15-49 years. Less than one fourth of women and FSWs had comprehensive knowledge of HIV transmission including avoiding misconceptions. However, knowledge of HTC was found significantly higher among FSWs (85%) compared to low risk women (40%). The efforts of HIV/AIDS awareness among general women are found to be less effective. However, the awareness building strategy of HIV prevention, HIV testing and counseling and prevention of mother to child transmission (PMTCT) are also at a lower level among

low risk and high risk populations. The aforementioned facts indicate that the governmental responses to awareness building have challenges.

The major challenges behind lower levels of awareness building are lack of appropriate strategic approach, language use in mass media campaigns, inefficient structural mechanism, enabling environment towards policy and programmes implementation. Beside these, the low levels of women position in society, taboos in sex and sexuality issues, cultural constraints and geographical as well as cultural diversity of country. Finally, there is access to HIV/AIDS services as per the requirements of people.

HIV testing and counseling is one of the preventive measures to combat HIV/problems. In total, 2,37,496 people have got HIV testing and counseling services from 175 centres in fiscal year 2018/19. Among the total HIV testing and counseling, 2298 were HIV positive (DoHS, 2019). The cumulative HIV positive in that year was 35062. This fact indicates that there are no sufficient HTC centres as per the requirements of the people.

According to governmental monitoring reports, the HIV and AIDS data are not fully included in the governmental HMIS system. The services provided by the non-governmental service data were not included in the national system. The problem of low coverage of data on labour migrants those were received services from the NGOs. The gap in HIV positivity coverage is found along with HIV testing coverage as per 90-90-90 targets. The geographical constraints, cold-chain problem, lack of infrastructures' and trained human resources are major issues for the HIV testing and counseling centers establishments and operations.

The overall HIV/AIDS prevention programmes are not encouraging. There are a lot of gaps in the implementation of prevention activities. The strategic approach of HIV prevention priority to high risk groups is not sufficient to reduce the risk of low risk population. It indicates that there is a need of prevention intervention for the low risk population. Beside the prevention intervention, national responses also included treatment, care and support initiatives of HIV/AIDS.

Despite the progress that has been made, still many issues and challenges are unidentified either at program management level or service seeking level. It is identified that new HIV infections continue to see which have affected the current efforts on the evaluation of the HIV epidemic. From reviews of national responses and facts of the national studies, it is found that there are gaps in treatment efforts.

There are a total of 78 ART sites across 60 districts till the end of fiscal year 2018/19. The routine monitoring data shows that 11 percent of those enrolled on ART died and 8 percent have been lost to follow-up while 81 percent are alive and on treatment (DoHS, 2019). Further facts also reveal that a total of 9787 people have received CHBC services from 52 covering districts. They have CCs across the country which has been delivering their services to PLHIV. The aforementioned facts are not sufficient for the needs of people living with HIV and the key risk population.

The major issues of treatment of HIV are low access to CD4 count and viral load testing services, client duplication, lost or incomplete medical records, poor supply of OIs machines as per demand, inadequate financial support for clients, CHBC services coverage is declining over time due to the limited support from donors. Without donor funding, HIV/AIDS response is not possible to combat the infection. This way funding agencies have a critical role to government responses to HIV/AIDS in Nepal.

A number of multilateral and bilateral organizations have financial and technical support on HIV/AIDS prevention and treatment programs in Nepal, including interventions for high risk groups, condom promotion, STI testing and treatment, behavior change communication, volunteer counseling and testing services and providing antiretroviral drugs. The facts of the NCASC shows that out of total funding of a year, only 10 percent is government funding whereas 90 percent comes from external and other sources. The funding agencies have been dominating at policy, district and program level interventions. The government officials are involved in the interventions as witnesses. Most of the program interventions are based on the biomedical reality philosophy. So that organizations are not enough to address the cultural issues in local context and management issues in service provider level.

It has been about three decades working for HIV/AIDS prevention in the country. To date the health service has limited success in addressing the need of the

commercial/female sex workers such as poor comprehensive knowledge, knowledge of safe sex, unsafe due to financial incentives, poor negotiation of condom use and sexual violence. Sexual transmission is a key driver of HIV transmission in Nepal. The existing programmes and policies still do not reach sufficiently as per the needs of services. The coverage of services to the high risk group of population is still problematic (Wasti et al., 2009).

The social taboos of MSM were also less likely to reach the services (Pokarel et al., 2008). The limited access of condom and other HIV/AIDS services are low level of approach to those type high risk population in Nepal. The social constructed knowledge of MSM and TGs were also negatively affect their health and utilizing the existing HIV and AIDS services. It can be said that the mass media campaign very rarely affect the knowledge promotion to women in rural settings. However, it is effective to young people UNGASS, 2010). The access to social media and use of internet is also problematic to rural women.

It is understand that there are underestimated number of HIV/AIDS cases in Nepal. The existing medical and public health infrastructure of Nepal and national reporting system is found to be lack of continuity. The differentiation in reported versus estimated cases reflected the underestimation. Without the correct information, it is very difficult to determine that which intervention impact on the HIV/AIDS control and behavior change. It is also understood that the lack of proper information on culturally sensitive issues, the design interventions are translate into actions are difficult. For the improvement in methodology of the survey, there is still a need to figure out the real number of infected people. Growing number of migrant labor every year from all over the country suggests that the surveillance should be conducted among the men and women which are eligible for DHS survey. HIV/AIDS is serious challenges to health and social system in Nepal. The there were numerous steps have been taken to combat with it, however, the challenges are still exist. The structural form of health is also posed challenges due to the geographical constraints of the nation. The access to services in remote areas Hill and Mountain region along with lower level of trained health workers and functional institutional structure are still lacking (UNGASS, 2008). The rural settings are also faced the structural

inequality of the health and institutional functioning. The multisectoral approach is also found to less likely to be effective in implementation level.

HIV/AIDS programmes are found well-funded by international development agencies but the epidemic is the burden of the country. The higher prevalence of epidemic in working age population can causes the negative effect of the country growth and development. However, 90 percent of funding for HIV prevention in Nepal is from external sources. It is argued that prevention makes treatment affordable and treatment can make prevention more effective (Salomon, 2005). An adequate financial resources for the prevention and treatment of HIV/AIDS programmes are a great challenges due to the poverty is key factor for the propagation of the HIV/AIDS epidemic.

It is identified that much more high risk behaviors are identified among different sub-group of people because of the countries' economic growth and poverty. There has been debate on resource allocation to response the HIV/AIDS epidemic for the prevention and treatment at the policy level that determines the effectiveness of the interventions. Increase access to treatment services of epidemic improves opportunities for HIV prevention through increased HIV testing and increased testing and counseling can reduce stigma and act as an entry point to prevention services. As a multicultural country, different social and cultural norms provide the difficult challenges to mitigate the impact of the HIV/AIDS epidemic due to the social constructed knowledge of HIV and AIDS. It deals with the sex issues regarding Nepalese society which is disrespectful. There problems of openly discussed about the sex related matters and it is considered as impolite and uncivilized characteristics of persons. Parents and elderly people usually do not talk openly about sex with young people which is cultural constraints. It is argued that most of the Nepalese PLHIV do not know their HIV status and many of them continue to practice the unsafe sexual behaviors (Wasti et al., 2009) and there is chance of spreading HIV/AIDS in different social and cultural context. The utilizing the HIV services also constraints by the perception towards the HIV/AIDS as negatively. Most of the community people hide their sexual and sexual infections due to the social and cultural construction of the HIV and AIDS epidemic (Beine, 2003).

Nepal is country of Mountain, Hill and Terai divided into three different ecological regions where the majority of the population living in urban settings. The geographical complexity poses the carry out the mass level of IEC and BCC of HIV interventions such as condom promotion, peer education programmes, harm reduction activities to prevent high risk group of people from HIV and AIDS. In the remote areas of the country, the single mass media and single hospital and health institution cannot operate the services as per the needs of services towards infected and affected people. The HTC and ARV services to remote areas people is quite difficult to access the services due to geographical constraints of the country as a storage of cold chain problems of the HIV services.

Finally, the issues of universal access to prevention and treatment of HIV/AIDS services, the major policy strategic and prevention barriers are outlines and provides the avenues for further policy debate. Evidence based planning is key to the HIV/AIDS responses in Nepal by the major causal explanation of prevention initiatives. The government of Nepal need to take culture as an integrated issues of the country's development effort particularly HIV/AIDS response. The programmatic responses need to revisited from the local context to effective implementation and fulfillment of requirements of needy people.

CHAPTER NINE

SUMMARY OF FINDINGS AND CONCLUSIONS

This chapter outlines the major findings, conclusions, contribution of the study, and opens up the avenue for further research on HIV prevention in Nepal. The conclusions are drawn from the research findings analyzed in the earlier chapters. The research findings are considered in terms of the original research questions.

The aim of this research was to investigate the factors that affected women's HIV/AIDS knowledge, attitude, and behaviors in Nepal and the governmental responses of HIV/AIDS. The study has two-fold objectives: KAB of women and the description of the effectiveness of governmental responses towards HIV/AIDS. As studying the factors affecting women's KAB of HIV/AIDS, individual as well as socially constructed factors were also explored. The study is based on primary and secondary sources of information. Individual aspects of women's KAB of HIV/AIDS were evaluated using NDHS, 2011, and 2016 quantitative data sets, and primary qualitative data from the field were obtained to examine the socio-cultural construction of HIV/AIDS. The assessment of the effectiveness of HIV/AIDS responses is based on government and non-government documents, past research studies on national responses and in-depth interviews with policy and advocacy level health authorities and stakeholders, planners, representatives of funding agencies, staff from the district and program level personnel.

