WOMEN’S VULNERABILITY TO HIV RISK: DECISION MAKING ON CONDOM USE AMONG MIGRANT SPOUSES

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Worldwide, almost 37 million people are living with human immunodeficiency virus (HIV). In 2015, about 2.1 million new HIV infections were recorded. Women have always been at high risk of HIV infection since the start of epidemic due to factors like, gender inequality, low access to health care services and education. In Nepal, wives of Nepalese labor migrants working in India are one of the high-risk groups. The aim of this cross-sectional and descriptive study was to examine the role of gender in decision making in use of condoms among migrant spouses in Nepal and other subsidiary factors affecting it. The study is descriptive and exploratory in nature.

The study was carried out in the Marku Village Development Committee (VDC), among labor migrants and their spouses, who had resided in India for a period of 3 months to 10 years. A cross-sectional analysis was conducted among 136 participants of which 69 (50.7%) were female and 67 (49.2%) were male. The researcher and health workers interviewed participants using a structured questionnaire. Chi-square test was used to examine the difference between categorical variables, and analysis of variance (ANOVA) was used to test the differences between the mean of more than two groups.

These data revealed that gender played a significant role in decision making in condom use. Men (56.3%) were more likely to take decisions on condom use than women (4.7%). Socio-economic factors such as, educational status and income were significantly associated with decision making in condom use in both genders. Almost all the women interviewed had no say in decision making about family matters. They were mostly involved in household chores, had lower income and educational status. Men had more knowledge regarding HIV/AIDS and its preventive measures. The male labor migrants seemed to consume more alcohol and practice unsafe sex in India. Only 19% of male participants claimed to be able to use condoms properly after alcohol consumption. Such findings reveal that the migrant workers and their spouses were at high risk of contracting HIV through regular unprotected sexual intercourse.

HIV/AIDS intervention programs should incorporate male labor migrants and their wives to reduce their vulnerability to HIV infection. HIV/AIDS prevention programs should collaborate with other health and socio-cultural projects to reduce costs and tackle other aspects of infected population such as livelihood, psychological and stigmatization.
ACKNOWLEDGEMENT

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Tek Subba,
April 2017
### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
</tr>
<tr>
<td>ANNOVA</td>
<td>ANalysis of Variance</td>
</tr>
<tr>
<td>AVERT</td>
<td>AVERTing HIV and AIDS</td>
</tr>
<tr>
<td>CBS</td>
<td>Central Bureau of Statistics</td>
</tr>
<tr>
<td>CDC</td>
<td>Center for Disease Control and Prevention</td>
</tr>
<tr>
<td>DoHS</td>
<td>Department of Health Survey</td>
</tr>
<tr>
<td>FHI</td>
<td>Family Health International</td>
</tr>
<tr>
<td>FSW</td>
<td>Female Sex Workers</td>
</tr>
<tr>
<td>GoN</td>
<td>Government of Nepal</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immuno-Deficiency Virus</td>
</tr>
<tr>
<td>IBBS</td>
<td>Integrated Biological and Behavioral Surveillance</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labor Organization</td>
</tr>
<tr>
<td>IOM</td>
<td>International Organization for Migration</td>
</tr>
<tr>
<td>MARPs</td>
<td>Most at risk populations</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>MLM</td>
<td>Male Labor Migrants</td>
</tr>
<tr>
<td>MoHP</td>
<td>Ministry of Health and Population</td>
</tr>
<tr>
<td>MSM</td>
<td>Men who have sex with men</td>
</tr>
<tr>
<td>NCASC</td>
<td>National Centre for AIDS and STD Control</td>
</tr>
<tr>
<td>NHRC</td>
<td>Nepal Health Research Council</td>
</tr>
<tr>
<td>PLHIV</td>
<td>People Living with Human Immuno-Deficiency Virus</td>
</tr>
<tr>
<td>PMTCT</td>
<td>Prevention of Mother to Child Transmission</td>
</tr>
<tr>
<td>PWIDs</td>
<td>People who inject drugs</td>
</tr>
<tr>
<td>SD</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>SES</td>
<td>Socio-economic status</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
</tr>
<tr>
<td>UNAIDS</td>
<td>United Nations Programme on HIV and AIDS</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Fund for Population Activities</td>
</tr>
<tr>
<td>VCT</td>
<td>Voluntary Counseling and Testing</td>
</tr>
<tr>
<td>VDC</td>
<td>Village Development Committee</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
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1. INTRODUCTION

Human Immunodeficiency Virus (HIV) infection/Acquired immune deficiency syndrome (AIDS) has already become a pandemic disease, taking the lives of about 36 million people in the previous three decades. In 2015, 36.7 million people were living with HIV, out of which more than 50 percent (17.8 million) were women and this proportion has been increasing in last 10 years. After the most severely affected Sub-Saharan Africa (66% of total HIV infections), Asia and the Pacific fall second in the most another affected region consisting of 5 million people living with HIV/AIDS in 2014 (AIDS by numbers 2015, AIDS by numbers 2016).

In Nepal, HIV was first detected in 1988 and since then, HIV has spread gradually. It is not a uniform epidemic throughout the region, rather multiple types of epidemics in various regions and districts are observed. Approximately, Nepal has an estimate of about 39,397 people living with HIV where four out of every five new infections (85%) are transmitted through unprotected sexual transmission. By the end of July 2016, cumulative 28,865 cases of HIV infection were reported to National Centre for AIDS and STD Control (NCASC). (National HIV/AIDS Strategy 2015, Integrated Biological and Behavioral Surveillance 2015). Nepal has also been categorized in the list of countries having highest infections among the South East Asian Region though having low prevalence (UNAIDS 2011, National HIV/AIDS Strategy 2015). Almost 40 percent (10,824) of the total HIV infected are women thus, ranking it among the most prevalent population sub-groups (injecting drug users, men having sex with men and female sex workers) (Nepal Country Progress Report 2012, National HIV/AIDS Strategy 2015).

Similarly, laborers migrating to India especially from Far-west region of Nepal such as Achham, Doti, Dang, Kanchanpur and Kailali are also among the other high risk populations (MARPs) which accounts a large proportion of HIV infected population threatening the country. National Centre for AIDS and STD Control, Nepal 2011 report indicates that male labor migrant accounts 27% of the total HIV infection and almost 16% of the total migrants were estimated to be engaged in unprotected sexual behavior with multiple partners (Nepal Country Progress Report 2012). The 2015 UNAIDS
country progress report of Nepal states that HIV prevalence among migrants’ workers in Western hilly remained average of 1.5% from 2006 to 2012 in a large number (505,728) of male labor migrants (Integrated Biological and Behavioral Surveillance 2015, National HIV/AIDS Strategy 2015). Consequently, wives of labor migrants contract HIV from their husbands and which ultimately spreads to the wider population.

Social status of Nepal favors men and women lack the authority to deny sex (forced sex or rape) and negotiation on condom use posing them highly vulnerable to HIV (Country Progress Report 2015). In the four districts of Far West, 0.8 percent of HIV prevalence was seen among wives of migrants. Despite adequate knowledge on condoms, the use of condom among couples is quite low. Issues such as early marriage, low literacy rate, low and inconsistent use of condoms and lack of knowledge on HIV testing further enhances the problems. (Integrated Biological and Behavioral Surveillance 2010). Women have limited knowledge on HIV/AIDS (37 percent) and additionally the social norms prevent access to information and service on HIV (Integrated Biological and Behavioral Surveillance 2010).

While there are number of studies conducted on the dynamics of migration and HIV among migrant labor of Far-West region of Nepal, little has been studied behind the factors influencing sexual decision making (Paudel 2004, Nepal 2007, Vaidya 2011, Weine et al. 2012). The Integrated Biological and Behavioral Surveillance (IBBS) survey conducted by Family Health International (FHI) Nepal and other few studies also provide some basic information on the prevalence of HIV and some factors of sexual decision making among migrant laborers and their spouses separately (IBBS 2010). However, no attempt has been made to study the factors influencing decision making in condom use among the labor migrants and their wives in a comparative way. This study will examine the role of gender in decision making in condom use and the factors associated with the risk of HIV infection among male labor migrants and their spouses. The finding of this study will help to better understand factors affecting decision making in condom use between partners, which may help to provide a clear picture for potential HIV/AIDS prevention projects among this group of people.
2. THEORETICAL BACKGROUND

2.1. HIV/AIDS - The disease

AVERTing HIV and AIDS (AVERT 2015) has mentioned HIV/AIDS originated from the Democratic Republic of Congo in 1920 from chimpanzees to humans via HIV crossed species. Only after 1970, sporadic cases of AIDS began to be seen. Within tenure of 10 years it may have already infected 100,000 to 300,000 people in five continents. Only in September 1982, CDC used the term ‘AIDS’ (Acquired Immune Deficiency Syndrome) by describing it as ‘a disease at least moderately predictive of a defect in cell mediated immunity, occurring in a person with no known case for diminished resistance to that disease’ (AVERT 2015).

World Health Organization (WHO) states, HIV as a retrovirus which destroys the function of immune system by infecting the immune cells ultimately weakening the person. AIDS is the most advanced stage of HIV infection which takes up to 15 years to develop. HIV transmission can occur through unprotected sexual intercourse, contaminated blood transfusion, from an infected mother to her infant during pregnancy, childbirth and breastfeeding and from sharing of contaminated needles. HIV can only be diagnosed with serological tests like RDTs or enzyme immunoassays (EIAs). Though it may take almost 28 days to detect the virus in some individuals (window period) however transmission can occur in any stages. HIV testing is a voluntary approach and must include Consent, Confidentiality, Counselling, Correct test results and Connection. Correct and consistent condom use (male and female) reduce up to 85% risk of HIV and sexually transmitted infections (STIs). Antiretroviral drugs can help in reducing the progression of AIDS. Voluntary medical male circumcision can reduce the risk of HIV transmitted heterosexually by 60% (WHO 2016a).

