

Knowledge and attitude on HIV-AIDS and Practice of Sexual Behavior among Female Sex Workers: a pilot study in Jhapa, Nepal

Birendra Kumar Singh¹_{MPH} Dr. B S Lall²_{Ph.D.} Dr. Neena Gupta³_{Ph.D.} and Dr. Deepak K. Bose⁴_{Ph.D.} Renu Kumari Singh⁵_{B.Sc.}

¹Principal investigator ²Assistant Professor (Sr), ³Assistant Professor (Sr. and HOD) ⁴Assistant Professor (Sr) ⁵Co-investigator

Faculty of Health, Medical Sciences, Indigenous and Alternative System of Medicine, SHIATS, Allahabad-211007(UP)

Abstract: Acquired Immune Deficiency Syndrome (AIDS) remains a public health problem of major significance in most parts of the world. The first HIV infection was detected in 1988 in Nepal. Since then HIV and AIDS epidemic has evolved from low to concentrated among “High risk groups” i.e. Injecting Drug Users (IDUs), Female Sex Workers (FSWs), Men having Sex with Men (MSM) and Seasonal labor Migrants. The objective of this study was to find out knowledge, attitude on HIV-AIDS among the respondents and assess the types of behavior that places them at risk of contracting HIV/AIDS in Jhapa district of Nepal. This was the cross sectional descriptive study carried out among High risk behavior group (FSWs, and Clients of FSWs) who come for treatment at VCT centre of Jhapa district. Multi stage purposive and random sampling was adopted and data were collected using a pre-tested interview schedule.

Maximum no. of respondents (98.9 %) had heard about HIV and (100.0 %) had heard about AIDS, (100.0 %) using condom, among which (82.2%) used consistently. About half of the respondents (50.1%) had thought that they have chances of contracting HIV/AIDS. Sex at an early age was the prevalent practice among the study population as (46.6%) of them reported to have initiated before the age of 15 years. As the age at first sex increases RTI problems decreases ($p=0.018$) and vice versa. Less than half of the respondents (71.2%) had used alcohol during sexual activity, among which, (59.6%) had neglected to use condom.

Knowledge about HIV-AIDS and condom was high. More than half of the respondent perceived their high risk to HIV/AIDS infection, judging from their present sexual behavior. The frequency of condom use was unsatisfactory (82.2%). Alcohol use and negligence to use condom during sexual activity was high.

Key words: knowledge, attitude and practice

I. Introduction

Acquired Immune Deficiency Syndrome (AIDS) remains a public health problem of major significance in most parts of the world. Acquired Immune Deficiency Syndrome (AIDS) is the late stage of infection with a retro virus known as Human Immunodeficiency Virus (HIV) and it can take 10-15 years for an HIV infected person to develop AIDS which can be slowed down further by antiretroviral drugs. Globally, unprotected sexual intercourse between men and women is the predominant mode of transmission of the virus. Other important modes of transmission include unprotected penetrative sex between men, injecting drug use, and unsafe injections and blood transfusions and between a mother and her infant during pregnancy, childbirth and breastfeeding.

The first HIV infection was detected in 1988 in Nepal. Since then HIV and AIDS epidemic has evolved from low to concentrated among “High risk groups” i.e. Injecting Drug Users (IDUs), Female Sex Workers (FSWs), Men having Sex with Men (MSM) and Seasonal labor Migrants. As of 2007, national estimates indicate that approximately 70,000 adults and children are infected with the HIV virus in Nepal, with an estimated prevalence of about 0.49% in the adult population. As of Aswin 2066, a total of 14,787 cases of HIV, 2,627 AIDS cases had been reported to the National Centre for AIDS and STD Control (NCASC). Of all adults estimated to be living with HIV, 1% was found among FSWs with clients of sex workers accounting for 5% in 2007.

In many countries, including most countries in the America, Asia and Europe, HIV infection is mainly concentrated in populations engaging in high-risk behavior, such as unprotected sex (particularly in the context of commercial sex work or between men) and sharing of drug injection equipment. In such situations, however, there is a persistent threat that localized epidemics will spill over into the wider population. In some countries, rapid growth of the size of the vulnerable population as a result of civil unrest, a rise in poverty or other social and economic factors triggers epidemic growth and wider spread of the virus.

