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#### ABSTRACT

Original Article

**Background:** To tackle with powerful strategies aimed at controlling AIDS epidemic, the virus is finding its new way for devastating human lives through bridge population. At present, migrant laborers are the major carriers of HIV from high risk population to the low risk population. The objective is to study the socio-demographic status of HIV patient visiting Seti Zonal Hospital, Dhangadi.

**Methods:** A descriptive study was carried out from December 2006 to May 2008 in 1099 HIV patients visiting HIV clinic, Seti Zonal Hospital, Dhangadi After taking informed consents, information regarding age, sex, educational status and socio economic status ware recorded in standard register. All the information were entered in to SPSS 11.5 system and analyzed to obtain socio-demographic profiles of the patients.

**Results:** Among 1099 Patients, 54.2% were females. Majority patients were in the age group 31-45 years (54.1%). As high as 86.07% of the patients were from Far Western Region and 14.2% were from Mid Western Region. Regarding occupation, almost 50% of the HIV patients were housewives (42.1% of whom were window) followed by migrant laborers (38.8). As high as 77.0% of the patients were found to be illiterate.

**Conclusion:** It can be concluded that low socio-economic status along with high migration rate of the Far Western Region was found to be the major predisposing factor for increasing vulnerability to HIV infection.

Key words: Dhangadhi, HIV/AIDS, housewives, migrants, socio-economic status

## **INTRODUCTION**

The epidemiological status of HIV in Nepal changing with time and place<sup>1</sup>. At present, the disease is more prevalent in mobilized communities of recourse poor setting such as Far Western Developmental region of Nepal. This region has 9 districts of which 2 fall in Terai region and the rest hilly mountains. Antiretroviral Therapy (ART) center is located in Seti Zonal Hospital (SZH), Dhangadhi. It is the second biggest ART center (Only after Teku Hospital) and obviously the referral ART center for Far Western Nepal. Due to low socio-economic status, low literacy rate and other adverse situations prevailing in the Far Western Region, many young males of this region find their way to India cities where they acquire HIV infection and during short visit to their home, they transmit the virus to their housewives and these silent population in turn may transmit the virus to other general population leading to the emergence of generalized from of HIV epidemic.<sup>1</sup>

Despite the fact that the first new HIV case in Nepal was detected only some years back i.e. in 1998, its toll is surprisingly higher enough to affect gross socioeconomic status of the nation and posing serious threat to achievement of Millennium Development Goal. By the

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end of 2007, the number of people living with HIV was estimated to be of 33.2 million [30.6-36.1 million] and that of peopled lying of AIDS to be 2.1 million [1.9-2.4 million]<sup>2</sup>. In context of Nepal, the estimated number of people living with HIV is over 75,000 and as of 12 April 2008, 11,234 HIV cases were reported by official date of National center for AIDS and STD control (NCASC)<sup>3</sup>.

Nepal is experiencing transition in HIV epidemic<sup>1</sup>. Currently, migration is one of the major social factors for the rapid spread of HIV in Nepal. Several bio-behavior as well as HIV seroprevalance studies conducted in Far Western Region of Nepal during different time intervals documented HIV prevalence of 6- 10% among the Mumbai returnee and inferred that this region was major hot spot of HIV population, mainly due to high rate of migration.<sup>4,5,6,7</sup> On the basis of these data has been realized that migrant population, especially labor migrant to India was recognized as one of the vulnerable group for HIV infection.

In one hand there is rapid spread of HIV in Far Western Region of Nepal and on the other hand there is lack of studies specifically oriented to HIV population of this region. So, this study was carried out in adequate number of HIV patients visiting Seti Zonal Hospital, Dhangadhi with patient coverage through out this region so that result obtained can be generalized with high degree of confidence.

#### **METHODS**

A descriptive study was carried out from December 2006 to May 2008 in 1099 HIV patients visiting HIV clinic, Seti Zonal Hospital, Dhangadi. After taking informed consent, information regarding age, sex, mode of transmission, education and socioeconomic status were recorded in standard register. HIV was diagnosed by Tri dot method. This research was a routine part of Hospital program, funded by Family Health International (FHI). All the information obtained from Laboratory report, hospital record and direct communication with patients were entered into SPSS 11.5 system and analyzed to obtain socio-demographic profiles of the patients.

# RESULT

Among 1099 patients, 54.2% (596) were females and 45.8% (503) were males. Majority of the patients were in the age group 31-45 years (54.1%) followed by 15-30 years (30.2%), the mean and median age being 30.7 years and 32.6 years respectively. HIV positive children constituted 10.4% of the total patients as shown in table 1

As high as 86.1 patients were from Far Western Region and majority were from Kailali district (49.3 % of the total male and 39.3% of the total female) followed by Doti (17.9 % of the total male and 25.3% of the total female). Similarly, 14.2 of the patients were from Mid Western Region and majority was from Surkhet and Banke district. Few patients were from Central Development region while no patients were from Eastern Development Region as shown in table 2.

Socio-economic status of the patients revealed that almost 50% were housewives (of whom 42.1% were widow), 38.8% were migrant laborers and 10.3% were dependent children as shown in table 3.

As high as 77.0% of the patients were found to be illiterate followed by primary level education (12.9%) as shown in table 4

The major mode of transmission was found to be sexual contact (88.3%) and followed by vertical transmission (10.3%) as shown in table 5.