2.2. HIV/AIDS - Challenges

HIV is still a global threat to public health. In 2015 alone, 2.1 million people became newly infected with HIV. Also 1.2 million people died from HIV related illness in the same year. Even now only 53% of people with HIV know their status and by mid-2015,
15.8 million HIV infected will be receiving antiretroviral (ARV) drugs (AIDS by numbers 2016, WHO 2016b). Global reports often state that the actions to halt and reverse the AIDS epidemic in Millennium Development Goal is somewhat impossible to meet. Although the death toll resulting from AIDS (with an estimated 1.1 million deaths in 2015, down by 0.4 million in 2010) and new HIV infection (In 2015, new HIV infections were estimated at 2.1 million, which is lower by 0.1 million than 2010) is in decreasing trend, provision of antiretroviral therapy to most of the infected people has not been possible. There are still approximately 54% people living with HIV who do not have access to HIV treatment and most of them even don’t know their HIV status. Similarly, a recent survey shows that condom use, which is a major preventive aspect for HIV reduction, is in decreasing trend. Also, there are insufficient indicators providing information related to the transmission of HIV from sex work, stigma and discrimination and men having sex with men. United Nations Programme on HIV and AIDS (UNAIDS) states that factors like gender inequalities and violence against women promotes unsafe sexual practices that reduces the accessibility to HIV and AIDS services such that the risk of HIV increases by 50% (Global report 2013, Global AIDS Update 2016).

However, the goal to prevent AIDS by reaching out to HIV infected people and reducing deaths caused by AIDS can be achieved by global commitment, broad leadership and consistent financial investment. A series of HIV prevention tools such as condoms, harm reduction, voluntary male circumcision, promoting gender equality and education are still effective. HIV infection in women can be reduced by eliminating gender-related violence (physical, sexual and emotional), through empowerment, literacy, economic independence and increasing access to services (Global health sector strategy 2016, Global AIDS Update 2016).
Table 1: HIV epidemic, global and by region 2010 and 2015

<table>
<thead>
<tr>
<th>Area</th>
<th>People living with HIV (all ages)</th>
<th>New HIV infections (all ages)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
<td>2015</td>
</tr>
<tr>
<td>Global</td>
<td>33.3 million</td>
<td>36.7 million</td>
</tr>
<tr>
<td>Asia and Pacific</td>
<td>4.7 million</td>
<td>5.1 million</td>
</tr>
<tr>
<td>Eastern and southern Africa</td>
<td>17.2 million</td>
<td>19.1 million</td>
</tr>
<tr>
<td>Eastern Europe and central Asia</td>
<td>1.0 million</td>
<td>1.5 million</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>1.8 million</td>
<td>2.0 million</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>190000</td>
<td>230000</td>
</tr>
<tr>
<td>Western and central Africa</td>
<td>6.3 million</td>
<td>6.5 million</td>
</tr>
<tr>
<td>Western and central Europe and North America</td>
<td>2.1 million</td>
<td>2.4 million</td>
</tr>
</tbody>
</table>

(Source: Global AIDS Update, UNAIDS 2016)

2.3. Global strategies on HIV/AIDS Control

As per the draft report on global health strategy on HIV 2016-2021, United General Assembly in September 2015 has adopted a big commitment to end AIDS epidemic as a public health threat by 2030. Interim targets have been set to turn the objective of ‘end of AIDS’ into a reality. There have been tremendous achievements and global response to HIV since WHO launched special programs on AIDS in 1986. The recent global health sector strategy on HIV/AIDS 2011-2015, had positive impact on tackling AIDS epidemic. Over 15 million people living with HIV on antiretroviral therapy were covered through HIV treatment in 2015. There was a decline in newer HIV infections and deaths and elimination of mother-to-child transmission of HIV were adopted by several nations (Global Health Sector Strategy 2016).
Despite numerous achievements to halt and reverse the AIDS epidemic on Global health sector strategy on HIV/AIDS 2011-2015, new opportunities and challenges are seen which are creating a serious public threat in all regions. Therefore, another strategy on HIV 2016-2021 has been formulated which includes strengthening national HIV programs and plans through planned strategies and good governance; offering an essential HIV services packages and continuing the ongoing HIV services along with high-impact interventions, ensuring quality and quantity of HIV services for different targeted populations, safeguarding financially for those services and reducing the risk of financial hardship and adopting new innovation for rapid progress. By the end of 2015, the coverages of services were too slow to achieve the global targets. Still, among 37 million people living with HIV, 17 million people were unknown about the HIV status and antiretroviral therapy was not reaching to 22 million people. The HIV services are distributed unevenly and inequitably as some regions showed decreasing trend while some an increasing trend. In Sub-Saharan Africa, young women were found to be infected with HIV at a double rate as compared to young men of the same age. The issues like gender based violence; stigma and discrimination are still hindering the access of children, young women and adolescents to health services. So, it was realized, ending the AIDS epidemic can only be achieved through rapid response over next five years and a sustainable action till 2030 and beyond. Global health strategy on HIV 2016-2021, included five strategic directions: focusing on current national HIV plans through good governance and strategic information, developing high interventional essential package of HIV services, providing equity in rendering HIV services to different population and settings ensuring quality, creating sound financial sustainability minimizing the risk financial hardship for service delivery and acquiring new techniques and innovation for rapid progress (Global health sector strategy 2016, On the Fast-Track to end AIDS 2016).
2.4. Situation of HIV in Nepal

In Nepal, HIV prevalence among adult population has remained almost constant (0.2-0.3%) in over the last five years. More than 39,000 people were estimated living with
HIV in 2015 with a slight decrease from last year (almost 41,000). In the same year, substantial progress has also been seen in number of deaths related to AIDS (2,263 deaths in 2015 and 2,576 deaths in 2014) and people with newly infected with HIV (1331 in 2015 and 1,493 in 2014) (NCASC 2015, UNAIDS 2015). Moreover, the high-risk groups like People who inject drugs (PWIDs), men who have sex with men (MSM) and female sex workers (FSW), male labor migrants (MLM), particularly migrating to India are transmitting infection to lower risk populations. About 30% of all HIV infections are accounted by labor migrants and almost 16% of migrants are estimated to be engaged in unprotected sexual behavior with multiple partners. Since 2003, Nepal has been categorized in three different epidemic zones: The Kathmandu Valley, the Highway districts (mainly bordering to India in South), the Far western hills and the Remaining hills. Far western hills have the higher population of male labor migrants working in India especially in Achham, Doti and Bajhang (National HIV/AIDS Strategy 2011).

Table 2: Cumulative HIV and AIDS situation in Nepal as of July 2015

<table>
<thead>
<tr>
<th>Sub-groups</th>
<th>Male</th>
<th>Female</th>
<th>Transgender</th>
<th>Total</th>
<th>Cases reported this month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex workers (SW)</td>
<td>82</td>
<td>1209</td>
<td>3</td>
<td>1,294</td>
<td>6</td>
</tr>
<tr>
<td>People who inject drugs (PWID)</td>
<td>2984</td>
<td>87</td>
<td>9</td>
<td>3,080</td>
<td>10</td>
</tr>
<tr>
<td>Men having sex with men (MSM)/transgender</td>
<td>362</td>
<td>0</td>
<td>39</td>
<td>401</td>
<td>3</td>
</tr>
<tr>
<td>Blood or organ recipients</td>
<td>78</td>
<td>32</td>
<td>0</td>
<td>110</td>
<td>0</td>
</tr>
<tr>
<td>Clients of sex workers</td>
<td>9625</td>
<td>173</td>
<td>4</td>
<td>9802</td>
<td>39</td>
</tr>
<tr>
<td>Migrant workers</td>
<td>1752</td>
<td>176</td>
<td>0</td>
<td>1928</td>
<td>46</td>
</tr>
<tr>
<td>Spouse/partner of migrants</td>
<td>62</td>
<td>1060</td>
<td>1</td>
<td>1123</td>
<td>8</td>
</tr>
<tr>
<td>Others *</td>
<td>1760</td>
<td>7201</td>
<td>3</td>
<td>8964</td>
<td>38</td>
</tr>
<tr>
<td>Total</td>
<td>16705</td>
<td>9938</td>
<td>59</td>
<td>26702</td>
<td>150</td>
</tr>
</tbody>
</table>

Others includes: Housewives, male partners, prison inmates, children
(Source: NCASC 2015)
2.5. National strategy on HIV/AIDS in Nepal

National Center for AIDS and STD Control (NCASC) talks about the National HIV/AIDS Strategy as a guideline for all the sectors, institutions and partners involved in response to HIV and AIDS in Nepal for next five years. After ‘National Policy on HIV and STI 2011’, ‘National HIV/AIDS Strategy Plan 2011-2016 (NSP)’ guided national response to HIV/AIDS with a principle of universal access and using right-based approach and a multi-sectoral approach to tackle the epidemic. National Strategic Plan 2006-2011 was focused to contribute the Millennium Development Goal i.e. to halt and to reverse the spread of HIV by 2015 and to achieve universal access target of 80% coverage of prevention, treatment, care and support for most-at-risk population (MARP) and people living with HIV (PLHIV). This strategy achieved significant results and emphasized the expansion of service delivery outlets and areas for partnership. Nevertheless, it also encountered a high gap in reaching the migrant workers to India and their spouses, low rates in utilization of Voluntary Counselling and Testing (VCT) and Prevention of Mother to Child Transmission (PMTCT) services, continuing stigma and discrimination and poor coordination between the bodies. Moreover, the strategy (2011-2016) was based on the achievement, lessons and experiences of previous strategy. The previous strategy (2011-2016) achieved important accomplishments like reducing new HIV infection by 43% and AIDS related deaths by 12%. The challenges like poverty, unemployment and low education and labor migration to India and Gulf countries increased people’s vulnerability to HIV infection. In addition, the geographical setting of the country, post conflict situation and ethnic diversity are other challenges that hinder reaching out to target groups. (National HIV/AIDS strategy 2011, Nepal HIVision 2016).

National HIV strategic plan 2016-2021 carries the ethos of global Joint United Nations Programme on HIV/AIDS (UNAIDS) strategy 2016-2021 and Sustainable Development Goals (SDGs) to end AIDs epidemic by fast tracking the response by 2030. The Constitution of Nepal also protect Nepalese citizens with free basic health care services and guarantees free antiretroviral medicines and free HIV testing services. The National Centre for AIDS and STD Control relying on global strategic plan 2016-2021 on HIV and AIDS has developed following four strategic directions (Nepal
HIVision 2016):

2.5.1. Vision of ending AIDS epidemic as a public health threat by 2030:

NCASC has set broad target to achieve the 90-90-90 targets: identifying and testing 90% of key population, treating 90% of people diagnosed with HIV and retaining 90% of diagnosed people on antiretroviral therapy by 2021. Similarly, reducing new HIV infection by 75%, eliminating transmission of HIV from mother to child and elimination of congenital syphilis are yet another target.