The overall objective of the study is to identify the most influential factors affecting women's knowledge, attitude, behavior towards HIV/AIDS in Nepal and governmental responses to HIV/AIDS. The specific objectives of study are as follows:

- To examine the individual factors[1] affecting women's knowledge, attitude and behavior towards HIV/AIDS prevention and transmission in Nepal,

[1] Demographic and socio-economic (age, marital status, place of residence, education, occupation and wealth index), geo-development model (ecological zone, development region and provincial states), cultural model (religion, ethnicity and native language) and media exposure model (reading newspaper or magazine, listening radio and watching television) are individual factors.

- To explore the socially constructed ideas of HIV/AIDS affecting women's KABP of HIV/AIDS, and
- To assess the governmental responses to HIV/AIDS and its effectiveness.

Further, this chapter concludes with an outline of the contributions of this research and reflections on the contributions to knowledge for behavior change communication (BCC) and positive prevention. Future avenues for research on women's HIV/AIDS issues in Nepal are also outlined.

9.1 Summary of Findings

The analysis of NDHS data sets (2011 and 2016) indicated that women's individual factors such as demographic, socio-economic, geo-development, cultural, and media exposure have been affecting women's HIV/AIDS-related knowledge, attitude, behaviors in Nepal. Besides the individual factors, it is also found that socially constructed knowledge of HIV/AIDS at community level based on the social norms, values, interaction about infection/virus between people and socio-cultural tradition shave shaped the knowledge differently which has also affected the women's KABP of HIV/AIDS. The study has further discussed that the educational attainment of women is the key influential individual factor for HIV/AIDS-related knowledge, attitude, and behaviors in Nepal.

The study also found that there are numerous issues on national responses to HIV/AIDS in Nepal for the effectiveness to behavioral change communication and treatment services. Despite the Government of Nepal's efforts, HIV prevention and treatment services are unable to reach vulnerable populations due to a gap in planning and implementation from the top to the community level. The major cultural issues and context of HIV prevention, care, support, and treatment to people living with HIV and the low risk population are still lacking in the policy, strategic planning, and programs. The major findings of factors of women's knowledge, attitude and behaviors (KAB) towards HIV/AIDS, and governmental responses are summarized below.

9.1.1 Factors Affecting Women's KAB towards HIV/AIDS

When it comes to determining the elements that influence women's HIV/AIDS knowledge, attitude, and behaviors, demographic and socioeconomic, geo-development, cultural, and media exposure aspects have been discovered to be relevant. The analysis of NDHS, 2011 and 2016 data sets explored the key variables of KAB/P of HIV/AIDS. The findings of qualitative data indicate that the social construction of HIV/AIDS and its effect on attitude and behaviors of HIV/AIDS. The following are the primary findings of variables impacting KAB of HIV AIDS among Nepalese women:

Factors of Demography and Socioeconomic Status

Age, marital status, and place of residence are constant demographic characteristics that have influenced women's HIV/AIDS knowledge, attitude, and behaviors. Similarly, education, employment, and wealth index are the demographic and socioeconomic individual elements that have influenced women's KAB towards HIV/AIDS.

Age is the consistent demographic factor which has affected women's KAB on AIDS. The analysis indicates that young women have higher level of knowledge, higher accepting attitude towards PLHIV and higher level of condom using behavior compared to adult women (aged 25 and above years). According to age of women from the general regression model, adult women were less likely to have knowledge on HIV prevention and transmission than young women [OR=1.86(1.75-1.98)] in 2011[Exp(B)=1.48(1.30-1.90)] in 2016.In case of accepting attitude towards PLHIV, the general regression model has identified that younger women were more likely to have accepting attitude towards PLHIV than adult women [OR =0.95(0.84-1.05)] in 2011 while [OR =1.19(1.05-1.34)] in 2016. In case of behavior of HIV/AIDS, the general regression model also indicates that young women were more likely to have condom using behavior in the last sex with most recent partner than adult women [OR =1.34 (1.08-1.66)] in 2011 and [OR =0.77 (0.60-0.99)] in 2016.

The net effect of marital status to knowledge, attitude and behavior of HIV/AIDS among women is not found statistically significant. The gross effect of marital

characteristics of women to KAB of HIV/AIDS is significant. Married, not married and divorced/separated women have higher level of knowledge, accepting attitude and safe sexual behavior compared to widowed women in both surveys (NDHS, 2011 and 2016).Similarly the place of residence is also less likely to affect the women's knowledge, attitude and behaviors on HIV/AIDS. However, the cross tabulation analysis indicates that women from the urban are more likely to have knowledge, attitude and behaviors of HIV/AIDS than rural women.

As expected result of education and KAB of HIV/AIDS among women in Nepal, the study has found that SLC and above educated women have 8 times more knowledge on prevention and transmission of HIV/AIDS than without education women in both surveys, such as [OR =8.00 (6.96-10.59)] in 2011 and [OR =7.82 (6.33-9.66)] in 2016.According to accepting attitude towards PLHIV, SLC and above educated women have 3 times more accepting attitude towards PLHIV than uneducated women [OR =2.74 (2.25-3.33)] in 2011 whereas [OR =3.71 (3.06-4.50)] in 2016. In case of safe sexual behavior of women, SLC and above educated women were almost 3 times more likely to use condom in the last sex with most recent partner than uneducated women [OR =2.90 (2.04-4.11)] in 2011 and [OR =2.87 (1.93-4.26)] in 2016.

Misconceptions of women have also affected women's knowledge, attitude and behaviors towards HIV/AIDS in Nepal. Women, those who have professional/managerial, clerical, skilled and unskilled manual workers have more knowledge, attitude and behaviors of HIV/AIDS. However, the net effect of occupation of women is less likely to predict the outcome of KAB.

Among demographic and socioeconomic determinants, the wealth index of women is a significant influence on women's HIV/AIDS knowledge, attitude, and actions. Rich women were almost 2 times more comprehensive towards HIV/AIDS knowledge than poor women [OR =2.65 (2.01-3.50)] in 2011 and [OR =2.04 (1.60-2.60)]. Similarly, rich women were almost 2 times more likely to have accepting attitude towards PLHIV than poor women[OR =1.91 (1.65-2.41)] in 2011. However, the accepting attitude among rich women have been increased in 2016. In case of safe sexual behavior, rich women were 2 times more likely to use condom in the last sex with

most recent partner than poorest women [OR =2.29 (1.43-3.65)] in 2011 and [OR =1.80 (1.10-2.91)] in 2016.

Geo-development Factors

The comprehensive analysis of geo-development individual factors indicates that ecological and provincial characteristics of women have been affecting the knowledge of HIV prevention and transmission, accepting attitude and sexual behaviors. The women from Hill and Terai regions were almost 2 times more likely to have comprehensive knowledge of HIV prevention and transmission than those of the Mountain in 2011. However, the results of the regression analysis in 2016 are not significant. Similarly, women from the Terai region were 2 times more likely to have accepting attitude towards people living with HIV than women from the Mountain region [OR = 2.40 (1.91-3.02)] in 2011 which is decreased in 2016 [OR = 1.36 (1.09-1.79)].

The analysis of geo-development factors, women from *Sudur Paschim* province were almost 2 times more likely to have knowledge on HIV/AIDS prevention and transmission than women from province#1 [OR = 1.81 (1.50-2.17)] in 2011 and [OR = 1.62 (1.31-2.00)].It is found that there is a significant correlation between women from far western province and their accepting attitude towards PLHIV. In case of condom using behavior, women from *Sudu Paschim* province were almost 3 times more likely to use condom in the last sex with most recent partner than women from province#1 [OR = 2.48 (1.78-3.44)] in 2011, whereas, it increased by 4.5 times in condom using behavior in 2016 [OR = 4.50 (2.93-6.89)].

Cultural Factors

From the analysis of NDHS data sets, 2011 and 2016, it is found that ethnicity is the consistent cultural factor affecting the women's knowledge of HIV transmission and accepting attitude towards PLHIV. Between 2011 and 2016, Nepali-speaking women were nearly twice as likely to be knowledgeable about HIV prevention and transmission. In case of accepting attitude towards PLHIV, Newar and Hill Janajati women were 2 times more likely to have accepting attitude towards PLHIV than Terai Dalit women. It is also found that Hill Dalit and Muslim women have also been

significantly associated with accepting attitude. Hill Brahmin women were 3 times more likely to have condom using behavior in the last sex with most recent partner than Terai Dalit women in 2011. However, it is not significant influential factor to affect the sexual behavior in 2016.

According to native language of women, women with Nepali mother tongue were 3 times more likely to know the HIV/AIDS prevention and transmission knowledge than Maithali speaking women [OR =3.34(2.21-5.05)] in 2011, whereas, [OR (B)=1.47(1.01-2.13)] in 2016. Nepali and Bhojpuri speaking women were 2 times more likely to have accepting attitude towards PLHIV than Maithali speaking women in both surveys, 2011 and 2016.

Media Exposure Factors

Media exposure of women was found to have an affect towards their knowledge, attitude and behavior of HIV/AIDS. Women those who read newspaper at least once a week were one and half times more likely to know HIV/AIDS than those who didn't read at all ($p<0.001$). In case of reading newspaper and accepting attitude towards PLHIV, women those who read newspaper at least once a week and less than once a week were more likely to have accepting attitude than those who did not read at all ($p<0.05$ in 2011 and $p<0.001$ in 2016). The women who read newspaper at least once a week were 2 times more likely to use condom in the last sex with most recent partner [OR =2.22 (1.59-3.10)] in 2011.