In context of Nepal, a large numbers of young Nepalese girls recruited as sex workers to Indian cities and a large numbers of young Nepalese males working in India are contributing to the increasing number of HIV infections. It is possible that within any society a subset of commercial sex workers (CSWs), with large number of unprotected sexual partners, could act as a core group of disease transmitters.

Objective of the study

1. To find out the knowledge regarding HIV/AIDS among the FSWs.
2. To find out the attitude regarding HIV/AIDS among the FSWs.
3. To assess the types of behavior that places them at risk of contracting HIV/AIDS.

II. Material And Methods

Study design

It was a cross sectional descriptive study to study the knowledge/attitude on HIV-AIDS and to assess the sexual behavior among Female Sex Workers.

Study area

Jhapa district was selected purposively as the pilot study area, which is a terrain (plane area) district of Eastern Development Region of Nepal. There are two VCT center in the district. One VCT center (Damak Health Post) was selected randomly.

Study population

Female Sex Workers, who come for treatment at VCT centre of Jhapa district was the study population.

Determination of Sample size

The sample size was found out using the following formula.

$$n = \frac{z^2 pq}{e^2}$$

n = no. of respondents

Z = 1.96 for 95% confidence interval

P = prevalence 5% (5% estimated HIV prevalence among Clients of Sex worker)

q = 1 - p

e = standard error (2%)

$$(1.96)^2 * 0.05 * 0.95$$

$$n = \frac{\dots}{(0.05)^2} = 72.99$$

Total selected sample size: **73**

Therefore the sample size was 73 FSWs

Sampling technique:

Multi stage sampling was adopted. Jhapa district was selected purposely. The district has two VCT centers of which one VCT centre was selected randomly. A total of 73 samples was selected from the VCT centre. All Female Sex workers visiting at VCT centers in the district were interviewed till the required number of sample size was met, time period between March 2012 to August 2012.

Data collection tools and techniques

Pre structured schedule was used to interview the respondents. Informed verbal consent from the respondents was taken. The objectives and the purpose of the study was made clear to the FSWs prior to interview.

III. Results And Discussion

3.1. Socio demographic characteristics

The study shows that more than half of respondents (58.9%) were in 20-25 year age group and only 6.8% respondents were above 30 year. More than three fourth of respondents (84.9%) were educated. More than half of respondents (58.9%) were drinking alcohol and (17.8%) had addiction of alcohol. Majority of respondents (46.2%) had alcohol every day and (15.4%) had alcohol at least once a week. about (8.2%) respondents were having intoxicating drugs Ganja.

3.2 Knowledge and Attitude towards STI, HIV and AIDS

According to Gurung G. (2004) teenagers have heard about AIDS and (57.8%) had good level of knowledge. However, significant number of respondents had misconception that one could contract HIV through mosquito bites and kissing. A significant number of teenagers (43%) had experienced risky sexual behavior according to the definition used in this study. Mean age of first sexual contact was 13.13 years. Most of the respondents inconsistently used the condom (79.1%). An overwhelming majority (70%) of the teenagers had multiple sexual partners. Good knowledge level on HIV with few misconceptions on the route of transmission, and risky sexual behavior among street teenagers were the major findings of the study.

In this study, more than half of the respondents (58.9%) have RTI problems recently (38.4%-Ulcer/sore in genital area, 58.9%- pain during intercourse, 65.8%-burning pain during urination, 45.2%-thick yellowish/greenish discharge with a foul smell and 67.1%- lower abdominal pain). Maximum no. of respondents (98.6 %) had heard about HIV and (100.0 %) had heard about AIDS. About three fourth (75.3 %) had knowledge about AIDS i.e. AIDS is not transmitted by Mosquito. More than three fourth of the respondents (84.9%) had knowledge that they can protect themselves from HIV/AIDS by having one uninfected faithful sex partner. More than two third (93.2%) respondents had said that people can protect themselves from HIV/AIDS by abstaining from sexual intercourse, (87.7%) said that person do not get HIV/AIDS by sharing a meal with someone who is infected and (98.6%) said that person get HIV/AIDS by getting injections with a needle that was already used by someone else who was infected. More than two third (82.2%) respondents thought that a healthy-looking person can be infected with HIV. Less than two third (71.2%) respondents had said that a pregnant woman infected with HIV or AIDS can transmit the virus to her unborn child and (65.8%) had said that a woman with HIV or AIDS can transmit virus to her newborn child through breast feeding. Similarly, 100% respondents had heard about VCT centre, about three fourth (72.6%) had heard about ART centre and only (54.8%) respondents had heard about PMTCT (Table No. 1.1).