2.5.2. Targeting investment areas for National HIV response:

National HIV strategic plan 2016-2021 has focused to work with key populations like female, sex workers, people who injects drug, transgender/ MSM and mobile and migrant population particularly moving to India for work. For instance, female sex workers are at a primary focus and people injecting drugs and MSM are at special attention given by the current strategic plan. Similarly, it has been noticed that mobile and migrant population are hard to reach due to their frequent movement away from communities. So, evidence-informed investment programs are developed for mobile populations and their families.

2.5.3. Governance, structures and responsibilities:

The government structures of Nepal on HIV and AIDS needs to be adjusted as per the need of emerging epidemic and learnings. The current fast track strategy in ending AIDS epidemic requires reviewed policy framework. The National HIV/AIDS and STI Control Board was established to implement, coordinate and supervise the National HIV and STI policy through central to grass-root levels. It also establishes a functional thematic group consisting of the Nepal Government and non-governmental organizations.

2.5.4. Summary of targeted investments

The National HIV strategic plan prioritizes resources for next five years to ensure fast
tracking on HIV response. Around three-quarters of total investment from each year are allocated for identifying and reaching key populations for prevention and treatment.

2.6. Migration and HIV- Seasonal labor migration in Nepal

UNAIDS Policy Brief (2008) describes international labor migration as a process of moving across national territory for employment. In 2008, 86 million people were living as a labor migrant outside their country. They often experience HIV risks and needs depending on their socio-cultural, economic and political factors in both origin and destination nations. The issues such as separation from spouse and families, socio-cultural norms, language barriers, poverty, poor living standards, economic instability and extreme working conditions may lead to isolation and anxiety and engage them in sexual behaviors. The risk of infection can be more increased from lack of access to HIV prevention services and stigmatization. Women left behind by their male counterparts are highly vulnerable to HIV due to similar economic and isolated situations and by their husband’s risk behavior. This policy strongly urges to develop and implement regional strategies to address HIV and related issues among labor migrants without any barriers.

Nepal has a 1,700 km long open border with neighboring India in the South, East and West. After the Peace and Friendship Treaty of 1816 there is no restriction of movement between both countries. There is a large flow of people towards India from Nepal for various purposes such as work, pilgrimage, study, tour and so on (Pattanaik 2013). Even the insurgency in Nepal had dragged people to be a part of migration especially to the neighboring country (Singh et al. 2005).

Seasonal and long-term migrations are quite common in Nepal, especially to India, 1.5 to 2 million Nepali migrants are estimated as labor migrants in India and most of them are from Far-west region of Nepal and one in four migrate before the age of 22 years. Due to limited job opportunities, weak economic condition and lack of resources in Nepal, at least one member of the family migrates seasonally. Migrants usually go to bigger cities of India like Mumbai, Punjab, Delhi and Chennai, which has high prevalence of HIV among sex workers. Migrants are often reported to involve in unsafe
sexual contact with sex workers during the tenure of their migration. Their high-risk behavior like regular visits to brothels after drinking alcohol, lack of access to information, condoms and supportive services increase the prevalence of HIV infection among them. On their return, there is a high chance they transmit the virus to their wives. Studies show that these workers rise in their economic and social status after their return and gain the privilege of engaging in extra marital sexual relations. (Integrated Biological and Behavioral Surveillance 2010, Vaidya 2011 & Bam et al. 2013). Male labor migrants (husbands) are acting as a medium for transmission of HIV infections to low-risk populations especially to their spouses; mostly who migrate to high prevalence areas of India and often visiting female sex workers there (Nepal 2007) (Figure 2).

**Figure 2: Migration trend and HIV infection between labor migrant’s husband and their wives**

<table>
<thead>
<tr>
<th>Male Migrant Labor</th>
<th>Wives of labor migrant</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Migration to India for work</td>
<td>-Stay as house-wives in Nepal</td>
</tr>
<tr>
<td>-Unsafe sexual practices</td>
<td>-Low SES</td>
</tr>
<tr>
<td>-Return home once or twice a year</td>
<td>-Low condom use</td>
</tr>
<tr>
<td>-Act as HIV virus carriers for spouse. (Nepal 2007)</td>
<td>-Vulnerable to HIV/AIDS from their husband. (Nepal 2007)</td>
</tr>
</tbody>
</table>

### 2.7. Factors influencing decisions making for condom use among genders

#### 2.7.1 Socio demographic factors

Migration to India for work is very common in Nepal. A systematic review conducted on 2007 has shown, higher trend of seasonal migration from the far-west region of Nepal to the urban parts of India such as Mumbai, Delhi, Haryana and Punjab. Studies
have shown that migrants staying for more than two years in India were at high risk. Studies from Achham and Doti have shown that migrant living in India for more than 4 years were likely to be 13% to 21% HIV positive compared to 2% to 5% respectively (Nepal 2007). If there are no intervention programs, it is estimated that almost 7,000 labor migrants returning from India will be infected with HIV and around 12,000 labor migrants will be living with HIV in India by 2015 (Vaidya & Wu 2011).

The prevalence of HIV was higher in the migrants returning from Mumbai and in the places where migration was common. In early 2000s, 10% of the migrants, from communities of Accham, Doti and Kailali, returning from Mumbai were accounted with HIV (Nepal 2007). HIV and STIs were often termed as ‘Bombay Rog’ with a belief of infection transmitted from Mumbai, India. Studies support that migrant-returnee are more likely to be HIV and STI positive than non-migrants in Nepal (Poudel et al. 2003).

A study conducted in rural India has shown significantly higher prevalence of HIV among the respondents having a migration history. Similarly, higher percentage of the wives of migrant workers were detected to be infected as compared to those of non-migrant workers. The spread of HIV infection is quite high in male labor migrants so immediate interventions for returnee migrants and their spouses are essential (Saggurti et al. 2011, Saggurti et al. 2012). Studies conducted in China and Bangladesh have also shown that migrants had high sexual behavior with commercial sex workers with low consistence in condom use especially after living apart from their spouses imposing them at higher risk of HIV and STIs (Mercer et al. 2007, Sudhunaraset et al. 2011, Zhuang et al. 2012).

In a case control study conducted by Thapa et al. (2014) there was an increased risk of HIV infection found among wives of labor migrants. The study revealed that among 112 cases of HIV positive and 112 cases of non-positive wives of labor migrants, factors like age, tenure and country of migration, alcohol consumption, living alone during migration, extra-marital affairs of their husband were determined the risk of infection to their spouses (Thapa et al. 2014).
Similarly, a study conducted in India illustrated that factors such as older age, lower education and lower level of HIV/AIDS knowledge among migrant workers increased their vulnerability to HIV/AIDS (Abdulkader et al. 2015). Likewise, a study conducted in four cities of US revealed that condom use was significantly higher among women taking decisions on the use of condoms during intercourse with their partners as compared to those who succumbed to the partner’s decisions. (Harvey et al. 2002). Meanwhile literacy status does not seem to be associated with HIV infection among all the respondents. The prevention strategies should incorporate the approaches like behavior change communication to the migrant labor and their spouses (Thapa et al. 2014).

Furthermore, another study conducted in Africa has concluded that low sexual power among women is directly associated to inconsistent condom use, ultimately putting them at high risk of HIV infection. In the study, women having low relationship power were 2.10 times likely to have inconsistency in condom use. Therefore, gender inequality may put women at a risk of HIV infection (McDonald et.al 2004). Similarly, study conducted among low-medium income African American women has found that men have a control over their relationship and sexual activity. Although women want to use condom, men made the final decision (Bowleg et. al 2004).

However, a study conducted in young women among high risk of HIV/AIDS have different findings. Study found that higher percentage of women had more power in sexual decisions compared to their partners. Almost 60% shared power with their partners, only 16% of decisions were made by their partner and women alone made 25% of the decisions. They had direct involvement in sexual decisions like condom use, birth control and desirability to have sex. Similarly use of condom was reported higher among the women who make decisions alone or together with their partners (Harvey et al. 2002).

Condom use for HIV prevention has always been focused outside marriage. A study conducted in South Africa revealed that despite high knowledge on condom use as dual protection against HIV and pregnancy, there was a very low consistency in condom use among married couples. However, the educated and urban dwellers were more likely
to use condom compared to less educated and rural population (Maharaj & Cleland 2004).

2.7.2 Information on HIV/AIDS and Condom use

A systematic review has shown that sexual factors like limited condom use, multiple partnering, regular clients of sex workers, low perception and knowledge on HIV among labor migrants were high in labor migrants placing them at increased risk of HIV. Besides, determinants like frequency and prolonged period of migration, higher income, limited access to health care, limited legal status, language barriers, sociocultural aspects (masculinity, condom use), separation from families, mental health problems, and low social support are interrelated with HIV infections (Weine & Kashuba 2012).

Women negotiation on safer sexual practices like condom use is considered as a major component of HIV/STD prevention strategies. Many studies have shown a strong association between the hypothesis relationship powers playing a role in safer sex decision-making by use of condom (Pulerwitz et al. 2002, Langen 2005). Women's risk behavior, intimate partner violence and high levels of male control in a woman's current relationship have been found to be associated with HIV seropositive (Dunkle et al. 2004). Likewise, very low percentage of wives of labor migrants had access to HIV/AIDS information and services (Integrated Biological and Behavioral Surveillance 2010).

HIV epidemic has often been boosted by gender inequalities. Women possess less sexual power compared to the spouse. In the same way, feminine nature can avert them from accessing HIV/AIDS information, dependency on their male partners, avoidance of unprotected sex and condom use. Young women experience high level of violence by 10 to 60% with low (38%) comprehensive knowledge on HIV/AIDS increases their vulnerability to HIV (UNFPA 2004, WHO 2012).

Another study from Vietnam, found that women’s efficacy on sexual decision-making is significantly associated with the persistent condom use. The women’s efficacy was highly determined by the women socio-economic status (education, ethnic groups,
access to media, age of marriage) and knowledge on condom in prevention of HIV (Do et al. 2011).

A study conducted with the wives of Tajiks’ male labor migrant showed null condom use as male-dominance and gender norms hindered their abilities to speak about sexual activity, condom negotiation and HIV testing, regardless of their knowledge on HIV and AIDS. They often knew about the engagement of husbands in sexual activities during migration but their dependence for money and protection left them with no choice (Golobof et al. 2010).