Listening radio and KAB towards HIV/AIDS among women has also a significant association. Women those who listened radio at least once a week were more likely to know HIV/AIDs than those who did not listen at all ($p<0.05$). According to listening radio and accepting attitude towards PLHIV, women who listened radio at least once a week and less and once a week were more likely to have accepting attitude towards PLHIV than women those who did not listen it at all ($p<0.001$).

Watching television and knowledge accepting attitude towards PLHIV are found significantly associated. Women those watching television at least once a week were more likely to know HIV/AIDS than those not watching television at all ($p<0.05$) in

2011. Women those watching TV less than once week were more likely to have accepting attitude towards PLHIV than those not watching at all ($p<0.001$).

This study has found that education is the most influential individual factor that has affected women's knowledge of HIV/AIDS. Similarly, wealth index, geo-development region, age and occupation characteristics are also predictable factors for HIV/AIDS knowledge. The findings of the study indicates that demographic and socio-economic characteristics are the most influential factors for HIV/AIDS knowledge than geo-development, cultural and media exposure factors among women in Nepal. The analysis of the study also found that ethnicity and native language as a cultural individual factors are most predictable to accepting attitude towards people living with HIV than demographic, socio-economic, geo-development, and media exposure factors. In case of condom using behavior as a HIV/AIDS behavior among women, ethnicity is the most influntial factor for the HIV/AIDS behavior than demographic, socio-economic, geo-development and media exposure factors. Finally, the study has identified that the individual cultural factors like ethnicity and native language have shaped the attitude towards PLHIV and safe sexual behavior of HIV/AIDS among women in Nepal.

9.1.2 Socially Constructed Knowledge, Attitude and Behavior of HIV/AIDS

Narratives from community women aged 15-49 years, socially constructed ideas of HIV/AIDS emerged from social norms, values, social interaction about HIV/AIDS, perceived risk, and belief with sex partner and position of women in the society which have an affect towards the knowledge, attitude and behaviors of HIV/AIDS. Media, peers, friends/relatives, interactions between groups and migrants people are the sources of HIV/AIDS knowledge constructed meaning of HIV/AIDS at micro level process. The meaning of HIV/AIDS and their understanding are quite different than its biomedical reality. The understanding of HIV/AIDS is as fatal, infectious, communicable, sexually transmitted disease which is emerged from the narratives of women at Ram Nagar. Most women (20 out of 31), regardless of age, ethnicity, area of residence, or media exposure, stated that "anyone with HIV/AIDS, men or women, will never be cured and will die."

Education is the most predictable factor for the comprehensive knowledge of HIV/AIDS. Educational attainment has increased over time among women in Nepal but comprehensive knowledge of HIV/AIDS is almost same (20%) over last 10 years. The findings indicate that increased education is not sufficient condition for the increased comprehensive knowledge. The narratives of women explore that wider misconception about HIV transmission is highly prevalent at community people. The socially constructed idea of HIV/AIDS mostly influences the biomedical reality of HIV/AIDS.

Most of the women focused on the response of family and the wider society towards people living with HIV. Most women had a clear understanding that HIV/AIDS is a stigmatized disease and the PLHIV were treated as disdain and hatred. The HIV/AIDS is the result of bad work (*Kharab Karma*).The narratives shows that majority of the research participants (18 out of 30) have accepting attitude towards caring a family member with AIDS in home. However, almost all except one woman reported that the social perception is negative towards people living with AIDS. Hence, women who were caring family members with AIDS at home were compelled to do so. The in-depth insights of qualitative information suggested that there were widespread stigma and discrimination in the society. The qualitative study also found that educated and young women had more accepting attitude than those lower educational status and older women. However, the social perception to people living with HIV is not still positive. Most of the community people stigmatize and discriminate PLHIV.

Another potential respondent from the Tharu community viewed that she will take care of her family member with AIDS, rather forcefully. This indicates that there are wide spread fear of stigma and discrimination in the society. The social constructive knowledge of AIDS was more responsible for such stigmatization.

The in-depth interview with women aged 15-49 years identified that there are very few women (only 4 out of 31) who used condom during their last sex. Some of the women already used permanent and a temporary contraceptive other than condom which is the reason for low level of condom using practices. The general understanding of women using condom as a contraceptive is to delay children rather

than means of HIV prevention and transmission. Among the total research participants, very few reported that condom protects from the sexually transmitted diseases including HIV/AIDS. The use of condom is determined by the sex partner's condom carrying behavior. If the sex partner does not carry condom, they would have sexual intercourse without using condom. There is also perceived risk of condom using behavior among young girls. The young girls did not use condom during sex with their boyfriends even if they had multiple sex partners. However, educated and high caste women have consistently used condom at pre-marital sexual activities.

9.1.3 Summary of Findings of Governmental Responses

The Government of Nepal has been responding to HIV/AIDS as public health problem since the first case was detected in 1988. Policies, strategic plan and programs are developed and implemented to combat epidemic. The findings of the efforts have seen in facts and figures to reduce HIV prevalence. However, changes in risk behaviors are still yet to be achieved. This brief evaluation of the governmental response is based on prevention, care, support and treatments of HIV/AIDS.

In HIV Prevention, awareness building among high risk as well as low risk and HIV testing and counseling are evaluated. As measuring the comprehensive knowledge of HIV transmission among women aged 15-49 years and FSWs indicates that there is also constant. Only 20 percent of women have a thorough understanding of HIV transmission, whereas, only 27 among FSWs (MoHP, 2007, 2012 & 2017; NCASC, 2009, 2012 & 2018). The results indicate that there is wider misconception about the HIV transmission. The socially constructed knowledge among population is the major trigger for the results. The government strategic plan and programs could not sufficiently address the cultural dimension of the epidemic.

In case of HTC, it is the entry point to the care of PLHIV. It is free of cost to test for high risk and general population. In 2019, about 204834 people tested HIV and received counseling services. Among them, 2796 people found positive (NCASC, 2020). This is lower number as per the requirements and demand of people. The capacity of health institutions, number of HTC centers and trained human resources are major issues for less effective of HIV testing. The ongoing campaign of HTC could not reach the wider scale and remote areas of Nepal. The 90-90-90 target of

strategic plan is not also achieved as per the given time frame (83% PLHIV know their status, 79% PLHIV who know their status and are on HIV treatment and people on HIV treatment who are virally suppressed). There is also a gap in the programs and implementation modality. The awareness building on PMTCT and availability services to HIV/AIDS are also found to be low.

Despite the progress made, many issues and challenges remain unidentified, either at the program management or service seeking levels. It has been determined that new HIV infections continue to occur, which has hampered present efforts to assess the HIV epidemic. From reviews of national responses and facts of the national studies, it is found that there are gaps in treatment efforts.

There are 78 ART sites spread over 60 districts as of the end of fiscal year 2018/19. The routine monitoring data shows that 11 percent of ever enrolled on ART died and 8 percent have been lost to follow up while 81 percent are alive and on treatment (DoHS, 2018/19). Furthermore, 9787 people have received CHBC services from 52 districts with CCCs across the country that have been providing services to PLHIV. The aforementioned facts are not sufficient to needs of people living with HIV and key risk population.

The major issues of treatment of HIV are low access to CD4 count and viral load testing services, client duplication, lost or incomplete medical records, poor supply of OIs machines as per demand, inadequate financial support for clients, CHBC services coverage is declining over time due to the limited support from donor. Without donor funding, HIV/AIDS response is not possible to combat the infection. So the funding agencies have critical role to government responses to HIV/AIDS in Nepal.

A number of multilateral and bilateral organizations provide financial and technical assistance to HIV/AIDS prevention and treatment programs in Nepal, including interventions for high-risk groups, condom promotion, STI testing and treatment, behavior change communications, volunteer counseling and testing services, and antiretroviral drug distribution. The facts of the NCASC shows that out of total funding of a year, only 10 percent is government funding whereas 90 percent from the external and other sources. The funding agencies have been dominating at policy, district and program level interventions. The government officials are involved in the

interventions as witness. Most of the program interventions are based on the biomedical reality philosophy. As a result, companies are insufficient to handle cultural difficulties in the local context and management challenges at the service provider level.

Finally, the study identified that awareness building, HIV/testing and counseling, access to ART services and its utilization, CHBC services are less likely to be effective. HIV/AIDS is a threat to health and social systems. Although the Nepalese government has taken positive steps in combating HIV/AIDS, numerous challenges remain. One concern is the geographically disclosed structural weakness of Nepal's present health care system. Basic health care and other social service systems are underfunded, and qualified health professionals are departing for greater possibilities in metropolitan regions, leaving rural health facilities understaffed. The overall evaluation of national responses indicates that policy and structural, pragmatic approach and enabling environment to PLHIV are critical issues to HIV/prevention and treatments in Nepal.

9.2 Conclusions

Individual demographic and socioeconomic, geo-development, cultural (religion, ethnicity, and native language), and media exposure, as well as Nepal's socio-cultural setting, have all had an impact on women's HIV/AIDS knowledge, attitude, and behavior. Among the individual factors, education is the most influential factor to affect the KABP of HIV/AIDS whereas wider misconceptions and socially constructed knowledge have been contributed to accepting attitude and behavior towards HIV/AIDS. The socially constructed knowledge of HIV/AIDS is emerge as individual factor that affected women’s KABP of HIV/AIDS.

Socially constructed knowledge of HIV/AIDS, stigma and discrimination and safe sexual behaviors are shaping by the socio-cultural context of HIV/AIDS among women. Without modern interventions in HIV response, there only acting cultural model is widely prevalent. It is believed that cultural (ethnicity and native language) and geo-developmental (women's provincial background) elements emerge as individual determinants influencing women's complete understanding of HIV.AIDS prevention and spread.