Table No. 3.1 Knowledge and Attitude towards STI, HIV and AIDS

Variables	Category	Frequency	Percentage
i. RTI problems (N=73)	Yes	43	58.9
	No	30	41.1
ii. Heard about HIV(N=73)	Yes	72	98.6
	No	1	1.4
iii. Heard about AIDS (N=73)	Yes	73	100.0
	No	0	0.0
iv. AIDS is transmitted by Mosquito (N=73)	Yes	9	13.7
	No	58	75.3
	Don't know	6	11.0
v. AIDS by uninfected faithful sex partner (N=73)	Yes	17	23.3
	No	56	84.9
vi. Transmission of AIDS by Abstinence (N=73)	Yes	17	4.1
	No	53	93.2
	Don't know	3	2.7
vii. AIDS by sharing meal (N=73)	Yes	13	12.3
	No	60	87.7
viii. AIDS by infected needle (N=73)	Yes	62	98.6
	No	11	1.4
ix. Healthy looking person may be infected (N=73)	Yes	56	82.2
	No	17	17.8
x. Transmission of AIDS from mother to unborn child (N=73)	Yes	54	71.2
	No	19	28.8
xi. Transmission of AIDS by breastfeeding (N=73)	Yes	46	65.8
	No	27	34.2
xii. Heard about VCT (N=73)	Yes	73	100.0
	No	0	0.0
xiii. Heard about PMTCT (N=73)	Yes	31	54.8
	No	42	45.2
xiv. Heard about ART Centre (N=73)	Yes	46	72.6
	No	27	27.4

(Source: Primary data)

The study shows 100% respondents had heard or seen condom and (100.0 %) had using condom. Majority of respondents (72.6%) had told that the important reason for using condom is both for STD/HIV prevention & for Pregnancy prevention, (5.5%) told only for STD/HIV prevention, (20.5%) only for Pregnancy prevention. The most common reason for not using condom is Partner's objection (75.0%). Majority of respondents (89.0%) had known that they can protect from HIV by using condom. The study shows being high risk behavior group, about half of the respondents (53.4%) had thought that they have chances of contracting

HIV/AIDS and (54.8%) had thought that their sexual partners can have HIV or AIDS. Majority of respondents (42.5%) didn't know the level of chance for contracting HIV infection; followed by (23.3%) moderate chance, (9.6%) low chance, (16.4%) very high chance and only (8.2%) thought they had no chance for contracting HIV infection.

IV. Practice of sexual risk behavior among Respondents

The study shows that sex at an early age was the prevalent practice among the study population as (100.0%) reported to have initiated before the age of 20 years. Around (46.6%) reported to have undergone the experience much earlier as before 15 years of age. The study also depicts that majority of respondent (28.8%) could not remember number of different sexual partner in last week, followed by having three different sexual partner as (23.3%). The study shows that most of the clients encountered in the last week were regular clients (86.3%). Profession wise, the five most cited clients of the sex workers in the last week were (57.2%) Rickshaw puller/Daily wage worker, (45.3%) Businessman, (45.7%) Transport workers, (38.2%) Uniform services and (23.4%) was student.

Khaniya R. and Joshi AB (2004) mentioned that all of the respondents replied that they had used condom last time when they had sex with a client. For majority of the respondents (75%) it is the client who bought the condom and for 24 percent was themselves. For 60% of the respondents, the reasons for using condom was to prevent both from getting infected with HIV/AIDS and getting pregnant, while for 40% it was to prevent from getting infected with HIV/AIDS. The pharmacies were the major condom outlets. Majority (89%) of the respondents said that they use alcohol. Among the users, 96 percent of the respondents replied that they had never forget to use condom because they had alcohol and 4% replied that they had not used condom because they had have alcohol.