**2.7.3 Alcohol, sexual assertiveness and trust**

A study conducted in Moscow showed that high sexual behaviors among the Tajik male labor migrants with more than 90% having sexual relation with sex workers, more than 85% possessing multiple sex partners and almost 35 % performed unprotected sex with sex workers. The frequency of condom uses among regular partners and their own wives were quite lower and condom use after alcohol consumption seems low. HIV risk was seen higher with number of time of migrating for work and misconception related to masculinity increased alcohol habits and multi-partner relationships (Weine et al. 2012).

A meta-analysis conducted by Leigh (2002) has found that drinking always is not associated with unprotected sexual intercourse. It may depend upon situation, context and sexual experiences of the partners. However, the study further suggests that using other substances like drugs may be associated with non-use of condoms. Similarly, this study has only analyzed drinking and sex and it fails to explain about the amount of alcohol consumed with unprotected sexual intercourse (Leigh 2002).

Poudel et al. (2004) states that several factors like peer pressure, cheap sex, alcohol intake, lack from family control and low perception on HIV risk tends migrants to perform high risk sexual behaviors. Consequently, multiple sexual intercourse with different partners and inconsistency in condom use were seen both in India and at home. It was believed that almost all migrants have sex in Mumbai before returning home and
even extramarital sex were highly persistent. There was strong belief in labor migrants the use of condoms and high alcohol intake reduced sexual pleasures, which could be a major barrier for condom use in Nepal. Extramarital sex was also common in the migrants’ home after returning from India as they attain new social and economic status and even knowledge on HIV was unsatisfactory (Poudel et al. 2004).

Similarly, study conducted with female sex workers in Nepal showed use of condoms was limited due to low self-efficacy, violence from clients and intimate partners, perception of low pleasure by clients, trust with them and fear of losing clients, lack of negotiation ability and intimidation (Ghimire et al. 2011).

Thus, high-risk behaviors of male labor migrants keep their spouses or partner at high risk of HIV and STIs. The relationship status, socio-cultural factors, knowledge on HIV and access to HIV/AIDS information influence sexual decision among the migrants’ families.

2.8. Logical framework of the study

Figure 3 shows logical frame work of this study describing significance of the study issues, study theme, study factors, and desired status.
Figure 3: Logical framework of the study

Study Issue
Spouses of migrant workers are vulnerable to transmission of HIV

Desired Status
Less or no transmission of HIV on Spouses of migrant workers

Study Theme
Decision making on condom use among migrant spouses

Study factors
- Socio-demographic factors.
- Information on HIV/AIDS and condom use.
- Alcohol, sexual assertiveness and trust.
3. AIMS OF THE STUDY

3.1 General aims

To investigate the influence of gender and other related factors on decision making in condom use in relation to the risk of HIV in Far-west region of Nepal

3.2 Specific aims

- To examine the role of gender in decision-making in condom use
- To assess other factors affecting decision making in condom use
4. MATERIALS & METHODS

4.1 Design

The study is a cross-sectional descriptive study among migrant labor population.

4.2 Settings

Figure 4: Study site in the map of Nepal

(Source: Ministry of Home Affairs 2013)

Marku Village Development Committee (VDC) of Achham district from Far west region of Nepal was selected as the study site. Achham is a hilly district of Nepal which has the highest prevalence of HIV (17%) with the most migrated population to India especially Mumbai and Delhi for work (Nepal 2007). The other health indicators were also poor in this district due to its topographical challenge. For instance, contraceptive prevalence rate was only 20% and delivery conducted by skilled birth attendants was also less than 30% (Annual Report 2012). As per the recent census (National Population and Housing Census 2011), 471 households were recorded in Marku VDC comprising 1180 male and 1,248 female populations.
4.3 Subjects and sampling

Simple random sampling procedure was applied to identify the participants of the study. Sample size was taken in a representative way and it was based on inclusion criteria. The entire population of the VDC was surveyed to screen the target population. Among the total (471) household population of the district, 30 percent of total household was taken for the study. The 136 study subjects were migrant labors and their spouses who had resided in India for at least 3 months and maximum 10 years for work. This time frame was determined in term of their vulnerability to HIV through previous findings (Integrated Biological and Behavioral Surveillance Survey 2010, Nepal 2007). The respondents were taken regardless of their HIV status.

4.4 Data Collection

4.4.1. Data collection tool

Structured questionnaire survey was conducted with the participants (migrant labor workers and their wives) who had resided in India between 3 months to 10 years (Questionnaire is mentioned in Appendix 2).

4.4.2. Data collection process

Social mapping was conducted in collaboration with a non-governmental organization ‘Gangotri Rural Development Forum (GaRDeF)’, involving its local team. The important structures like health post, sub-health post, house of female community health volunteer, house of migrant, temples, etc. were identified to understand the geographical location. GaRDeF provided 5 (2 females and 3 males) staff members to carry out the questionnaire survey for this study.

Questionnaire were developed in English and Nepali language to ease the communication. Informed verbal consent from each respondent were taken before data collection. The principal researcher and the team conducted questionnaire survey orally due to low literacy rates in the area, who in many instances were not able to read and write. GaRDeF team had been working in HIV projects in Nepal and were familiar with
the area. Each questionnaire took about 20-30 minutes. Refusal right of the respondent was respected and they were assured of complete confidentially of their personal and identifying information throughout the research process.

4.4.2.1 Piloting

Questionnaires were developed based on literature review and were further validated by a pilot study. Piloting was conducted in a similar VDC (Bayelpata) near the study VDC (Marku) with 15 subjects. Piloting was carried out using structured questionnaires within same inclusion criteria. The piloting came up with important results such as necessity of female interviewer was observed to interview with female participants. Questionnaire was easy to understand for participants and took manageable time.

4.4.2.2 Logistics

Logistical support was provided by a non-governmental organization ‘Gangotri Rural Development Forum (GaRDeF)’. Questionnaire were printed in Nepali language and filled by interviewers by asking verbally with the participants. Social mapping was conducted for reaching the participants and important infrastructures like health posts, schools and temples of the VDC were identified. There was no incentive given to the participants.

4.5 Data Analyses

The characteristics of the study participants such as, socio-demographic information, knowledge and attitude towards HIV and AIDS, condom use negotiation and alcohol consumption were compared between male and female respondent by Chi Square ($\chi^2$) test. Further, the influence of baseline characteristics of participants on decision making in condom use were presented in mean (standard deviation). The level of significance was set at $p \leq 0.05$. The data were analyzed by Statistical Package for Social Sciences (SPSS) version 21 for Windows.
4.6 Ethical considerations

Ethical approval was taken from Nepal Health Research Council (NHRC), Kathmandu Nepal on 12th March 2014 (Given in Appendix 1). Informed verbal consent was taken from each respondent before the interview and obtained information were kept confidential.
5. RESULTS

5.1 Socio-demographic characteristics

The socio-demographic characteristics of participants are presented in Table 3. The study comprised of 136 respondents with mean age of 33.5 years (SD=12.0), of which women, n=69 (50.73%) were slightly more than men, n=67 (49.26%). Participants were categorized into five different age categories (15-24) years, (25-34) years, (35-44) years, (45-54) years and (55-64) years. Majority, n=40 (29.4%) of the participants were from the age group which were likely to be sexually active (25-34) years followed by (15-24) years, n=37 (27.2%). The least number, n= 10 (7.4%) of participants were from elderly group (55-64) years and this trend was also similar between the genders too i.e. male, n=8 (11.9%) and female, n=2 (2.9%) respectively. Among the participants, n=131 (96.3%) were married, followed by fewer percentage of widowed (1.5%), unmarried (1.5%) and separated (0.7%) (P=0.169). More women were illiterate, n=22 (31.9%) as compared to men, n=5 (7.5%) and even among the highest levels of education men, n=8 (11.9%) were more educated than women, n=5 (7.2%) (P ≤0.001).

Women were more likely to be involved in household activities as their major occupation, n=53 (76.8%), compared with other occupational groups (P ≤0.001) than men. Men involvement was seen higher in agriculture, n=42 (62.7%) followed by watchman, n=10 (14.9%), labor, n=12 (17.9%), and service, n=3 (4.5%). Women seem to have less yearly income compared to men in almost all income groups (P=0.459). Likewise, mean tenure of migration was 7.06 years (SD=3.33) and over half, n=73 (53.7%) has been working in India as a labor migrant for 9 to 10 years. Also, mean time for visiting back home was 7.17 months (SD=9.16). Majority of household decisions in family were taken by father/mother in law, n=51 (37.5%) and husband, n=50 (36.8%). On the other hand, women had a very less role in decision making of the family, n=13 (9.6%) (P=0.002). A higher number of men, n=47 (70.1%), consumed alcohol than women, n=9 (13%) (P ≤0.001).
<table>
<thead>
<tr>
<th>Variables</th>
<th>Female n (%)</th>
<th>Male n (%)</th>
<th>P-value</th>
<th>Total n (%)</th>
</tr>
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<tr>
<td><strong>Socio-demographic</strong></td>
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<tr>
<td><strong>Age group (years) (n=136)</strong></td>
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<tr>
<td>15-24</td>
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<td>25-34</td>
<td>26 (37.7)</td>
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<td>40 (29.4)</td>
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<td>35-44</td>
<td>13 (18.8)</td>
<td>17 (25.4)</td>
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<td>30 (22.1)</td>
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<td>45-54</td>
<td>6 (8.7)</td>
<td>13 (19.4)</td>
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<td>19 (14)</td>
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<td>55-64</td>
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<td>8 (11.9)</td>
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<td>67 (100.0)</td>
<td>136 (100.0)</td>
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<tr>
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<td>67 (100.0)</td>
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<td><strong>Occupation (n=136)</strong></td>
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<td><strong>Yearly income (n=136)</strong></td>
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<tr>
<td>≤30,000</td>
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Table 3. (Continued)

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## Other factors

### Tenure of migration for work (n=136) years

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<tr>
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<td>22 (16.2)</td>
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<td>14 (10.3)</td>
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### Last visited home (n=128) months

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<th>25-36</th>
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<td>48 (77.4)</td>
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<td>6 (9.7)</td>
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<td></td>
<td>60 (90.9)</td>
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<td>1 (1.5)</td>
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<td></td>
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<tr>
<td></td>
<td>108 (84.4)</td>
<td>11 (8.6)</td>
<td>7 (5.5)</td>
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### General decision maker in family (n=136)

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<th>Wife</th>
<th>Both</th>
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<tr>
<td>Husband</td>
<td>16 (23.2)</td>
<td>11 (15.9)</td>
<td>11 (15.9)</td>
<td>31 (44.9)</td>
<td>69 (100.0)</td>
</tr>
<tr>
<td>Wife</td>
<td>34 (50.7)</td>
<td>2 (3)</td>
<td>11 (16.4)</td>
<td>20 (29.9)</td>
<td>67 (100.0)</td>
</tr>
<tr>
<td>Both</td>
<td>50 (36.8)</td>
<td>13 (9.6)</td>
<td>22 (16.2)</td>
<td>51 (37.5)</td>
<td>136 (100.0)</td>
</tr>
</tbody>
</table>

### Intake of alcohol (n=136)

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60 (87)</td>
<td>9 (13)</td>
<td>69 (100.0)</td>
</tr>
<tr>
<td></td>
<td>20 (29.9)</td>
<td>47 (70.1)</td>
<td>67 (100.0)</td>
</tr>
<tr>
<td></td>
<td>80 (58.8)</td>
<td>56 (41.2)</td>
<td>136 (100.0)</td>
</tr>
</tbody>
</table>

P-value=Chi-square test
5.1.1 Distribution of study population by ward

The distribution of study population and number of ward are presented in Figure 5. Majority of respondents, n=31 (22.8%) had participated from ward number 4 comprising women, n=17 (24.6%) and men, n= 14 (20.9%) which had the highest number of migrants’ household (n=70, P=0.004). Ward number 6 had the lowest participants, n=6 (4.4%) compared to all other wards.