The overall HIV prevention program are not encouraging. There are a lot of weakness on implementation of prevention activities. The strategic approach of HIV prevention is to focused high risk groups which is not sufficient to risk reduction of low risk population. It indicates that there is prevention intervention needed to low risk population.

Despite the reducing the HIV prevalence in high risk group of people, the behavioral change intervention have also numerous challenges to service level. It is noted that new HIV infections continue to see which have affected the current efforts on the assessment of the HIV epidemic. Finally, cultural (ethnicity and native language) and provincial characteristics of the women are emerged as the influential individual factors affecting women's HIV/AIDS knowledge prevention and transmission, accepting attitude towards PLHIV and condom using behavior in Nepal. Besides these, socially constructed knowledge (social norms, values, interaction between community members) have affected women's KAB at the micro-level process as well. The local cultural friendly policy and pragmatic intervention is crucial for the HIV prevention in Nepal.

9.3 Contribution to Knowledge

This study comprises a rare contribution to the knowledge of women in Nepal. Analyses of knowledge, attitude, sexual behaviors and practices of women provide valuable insight into positive prevention in diverse society in terms of geography and culture. This research contributes to the body of knowledge expanding the WHO value free scientific model incorporating cultural individual factor in the bio-medical reality model. It is needed to place behavior change in context and shows the importance of the shift in dominance of prevention models from bio-medical, technical models to an understanding of the need to place behavioral change in a socio-economic and cultural context over time for information, education and communication (IEC) and behavioral change communication (BCC) to be successful in Nepal. Therefore, knowledge on its own cannot greatly influence behavior change. Intervention programs, which are culturally sensitive and support people's experiences, may encourage favorable changes in sexual practices.

This also contributed to methodology. The application of quantitative led mixed research approach supportive to deeper understanding of KABP of women. The philosophical and methodological framing of the study from positivism to post positivism shifting which is the methodological contribution of the study. In Nepal, there is still room for further socioeconomic and cultural impact studies on HIV/AIDS using diverse research methods. Our survey sample size was small, and more study would be helpful in understanding the complexities of HIV/AIDS in multicultural societies.

9.4 Areas for Further Research of HIV/AIDS

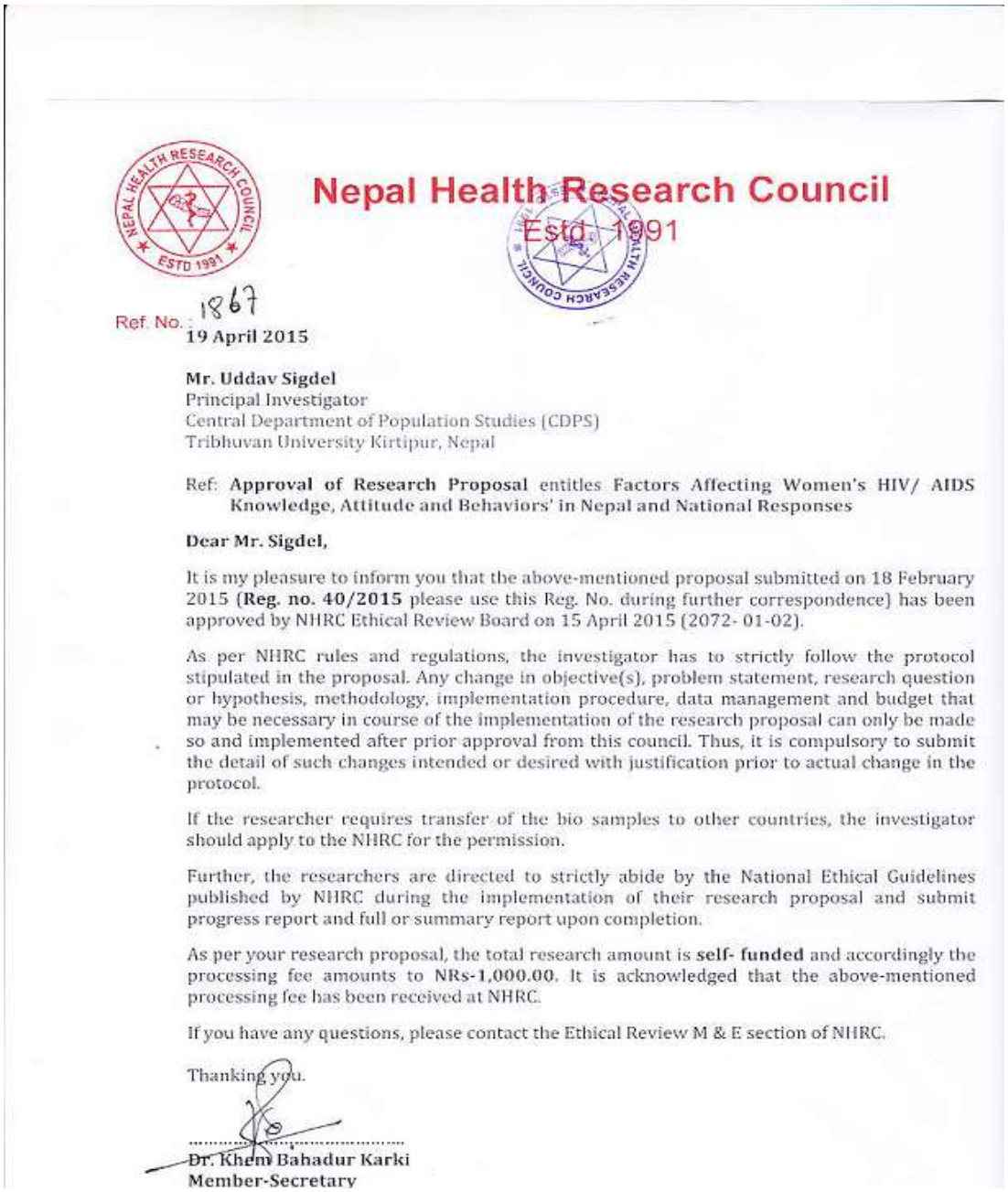
The study suggested that there is a need to study male sexual behavior which will help to further prevent HIV/AIDS. Every section of the society from economically elite businessmen to wage labors visited to FSWs for sex services. The study clearly identified that the consistent condom using behavior is still moderate which will further risk the clients of FSWs. There is a need to enhance research and hasten the development of novel HIV preventive methods. Research and data that examines social interactions from a larger perspective by systematically addressing the cultural, environmental, and structural aspects that impact the dynamics of AIDS outbreaks and society reactions to them. It would be useful for socio-culturally appropriate IEC/BCC programs.

It is also suggested that different theoretical approaches be converged, resulting in a more holistic study of HIV/AIDS, and that individual preferences be taken into account as relational, social, and endogenous to interactions with others and the global social environment. The model was discovered to have a wide variety of attitude, actions, and significant cultural and socioeconomic characteristics among women, and further research will likely reveal further complexity in the model. More socio-environmental and cultural context studies on HIV/AIDS remain possible in multi-cultural societies. The study's numbers and location were restricted in a single study, and more research would be good to understand the complexities of many sexual partners, a lack of condom usage, and other behavioral change difficulties connected to HIV prevention in hotspot locations. Furthermore, additional research on issues of culturally sensitive experiential knowledge would add value to the findings.

Finally, national survey like Nepal Demographic and Health Survey should include HIV prevalence among women and men in the further surveys which will provide more accurate facts of HIV prevalence in low risk population which has been practiced in India and other DHS countries. The further research on low risk population should be prioritized from the holistic approach with mixed research methods that will provide the deeper understanding of the issues.

APPENDECES

Appendix-I: Ethical Approval Letter



Nepal Health Research Council

Estd. 1991

Ref. No. 1867

19 April 2015

Mr. Uddav Sigdel
Principal Investigator
Central Department of Population Studies (CDPS)
Tribhuvan University Kirtipur, Nepal

Ref: **Approval of Research Proposal** entitles **Factors Affecting Women's HIV/ AIDS Knowledge, Attitude and Behaviors' in Nepal and National Responses**

Dear Mr. Sigdel,

It is my pleasure to inform you that the above-mentioned proposal submitted on 18 February 2015 **(Reg. no. 40/2015** please use this Reg. No. during further correspondence) has been approved by NHRC Ethical Review Board on 15 April 2015 (2072- 01-02).

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, the total research amount is **self- funded** and accordingly the processing fee amounts to **NRs-1,000.00**. It is acknowledged that the above-mentioned processing fee has been received at NHRC.

If you have any questions, please contact the Ethical Review M & E section of NHRC.

Thanking you.

.....
Dr. Khem Bahadur Karki
Member-Secretary

Appendix-II: Consent Form

Tribhuvan University
Faculty of Humanities and Social Sciences, Dean Office
Kirtipur
Ph.D. Field Work
Oral Informed Consent Form for Factors Affecting Women's HIV/AIDS Knowledge, Attitude and Behavior Study
And
Effectiveness of HIV/AIDS prevention, care and support programs for FSWS study

Title: **Factors Affecting Women's HIV/AIDS Knowledge, Attitude and Behaviors in Nepal and National Responses**
Funding: Self

Principal Investigator/s: Uddhav Sigdel
Address: Kalanki, Kathmandu
Phone: +977 9860276184
Email:sigdel.uddhav@gmail.com

Introduction

We are requesting you to take part in a qualitative study to collect information needed for assessing factors affecting women's HIV/AIDS knowledge, attitude and behavior like you. We want to be sure that you understand the purpose of the research and your responsibilities before you decide to participate in the study. This discussion is the process needed before the study occurs. You will not be asked to sign this form, only to tell us you understand it. One person will explain you about the study and another person will be witness in the consent taking process. Both consent taker and the witness will sign the form. You can ask us to explain any words or information that you may not understand.

