

A descriptive study of associated factors with HIV/AIDS among antiretroviral users of Eastern Nepal

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ABSTRACT

INTRODUCTION: In Nepal, the first case of Human Immunodeficiency Virus (HIV) was reported in 1988, since then the epidemic is driven by sexual transmission and intravenous drug use. The aim of this research is to study various associated factors with HIV/AIDS patients.

MATERIALS AND METHODS: A cross-sectional study was carried out from May 2009 – April 2010 at three Anti-retroviral treatment centers (B.P.K.I.H.S, Dharan, Koshi Zonal Hospital, Biratnagar and Mechi Zonal Hospital, Bhadrapur). A purposive sampling technique was applied to include all 234 seropositive patients who were under medication from these centers.

RESULTS: Males represented 71% of the patients. More than 75% of the patients fell in the age group of 20-39 years. 35.9% of them had visited commercial sexual workers and similar proportion of them had shared needles during intravenous drug use.

CONCLUSIONS: Unsafe high risk behavior with commercial sexual worker and needle sharing habit were found to be the associated with HIV/AIDS patients.

KEY WORDS: HIV/AIDS, Commercial sexual worker, Man sex with man

Article submitted 20 August. Reviewed 29 August. Author correction 1 September. Final version accepted 10 September 2013.

INTRODUCTION

AIDS was first recognized in the United States in the summer of 1981 by Center for Disease Control and Prevention (CDC) for the unexplained occurrence of *Pneumocystis jiroveci* (formerly *P. carinii*) pneumonia in five previously healthy homosexual men in Los Angeles and of Kaposi's sarcoma (KS) with or without *P. jiroveci* pneumonia in 26 previously healthy homosexual men in New York and Los Angeles. Later the disease became recognized in male and female injection drug users and soon thereafter in recipients of blood transfusion and in hemophiliacs.¹ In Nepal, the first case was reported in 1988; since then more than fifty thousand HIV positive cases had been reported to the National Centre for AIDS and STD control as of November 2012; with a national prevalence of 0.3. The largest number of HIV positive cases in the last 18 months was reported among 30-39 and 24-29 years old and 42 % of HIV cases reported was among men and women aged 30 to 39 years old while 22 percent were among young men and women aged 24 to 29 years old. National level cumulative data shows more than 101,578 cases of AIDS and more than thousand deaths reported. The sex ratio among HIV positive cases is 2.9:1.² The epidemic in Nepal is driven by sexual transmission and injecting drug use. There are numerous social, economical and cultural factors that drive the injecting and sexual behaviors among various most-at-risk groups.

The infection rate of HIV/AIDS in Nepal among the adult population is estimated to be below the 1 percent threshold which is considered "generalized and severe". However, the prevalence rate masks a concentrated epidemic among at-risk populations such as female sex workers, injecting drug users, men who have sex with men and migrants. Cultural factors have also been shown to play a significant role in the spread of HIV and AIDS in Nepal.⁸ Various factors associated with HIV infection are unsafe sex and drug injection practices, civil conflict, internal and external mobility, and limited adequate health care delivery multiply the difficulties of addressing HIV/AIDS. Moreover, existing care and support services are already overwhelmed as increasing numbers of HIV-infected individuals become sick with AIDS.⁹ The aim of this research is to study various associated factors with HIV/AIDS patients in Nepal.

MATERIALS AND METHODS

This was a cross sectional study with purposive sampling from May 2009 – April 2010. The study

was undertaken in three ARV centre in the eastern Nepal (Tropical ward, BPKIHS Dharan, Koshi Zonal Hospital and Mechi Zonal Hospital). All patients who were under medication from these centers were included in the study. Interview was conducted by face to face interview using pre-tested semi-structured questionnaire. Questionnaires were pretested in BPKIHS for its validity and reliability. Written informed consent was taken prior to the study and confidentiality was maintained with the information gathered. Questionnaire included information on socio-economic and demographic characteristics and epidemiological factors associated with HIV/AIDS. Ethical clearance was taken from the institutional ethical review board of B. P. Koirala Institute of Health Sciences. The variables were coded and entered in Excel software. The statistical analysis was done by SPSS 11.5 version to calculate frequency, percentage and mean.

RESULTS

Among the participants, the mean age was calculated to be 33 years. It was also found that 70.9% of them were male and more than half of them were in the age group of 30-39 years. It was also reported that 75.5% of them were married and 32.1% of them had not undergone any formal education. It was also observed that about one third (31.2%) of them were unemployed (Table 1).