![Distribution of study population by ward](image)

Figure 5: Distribution of study population by ward

5.1.2 Involvement in decision making in condom use by gender distribution

More than half of decisions for condom use were made by men, n=72 (56.3%) followed by both genders n=50 (39.1%). Women, n=6 (4.7%) seemed to have lowest control over the decisions related to condom use. However, there was no statistically significant difference (P=0.616) between decision maker in condom use among the three groups, men, women or both (Figure 6).
5.2 Roles of gender in decision making in condom use

5.2.1 Knowledge on condom use

The percentage distribution of any information about condom use by gender is shown in the Figure 7. Almost three quarter of participants (women=79.4%, men= 85.1%) seems to have heard about condom use and among them, men had more information on condom use. However, there was no any statistically significant difference between those who had heard about condom use and those who have not heard about condom use (P=0.390).
Table 4 shows descriptive statistics of men and women who have knowledge on the importance of condom use as a means of protection against HIV/AIDS and STIs and family planning measures. Majority of men, n=57 (89.1%) had knowledge on condom use compared to women, n=43 (63.2%), P≤0.001. Men, n=47 (73.4%) were more likely to have knowledge on condom use as a family planning measures compared to women, n=28 (41.2%), P ≤0.001.

**Table 4: Knowledge on the importance of condom by gender**

<table>
<thead>
<tr>
<th>Condom importance</th>
<th>Female n (%)</th>
<th>Male n (%)</th>
<th>P-value</th>
<th>Total n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HIV/AIDS and STIs protection</strong></td>
<td>25 (36.8)</td>
<td>7 (10.9)</td>
<td>≤0.001</td>
<td>32 (24.2)</td>
</tr>
<tr>
<td>No</td>
<td>43 (63.2)</td>
<td>57 (89.1)</td>
<td></td>
<td>100 (75.8)</td>
</tr>
<tr>
<td>Yes</td>
<td>68 (100.0)</td>
<td>64 (100.0)</td>
<td></td>
<td>132 (100.0)</td>
</tr>
<tr>
<td><strong>Family planning measures</strong></td>
<td>40 (58.8)</td>
<td>17 (26.6)</td>
<td>≤0.001</td>
<td>57 (43.2)</td>
</tr>
<tr>
<td>No</td>
<td>28 (41.2)</td>
<td>47 (73.4)</td>
<td></td>
<td>75 (56.8)</td>
</tr>
<tr>
<td>Yes</td>
<td>68 (100.0)</td>
<td>64 (100.0)</td>
<td></td>
<td>132 (100.0)</td>
</tr>
</tbody>
</table>

P-value=Chi-square test
5.2.2 Negotiation

Table 5 explains about negotiation on condom use between genders. Majority of decision on condom use were made by men, n= 72 (56.3%) whereas women, n=6 (4.7%) seems to have very low role as a decision maker in condom use. However, there was no statistically significant difference between decision maker for condom use and genders (P=0.616).

On the other hand, statistical significance was seen among participants who could discuss about condom use with partners (P≤0.001). Majority of men, n=60 (89.6%) could discus about condom use with their partners whereas fewer women, n=42 (60.9%) could discuss about it. Similarly, women, n=45 (65.2%) were less able to insist their partner for condom use compared to men, n=57 (85.1%) (P=0.008).

Table 5: Condom use negotiation by gender

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sex</th>
<th>P-value</th>
<th>Total n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female n (%)</td>
<td>Male n (%)</td>
<td></td>
</tr>
<tr>
<td>Decision maker for condom use (n=128)</td>
<td>0.616</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husband</td>
<td>39 (58.2)</td>
<td>33 (54.1)</td>
<td>72 (56.3)</td>
</tr>
<tr>
<td>Wife</td>
<td>4 (6)</td>
<td>2 (3.3)</td>
<td>6 (4.7)</td>
</tr>
<tr>
<td>Both</td>
<td>24 (35.8)</td>
<td>26 (42.6)</td>
<td>50 (39.1)</td>
</tr>
<tr>
<td>Total</td>
<td>67 (100.0)</td>
<td>61 (100.0)</td>
<td>128 (100.0)</td>
</tr>
<tr>
<td>Can discuss about condom use with partners (n=136)</td>
<td></td>
<td>≤0.001</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>27 (39.1)</td>
<td>7 (10.4)</td>
<td>34 (25)</td>
</tr>
<tr>
<td>Yes</td>
<td>42 (60.9)</td>
<td>60 (89.6)</td>
<td>102 (75)</td>
</tr>
<tr>
<td>Total</td>
<td>69 (100.0)</td>
<td>67 (100.0)</td>
<td>136 (100.0)</td>
</tr>
<tr>
<td>Can insist partner for condom use (n= 136)</td>
<td></td>
<td>0.008</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>24 (34.8)</td>
<td>10 (14.9)</td>
<td>34 (25)</td>
</tr>
<tr>
<td>Yes</td>
<td>45 (65.2)</td>
<td>57 (85.1)</td>
<td>102 (75)</td>
</tr>
<tr>
<td>Total</td>
<td>69 (100.0)</td>
<td>67 (100.0)</td>
<td>136 (100.0)</td>
</tr>
</tbody>
</table>

P-value= Chi-square test
5.2.3 Practice

Table 6 shows use of condom for HIV protection and frequency of its use by participants. Very few women, n=16 (23.2%) reported of using condom as measure of HIV protection whereas nearly half, n=31 (46.3%) of men reported of using it as a means for HIV protection (P=0.005). Even those who were likely to use condom for HIV protection, they used it infrequently. Majority of the participants (women 94.7% and men 72.7%) preferred to use condom occasionally (sometime) (P=0.110).

Table 6: Condom use for HIV protection by gender

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sex</th>
<th>P-value</th>
<th>Total n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female n (%)</td>
<td>Male n (%)</td>
<td></td>
</tr>
<tr>
<td>Used for HIV protection (n=136)</td>
<td>0.005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>53 (76.8)</td>
<td>36 (53.7)</td>
<td>89 (65.4)</td>
</tr>
<tr>
<td>Yes</td>
<td>16 (23.2)</td>
<td>31 (46.3)</td>
<td>47 (34.6)</td>
</tr>
<tr>
<td>Total</td>
<td>69 (100.0)</td>
<td>67 (100.0)</td>
<td>136 (100.0)</td>
</tr>
<tr>
<td>Frequency in use for HIV protection (n=52)</td>
<td>0.110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Every time</td>
<td>0 (0)</td>
<td>6 (18.2)</td>
<td>6 (11.5)</td>
</tr>
<tr>
<td>Often</td>
<td>1 (5.3)</td>
<td>47 (9.1)</td>
<td>4 (7.7)</td>
</tr>
<tr>
<td>Sometime</td>
<td>18 (94.7)</td>
<td>24 (72.7)</td>
<td>42 (100.0)</td>
</tr>
<tr>
<td>Total</td>
<td>19 (100.0)</td>
<td>33 (100.0)</td>
<td>52 (100.0)</td>
</tr>
</tbody>
</table>

P-value= Chi-square test

Table 7 describes about practice of condom use. Participants had a very low, n=43 (31.6%) practice of condom use during last intercourse. Among them, few, n=18 (26.1%) women used condom during last intercourse. Within the non-users, n=93 (68.4%), nearly half, n=44 (47.3%) didn’t used it due to trust between spouse (P≤0.001). Other reasons for not using condom were bearing child, n= 23 (63.88%), lack of condom availability during intercourse, n= 8 (22.22%) and due to pain while condom use, n=5 (13.88%). Majority of participants, n=56 (41.2%) were not able to use condom correctly after alcohol consumption (P≤0.001). Very low number of women, n= 5 (7.2%) could use condom correctly after alcohol intake.
Table 7: Condom Practice by gender

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sex</th>
<th>P-value</th>
<th>Total n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female n (%)</td>
<td>Male n (%)</td>
<td></td>
</tr>
<tr>
<td>Used condom at last intercourse (n=136)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>51 (73.9)</td>
<td>42 (62.7)</td>
<td>93 (68.4)</td>
</tr>
<tr>
<td>Yes</td>
<td>18 (26.1)</td>
<td>25 (37.3)</td>
<td>43 (31.6)</td>
</tr>
<tr>
<td>Total</td>
<td>69 (100.0)</td>
<td>67 (100.0)</td>
<td>136 (100.0)</td>
</tr>
<tr>
<td>Reason for not using condom at last intercourse (n=93)</td>
<td></td>
<td>≤0.001</td>
<td></td>
</tr>
<tr>
<td>Trust for spouse</td>
<td>33 (64.7)</td>
<td>11 (26.2)</td>
<td>44 (47.3)</td>
</tr>
<tr>
<td>Lack of pleasure</td>
<td>1 (2)</td>
<td>12 (28.6)</td>
<td>13 (14)</td>
</tr>
<tr>
<td>Others</td>
<td>17 (33.3)</td>
<td>19 (45.2)</td>
<td>36 (38.7)</td>
</tr>
<tr>
<td>Total</td>
<td>51 (100.0)</td>
<td>42 (100.0)</td>
<td>93 (100.0)</td>
</tr>
<tr>
<td>Can use condom correctly after alcohol intake (n= 136)</td>
<td></td>
<td>≤0.001</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>25 (36.2)</td>
<td>31 (46.3)</td>
<td>56 (41.2)</td>
</tr>
<tr>
<td>Yes</td>
<td>5 (7.2)</td>
<td>22 (32.8)</td>
<td>27 (19.9)</td>
</tr>
<tr>
<td>Don’t know</td>
<td>39 (56.5)</td>
<td>14 (20.9)</td>
<td>53 (39)</td>
</tr>
<tr>
<td>Total</td>
<td>69 (100.0)</td>
<td>67 (100.0)</td>
<td>136 (100.0)</td>
</tr>
</tbody>
</table>

P-value= Chi-square test

5.3 Factors affecting decision making in condom use

5.3.1 Education

Among the illiterate, women n=3 (50%) took decision for condom use compared to men n=19 (26.4%). In the highest level (bachelor and higher) of education, men, n=9 (12.5%) had decision making power for condom use. There was statistically significant difference between decision maker in condom use and education level (P=0.003).