# DISCUSSION

This study revealed that Epidemiological status of HIV in Far West Region attained generalized form affecting low risk groups such as women and children. Majority of the studied subjects were illiterate and acquired HIV infection via unsafe sexual practice. Other similar studies have suggested the transition of HIV from high risk group such as female sex workers to low risk populations such as housewife via bridge population such as migrants. Analysis of official data of NCASC between 1988 and 2005 reveled that the percentage of housewife among the total HIV positive women increased every year and it was as high as 78.1% in 2008. Through patients' history (obtained during counseling), it was clear that migrant laborers had sexual contact with female sex workers (of the Indian cities) and unknowingly transmitted the virus to their housewives. This pattern of HIV transmission obviously leads to the more number of females (in fact widows) than males in the present scenario. So, although number of migrants were less (due to death in advance stage of HIV), they might have been acting as initial bridge population and were responsible for the emergence of generalized from. Other similar studies have also inferred that migrant are more vulnerable to HIV infection.<sup>8, 9</sup> Table 2 revealed that there was high flow of patients in this ART centre even from Mid Western Region and majority were from Surkhet and Banke district. On the basis of this data it can be suggested that Surkhet or Banke will be the appropriate sites for the establishment of ART centre in order to deliver ART related services to as many as needy individuals. As this finding is based on the study of HIV patients visiting Seti Zonal Hospital, Dhangadhi only, the number can be viewed as a tip of an iceberg and signals the necessity to take the combined effort to overcome the challenge.

Socio-Demographic Profile of HIV Patients at Seti Zonal Hospital

Table 1. Distribution of HIV patients by Age and Sex							
	Male		Fe	Female		Total	
Age group (in yrs)	Number	Percent	Number	Percent	Number	Percent	
<15	71/56	14.1	43/38	7.2	114/153	10.4	
15-30	120/117	23.9	212/210	35.6	332/317	30.2	
31-45	275/250	54.6	320/295	53.7	595/950	54.1	
46-60	33/30	6.6	21/20	3.5	54/50	4.5	
>60	4/2	0.8	0	0	4	0.4	
Total	503/469	45.8	596/563	54.2	1099/1032	100	

Table 2 Discussion of LINE	mention to be Dented and Distriction
$I_{ADIE}$ / Distribution of Hiv	patients by Region and Districts

Regions	Districts	Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent
	Kathmandu	2	0.4	1	0.2	3	0.3
Central	Lalitpur	2	0.4	0	0	2	0.2
N=6 (0.5%)	Dhading	1	0.2	0	0	1	0.1
	Nawalparasi	1	0.2	0	0	1	0.1
Mid western							
N=156 (14.2%)	Surkhet	20	3.9	28	4.7	48	4.3
	Banke	22	4.3	18	3.0	40	3.6
	Dailekh	15	3.0	9	1.5	24	2.2
	Baradia	10	1.9	14	2.3	24	2.2
	Dang	7	1.4	10	1.7	17	1.5
	Rolpa	1	0.19	0	0	1	0.1
	Kalilkot	1	0.19	0	0	1	0.1
	Rukum	0	0	1	0.16	1	0.1
Far western							
N=156 (86.1%)	Kailali	248	49.3	238	39.9	486	43.7
	Doti	90	17.9	150	25.2	240	21.6
	Acham	63	12.5	96	16.1	159	14.3
	Bajura	2	0.4	4	0.7	6	0.5
	Baghang	2	0.4	2	0.3	4	0.4
	Kanchanpur	16	3.2	15	2.5	31	2.8
	Dadeldhur	4	0.8	6	1.0	10	0.9
	Baitadi	6	1.2	3	0.5	9	0.8
	Darchula	0	0	1	0.2	1	0.1

Table 3. Socio-economic status of HIV patients				
Occupation	Number	Percent		
Housewife*	546	49.7		
Migrant laborer	46	38.8		
Dependent children	114	10.3		
female sex worker (FSW)	7	0.6		
Business (clients of FSW)	6	0.5		

316 (57.9%) were with husband, 230 (42.1%) were widow

Table 4. Education status of HIV patients.				
Education status	Number	Percent		
Illiterate	847	77.0		
Primary Education	142	12.9		
Secondary Education	75	6.8		
Higher Sec. Education	25	2.4		
Bachelor	10	0.9		

Table 5. Mode of transmission of HIV infection				
Mode of transmission	Number	Percent		
Sexual contact	970	88.3		
Unknown	4	0.7		
Blood contact	1	0.1		
Drug user	10	0.9		
Vertical transmission	114	10.3		
Total	1099	100		

#### **CONCLUSION**

On the basis of above finding, it can be concluded that significantly larger population of housewives were infected with HIV and patients history suggested that laborer migrants were acting as the bridge population for HIV/AIDS explosion in Far Western Region of Nepal

#### Socio-Demographic Profile of HIV Patients at Seti Zonal Hospital

on the ground of low socioeconomic status and high rare of illiteracy with the similar trend in Surkhet and Banke districts of Mid Western Region. So it is recommended that all the HIV/AIDS related agencies should put a combined effort to address this issue as soon as possible through scaling up of the ART services in other sites along with the adoption of appropriately targeted intervention strategies.

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