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A Study on the Current Behavioural Factors among Plhiv Attending an Art Centre, Kolkata

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ABSTRACT

Introduction: AIDS is a fatal illness and it is a major public health problem in India.Behavioural factors like smoking, tobacco chewing, alcoholism, sexual behaviours, drug abuse are seen to affect the spread of HIV by implication from high risk behaviour in general are reviewed in this study.

Objective: Determine the socio-demographic profile of study population, assess the current behavioural factors of the people living with HIV and find out association, if any between current behavioural factors and socio-demographic profile of the study subjects.

Material and Methods: An observational, cross-sectional study was carried out in an ART centre of R.G. KarMedical College and Hospital, Kolkata for a period of 3 months, November 2019 to January 2020. 120 study subjects were interviewed using pre-designed and pre-tested schedule, after taking written consent from them.

Results: High risk sexual behavioural pattern were seen among 39.2% of the study population. Present study showed that 32.5 % of the total study population were alcoholic among which 69% belongs to age group 26-40 years. 84.6% belonged to Single/widow/widower/separated group. This study showed that 50% of the study subjects were smoker. 45% of the study subjects were tobacco chewers. Only 19% of the total study population were drug abusers.

Conclusion: Most of the study subjects who had high risk sexual behavioural pattern were illiterate person and some up to primary school education and low socioeconomic status.The challenge however, was their ability to use condoms consistently, their desires to fulfil cultural expectations around having a family.

Keywords: PLHIV,AIDS.

INTRODUCTION

Aquired immune-deficiency syndrome(AIDS) is a fatal illness caused by a retrovirus known as human immune deficiency virus(HIV). HIV/AIDS is a major public health problem in India.Multiplebehavioural factors like smoking, tobacco chewing, alcoholism, sexual behaviours, drug abuse are seen to hamper the quality of life in people living with HIV(PLHIV).It is seen that sexual spread of HIV has been attributed to behavioural factors, such as frequent change of partners and unprotected sex, drug abuse.Globally approximately 40 million people are currently living with HIV infection and an estimated 25 million people died from this disease [1].Maximum cases in India suffered from the disease through heterosexual sex,but at the end of 1980s a rapid spread of HIV was observed among the IV drug abusers in Manipur,Mizoram and Nagaland [2].HIV estimation in

India in 2007, reveals 10% of the total PLHAs in the country live in West Bengal [3].

Mainstay of HIV prevention lies in the fact that the people practice safe sex and encourage them to avoid risky sexual behavior. For sexually active people, it means consistent use of condoms and restricting the number of sexual partners [4] .Evidence that behavioural factors affect the spread of HIV infection,both direct and by implication from high risk behaviour in general are reviewed in this study.

Understanding the socio-demographic profile with magnitude of risky behaviour might include positive messages in the routine HIV/AIDS care and treatment. With this above backdrop, the present study was conducted to find out the socio-demographic status, behavioural factors among PLHIVs and associations, if any between them.

MATERIAL AND METHODS:

An observational, cross-sectional study was carried out in an institution based ART centre of R.G. Kar Medical College and Hospital, Kolkata for a period of 3 months from November 2019 to January 2020. 120 study subjects were interviewed within the study period using pre-designed and pre-tested schedule, after taking written consent from them. Data collection was done twice weekly. Each case needed a minimum time span of 30 minutes to be interviewed.Each day approx. 20to30 patients attend ART centre. Each of those registered patient, usually visits the centre once in a month to receive ART. Those who were 15 years and above were selected first from the daily registration list and then first patient was selected from there by lottery method. Then every fifth registered patient who was satisfying the selection criteria was taken as study subject by systematic random sampling. 5 cases could be completed in a day within the time restraint. This came to total 10cases per week. Therefore, each month total 40 cases could be interviewed. Our period of data collection was 3 months. So total of 120 cases were interviewed within the study period. All the study subjects were interviewed after obtaining an informed consent from them and maintaining full confidentiality and anonymity. This particular study was completely academic in nature.

This proposal was submitted to institutional ethics committee of Calcutta national Medical College and Hospital and R.G.Kar Medical College and hospital as well for ethical clearance. Proposal was also submitted to West Bengal state AIDS Prevention and Control Society and West Bengal University of Health Sciences. After getting approval from them, the process of data collection was started.

STATISTICAL ANALYSIS:

Data were analysed using Microsoft excel, SPSS version 20 (IBM corporation, Armonk, NY, USA). To find out association between two variables, analysis was done using chi-square test.