5.3.2 Occupation

Among occupational groups, men working in agriculture had highest decision making
role in condom use, n=31 (43.1%). Men working as watchmen, n=5 (6.9%), labor n=6 (8.3%), and service, n=2 (2.8%) made few decisions in condom use. Women in general, had very low role in decision making role in condom use among all occupational group.

5.3.3 Income

Higher yearly income seems to have increasing role in decision maker for condom use (P=0.037) among genders. Decision maker in condom use among men in lowest income group (≤30,000) was slightly more than a quarter, n=19 (26.4%) whereas increasing percentage, n=28 (38.9%) was seen in highest income group (≥70,000). Similarly, majority of women, n=3 (50%) having yearly income (50,000-70,000) took decision for condom use however lower, n=1 (16.7%) women took decision for condom use with low income group (≤30,000).

5.3.4 Knowledge of HIV/AIDS

Women, n=5 (83.8%) having knowledge about HIV/AIDS were likely to make decision on condom use compared to women, n=1 (16.7%) without knowledge about HIV/AIDS. In this study, decision maker in condom use was higher among participants who had heard about HIV/AIDS. However, decision making in condom use was not significantly associated with heard about HIV/AIDS (P=0.449).

Similarly, participants having knowledge on transmission of HIV from unsafe sex were more likely to make decisions on condom use (P=0.952). Among women with knowledge on transmission, majority, n=4 (80%) of them took decision on condom use compared to women, n=1 (20%) with no knowledge on transmission.

Knowledge on prevention from HIV/AIDS by correct and consistent use of condom was significantly associated with decision in condom use (P=0.045). Both, n=42 (85.7%) men and women with high knowledge were likely to have higher role in decision maker in condom use compared to lack of knowledge, n=7 (14.3%) on prevention. Groups with “no knowledge” were more likely to have less roles in decision making for condom use.
Majority of participants, n=93 (72.7%) were involved in decision making in condom use, who had known someone dying of AIDS compared with groups, n=35 (27.3%) with no knowledge of anyone dying from AIDS. Participants who knew anybody dying from AIDS were more likely to have role in decision making in condom use, although the estimates were not statistically significant (P=0.927).

5.3.5 Decision making role at home

Among general decision maker at home, father/mother in law, n= 50 (39.1%) and husband, n=46 (35.9%) had higher role in decision maker in condom use. Similarly, among the general decision maker at home, wife, n=11 (8.6%) seems to have very low role in decision making in condom use. In this study, participants making general decision at home seems to have higher role on decision for condom use. However, there was no any statistical significant between decision maker at home and decision maker in condom use (P=0.893).

5.3.6 Availability of condom

Participants, n=6 (4.8%) had a very low availability of condom from their spouse. Most of them preferred from other sources, n=120 (95.2%) like health workers, health facilities and peer educators. Few, n=4 (5.7%) men receiving condom from spouse had role as a decision maker in condom use whereas majority of the men, n=66 (94.3%) prefer other sources. However, availability of condom from spouse and decision maker in condom use was not statistically significan with each other (P= 0.777).

Majority, n=69 (54.3%) of the participants could access condom within 10 minutes and very few, n=4 (3.1%) reported for more than 60 minutes. Women, n=5 (83%) having closer access (less than 10 minutes) to condom seem to have higher role in decision making in condom use than other groups (10-20 minutes). Among the participants, decision maker in condom use seems increasing with decrease in time taken to access condom. However, the estimates were not statistically significant (P=0.582).

5.3.7 Alcohol intake
Among non-alcoholic women, more than half, n=4 (66.7%) of them took decision in condom use whereas only more than a quarter, n=2 (33.3%) of women took decision in condom use among alcoholic women. On the other hand, among non-alcoholic men, n=46 (63.9%) took decision in condom use and only, n=26 (36.1%) had a role in decision for condom use among alcoholic men. In this study, decision maker in condom use were more likely to be higher in participants who do not consume alcohol, though the estimates were not statistically significant (P=0.393).

5.3.8 Extra-marital sexual relations

Participants, n=66 (51.6%) who do not think nor had sexual relation during migration had higher role in decision making in condom use. Similarly, respondents, n=34 (26.6%) who though or had any sexual relation reported lower role in decision for condom use. Among the “Yes group”, fewer, n=1 (16.7%) women had a role in decision maker in condom use whereas among “No group” majority of women, n=5 (83.3%) had role in decision maker in condom use. There was statistically significant difference between the extra-marital sexual relation and decision maker in condom use (P=0.018) (Table 8).
### Table 8: Factors affecting decision making in condom use

<table>
<thead>
<tr>
<th>Variables</th>
<th>Decision maker in condom use</th>
<th>P-value</th>
<th>Total n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Husband n (%)</td>
<td>Wife n (%)</td>
<td>Both n (%)</td>
</tr>
<tr>
<td><strong>Education level (n=128)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>19(26.4)</td>
<td>3(50)</td>
<td>2(4)</td>
</tr>
<tr>
<td>Informal education</td>
<td>22(30.6)</td>
<td>0</td>
<td>17(34)</td>
</tr>
<tr>
<td>Primary education</td>
<td>5(6.9)</td>
<td>1(16.7)</td>
<td>13(26)</td>
</tr>
<tr>
<td>Pre-secondary</td>
<td>10(13.9)</td>
<td>0</td>
<td>4(8)</td>
</tr>
<tr>
<td>Higher secondary</td>
<td>7(9.7)</td>
<td>2(33.3)</td>
<td>10(20)</td>
</tr>
<tr>
<td>Bachelor and higher</td>
<td>9(12.5)</td>
<td>0</td>
<td>4(8)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>72(100)</td>
<td>6(100)</td>
<td>50(100)</td>
</tr>
<tr>
<td><strong>Occupation (n=128)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household</td>
<td>28(38.9)</td>
<td>3(50)</td>
<td>21(42)</td>
</tr>
<tr>
<td>Agriculture</td>
<td>31(43.1)</td>
<td>1(16.7)</td>
<td>17(34)</td>
</tr>
<tr>
<td>Labor</td>
<td>6(8.3)</td>
<td>1(16.7)</td>
<td>6(12)</td>
</tr>
<tr>
<td>Service</td>
<td>2(2.8)</td>
<td>1(16.7)</td>
<td>2(4)</td>
</tr>
<tr>
<td>Watchmen</td>
<td>5(6.9)</td>
<td>0</td>
<td>4(8)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>72(100)</td>
<td>6(100)</td>
<td>50(100)</td>
</tr>
<tr>
<td><strong>Yearly income (Nepali rupees) (n=128)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤30,000</td>
<td>19(26.4)</td>
<td>1(16.7)</td>
<td>19(38)</td>
</tr>
<tr>
<td>30,000-50,000</td>
<td>12(16.7)</td>
<td>2(33.3)</td>
<td>14(28)</td>
</tr>
<tr>
<td>50,000-70,000</td>
<td>13(18.1)</td>
<td>3(50)</td>
<td>8(16)</td>
</tr>
<tr>
<td>≥70,000</td>
<td>28(38.9)</td>
<td>0</td>
<td>9(18)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>72(100)</td>
<td>6(100)</td>
<td>50(100)</td>
</tr>
<tr>
<td><strong>Heard about HIV and AIDS (n=128)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>5(6.9)</td>
<td>1(16.7)</td>
<td>2(4)</td>
</tr>
<tr>
<td>Yes</td>
<td>67(93.1)</td>
<td>5(83.8)</td>
<td>48(96)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>72(100)</td>
<td>6(100)</td>
<td>50(100)</td>
</tr>
<tr>
<td><strong>Knowledge on transmission of HIV from Unsafe sex (n=121)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>15(22.4)</td>
<td>1(20)</td>
<td>12(45.5)</td>
</tr>
<tr>
<td>Yes</td>
<td>52(77.6)</td>
<td>4(80)</td>
<td>37(75.5)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>67(100)</td>
<td>5(100)</td>
<td>49(100)</td>
</tr>
<tr>
<td><strong>Knowledge on prevention by correct and consistent use of condom (n=122)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>13(19.1)</td>
<td>3(60)</td>
<td>7(14.3)</td>
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Table 8. (Continued)