Among the participants, more than one third of them had high risk behavior with the commercial sex worker (35.9%) and approximately one third were intravenous drug users (32.9%) (Table 2).

It was also observed that more than one third of them believed heterosexual (35.5%) and needle sharing habit among friends (35.9%) as the cause of HIV transmission to them. Very few reported blood transfusion (2.1%) and mother to child transmission (1.3%) as the cause behind the infection (Table 3).

DISCUSSION

HIV infection has maintained to be a global threat to mankind far more extensive than it was predicted a decade ago. The pace of the epidemic is accelerating all over the world and especially south Asia and sub-Saharan region.³ This study showed that most of the respondents among the HIV/AIDS patients were male (71%) and the male to female ratio was reported to be 2.4 to 1. Similar study done at Aligarh by Zaheer MS et al. reported mean age of patients to

Table 1. Socio-demographic characteristics of respondents (n=234)

Characteristics	Frequency	Percentage
Sex	Male	166
	Female	68
Age Group (Years)	0 - 19	6
	20-29	60
	30 - 39	132
	>40	36
Marital status	Married	177
	Unmarried	36
	Widow/ Widower/ Separated	21
Education level	Informal education	75
	Primary education	114
	Secondary and above	45
Occupation	Unemployed	73
	House wife	53
	Skilled/unskilled labor	64
	Business/sales	22
	Others	22

Table 2. Distribution of high risk behavior among the respondents (n = 234)

Characteristics	Frequency	Percentage
Risk behavior		
Intravenous Drug Use	77	32.9
Commercial Sex Workers	84	35.9
Man Sex with Man	2	0.9
No any significant risk behavior	71	30.3

Table 3. Mode of transmission for HIV infections among the respondents (n = 234)

Characteristics	Frequency	Percentage
Mode of transmission		
Heterosexual	83	35.5
Needle sharing	84	35.9
From husband	54	23.1
Mother to child	3	1.3
Blood transfusion	5	2.1
Others	5	2.1

be 29.6 years and the male to female ratio was 2.4:1 which is highly consistent with our study.⁷ This could be due to the risk behavior male counterparts adopt in a patriarchal society. This finding was slightly higher than a similar study done by Dhungana GP et al in which 66% males were HIV infected but consistent with the finding by Das which showed 74.3% of the males were infected.^{4,5} Our study found that 35.5% of the patients believed their heterosexual relationship as a mode of transmission of HIV and the other 35.9% mentioned their needle sharing habit during intravenous drug use as the cause behind the transmission. Worldwide heterosexual transmission is reported to be the most common mode of transmission. In a similar study by Das et al of Manipal teaching hospital, Pokhara 61% of the patients were found to

have transmitted HIV infection through unsafe hetero sexual relationship and the other 22% transmitted by sharing needles among their intravenous drug user friends.⁵ Similarly, Myoung-don Oh et al from Korea reported that 62% of his patients transmitted the infection secondary to unsafe heterosexual contacts and this finding is similar to our study.⁶ Similarly another study by Zaheer et al of Aligarh also reported that 56.3% of the patients in his research were infected through sexual contact.⁷

A large proportion of people who have HIV infection but aren't under medication aren't included in this study which is one of the main limitation of this study. Similarly, retrospective inquiry of the mode of HIV infection transmission

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is one of the other limitations.

CONCLUSIONS

Our study concluded that young males are more vulnerable to get HIV infection transmitted due to their high risk taking tendencies as compared to females. Similarly unsafe sexual contact with commercial sex workers, heterosexual contact and needle sharing habit were found to be associated with transmission of HIV infection. Thus, this study advocated the high chances of HIV transmission among high risk behavior people.

ACKNOWLEDGEMENTS

Our sincere acknowledgement to Mrs. Shobha Poudel, Dr. Samyog Uprety, Dr. Shyam Sundar Budhathoki and the nursing staffs of Tropical ward of B. P. K. I. H. S, Koshi Zonal Hospital, Biratnagar and Mechi Zonal Hospital, Bhradapur. We are also thankful to B. P. Koirala Institute of Health Sciences for the valuable time.

CONFLICT OF INTEREST: None

FINANCIAL INTEREST: None

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Citing this article

Khanal VK, Rayamajhi RB, Neupane B, et al. A descriptive study of associated factors with HIV/AIDS among antiretroviral users of Eastern Nepal. Int J Infect Microbiol 2013;2(3):95-98.