RESULTS:

Table 1.Distribution of the study subjects according to different socio- demographic variables and their current behavioural factors(n = 120)

Socio- demographic variables		Number	Percentage
Gender	Male	62	51.7
	Female	58	48.3
Age group	15 to 25yrs	20	16.7
	26-40yrs	67	55.8
	>40yrs	33	27.5
Religion	Hindu	94	78.3
	Muslim	26	21.7
	Others	0	0

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Education	Illiterate-middle school	79	65.8
	Secondary school and above	41	35.2
Marital status	Married	61	50.8
	Single/widow/widower/separated	59	49.2
Socio economic status	Upper class to middle class	32	26.7
	Lower middle to lower class	88	73.3
Occupation	Unemployed	22	18.3
	Unskilled	25	20.8
	Semi-skilled	45	37.5
	Skilled	28	23.3

Current behavioural factors		Number	Percentage
Smoker	Yes	60	50.0
	No	60	50.0
Alcoholic	Yes	39	32.5
	No	81	67.5
Sexual behaviour	High risk	47	39.2
	Low risk	73	60.8
Tobacco chew	Yes	54	45.0
	No	66	55.0
Drug abuse	Yes	23	19.2
	No	97	80.8

51.7% of the total 120 PLHIV patients were male. Majority of the patients belonged to the age group 26-40 years (55.8%). Maximum PLHIV patients were Hindu (78.3%). Most of the patients were educated within the range of illiterate to middle school (65.8%). 50.8% of the study subjects were married. Majority of the study subjects belonged to lower middle class socio-economic status (73.3%). 37.5% of study population were semi-skilled workers.50% of the study subjects were smoker. 32.5% of the total study subjects were alcoholic. High risk sexual behavioural pattern were seen among 39.2% of the study population. 45% of the study subjects were tobacco chewers. Drug abusers were 19.2% of the total study population.

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Table 2.Association of current behavioural factors with different socio-demographic variables(n=120)

Characteristics		Behavioural factors		Significance
		Smoking		
		Yes	No	
Gender	Male	49	13	X^2=43.248, p=0.000,df=1
	Female	11	47	
Religion	Hindu	41	53	X^2=7.070, p=0.008,df=1
	Muslim	19	7	
Age group	15 to 25yrs	6	14	X^2=8.694,p=0.013,df=2
	26-40yrs	31	36	
	>40yrs	23	10	
Education	Illiterate to middle school	44	35	X^2=3.001,p=0.083,df=1
	Secondary school & above	16	25	
Marital status	Married	36	25	X^2=4.034,p=0.045,df=1
	Single/widow/widower/separated	24	35	
Socio-economic status	Upper class to middle class	21	11	X^2=4.261,p=0.039,df=1
	Lower middle to lower class	39	49	
Occupation	Unemployed	2	20	X^2=18.462,p=0.000,df=3
	Unskilled	14	11	
	Semi-skilled	26	19	
	Skilled	18	10	
Characteristics		Behavioural factors		Significance
		Alcoholic		
		Yes	No	
Gender	Male	22	40	X^2=0.521,p=0.471,df=1
	Female	17	41	
Religion	Hindu	33	61	X^2=1.343,p=0.246,df=1
	Muslim	6	20	
	Others	0	0	
Age group	15 to 25yrs	9	11	X^2=11.525,p=0.003,df=2
	26-40yrs	27	40	

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	>40yrs	3	30	
Education	Illiterate to middle school	15	64	X^2=19.245,p=0.000,df=1
	Secondary school and above	24	17	
Marital status	Married	6	55	X^2=29.050,p=0.000,df=1
	Single/widow/widower/separated	33	26	
Socio-economic status	Upper class to middle class	24	8	X^2=35.929,p=0.000,df=1
	Lower middle to lower class	15	73	
Occupation	Unemployed	1	21	X^2=24.026,p=0.000,df=3
	Unskilled	4	21	
	Semi-skilled	16	29	
	Skilled	18	10	

81.6% of the total smokers are male and are statistically significant. Among the total smokers,68.3% belongs to Hindu religion. 51.6% of the total smokers belongs to the age group 26-40 years and is statistically significant. 60% of the total smokers are married.43.3% of the total smokers belongs to semi-skilled group of workers and is statistically significant. Among the total smokers, 65% belongs to lower middle class socio-economic status people.