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>55(80.9)</td>
<td>2(40)</td>
</tr>
<tr>
<td>Total</td>
<td>68(100)</td>
<td>5(100)</td>
</tr>
<tr>
<td><strong>Know anybody died from AIDS (n=128)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>19(26.4)</td>
<td>2(33.3)</td>
</tr>
<tr>
<td>Yes</td>
<td>53(73.6)</td>
<td>4(66.7)</td>
</tr>
<tr>
<td>Total</td>
<td>72(100)</td>
<td>6(100)</td>
</tr>
<tr>
<td><strong>Decision maker at home (n=128)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husband</td>
<td>26(36.1)</td>
<td>2(33.3)</td>
</tr>
<tr>
<td>Wife</td>
<td>7(9.7)</td>
<td>1(16.7)</td>
</tr>
<tr>
<td>Both</td>
<td>12(16.7)</td>
<td>0</td>
</tr>
<tr>
<td>Father in law/Mother in law</td>
<td>27(37.5)</td>
<td>3(50)</td>
</tr>
<tr>
<td>Total</td>
<td>72(100)</td>
<td>6(100)</td>
</tr>
<tr>
<td><strong>Availability of condom from spouse (n=126)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>66(94.3)</td>
<td>6(100.0)</td>
</tr>
<tr>
<td>Yes</td>
<td>4(5.7)</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>70(100.0)</td>
<td>6(100.0)</td>
</tr>
<tr>
<td><strong>Time taken to access condom (n=127)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 10 mins</td>
<td>37 (52.1)</td>
<td>5 (83.3)</td>
</tr>
<tr>
<td>10-20 mins</td>
<td>17 (23.9)</td>
<td>1 (16.7)</td>
</tr>
<tr>
<td>30-60 mins</td>
<td>14 (19.7)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>More than 60 mins</td>
<td>3 (4.2)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Total</td>
<td>71 (100.0)</td>
<td>6 (100)</td>
</tr>
<tr>
<td><strong>Alcohol intake (n=128)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>46(63.9)</td>
<td>4(66.7)</td>
</tr>
<tr>
<td>Yes</td>
<td>26(36.1)</td>
<td>2(33.3)</td>
</tr>
<tr>
<td>Total</td>
<td>72(100.0)</td>
<td>6(100.0)</td>
</tr>
<tr>
<td><strong>Think/had sexual relation in India (n=128)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>44(61.1)</td>
<td>5(83.3)</td>
</tr>
<tr>
<td>Yes</td>
<td>14(19.4)</td>
<td>1(16.7)</td>
</tr>
<tr>
<td>Do not know</td>
<td>14(19.4)</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>72(100.0)</td>
<td>6(100.0)</td>
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P-value= Chi-square test
6. DISCUSSIONS

This study identified the role and factor affecting decision making in the use of condoms among migrant workers and their wives in Nepal. The study found that men had more role in decision making in condom use than women. It also found that social economic factors like education, occupation, income, general decision making at home and other factors like knowledge on HIV/AIDS, condoms and its use, availability of condoms, alcohol intake and extra-marital sexual relations during migration influenced the decisions on condom use.

A study conducted by University of California has shown positive association between low socio economic status and the risk of HIV infection in women (Wojcicki 2005). In this thesis women had low literacy and were less involved in money oriented occupation compared to men. The low socio-economic status of women may also have played a role in hindering the right to decision making in the family. However, men having only slightly higher socio economic status than women with involvement in formal employment were more likely to have higher role in decision making for condom use. This means that both genders were somehow socio-economically vulnerable to HIV risk. A study in Mexico has also found that significant difference between men and women in socioeconomic profiles poses differences in risk of HIV infection (Bautista-Arredondo et al. 2015). Another study by Thapa (2015), has also reported similar results between low socioeconomic status and gender inequality in wives of labor migrants that predisposed them to poor sexual negotiation and increased their risk of HIV infection through unprotected sex (Thapa et al. 2015).

In this study, more than half of decisions for condom use were made by men followed by both gender 39.1% and women 4.7%. However, a study conducted by Harvey et. al (2002) showed that only 16% of decisions on condom use were made by male partners whereas 60% shared power with their partners and 25% of decisions were made by women. The difference in these two studies is expected as Nepal is governed by a male dominant society where women’s decision making power is low. In contrast, the above-mentioned study (Harvey et al. 2002) was conducted in a developed country where
decision making power of women is high. The results from this study can be generalized in similar setting with consideration.

The findings of this study revealed that most of the young Nepalese men (age group which are likely to be sexually active) between 25 years to 34 years were migrating for labor work. This is probably because most of the families living in geographically disadvantaged areas had low socio economic status with poor health and developmental indicators. Hence, labor migration to India was quite common with ease of open border access (Singh et al. 2005, Vaidya & Wu 2011). The finding of this study is consistent with the study conducted by Bam (2013) which showed that large groups of young Nepalese migrate to India for employment due to lack of job and poor socio-economic status (Bam et al.2013).

Furthermore, this study found that mean period of migration was really long (7.06 years), although there was a frequent annual visit back home. This is because migrants often visit their home country during festivals and the time of crop harvesting. Likewise, there are often evidence of migrants practicing unsafe sex and frequent visits to brothels while working in India. This means wives of labor migrants and of course the migrants themselves are at high risk of getting HIV through continuously engaging in unprotected sex. The result of this study is consistent with the previous study conducted in Far-west Nepal which showed that high recruitment of HIV infections from India are carried by seasonal labor migrants in these regions (Bam et al. 2013).

The results of this study showed that women's decision making for condom use was relatively lower than men. Similarly, the current study also revealed that women also had lowest role in general decision making in family after husband and father/ mother in law. This is because Nepal has a prevalent male dominated society. Thus, women have limited say in decision making. The findings of this study are supported by a study conducted in Nepal, Tajikistan and United States which reported gender inequalities in a male dominated society limit the active role of women in HIV protection (Golobof et al. 2011, Harvey et al. 2002, WHO 2016).

This study also showed that genders having knowledge on HIV/AIDS were more likely to decide on using condoms as opposed to the ignorant groups. Gender differences in
knowledge on transmission and prevention of HIV were also seen in our study. This is probably because in this current study men were more educated than women. The finding of this study is well supported by a similar study conducted by Tapia-Aguirre (Tapia-Aguirre et al. 2004). This study showed that men had more knowledge on HIV and its preventive measures so held greater roles in decisions for condom use. According to Bohara (2014), illiteracy in wives of Nepalese laborer migrants often enhances poor knowledge of HIV/AIDS. Another study on migrants, reported that labor migrant have enough knowledge about HIV/STIs in Nepal (Bohara 2014). This indicates that awareness should be more focused on wives of laborer migrants. Although 79.4% of women had heard about condom, only 63.2% knew its importance for HIV/STIs protection. While comparing between genders, men were 30% more likely to have knowledge on condom importance as HIV/AIDS and STIs protection than women.  

In this study, knowing anybody dying from AIDS was not significant with decisions making for condom use. Women seemed oblivious to information on deaths caused by AIDS. This is probably due to limitation of the study design and a sample size of only 136 participants. However, a study conducted in Africa had showed positive association between knowing personally anybody dying of AIDS and HIV preventive behaviors like condom use. African communities seem to change their behavior by high level of mortality experienced in their communities (Macintyre et al. 2001).  

Bohara (2014) has concluded that use of condom between migrant couples are very low in spite of their risky sexual behavior. Our study findings have also supported that condom use for HIV protection was very low with less frequent use among migrant spouse. During their last intercourse, only 31.6% used condoms. Similarly, most of the couples did not think it necessary to use condoms due to trust between husband and wife. Infrequent condom uses among migrant both at home and abroad were avoided due to low perceived vulnerability to HIV/STIs and fear of losing trust (Kapiga et al. 1995 & Poudel et al. 2004). In addition, our study also found that condom availability from spouse was quite low between the genders. Only fewer men could take decision for condom use among condom receiving from their spouse. Most of them receive condom from health workers, health facilities, peer educators, female community health volunteers and information centers.
Sexual behavior during migration was another factor associated with decision making in condom use. Alcohol intake was so quite common and high among men than women in our study. In India, post alcohol consumption men were more likely to be engaged in sexual behavior and disregarded the use of condoms. Among the genders, decision maker for condom use was seen higher amongst those who believed/thought they had no sexual relation in India. Likewise, only 7% of the men could use condom correctly after alcohol intake. A study conducted in Nepal among migrant laborers shows that, they developed alcohol habits at an early age, visited sex workers and practiced unsafe sex in India often to relieve loneliness and troubles about home (Bam et al. 2013).

In this study, descriptive analysis and univariate analysis were carried out for data analysis. Variables like education level, yearly income, knowledge and prevention by correct and consistent use of condom, think/has sexual relation in India were associated with decision making on condom use in the univariate analysis. However, in order to find strong association between variables and decisions making on condom use multivariate analysis should be used.

As far as our knowledge, no study has been ever included both labor migrants and their wives to identify their roles in decision making in condom use and to assess factors affecting in decision making for condom use in Nepal. Incorporation of genders is very essential to establish a relation between risk factors, disease transmission, and behavior of migrant’s laborers husband and their wives’ vulnerability to HIV risk.

The limitation of the study is that it only focuses on quantitative information of the study population. Using both quantitative and qualitative methods will further elaborate the phenomena. Similarly, a bigger study sample size could have made the study more representative of the study population.
7. CONCLUSIONS AND RECOMMENDATIONS

Findings from this study have important implications for reducing vulnerability of HIV infection among both migrant laborers and their wives in Nepal. This study showed that women were at high risk of HIV infection due to their passive role on decision making in condom use compared to men. Low socio-economic status, lesser information on HIV/AIDS and condom use in women had a direct influence on decisions for condom use. Despite high risky sexual behavior by migrants, there was comparatively lower use of condom for HIV protection among labor migrants and their spouse. Thus, condom use among migrant couples should be encouraged. Mass awareness programs should be conducted on HIV prevention to improve knowledge of migrants’ families. Furthermore, training on income generating skills should be given to improve socio-economic status of women.

7.1 Policy

Intervention programs on migrant population for HIV reduction should include both migrant labors and their wives. Likewise, programs related to literacy, empowerment and income generation should be incorporated with HIV/AIDS projects. A trend of migration exists between Nepal and India, and migrant workers often pose a risk behavior during migration. International policy should thus be developed to reach migrant population.

7.2 Practice

Regular awareness programs on HIV prevention and correct and consistent condom use should be continued. Projects related to women and health should be merged with HIV/AIDS projects to reduce gender inequality and increase decision making capacity of women on condom use negotiation and safer sex. Seasonal labor migrants should be oriented on issues like migration and HIV, alcohol use and sexual behavior to reduce prevalence of HIV. Joint counselling programs for migrant labors and their wives on importance of condom use can be an effective way to eliminate their common myth such as using of condom between them decreases faith in partners.
7.3 Future research

Upcoming researchers are highly encouraged to investigate qualitative perspective to have better understanding in gender role on decision making in condom use in risk of HIV/AIDS.
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McDonald, M., Anker, M., Deal, C., Mawle, A., O'Connor, S., Slaughter, L. (2004). International Conference on women and Infectious diseases. Emerging Infectious Diseases, 10 (11), 1963


On the Fast-Track to end AIDS, UNAIDS. 2016. (Accessed 25.01.17)


http://www.who.int/gender/hiv_aids/en/

http://www.who.int/topics/hiv_aids/en/

http://www.who.int/mediacentre/factsheets/fs360/en/


http://www.unfpa.org/gender/aids.html

9. ATTACHMENTS

Attachment 1

Ethical Approval Form from Nepal Health Research Council

Nepal Health Research Council

Estd. 1991

Ref. No.: 16

12 March 2014

Mr. Tek Subba
Principal Investigator
University of Eastern Finland
Institute of Public Health and Clinical Nutrition
Finland

Ref: Approval of Research Proposal entitled A study on women vulnerability to HIV risk: Sexual decision making among partners in Marku VDC of Achham district, Nepal

Dear Mr. Subba,

It is my pleasure to inform you that the above-mentioned proposal submitted on 23 January 2013 (Reg. no. 6/2013 please use this Reg. No. during further correspondence) has been approved by NHRC Ethical Review Board on 11 March 2014 (2070.11.27).