The finding of the study shows that all the respondents (100.0 %) had using condom and among which (100.0%) was male condom including (2.7%) both male and female condom. More than three fourth of respondents (82.2%) had used condom consistently and majority of respondents (89.0%) had used condom in last sex and less than half of respondents (46.2%) told that the idea of condom use was respondents' own and in more than half (53.8%) cases, idea of condom use was both partner's and respondents. In more than two third (70.8%) cases, respondents themselves had provided the condom. About two third of the respondents (67.1%) reported that they could get condoms from NGOs/INGOs. Maximum no. of respondents (95.9 %) had kept condom in stock, among which more than two third (71.4%) kept always (Table No. 2.1).

Table No. 4.1 Use of condom by Respondents

Variables	Category	Frequency	Percentage
i. Use of condom (N=73)	Yes	73	100.0
	No	0	0.0
ii. Frequency of condom use (N=73)	Every Time	49	82.2
	Sometimes	24	17.8
iii. Use of condom in last sex (N=73)	Yes	61	89.0
	No	12	11.0
iv. Idea of condom use (N=66)	Mine	34	46.2
	Both partner's and mine	32	53.8
v. Who provided the condom (N=66)	I did	51	70.8
	Partner	15	29.2
vi. Place for condom availability (N=73)	Pharmacy	1	1.4
	Health Centers	4	5.5
	NGO/ INGO	48	67.1
	>2	20	26.0
vii. Condom stock (N=73)	Yes	70	95.9
	No	3	4.1
viii. Nature of Condom stock (N=70)	Always	51	71.4
	Sometimes	19	28.6
ix. Negligence to use condom due to alcohol (N=52)	Yes	31	59.6
	No	21	40.4

(Source: Primary data)

The study shows more than two third of the respondents (71.2%) had used alcohol during sexual activity, among which, more than half of the respondents (59.6%) had neglected to use condom.

The findings of the study show maximum number of respondents (98.6%) had insisted partner to use condom. Less than half of respondents' sexual partners (47.9%) had refused to use condom in the last 3 months. About one third of the respondents (34.3.0%) had charged extra amount when their sexual partners refused to use condom followed by (28.6%) had refused to have sex, (22.9%) had persuaded successfully, and (14.3%) had failed to persuade.

The study shows majority of the respondents (95.9%) had an HIV test and only (4.1%) had not get HIV tested.

The study shows that majority of respondents (58.1%) had RTI problems who initiated first sex before the age of 15 years as compared to (30.0%) respondents had not RTI problems who initiated first sex before the age of 15 years. An RTI problem is affected by age at first sex. As the age at first sex increases RTI problems decreases and vice versa. Respondents who had initiated first sex before 15 years had 3.2 times likely to have RTI problems as compared to respondents who had initiated after 15 years of age (Table No. 2.2).

Table No. 4.2 RTI problems by Age at first sex

RTI problems	Age at first sex		Total
	<15 years	15-20 year	
Yes	25 (58.1)	18 (41.9)	43 (100.0)
No	9 (30.0)	21 (70.0)	30 (100.0)
Total	34 (46.6)	39 (53.4)	73 (100.0)
$\chi^2_{0.05,1} = 6.62, \quad p = 0.018 \quad OR = 3.2 \quad \text{significant}$			

Note: The figure in the parenthesis is percentage of frequency.
(Source: Primary data)

V. Conclusion And Recommendations

Conclusion

A cross sectional descriptive study which was done among 73 Female Sex workers concludes that

1. The study shows that more than half of the respondents (58.9%) were in 20-25 year age group and more than three fourth (84.9%) respondents were educated.
2. Knowledge about HIV-AIDS and condom was high.
3. More than half of the respondent perceived their high risk to HIV/AIDS infection, judging from their present sexual behavior.
4. The frequency of condom use was unsatisfactory (82.2%).
5. As the age at first sex increases, RTI problems decreases ($p=0.018$) and vice versa.
6. Alcohol use and negligence to use condom during sexual activity was high.
7. Sex at an early age was the prevalent practice among the study population as (46.6%) of them reported to have initiated before the age of 15 years and 100 % before the age of 20.
8. Maximum no. of respondents (95.9 %) had kept condom in stock, among which more than two third (71.4%) kept always.
9. The study shows majority of the respondents (95.9%) had an HIV test.
10. An RTI problem is affected by age at first sex. As the age at first sex increases RTI problems decreases and vice versa.