69% of the total alcoholics belongs to age group 26-40 years and is statistically significant. Among the total alcoholics, 61.5% belongs to more than secondary school education. Among the total alcoholics, 84.6% belonged to Single/widow/widower/separated group and were found to be statistically significant. 61.5% of the total alcoholics belonged to upper middle class of people and were statistically significant. Among the total alcoholics, 46% belonged to skilled group of workers.

Table 3.Association of current behavioural factors with different socio-demographic variables(n=120)

Characteristics		**Behavioural factors**		**Significance**
		Sexual behaviour		
		High risk	**Low risk**	
Gender	Male	28	34	X^2=1.935,p=0.164,df=1
	Female	19	39	
Religion	Hindu	34	60	X^2=1.635,p=0.201,df=1
	Muslim	13	13	
	Others	0	0	
Age group	15 to 25yrs	8	12	X^2=15.830,p=0.000,df=2
	26-40yrs	17	50	
	>40yrs	22	11	

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Education	Illiterate to middle school	47	32	X^2=40.097,p=0.000,df=1
	Secondary school & above	0	41	
Marital status	Married	27	34	X^2=1.352,p=0.245,df=1
	Single/widow/widower/separated	20	39	
Socio-economic status	Upper class to middle class	6	26	X^2=7.634,p=0.006,df=1
	Lower middle to lower class	41	47	
Occupation	Unemployed	7	15	X^2=9.364,p=0.025,df=3
	Unskilled	16	9	
	Semi-skilled	17	28	
	Skilled	7	21	
Characteristics		**Behavioural factors**		**Significance**
		Tobacco chewing		
		Yes	**No**	
Gender	Male	49	13	X^2=60.028,p=0.000,df=1
	Female	5	53	
Religion	Hindu	34	60	X^2=13.667,p=0.000,df=1
	Muslim	20	6	
	Others	0	0	
Age group	15 to 25yrs	2	18	X^2=18.111,p=0.000,df=1
	26-40yrs	29	38	
	>40yrs	23	10	
Education	Illiterate to middle school	41	38	X^2=4.446,p=0.035,df=1
	Secondary school & above	13	28	
Marital status	Married	38	23	X^2=14.994,p=0.000,df=1
	Single/widow/widower/separated	16	43	
Socio-economic status	Upper class to middle class	16	16	X^2=0.441,p=0.507,df=1
	Lower middle to lower class	38	50	
Occupation	Unemployed	1	21	X^2=20.028,p=0.000,df=3
	Unskilled	11	14	
	Semi-skilled	24	21	

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	Skilled	18	10	

High risk sexual behavioural pattern is seen in the age group of more than 40years and is found to be statistically significant. 100% high risk sexual behaviour is found in illiterates and passed till middle school.87.2% of the high risk sexual behavioural pattern was seen lower middle class socio-economic status people. Maximum high risk sexual behaviour is found in unskilled and semi-skilled workers.

90.7% of the total tobacco chewers were male. 60% of the total tobacco chewers belonged to Hindu religion. Most of the tobacco chewers were in the age group 26-40 years. Maximum tobacco chewers were illiterate and studied till middle school. 70% of the total tobacco chewers were married. Most of the tobacco chewers are semi-skilled workers

Table 4.Association of current behavioural factors with different socio-demographic variables(n=120)

Characteristics		**Behavioural factors**		**Significance**
		Drug abuse		
		Yes	**No**	
Gender	Male	15	47	X^2=2.092,p=0.148,df=1
	Female	8	50	
Religion	Hindu	18	76	X^2=0.000,p=0.993,df=1
	Muslim	5	21	
	Others	0	0	
Age group	15 to 25yrs	9	11	X^2=14.163,p=0.001,df=2
	26-40yrs	13	54	
	>40yrs	1	32	
Education	Illiterate to middle school	11	68	X^2=4.102,p=0.043,df=1
	Secondary school & above	12	29	
Marital status	Married	3	58	X^2=16.258,p=0.000,df=1
	Single/widow/widower/separated	20	39	
Socio-economic status	Upper class to middle class	8	24	X^2=0.958,p=0.328,df=1
	Lower middle to lower class	15	73	
Occupation	Unemployed	5	17	X^2=0.490,p=0.921,df=3
	Unskilled	4	21	
	Semi-skilled	8	37	
	Skilled	6	22	

Of the total drug abusers, 56.5% belonged to the age group 26-40 years. 86.9% of the total drug abusers belonged to unmarried/widow/widower/separated group.