Information about the Research and Your Role

In this study participants are selected purposively by the researcher using personal information available regarding you as an appropriate person to be the potential respondent for this study. Study participants will be selected from adjoining city/villages of the East-West Highway of Nawalparasi and Rupendehi districts and hotspots of the same highway districts of Nepal. You are in the pool of possible candidates, but the final selection would be based on your choice. In total, about 20-25 individuals like you (general women) and 5 FSWs will be selected for interview. Once you agree to participate in the study we will ask you to participate in in-depth interview.

You will have to spend about 60 minutes with us if you decide to participate in this study. We would like to inform that this is a qualitative research study and not health care provision service.

Possible Risks

The risk of participating in this study is the minor discomfort during asking some questions related to sexual and HIV/AIDS issues. You might feel awkward or uncomfortable to answer them. You are free not to answer such questions and also to stop participating in the research at any time you want to do so. However, we expect you to participate in the study and help us.

We will provide information and address for seeking assistance for any further counseling you may need later in case you have any questions to ask on HIV/AIDS.

Possible Benefits
You will be provided with information on safe sexual and HIV/AIDS behavior. Moreover, the information we obtain from this qualitative research will help to policy debate and strategy development.

If You Decide Not to Be in the Research
You are free to decide whether or not to take part in this qualitative study. Your decision will not affect in any way the health services you are seeking now and you would normally receive from the health centers/delivery points.

Confidentiality
We will protect information collected from you and your participation in this study to the best of our ability. We will not use your name in any reports. We will not ask you to put your name or sign on this form, but only ask you to agree verbally (with spoken words).

Leaving the Research
You may leave the research at any time.

If you have a questions about the study
If you have any questions about the research, call:
Uddhav Sigdel, Ph.D. Scholar, Tribhuvan University, Phone number, 9860276184
We will not be able to pay for/care for injuries that occur as a result of the study.

Your Rights as a Participant
This qualitative study has been reviewed and approved by Nepal Health Research Council (NHRC). If you have any questions about how you are being treated by the study or your rights as a participant you may contact : **Ethical Review Board**, **Nepal Health Research Council**, **Ram Shah Path, P.O. Box 7626** Phone: **977-1-4254220/4227460** Email: **nhrc@healthnet.org.np.** Or you may contact **Prof. Dr. Ram Sharan Pathak (Research Supervisor)**, Central Department of Population Studies (CDPS), T.U., Kirtipur, Tel: 977-01-4331323, 9841228629. Email: drpathakrs@gmail.com

VOLUNTEER AGREEMENT

I have listen while the benefits, risks and procedures were read by the researcher. All questions were answered and I agreed to take part in the research.

_____
Signature of Research Participant Date

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

_____
Signature of Person Who Obtained Consent Date

Appendix-III: Field Research Guidelines
Appendix-IIIa: Questions for KABP of Women Aged 15-49 years

GUIDELINES FOR IN-DEPTH INTERVIEWS WITH GENERAL WOMEN AGED 15-49 IN NAWALPARASI (EAST_WEST TERAI HIGH WAY)

NOTE: PLEASE SPEND SUFFICIENT TIME TO BUILD RAPPORT WITH THE RESEARCH PARTCIPANTS AND ASSURE HER ABOUT THE CONFIDENTIALITY OF THEIR RESPONSES. BEFORE ASKING ANY QUESTIONS, PLEASE PAY ATTENTION TO HER STATE OF MIND. (Body language and facial expressions, which will show if she is feeling awkward, irritated, etc. Do not force them to answer if they are not ready.)

BACKGROUND

1. Family Background:

1.1 Where is your home? Is this your home?
1.2 Where is your place of birth?
1.3 How many family members do you have?
1.4 Can you tell me about family members? Do they live together?
1.5 Do you live with your parents? If not with whom?
1.6 What are the sources of income of your family?
1.7 Is the income sufficient for the family?
1.8 What is the religion of your/family members?
1.9 What is the caste/ethnicity of your/family members?
1.10 What is the language of your/family members?

2. Personal Background:

2.1 How old are you now?
2.2 What about your education?
2.3 What about your occupation
2.4 What is your marital status?
2.5 (If married), are you living with your husband? How is your relation with your husband?
2.6 (If not living together), is husband outside home (foreign employment)?
2.7 Ask about which country (India, Saudi/Malaysia/Dubai/Qatar etc., _____)
2.8 (If unmarried), do you have a boyfriend? Do you live with him? How is your relation with your boyfriend?
2.9 Do you do anything to earn for yourself or for your family? * Do you have any ambition?
2.10 Are you members in *Mahila Samuha, BachatSamuha, AmaSamuha*,? Please specify the name of group she is affiliated.
2.11 Have you ever faced any types of violence (emotional, psychological, sexual, physical, IPV)?
2.12 How often do you read newspaper, listen radio and watching television?

3. KNOWLEDGE ABOUT STIs AND HIV/AIDS

3.1 Have you ever heard about *Youn Rogs*? What about AIDS?
3.2 If yes, what have you heard about *Youn Rog* (STIs) and AIDS? What happens to women when they have *Youn Rog*?
3.3 How can it be transmitted? Mode of transmission?
3.4 What are the prevention method?
3.5 Are you concerned about contracting STIs and HIV/AIDS from your husband/partners?
3.6 Are you concerned about spreading STIs and HIV/AIDS to your husband/partner through sexual activity?
3.7 Is your husband/partners equally concerned about the same?
3.8 In your opinion what can be done to prevent from getting transmitted?
3.9 Has such disease ever infected you? * If yes, what do you do to overcome the problem?
3.10 Do you know anyone who is infected with these types of disease in your community?
3.11 If yes, did he/she go for treatment?
3.12 Do you know a place to get HIV test? If yes, how far from your house?
3.13 Can HIV transmitted from mother to child during delivery, breast feeding?
3.14 In your opinion, what can be done to prevent from getting transmitted MTCT?

4. ATTITUDES TOWARDS HIV/AIDS

4.1 Do you personally know anyone who has HIV or has died from AIDS?
4.2 What about the community attitudes towards HIV infected? If negative attitudes, why?
4.3 Have you ever shared a meal with a person you knew or suspected had HIV or AIDS?
4.4 If a member of your family becomes sick with the AIDS virus, would you be willing to care for him or her in your household?
4.5 If a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in school?
4.6 If you know that a shopkeeper or food seller has the AIDS virus, would you buy vegetables from them?
4.7 If a member of your family get infected with the AIDS virus, would you want it to remain a secret?
4.8 In the past 12 months, have you been tested for HIV, the virus that causes AIDS?

5. BEHAVIOUR OF HIV/AIDS

5.1 Have Ever had sexual intercourse? If yes, what age at first sexual intercourse and whom with first sex?
5.2 What about social and cultural perception on pre-marital and extramarital sex (sexual orientation)?
5.3 What types of persons are involved in premarital and extramarital sexual activity?
5.4 What types of sexual partners/relationships, such as regular partner, casual partners of yours?
5.5 Did you use any contraceptive at last intercourse?

5.6 Did you use condom at last intercourse? For what purpose? To protect from HIV/AIDS or To protect from pregnancy
5.7 If you don't use condom, why are you not using it?
5.8 Do you ever test HIV? Where to get HIV test?
5.9 Do the women who have been tested for HIV and know the results?
5.10 Have you ever experienced (current or past) STI other than HIV and hepatitis?
5.11 Do you go to treatment of STI in health centre?
5.12 Do you receive HIV counseling during antenatal care?
5.13 Have the women received any medicine to PMTCT during pregnancy?

6. ACCESS TO SERVICES

6.1 How far is health facilities from here?
6.2 Is there is a VCT centre?
6.3 Have you ever visited VCT centre?
6.4 Are the services confidential and effective?
6.5 What types STI/HIV/AIDS services are essential in this community?

……END…..

Appendix-III: Field Research Guidelines:
Appendix-IIIb: Questions for FSWs to Evaluate HIV/AIDS Prevention Interventions

GUIDELINES FOR IN-DEPTH INTERVIEWS WITH FEMALE SEX WORKERS (FSWS) AGED 15+ YEARS IN CHITAWAN NAWALPARASI AND RUPENDEHI (EAST_WEST TERAI HIGH WAY)

NOTE: PLEASE SPEND SUFFICIENT TIME TO BUILD RAPPORT WITH THE RESEARCH PARTCIPANTS AND ASSURE HER ABOUT THE CONFIDENTIALITY OF THEIR RESPONSES. BEFORE ASKING ANY QUESTIONS, PLEASE PAY ATTENTION TO HER STATE OF MIND. (Body language and facial expressions, which will show if she is feeling awkward, irritated, etc. Do not force them to answer you if they are not ready.)

BACKGROUND OF FSWs

1. Family Background:

1.1 Where is your home? Is this your home?
1.2 Where is your place of birth?
1.3 How many family members do you have?
1.4 Can you tell me about family members? Do they live together?
1.5 Do you live with your parents? If not with whom?
1.6 What are the sources of income of your family?
1.7 Is the income sufficient for the family?
1.8 What is the religion of your/family members?
1.9 What is the caste/ethnicity of your/family members?
1.10 What is the language of your/family members?