Recommendation

1. There is an urgent need to increase the awareness of HIV/AIDS to make Female sex workers aware from the comprehensive knowledge for the transmission of HIV-AIDS.
2. HIV/AIDS awareness program needs to be more focused in order to promote safer sexual practices.
3. Prevention programs should be focused more on the need for consistent condom use for HIV/STI infection prevention.
4. Free condom distribution programs through NGOs/ health workers/ volunteers should be continued and expanded to cover a larger group of target population as the sex workers find it convenient to receive condoms from those sources.
5. Promotion of the concept of the condom as only one method for dual protection against transmission of HIV /STI as well as unintended pregnancy, alone or in the combination with other methods of contraception.
6. Conduction of intensive education campaigns to change attitudes of men towards high risk sexual behavior, and the image of condom as a sign of caring of health. It should be advocated strictly that condoms are under the control of men, and they may play the role of HIV transmission to their sex partners and to wives.

Acknowledgements

Foremost I thank the Almighty God for his presence and for his helping hand whenever I need Him throughout this study. I express my deep gratitude to my advisor Mrs. B. S. Lall, Assistant professor (Sr.), Dr Neena Gupta, Assistant professor (Sr.), Dr. Deepak Kumar Bose, Assistant professor (Sr.), College of Health Sciences, SHIATS, Allahabad, for her valuable suggestions and continuous encouragement that this study was made possible.

No words are enough to express my deep sense of gratitude and love to my parents shree Utim Lal Mahato and Late Aasha Devi who devoted their entire life for my success and untiring efforts and good wishes to materialization this dream. Furthermore, heartfelt thanks go to my lovely wife Mrs. Renu Kumari Singh and all my family members for giving moral support, guidance and inspirations of my life.