DISCUSSION:

HIV/AIDS is considered as a devastating global health problem in low and middle income countries.

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The epidemic of HIV/AIDS in India is shifting from highest risk groups (commercial sex workers, drug abusers) to bridge populations (clients of sex workers,STDpatients,partners of drug abusers) and then to general population. HIV seems to be affecting the economically productive , sexually active group and thus having a tremendous impact on the livelihood of the affected family [5].This study describes and reports about the major behavioural factors including smoking, tobacco chewing, sexual behaviours, drug abuse and alcoholism among PLHIV in a tertiary care hospital in Kolkata, West Bengal. Present study showed that almost 56% of the PLHIVs belonged to 26-40years, which is very similar to a study conducted by Shukla Y et al,Madhya Pradesh 2009 [6,7]but only 16.94% of the study subjects were married which is unlike the current study where almost 50.8% of the study subjects were married. 78.3% of the total study populations were Hindu, which is similar to a study conducted by Chatterjee S et al,West Bengal,2010 [8]. 18.3% of the study subjects were unemployed and 20.8% were unskilled in the present study which is unlike the study conducted by Chatterjee S et al,West Bengal,2010 [8] where 11.6% of the study subjects were unemployed and 12% of the study subjects were unskilled. Most of the patients were educated within the range of illiterate to middle school (65.8%), which is very similar to a study conducted by Shukla Y et al,Madhya Pradesh 2009 [6].Majority of the study subjects belonged to lower middle class socio-economic status (73.3%).

High risk sexual behavioural pattern were seen among 39.2% of the study population. 100% high risk sexual behaviour is found in illiterates and passed till middle school.87.2% of the high risk sexual behavioural pattern was seen lower middle class socio-economic status people, which is very similar to a study conducted byTaraphdar P et al,West Bengal,2006 [9]but unlike the present study where 45% of the male study subjects were seen to have high risk sexual behaviour, the study conducted by Taraphdar P et al,West Bengal,2006 [9] , showed that almost 94% of the male study subjects were having high risk sexual behaviour. Maximum high risk sexual behaviour is found in unskilled and semi-skilled workers.High risk sexual behaviours includes sex with non regular sexual partner, reluctant use of condoms. A study of condom use among women in 16 developing countries found that the median percent of married couples using condom was 2.1% [10].

Present study showed that 32.5 % of the total study populations were alcoholic among which 69% belongs to age group 26-40 years. 84.6% belonged to Single/widow/widower/separated group and were found to be statistically significant, which is very similar to a study conducted by Musumari M P et al in 2015 in Chiang Mai province, Northern Thailand [11] . Unlike the present study where 35.2%of the study population were educated more than secondary school, the study conducted by Musumari M P et al showed that only 15.1% were educated more than secondary school.

This study showed that 50% of the study subjects were smoker, among which 81.6% are males.68.3% belongs to Hindu religion. 51.6% of the total smokers belongs to the age group 26-40 years and is statistically significant which is very similar to the study conducted by Musumari M P et al in 2015 in Chiang Mai province, Northern Thailand [11]. Smoking is associated with increased risk of non-AIDS related mortality among the HIV infected patients [12,13]. 45% of the study subjects were tobacco chewers, among which almost 91% were male and majority of them belonged to age group 26-40 years.60% of the total tobacco chewers belonged to Hindu religion.

Only 19% of the total study population were drug abusers, among which almost 87% belonged to group of unmarried/separated/divorced people.

CONCLUSION:

Majority of the PLHIV patients were in sexually active age group of 26-40years and maximum were male. The other socio-demographic determinants were low education level and poor socioeconomic condition.Majority of the study population belonged to semi-skilled group of occupation. Most of the study subjects who had high risk sexual behavioural pattern were illiterate person and some upto primary school education and low socioeconomic status.Smoking and alcoholism were primarily predominant in male population and majority of them belonged to low socioeconomic status.A number of participants reported a reduced number of partners and being faithful to their spouses or permanent partners. This in itself is encouraging and a further

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drive to increase ART access for people living with HIV. The challenge however, was their ability to use condoms consistently, their desires to fulfil cultural expectations around having a family and the difficulty of finding sexual partners for those who would like to engage in sex. Recommendations to them were to develop safe sexual practices and cessation of smoking and alcohol and drug abuse specially to the illiterate group of people and those who belonged to lower socioeconomic status.

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