2. Personal Background:

2.1 How old are you now?
2.2 What about your education?
2.3 What about your occupation
2.4 What is your marital status?
2.5 (If married), are you living with your husband? How is your relation with your husband?
2.6 (If not living together), is husband outside home (foreign employment)?
2.7 Ask about which country (India, Saudi/Malaysia/Dubai/Qatar etc., _____)

2.8 (If unmarried), do you have a boyfriend? Do you live with him? How is your relation with your boyfriend?
2.9 Do you do anything to earn for yourself or for your family? * Do you have any ambition?
2.10 Are you members in MahilaSamuha, BachatSamuha, AmaSamuha,? Please specify the name of group she is affiliated.
2.11 Have you ever faced any types of violence (emotional, psychological, sexual, physical, IPV)?
2.12 How often do you read newspaper, listen radio and watching television?

3. STI/HIV/AIDS RELATED KNOWLEDGE, ATTITUDE AND BEHAVIOUR
Policy and Advocacy

3.1 Policy and legal situation that put FSWs at risk.
3.2 Implementation of policies and how it puts FSWs at risk.
3.3 Available advocacy related programs.

Socio-cultural practices

3.4How is your relation with the society?
3.5 How is your relation with the family members?
3.6 How is your relation with the spouse/sexual partner?

Perceptions about detrimental/unfavorable social norms for STI/HIV/AIDS

3.7 Are you currently sexually active? Who are your sex partners?
3.8 Have you heard about STI/HIV/AIDS?
3.9 Are there any unfavorable norms/practices in the society that helps to detroite HIV/AIDS among people like you? Tell me your perception.
3.10 Do you think that being a FSW, one has difficulties in using available STI/HIV/AIDS services?
3.11 If there are any difficulties due to the social norms/practices, what are they?

Influence of economic conditions

3.12 How is your economic condition? Do you have your own income? How do you earn? Does your family or spouse help you financially?
3.13 Does your economic condition preclude/bar you to use/access HIV and AIDS services?
3.14 Do you think HIV and AIDS services are expensive? If Yes why? Where is the cost incurred?
3.15 Do you know about the free HIV and AIDS services around you? Who provides and where are those services available?
3.16 Do you think people who are in poor economic conditions can access these services? If not why?

Gender Difference

3.17 In the society where you live in, is there any gender discrimination? Tell me more about the discriminations you face regarding use of HIV and AIDS services.
3.18 In your opinion how should this be addressed and by whom? By family members or by the society or by the government or people who are involved in providing health services to people like you?
3.19 Do you think girls are suffering simply because of the sexual discrimination in the society? If yes, how can girls help themselves?

4. HIV and AIDS related risk behavior

Risk behaviors- what puts the FSWs at risk and what behaviors multiply the risks?

4.1 Do you think FSWs have greater risk than others? If yes what are those risks? Do you think of health risk also?
4.2 Why do you think FSWs are in greater risk? What puts them at risk?
4.3 Do you think there are some behaviors that put FSWs in greater risk compared to others?

Unprotected sex, multiple sex partners, coercive sex and sex under the influence of alcohol.

4.4 What about the use of alcohol and other drugs? Does it increase the risk of poor HIV/AIDS status of FSWs?

4.5 What about multiple sex partners? Does it have any health consequence? If yes what are they?
4.6 Do you think FSWs like you are at the risk of coercive sex? What are the consequences of coercive sex? Who puts them in such risk?

Presence of STI and STI management

4.7 Do you know the symptoms of STI? Have you ever had STI symptoms? Do you have such symptoms now also?
4.8 Is STI common among FSWs like you?
4.9 Normally what do you do when you have such symptoms? Where do you go for treatment?
4.10 If you do not seek treatment why is that? Do you know the places where you can get for the STI services?
4.11 Do you think your friends also have the similar situation like yours or others are different? What do they do when they have STI symptoms?

Understanding of PMTCT concept

4.12 Do you think that small children also may have HIV infection? If yes why do you think so? How are they infected? Do you have any idea?
4.13 Can a HIV infected mother transmit infection to her new born child?
4.14 Is there any way to prevent the transmission of infection from mother to child?
4.15 Do you think there are many FSWs who have such problem?
4.16 Do you think they know about the PMTCT services available?

5. ACCESS TO SERVICES

5.1 How far are health facilities from here?
5.2 Is there a VCT centre?
5.3 Have you ever visit VCT centre?
5.4 Are the services confidential and effective?
5.5 What types STI/HIV/AIDS services are essential in this community?

…END…

Appendix-III: Field Research Guidelines:
Appendix-IIIc: Field Research Guidelines for Policy and Advocacy level Personal

We would like to request for your responses in these key guiding questions HIV/AIDS Prevention, care and support among General Women In Nepal

Ph.D Field Work of Mr. Uddhav Sigdel

INTRODUCTION AND CONSENT

Uddhav Sigdel is a Ph.D. Scholar of FOHS, T.U. is collecting data for Ph. D. research**.** The gathered information will be used to assess national responses for HIV/AIDS prevention, care and support. We are also interviewing district health officials, implementing organizations, general women including wives of migrants and selected few cases of FSWS. I will also ask questions on diverse topics including policy guidelines, strategies, budget, intervention planning, monitoring and supervision, coordination between stakeholders etc.

You opinions are important in this study, thus, we are inviting you to be a part of it. We value your opinion and there are no wrong answers to the questions. Completing these questions will approximately take 1:00 hour of your time. There are no risks as a result of your participation in the study. Your participation in this research is completely voluntary. You are free to withdraw your consent and discontinue participation at any time.

The information given by you will be strictly treated as confidential and will be used only for the study. Your responses will not be linked with your name/address and will be kept separately in a locked room and will be destroyed once all the data are collected and analyzed.

Your participation will be highly appreciated. The answers you give will be used in policy debate on HIV/AIDS related programs and services.

Are you willing to participate in the study? 1. Yes 2. No

Signature of the interviewer: _____ Date: ____/_____/2070

Only for confidential use

In Depth Interview (IDI)
Guidelines for Central Level Stakeholders

NCASC and INGOs working in HIV/AIDS field

Name of Officer _____
Name of the Organization _____
Position: _____
Date of Interview: _____

For Central Level Stakeholders

1. What are the major accomplishments of the national responses on HIV/AIDS among women in Nepal? What worked well? How did it work? What factors played role towards the accomplishment? What would you consider as good practice to achieve accomplishment? What factors affect the women's HIV/AIDS comprehensive knowledge, negative attitude and safe sexual behavior?

_____
_____
_____
_____

Issues:

- **Policy Guidelines:** What are the existing policy gaps in response to HIV/AIDS among general women in Nepal?

_____
_____
_____
_____

- **Coordination:** What is the situation on coordination between different stakeholders working in field of HIV/AIDS?

_____
_____
_____
_____

- **Advocacy:** How is the advocacy of HIV/AIDS Program in the central, district and sub-district level? (Who are involved? How is it done? How successful is the advocacy campaign)

_____
_____
_____
_____

- **Programme Design:** Is the HIV/AIDS Program well designed meeting the needs of general women? Are there any gaps in program designing?

_____
_____
_____
_____

- **Planning:** Were there any planning issues? Was HIV/AIDS Program well planned? Is there any gaps on planning issue?

  _____
  _____
  _____
  _____

- **Implementation Modality:** How is the program Modality designed at the central level? Are there any gaps on implementation modality of HIV/AIDS program among general women? Or is it not priority of NCASC?

  _____
  _____
  _____
  ____

- **Effectiveness :**Have you experienced any support in implementation of other programs jointly with HIV/AIDS program? What kinds of changes did you find in HIV/AIDS KAB among general women?

  _____
  _____
  _____
  ____

2. What are the major problems with HIV/AIDS program to general women in Nepal? What did not work well, what needs improvement? What lessons would you like to share?

_____
_____
_____
_____

3. What are your recommendations for improvement of the program? What are your recommendations for improving general women HIV/AIDS policies and programs?

We need as much detail as possible on the recommendations and rationale behind them.)

_____
_____
_____
_____

Only for confidential use

Appendix-III: Field Research Guidelines:
Appendix-IIId: Field Research Guidelines for DPHO and Implementing Level Staffs

Guidelines for District and NGOs Officials

We would like to request for your responses in these key guiding questions HIV/AIDS Prevention, care and support among Women and FSWs in Nepal

Ph.D Field Work of Mr. Uddhav Sigdel

INTRODUCTION AND CONSENT

Uddhav Sigdel is a Ph.D. Scholar of FOHS, T.U. is collecting data for Ph. D. research**.** The gathered information will be used to assess national responses for HIV/AIDS prevention, care and support. We are also interviewing district health officials, implementing organizations; general women including wives of migrants and selected few cases of FSWS. I will be asked questions on diverse topics including program coverage, budget, intervention planning, monitoring and supervision, coordination between stakeholders etc.

You opinions are important in this study, thus, we are inviting you to be a part of it. We value your opinion and there are no wrong answers to the questions. Completing these questions will approximately take 1:00 hour of your time. There are no risks as a result of your participation in the study. Your participation in this research is completely voluntary. You are free to withdraw your consent and discontinue participation at any time.

The information given by you will be strictly treated as confidential and will be used only for the study. Your responses will not be linked with your name/address and will be kept separately in a locked room and will be destroyed once all the data are collected and analyzed.

Your participation will be highly appreciated. The answers you give will be used in policy debate issues.

Are you willing to participate in the study? 1. Yes 2. No

Signature of the interviewer: _____ Date: ____/_____/2070

In Depth Interview (IDI)
Guidelines for District and Program level Personnel

DPHS/DHO and NGOs working in HIV/AIDS field

Name of Officer _____
Name of the Organization _____
Position: _____
Date of Interview: _____

For District and NGO level officials

1. What are the major accomplishments of the national responses on HIV/AIDS among women in Nepal? What worked well? How did it work? What factors played role towards the accomplishment? What would you consider as good practice to achieve accomplishment? What factors affect the women's HIV/AIDS comprehensive knowledge, negative attitude and safe sexual behavior?