As per NHRC rules and regulations, the investigator has to strictly follow the protocol stipulated in the proposal. Any change in objective(s), problem statement, research question or hypothesis, methodology, implementation procedure, data management and budget that may be necessary in course of the implementation of the research proposal can only be made so and implemented after prior approval from this council. Thus, it is compulsory to submit the detail of such changes intended or desired with justification prior to actual change in the protocol.

If the researcher requires transfer of the bio samples to other countries, the investigator should apply to the NHRC for the permission.

Further, the researchers are directed to strictly abide by the National Ethical Guidelines published by NHRC during the implementation of their research proposal and submit progress report and full or summary report upon completion.

As per your research proposal, the total research amount is NRs 2, 45,100.00 and accordingly the processing fee amounts to NRs 8,615.00. It is acknowledged that the above-mentioned processing fee has been received at NHRC.

If you have any questions, please contact the research section of NHRC.

Thanking you,

Dr. Guna Raj Lohani
Executive Chief

Tel.: 977-1-4254220, 4227460, Fax: 977-1-4263469, Ramshah Path, P.O. Box 7626, Kathmandu, Nepal. Website: http://www.nhrc.org.np, Email: nhrc@nhrc.org.np
Attachment 2 (1/2)

CONSENT FORM TO PARTICIPATE IN RESEARCH

A STUDY ON WOMEN’S VULNERABILITY TO HIV RISK: SEXUAL DECISION MAKING AMONG PARTNERS IN MARKU VDC OF ACHHAM DISTRICT, NEPAL

UNIVERSITY OF EASTERN FINLAND KUOPIO, FINLAND

Introduction

Hello! I Mr./Mrs.……………………………… (myself/ on behalf of) University of Eastern Finland (UEF), Kuopio Finland am / is here to collect data for research purpose as a requirement of the course. The research topic is “A study on women vulnerability to HIV risk: sexual decision making among partners in Marku VDC of Achham district, Nepal.

Purpose

The purpose of the study is to analyze sexual decision making among the partners in Marku VDC of Achham district of Nepal.

Procedure

If you agree to be in this study, you will be asked some questions related to your socio-economic status, knowledge and attitude on HIV and AIDS and sexual behavior. There will be almost 40 questions. I can read questions verbally for you in case if you are not able to fill the questionnaire form. You may also be permitted to capture a picture if necessary.

Study time: Study participation will take a total of approximately 30 minutes.

Study location: All the study procedure will take place at Marku VDC.

Benefits: There is no direct benefit to you anticipated from participating in this study. However, it is hoped that the information gained from the study will help health professionals to understand the factors hindering in sexual decision making and therefore helps to reduce prevalence of HIV.

Risks/Discomforts:

Some of the questionnaire may be too personal, but you are free to decline to answer and move further.

Breach of confidentiality: As with all research, there is a chance that confidentiality could be compromised; however, we are taking precautions to minimize this risk.
Confidentiality
The information given by you shall be strictly treated as confidential. All the mentioned information will be used only for the objectives of the study. If results of this study are published or presented, personally identifiable information or names will not be used, ‘unless you give explicit permission for this.’

If you have any queries or questions related to this study, you could contact Tek Subba at +358400185065 or teksubba88@yahoo.com.

CONSENT
Will you help me providing information required by the study? If so, please sign and date below.

_________________________________________    ________________
Participant's Name                                  Date

_________________________________________    ________________
Participant's Signature                            Date

_________________________________________    ________________
Person Obtaining Consent                          Date
QUESTIONNAIRE FOR MIRGANT FAMILIES

GENERAL INFORMATION
1. What is your ward number?

...........................

2. What is your village name?

............................................................

3. Sex
   1. Male □
   2. Female □

4. How old are you?
   □ Years

5. Marital Status
   1. Married □
   2. Unmarried □
   3. Divorced/ separated □
   4. widow/widower □

6. How many children do you have altogether?
   □ Children

7. What is your education?
   1. Illiterate □
   2. Primary education □
   3. Pre-secondary □
   4. Higher secondary □
   5. Bachelor and higher □

8. What is your occupation?
   1. Household □
   2. Agriculture □
   3. Labor □
4. Service □
5. Watchmen □

9. How much is your yearly income?
   1. Less than 30,000 □
   2. 30,000-50,000 □
   3. 50,000-70,000 □
   4. More than 70,000 □

10. How long have you/ your spouse been working in India as a migrant worker?
    □ Years

11. When did you last return home?
    □ Months ago

**KNOWLEDGE AND ATTITUDE TOWARDS HIV/AIDS**

12. Have you ever heard about HIV/AIDS?
   1. Yes □
   2. No □

13. If Yes, what are the sources of information on HIV and AIDS?
   1. Radio □
   2. Television □
   3. Friends/relatives/Neighbors □
   4. Health workers □
   5. Spouse □
   6. Peer educator/Out-reach worker/Female Community Health Volunteer/Drop in Center □

14. How a person can get HIV/AIDs?
   1. Unsafe sexual contact □
   2. Blood Transfusion from HIV infected person □
   3. Blades, needles, syringes, etc. containing HIV infected blood □
   4. HIV infected pregnant mother to child in the womb □
5. Mosquito bite □
6. Eating together in same plate with HI infected person. □
7. Kissing or hugging □
8. Holding hands □
15. How can a person protect himself/herself from HIV/AIDS?
   1. Regular and consistence use of condom □
   2. Sterilization or use of new blades, syringes, needles, etc. □
   3. Prevention from mother to child transmission (PMTCT) □
   4. All of above □
16. Do you know anyone infected or died with HIV/AIDS?
   1. Yes □
   2. No □
17. Why do you think that person got that disease?
   1. Unsafe sexual contact □
   2. Sin of past lives/ Bad fortune □
   3. Witch/ Ghosts/ Devil, etc. □
18. Is your going to take care of, if somebody gets infected with HIV at your home?
   1. Yes □
   2. No □
19. Have you ever tested for HIV?
   1. Yes □
   2. No □

**DECISION MAKING**

20. Who makes general decision in your family?
   1. Husband □
   2. Wife □
   3. Both □
   4. Father in law/Mother in law (Father/Mother) □
21. Do you think, your opinions are given importance during decision making?
   1. Yes □
   2. No □
SEXUAL BEHAVIOIR & POWER IN CONDOM NEGOTIATION

22. Have you ever heard of condom?
   1. Yes ☐
   2. No ☐

23. If yes, from where did you know about it?
   1. Radio ☐
   2. Television ☐
   3. Friends/relatives/Neighbors ☐
   4. Health workers ☐
   5. Spouse ☐
   6. Peer educator/ Female Community Health Volunteer/ Drop in Center ☐

24. Do you know the importance of condom?
   1. HIV/AIDS and STIs protection ☐
   2. Family Planning Contraceptive ☐

25. If you know importance of condom for HIV protection, from where did you know about it?
   1. Radio ☐
   2. Television ☐
   3. Friends/relatives/Neighbors ☐
   4. Health workers ☐
   5. Spouse ☐
   6. Peer educator/ Out-reach worker/ Female Community Health Volunteer/ Drop In Center ☐

26. Have you ever used condom for HIV protection?
   1. Yes ☐
   2. No ☐

27. If yes, how frequent you use condom for HIV protection?
   1. Every time ☐
   2. Often ☐
   3. Some time ☐

28. Who decides for the use/no use of condom?
   1. Husband ☐
   2. Wife ☐
   3. Both ☐
29. Can you talk/discuss easily about condom with your partners?
   1. Yes ☐
   2. No ☐

30. Can you insist your partners for condom use?
   1. Yes ☐
   2. No ☐

31. Did you use condom during last sex?
   1. Yes ☐
   2. No ☐

32. If not, Why?
   1. Trust between spouse ☐
   2. Lack of pleasure/excitement ☐
   3. Others ☐

33. How do/can you have access to condom?
   1. Spouse ☐
   2. Heath worker ☐
   3. Health facility (drop in center/health post/hospital) ☐
   4. Peer educator/Outreach worker/female health volunteers ☐

34. How much does it take to get condom?
   1. Less than 10 minutes ☐
   2. 10-30 minutes ☐
   3. 30-60 minutes ☐
   4. More than 60 minutes ☐

**USE OF ALCOHOL AND SEXUAL ASSERTIVENESS**

35. Do you use alcohol/?
   1. Yes ☐
   2. No ☐

36. Does your spouse take alcohol?
   1. Yes ☐
   2. No ☐
37. Do you use alcohol when you are in other country for work?
   (Do you think your husband take alcohol when they are in other country for work?)
   1. Yes  
   2. No  
   3. Don’t know 

38. Do you had/ (think your husband had) any other sexual relations in India?
   1. Yes  
   2. No  
   3. Don’t know  

36. Do you trust your partner when he/she is away from you?
   1. Yes  
   2. No  

39. Do you think you can get any disease from your spouse?
   1. Yes  
   2. No  

40. Do you think you can get HIV/AIDs from your spouse?
   1. Yes  
   2. No  
   3. Do not know  

41. Does alcohol/ tobacco affect your sexual behavior?
   1. Yes  
   2. No  
   3. Don’t know  

42. Can you use condom correctly when you drink alcohol?
   1. Yes  
   2. No  
   3. Do not know  

THANK YOU FOR YOUR SUPPORT.
Sample size

Total number of migrants’ household living in India for at least 3 months and up to 10 years.

<table>
<thead>
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<th>Total number of migrant’s household</th>
<th>Number of respondent who were interviewed</th>
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