Reference

- [1]. **Alene G.D. (2002).** Knowledge and practice of condom in preventing HIV/AIDS infection among commercial sex workers in three small towns of northwestern Ethiopia. *Ethiopia Journal of Health Development*.16 (3):pp.277-286
- [2]. **Barrientos J. E., Bozon M., Ortiz E. and Arredondo A. (2007).** HIV prevalence, AIDS knowledge, and condom use among female sex workers in Santiago, Chile. *Cad. Saúde Pública*, Rio de Janeiro, 23(8):1777-1784.
- [3]. **Begum S., Mallick P.S., and Kelly R.J. (2004).** Reducing the HIV vulnerability of Female Sex Workers (FSWs) in Bangladesh: Reality or Rhetoric. *FHI (Family Health International), Dhaka, Bangladesh.*
- [4]. **Bhatta D.N. (2014).** HIV-related sexual risk behaviors among male-to-female transgender people in Nepal. *International Journal of Infectious Diseases*, Volume.22, pp. 11-15.
- [5]. **Bhatta P, Thapa S, Neupane S, Baker J, and Friedman M. (1994).** Commercial Sex Workers in Kathmandu Valley: Profile and Prevalence of Sexually Transmitted Diseases. *JNMA (Journal of Nepal Medical Association)*; 32:192-203
- [6]. **Cai Y., Shi R., Shen T., Pei B., Jiang X., Ye X., Xu G., Li S., Huang H. and Shang M. (2010).** A study of HIV-AIDS related knowledge, attitude and behaviors among female sex workers in Shanghai China. <http://www.biomedcentral.com/1471-2458/10/377>
- [7]. **CREHPA (Center for Research on Environment Health and Population activities). (2005).** Integrated Bio-behavioral Survey (IBBS) among MSM Population in Kathmandu Valley. E-mail: crehpa@crehpa.wlink.com.np
- [8]. **Central intelligence agency,** The world fact book. Available: <https://www.cia.gov/library/publications/the-world-factbook/geos/np.html>
- [9]. **Chauhan T., Bhardwaj A.K., Parashar A. and Kanga A.K. (2013).** A study of Knowledge, Attitude, Behaviour and Practice (KABP) among the attendees of Integrated Counselling and Testing Centre of Tertiary Care Hospital of Northern Hilly State of India. *Al Ameen Journal of Medical Science*, 6(3):265-271.
- [10]. **Crisis in Nepal,** Recent developments. Available: http://www.ipcs.org/IPCSC-Special-Report_22.pdf
- [11]. **Family Health International/Nepal. (June - August 2008).** Integrated Biological and Behavioral Surveillance Survey among Female Sex Workers in Pokhara Valley – Round III.
- [12]. **FHI/New Era SACTS. (2000).** Integrated Bio-Behavioral Survey among Female Sex Workers in East-West Highways Covering 22 Districts of Nepal. Pyukha, Kathmandu;
- [13]. **Government of Nepal, Ministry of Health and Population, NCASC, Teku. (2010).** HIV and STI Prevalence Declining among Certain Most-at-Risk Populations in Nepal. [web page on the internet]. 2009-09-17 <http://www.ncasc.gov.np/pressrelease.php?id=5>
- [14]. **Gupta S., Khanal T.R., Gupta N., Thakur A., Khatri R., Suwal A., and Seomangal K. (2011).** Knowledge, Behavior and Attitude towards Sexually Transmitted Infections and Acquired Immunodeficiency Syndrome of Adolescent Students. *Journal of Nepal Health Research Council* 2011 April;9(18):44-47.
- [15]. **Gurung G. (October 2004).** Knowledge and Attitude on HIV/ AIDS and Sexual Behavior of Street Teenagers in Kathmandu Valley. *Journal of Nepal Health Research Council* Vol. 2 No. 2.pp.9-13
- [16]. **Hemalatha R. , Kumar R.H. , Venkaiah K. , Srinivasan K. and Brahman G.N.V. (October, 2011).** Prevalence of & knowledge, attitude & practices towards HIV & sexually transmitted infections (STIs) among female sex workers (FSWs) in Andhra Pradesh. *Indian Journal of Medical Research*; 134(4): 470–475.
- [17]. **HIV and AIDS in Asia. (2010).** [web page on the internet]. <http://www.Biomedcentral.com/1471-2458/10/250>.
- [18]. **Ikechebelu L.J., Udigwe G.O., Ikechebelu N., Imoh L.C. (2006).** The knowledge, attitude and practice of voluntary counselling and testing (VCT) for HIV/AIDS among undergraduates in a polytechnic in southeast, Nigeria. *Niger Journal of Medicine*.; 15(3):245-9.
- [19]. **Jaiswal S., Magar B.S., Thakali K., Pradhan A., Gurubacharya D.L. (2005).** HIV/AIDS and STI related knowledge, attitude and practice among high school students in Kathmandu valley. *Kathmandu University Medical Journal*, Vol.3, No.1, Issue 9, 69-75.
- [20]. **Karki S. (2008).** HIV/AIDS situation in Nepal: transition to women. Master Thesis, Department of Medical and Health Sciences, Linköping University, Sweden.
- [21]. **Khaniya R. and Joshi A.B. (2 October 2004).** Sexual Behavior and Risk Perception of HIV/AIDS among Female Sex Workers (FSWS) in Kathmandu City, Nepal. *Journal of Nepal Health Research Council* Vol. 2 No. pp. 60-61.
- [22]. **Maimaiti N., Shamsuddin K., Abdurahim A. Tohti N., and Memet R. (2010).** Knowledge, Attitude and Practice regarding HIV/AIDS among University students in Xinjiang. *Global Journal of Health Science*, Vol 2, No 2. ISSN 1916-9744.
- [23]. **Ministry of Health and Population, Department of Health Service (MoHP/DoHS). (2012/13).** Annual report. pp. 144-152.
- [24]. **NCASC. (2010).** Factsheet N°1: HIV and AIDS Epidemic Update of Nepal, as of August 2010. MoHP, Natinal Center for AIDS and STD Control, Kathmandu. <http://www.ncasc.gov.np>
- [25]. **New Era. (2007).** Integrated Bio-behavioral Survey (IBBS) among Men who have Sex with Men in the Kathmandu Valley. In Collaboration with STD/AIDS Counseling and Training Services-Pyukha, Kathmandu, Nepal.
- [26]. **Niranjan S., Prasad P.D., and Kalpana J. (2012).** Sexual health behaviours of adolescents in Pokhara, Nepal. *Indian Journal of Community Health*, Vol. 24, No. 2. pp. 73-79.
- [27]. **Oyefara J.L. (2007).** Food insecurity, HIV/AIDS pandemic and sexual behavior of female commercial sex workers in Lagos metropolis, Nigeria. *Journal of Social Aspects of HIV/AIDS*, VOL. 4 NO. 2 AUGUST 2007
- [28]. **Sadhya G., Islam A., Islam R., Ahmed N.U., and Rahman M. (2010).** Knowledge and awareness about the risk of HIV/AIDS among truck drivers of a Selected Area. *Faridpur Medical College Journal*;5(2):46-49.
- [29]. **Samet JH., Pace CA., Cheng DM., (2010).** Alcohol use and sex risk behaviors among HIV-infected female sex workers (FSWs) and HIV-infected male clients of FSWS in India. *Department of Medicine, Boston* 2010; 1:S74-83
- [30]. **Shah N. S., Shiraishi R. W., Subhachaturas W. (2007)** Bridging Populations-Sexual Risk Behaviors and HIV Prevalence in Clients and Partners of Female Sex Workers, Bangkok, Thailand. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, Vol. 88, No.3.pp.533-544.
- [31]. **Sharma A.K., Gupta A., and Aggarwal O.P. (2001).** HIV/AIDS related knowledge, risk perception, attitude and sexual behavior of working women staying in hostels. *Indian Journal of Dermatology, Venereology and Leprology*, Vol. : 67.Issue: 1,pp : 21-24.