_____
_____
_____
_____

Issues:

- **Coordination:** What is the situation on coordination between different stakeholders working in field of HIV/AIDS?

  _____
  _____
  _____
  _____

- **Advocacy:** How is the advocacy of HIV/AIDS Program in the district and sub-district level? (Who are involved? How is it done? How successful is the advocacy campaign)

  _____
  _____
  _____
  _____

- **Program Design:** Is the HIV/AIDS Program well designed meeting the needs of general women? Are there any gaps in program designing?

  _____
  _____
  _____
  _____

- **Planning:** Were there any planning issues? Was HIV/AIDS Program well planned? Any Gaps on Planning Issue?

  _____
  _____
  _____
  _____

- **Implementation Modality:** How is the program Modality designed at the district and hot spot areas? Are there any gaps on implementation modality of HIV/AIDS program among general women? Or is it not priority of program?

_____
_____
_____
____

- **Effectiveness:** Have you experienced any support in implementation of other programs jointly with HIV/AIDS programs? What kinds of changes did you find in HIV/AIDS KAB among general women?

_____
_____
_____
____

2. What are the major problems with HIV/AIDS program to general women in Nepal? What did not work well, what needs improvement? What lessons would you like to share?

_____
_____
_____
_____

3. What are your recommendations for improvement of the program? What are your recommendations for improving general women's HIV/AIDS KAB at community level?
We need as much detail as possible on the recommendations and rationale behind them.)

_____
_____
_____
_____

Appendix-IV: Background Characteristics of Women aged 15-49 years and FSWs 16 years and above

General Background Characteristics of Research Participants: Women aged 15-49 years and FSWs aged 16 Years and above

Table 1: Distribution of Research Participants by Age

	Women	FSWs
Age Group	**N**	**N**
15-19	3	2
20-24	15	3
25-29	8	2
30 and above	5	-
Total	**31**	**7**

Table 2: Distribution of Research Participants by Caste/Ethnicity

	Women	FSWs
Ethnicity	**N**	**N**
Hill Brahmin/Chhetri	8	1
Hill Janajati	4	2
TeraiJanajati (Tharu)	5	1
Madheshi	4	1
Dalit	6	2
Muslim	4	
Total	**31**	**7**

Table 3: Distribution of Research Participants by Religion

	Women	FSWs
Religion	**N**	**N**
Hindu	22	4
Boudhist	2	1
Muslim	4	-
Christian	3	2
Total	**31**	**7**

Table 4: Distribution of Research Participants by Mother Tongue

	Women	FSWs
Mother Tongue	**N**	**N**
Nepali	15	4
Bhojpuri	6	1
Tharu	6	1
Hindi	1	-
Magar	1	-
Newari	1	-

Gurung	1	1
Total	**31**	**7**

Table 5: Distribution of Research Participants by Education

	Women	**FSWs**
Education	**N**	**N**
Illiterate	9	1
Literate but not formal schooling	2	1
Primary	5	
Lower secondary	6	1
Secondary	3	2
SLC and above	6	2
Total	**31**	**7**

Table 6: Distribution of Research Participants by Occupation

	Women	**FSWs**
Occupation	**N**	**N**
Agriculture	5	3
Housework	22	2
Cutting/Swing	1	
Job	2	-
Student	1	2
Total	**31**	**7**

Table 7: Distribution of Research Participants by Marital Status

	Women	**FSWs**
Marital Status	**N**	**N**
Never Married	2	3
Ever Married	29	4
Total	**31**	**7**

Table 8: Distribution of Research Participants by Living Arrangement

	Women	**FSWs**
Living Arrangement	**N**	**N**
Living with Husband	16	2
Living with Joint Family	10	2
Living with Family (Children)	5	-
Living with Friends		3
Total	**31**	

Table 9: Distribution of Research Participants by husband's Occupation

	Women	**FSWs**

Husband's/Partner Occupation	**N**	**N**
Agriculture	4	1
Contractor	4	1
Transport Worker	4	1
Rickshaw Puller	2	-
Migrant Labor	13	2
Small Business	2	2
Service/Job	2	-
Total	**31**	**7**

Table 10: Distribution of Research Participants by Participation in Socio-economic Organizations

	Women	**FSWs**
Participation	**N**	**N**
MahilaSamuha	7	1
AmaSamuha	2	-
BachatSamuha	21	1
Neighbourhood Group	5	-
No Participation	4	5
Total	**31***	**7**

Note: *Multiple Responses Allowed

Table 11: Distribution of Research Participants by Faced Any Forms of Domestic Violence

	Women	**FSWs**
Faced Domestic Violence	**N**	**N**
Yes	9	5
No	22	2
Total	**31**	**7**

Table 12: Distribution of Research Participants by Media Exposure

Media Exposure	**Number**	
Reading Newspaper/Magazine	8	3
Listening Radio	12	2
Watching Television	25	7
Online Media	20	5
Total	**31***	**7***

Note: *Multiple Responses Allowed

Appendix-V: Caste and Ethnic Group in Nepal

Caste Group	**1. Brahaman/Chhetri**	1.1 Hill Brahman Hill Brahman
		1.2 Hill Chhetri Chhetri, Thakuri, Sanyasi
		1.3 Tarai/Madhesi Brahman/Chhetri Madhesi Brahman, Nurang, Jha, Mishra, Rajput, Kayastha
	2. Tarai/Madhesi Other Castes	2.1 Tarai/Madhesi Other Castes Kewat, Mallah, Lohar, Nuniya, Kahar, Lodha, Rajbhar, Bing, Mali Kamar, Dhuniya, Yadav, Teli, Koiri, Kurmi, Sonar, Baniya, Kalwar, Thakur/Hazam, Kanu, Sudhi, Kumhar, Haluwai , Badhai, Barai, Bhediyar/ Gaderi
	3. Dalits	3.1 Hill Dalit Kami, Damai/Dholi, Sarki, Badi, Gaine, Unidentified Dalits
		3.2 Tarai/Madhesi Dalit Chamar/Harijan, Musahar, Dushad/Paswan, Tatma, Khatwe, Dhobi, Baantar, Chidimar, Dom, Halkhor
	4. Newar	4 Newar Newar

Adivasi/ Janajati	**5. Janajati**	5.1 Hill/Mountain Janajati Tamang, Kumal, Sunuwar, Majhi, Danuwar, Thami/Thangmi, Darai, Bhote, Baramu/Bramhu, Pahari, Kusunda, Raji, Raute, Chepang/Praja, Hayu, Magar, Chyantal, Rai, Sherpa, Bhujel/Gharti, Yakha, Thakali, Limbu, Lepcha, Bhote, Byansi, Jirel, Hyalmo, Walung, Gurung, Dura
		5.2. TaraiJanajati Tharu, Jhangad, Dhanuk, Rajbanshi, Gangai, Santhal/Satar, Dhimal, Tajpuriya, Meche, Koche, Kisan, Munda, Kusbadiya/Patharkata, Unidentified Adibasi/Janajati
Others	**6. Muslim**	6: Muslim Madhesi Muslim, Churoute (Hill Muslim)
	7. Other	7 Other: Marwari, Bangali, Jain, Punjabi/Sikh, Unidentified Others

Appendix-VI: Review of Data Sources including Indicators

Table 3.1

Secondary sources of quantitative data on KAB of women of HIV/AIDS

Survey Data Source/Year	Sample Size	Sample Population	Knowledge data	Attitude data	Behavioral Data
NFHS, 1996 Family Health Division, Government of Nepal	N=8,429	Ever married women	*Heard of AIDS *HIV prevention knowledge *Sources of Knowledge *perception about AIDS *Knowledge and use of condom	Not available	Not available
Nepal Demographic and Health Survey, 2001, Government of Nepal, Ministry of Health and Population	N=8,726 N=2,261	Ever married women age 15-49 Ever married men age 15-59	**Heard of AIDS *HIV prevention knowledge *knowledge of programmatically important to avoid AIDS *Knowledge of HIV/AIDS related issues	*Spousal communication about HIV/AIDS	*Knowledge and use of condom *Multiple sexual partners
Nepal Demographic and Health Survey, 2006, Government of Nepal, Ministry of Health and Population	N=10,793 N=4,397	Women aged 15-49 Men aged 15-49	#Knowledge of HIV/AIDS and of Transmission and prevention methods *Knowledge of HIV test	*Accepting attitudes towards People Living with HIV *Attitude towards negotiating safer sex	*Multiple sexual partner and higher risk sexual intercourse *Condom use at last sex *Paid sex *Reported STIs and treatment seeking behavior
Nepal Demographic and Health Survey, 2011, Of Nepal, Ministry of Health and Population	N=12,674 N=4,121	Women aged 15-49 Men aged 15-49	*Knowledge, transmission and prevention methods of HIV/AIDS *Knowledge of PMTCT	*Accepting attitudes towards people living with HIV and AIDS *Attitudes towards negotiating safe sex	* Multiple sexual partners *Condom use at last sex *HIV testing *Reported STI and treatment seeking behaviour
Nepal Multiple Indicator Cluster Survey, 2014, Government of Nepal, NPC, CBS and	N=14,162	Women Aged 15-49 years	*Knowledge about HIV Transmission, and misconceptions about HIV/AIDS *Knowledge of place for HIV	*Accepting attitudes towards people living with HIV	HIV testing during antenatal care

UNICEF			testing and counseling		
Nepal Living Standard Survey, 2010/11, Government of Nepal, NPC, CBS	N=7,200	*House holds across the country	*Knowledge and prevention methods of HIV/AIDS	Not available	Not available
STD and HIV Prevalence Among Female Sex Workers and Truckers on Highway Routes in Terai Nepal, Government of Nepal, NCASC, 1999	N=410 N=400	FSWs Truckers	Not available	Not Available	*STI and HIV Prevalence * Sexual behavior
Integrated bio-behavioural survey (IBBS) among female sex workers (FSWs) and Truckers, Along the Terai Highway routes covering 22 district of Nepal, 2003, Government of Nepal, NCASC, 2003	N=400 N=400 N=200	Truckers FSWs from 16 district FSWs from 16 district	Not available	Not available	*STI and HIV Prevalence *Sexual behavior *Condom use
Integrated bio-behavioural survey (IBBS) among female sex workers (FSWs) in East-West highways covering 22 districts Rount III 2006, Government of Nepal, NCASC, 2006	N=400 N=200	FSWs from 16 district FSWs from 6 district	*Knowledge of condom *Knowledge of HIV/AIDS *Perception on HIV Test * Knowledge of sexually transmitted Infections * Exposure to HIV/AIDS awareness Program	*Stigma and Discrimination	*Use of alcohol and Drugs *STI and HIV prevalence *Condom use of different sex partners *Treatment and care seeking behavior
Integrated bio-behavioural survey (IBBS) among female	N=400 N=200	FSWs from 16 district FSWs	*Knowledge of condom *Knowledge of HIV/AIDS	*Stigma and Discrimination	*Use of alcohol and Drugs *STI and HIV prevalence

sex workers (FSWs) in East-West highways covering 22 districts Round IV 2009, Government of Nepal, NCASC, 2009		from 6 district	*Perception on HIV Test * Knowledge of sexually transmitted Infections * Exposure to HIV/AIDS awareness Program *Knowledge of female condom *Knowledge of use of FP methods *Knowledge of HIV Prevention and transmission *Sources of HIV/AIDS knowledge		*Condom use of different sex partners *Treatment and care seeking behavior *use of female condom *Type of sex practice *condom carrying behavior
Integrated bio-behavioural survey (IBBS) among female sex workers (FSWs) in East-West highways covering 22 districts Round V, Government of Nepal, NCASC, 2012	N=400 N=200	FSWs from 16 district FSWs from 6 district	*Knowledge of HIV and STI *Knowledge of HIV/prevention and Transmission *Perception of HIV test * Sources of HIV/AIDS knowledge *Knowledge of different STIs *Knowledge of condom including female condom *Knowledge of FP *Modes of condom obtaining * Perception of HIV risk	*Stigma and Discrimination * social support *psychological health *Distress and Depression	*Use of alcohol and Drugs *STI and HIV prevalence *Condom use of different sex partners *Treatment and care seeking behavior *use of female condom *Type of sex practice *condom carrying behavior
Nepal Demographic and Health Survey, 2016, Government Health and Population	N=12862 N=4083	Women aged 15-49 Men aged 15-49	*Knowledge, transmission and prevention methods of HIV/AIDS *Knowledge of PMTCT	*Accepting attitudes towards people living with HIV and AIDS *Attitudes towards negotiating safe sex	* Multiple sexual partners *Condom use at last sex *HIV testing *Reported STI and treatment seeking behavior

Source:CBS/UNICEF;NCASC; Ministry of Health and Population (MoHP)/ORC Macro International.

Appendix-VIIa: Multicollinearity between Independent Variables (NDHS, 2011)

Independent Variables	Age	Marital Status	Place of residence	Education	occupation	Wealth index	Ecological Region	Development Region	Provinces	Religion	Ethnicity	Native language	Reading newspaper	Listening radio	Watching television
Age	1	.355**	-.015	-.385**	.137**	.015	-.011	-.014	-.011	-.016	-.004	-.013	-.206**	-.115**	-.073**
Marital Status	.355**	1	.028**	-.253**	.086**	-.043**	-.005	.038**	.035**	-.003	.013	.005	-.180**	-.097**	-.078**
Type of place of residence	-.015	.028**	1	-.201**	.061**	-.382**	.003	.043**	.014	.020*	.045**	-.011	-.287**	-.009	-.259**
Education	-.385**	-.253**	-.201**	1	-.134**	.449**	.006	-.094**	-.071**	-.138**	-.176**	-.201**	.658**	.274**	.438**
occupation	.137**	.086**	.061**	-.134**	1	-.139**	-.124**	.073**	.081**	-.109**	-.030**	.009	-.095**	.025**	-.063**
Wealth index	.015	-.043**	-.382**	.449**	-.139**	1	.298**	-.206**	-.187**	-.015	-.100**	-.086**	.463**	.078**	.629**
Ecological Region	-.011	-.005	.003	.006	-.124**	.298**	1	-.092**	-.154**	.162**	.182**	.190**	.010	-.147**	.158**
Development Region	-.014	.038**	.043**	-.094**	.073**	-.206**	-.092**	1	.972**	-.103**	-.110**	-.041**	-.092**	-.004	-.110**
Provinces	-.011	.035**	.014	-.071**	.081**	-.187**	-.154**	.972**	1	-.124**	-.114**	-.069**	-.066**	.014	-.088**
Religion	-.016	-.003	.020*	-.138**	-.109**	-.015	.162**	-.103**	-.124**	1	-.040**	.074**	-.104**	-.111**	-.086**
Ethnicity	-.004	.013	.045**	-.176**	-.030**	-.100**	.182**	-.110**	-.114**	-.040**	1	.238**	-.135**	-.132**	-.127**
Native language	-.013	.005	-.011	-.201**	.009	-.086**	.190**	-.041**	-.069**	.074**	.238**	1	-.173**	-.128**	-.128**
Reading newspaper	-.206**	-.180**	-.287**	.658**	-.095**	.463**	.010	-.092**	-.066**	-.104**	-.135**	-.173**	1	.245**	.428**
Listening to radio	-.115**	-.097**	-.009	.274**	.025**	.078**	-.147**	-0.004	.014	-.111**	-.132**	-.128**	.245**	1	.203**
Watching Television	-.073**	-.078**	-.259**	.438**	-.063**	.629**	.158**	-.110**	-.088**	-.086**	-.127**	-.128**	.428**	.203**	1
Total	12674	12674	12674	12674	12674	12674	12674	12674	12674	12669	12674	12672	12674	12674	12674

Sources: NDHS Data file , 2011

Note: ** indicates p<0.001 and * indicates p<0.05

Appendix-VIIb: Multicollinearity between Independent Variables (NDHS, 2011)

Independent Variables	Age	Marital Status	Place of residence	Education	occupation	Wealth index	Ecological Region	Development Region	Provinces	Religion	Ethnicity	Native language	Reading newspaper	Listening radio	Watching television
Age	1	.360**	-.017	-.388**	.180**	.042**	-.006	-.016	-.011	-.008	-.018*	-.012	-.118**	-.110**	-.045**
Marital Status	.360**	1	.041**	-.266**	.089**	-.055**	-.005	.015	.011	-.018*	-.020*	-.013	-.161**	-.079**	-.078**
Type of place of residence	-.017	.041**	1	-.197**	.043**	-.335**	-.046**	.049**	.021*	-.009	-.008	.141**	-.231**	-.001	-.263**
Education	-.388**	-.266**	-.197**	1	-.087**	.328**	-.103**	-.028**	.001	-.016	-.047**	-.161**	.554**	.286**	.359**
occupation	.180**	.089**	.043**	-.087**	1	-.243**	-.202**	.102**	.119**	-.021*	-.024**	-.004	-.012	.129**	-.083**
Wealth index	.042**	-.055**	-.335**	.328**	-.243**	1	.264**	-.191**	-.162**	.035**	.010	-.058**	.382**	-.070**	.522**
Ecological Region	-.006	-.005	-.046**	-.103**	-.202**	.264**	1	-.150**	-.197**	.012	.094**	.171**	-.110**	-.205**	.054**
Development Region	-.016	.015	.049**	-.028**	.102**	-.191**	-.150**	1	.964**	-.073**	-.099**	.043**	-.068**	.103**	-.158**
Provinces	-.011	.011	.021*	.001	.119**	-.162**	-.197**	.964**	1	-.079**	-.108**	.009	-.036**	.112**	-.132**
Religion	-.008	-.018*	-.009	-.016	-.021*	.035**	.012	-.073**	-.079**	1	.207**	.082**	-.005	-.033**	-.005
Ethnicity	-.018*	-.020*	-.008	-.047**	-.024**	.010	.094**	-.099**	-.108**	.207**	1	.251**	-.048**	-.064**	-.002
Native language	-.012	-.013	.141**	-.161**	-.004	-.058**	.171**	.043**	.009	.082**	.251**	1	-.160**	-.072**	-.080**
Reading newspaper	-.118**	-.161**	-.231**	.554**	-.012	.382**	-.110**	-.068**	-.036**	-.005	-.048**	-.160**	1	.238**	.345**
Listening to radio	-.110**	-.079**	-.001	.286**	.129**	-.070**	-.205**	.103**	.112**	-.033**	-.064**	-.072**	.238**	1	.123**
Watching Television	-.045**	-.078**	-.263**	.359**	-.083**	.522**	.054**	-.158**	-.132**	-.005	-.002	-.080**	.345**	.123**	1
Total	12862	12862	12862	12862	12862	12862	12862	12862	12862	12862	12862	12862	12862	12862	12862

Sources: NDHS Data file , 2016

Note: ** indicates p<0.001 and * indicates p<0.05

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