- [32]. **Singh S. K., Manandhar N., Prasai M., Patowary S., and Krishna G. (2005).** An awareness study of HIV/AIDS among adolescent students of Chitwan district, Nepal. *Journal of Institute of Medicine* 2005; 27:17-20. www.healthnet.org.np/journal/jiom/
- [33]. **Sidig A. MD., Mahgoub A. and Hussein A. MD. (January 2009).** A study of knowledge, attitude, practice towards HIV/AIDS and prevalence of HIV/AIDS among tea sellers women in Khartoum State. *Sudanese journal of Public Health*, Vol.4 No.1.pp.214-224.
- [34]. **Tehrani F. R. and Afzali H. M. (January - February, 2008).** Knowledge, attitudes and practices concerning HIV/AIDS among Iranian at-risk sub-populations. *Eastern Mediterranean Health Journal, WHO.* Volume. 14 No.1. <http://www.emro.who.int/asd/programmeareas-Risk Groups.htm>
- [35]. **The World Bank. (2008).** HIV/AIDS in Nepal. The World Bank, Washington, DC.
- [36]. **Thu M., Kyu H.H., Putten M.V. (2008).** Knowledge, Attitude and Practices on HIV/AIDS Prevention among Myanmar Migrants in Maha Chai, Samut Sakhon Province, Thailand. *Faculty of Nursing Science, Assumption University Bangkok, Thailand.* Vol.8 No.3.pp.131-134.
- [37]. **UNAIDS/WHO. (2009).** AIDS epidemic update 2009. [web page on the internet]. [accessed October 2010] <http://www.who.int/entity/hiv/data/en/index/html>
- [38]. **Upreti D., Regmi P., Pant P., and Simkhada P. (2009).** Young people's knowledge, attitude, and behaviour on STI/HIV/AIDS in the context of Nepal: A systematic review. *Kathmandu University Medical Journal* (2009), Vol. 7, No. 4, Issue 28, 383-391.
- [39]. **WHO. HIV/AIDS. (2010).** [webpage on the internet]. [accessed on October 2010] http://www.who.int/topics/hiv_infections/en/index/html
- [40]. **WHO. (2009).** HIV / AIDS in the South-East Asia Region. WHO, Geneva.