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To Study The Socio-Demographic Profile and Identify The Prevalence of High Risk Behaviour for Sexually Transmitted Diseases Among Study Subpopulation

Medical Science

KEYWORDS : HIV, condom,truck drivers

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ABSTRACT

BACKGROUND: AIDS continues to spread rapidly, especially in sub-Saharan Africa and South East Asia. Many researchers warn that the worst is yet to come . By assuming the dimensions of a truly global pandemic, resulting in the death of more than 20 million people world wide, and another 40 million are waiting for the same fate.AIM: Behavior is the Engine that runs the AIDS epidemic. So the present aim is To Study the socio-demographic profile and identify the prevalence of high risk behaviour for sexually transmitted diseases among study subpopulation.METHODOLOGY: The present study was conducted within the municipal limits of Srinagar city. The subpopulations studied were:Long distance Truck Drivers and their helpers.Study .The study among Long distance Truck Drivers and their helpers was conducted at the two Main Truck Terminals .The study was conducted by in-depth face to face interviews with the target populations using the questionnaire based on Family Health International's instrument for Behavioral surveillance surveys with suitable modifications. The parameters studied included:1) Respondent profile 2) alcohol & IV drug use 3) sexual behavior & condom usage The NGO running the targeted intervention project with Truck drivers namely Better World was approached for building a rapport with the study population. The interviews were conducted twice in a week at each of the sites and at each visit a total of 10% truck drivers available at that time were interviewed using systematic random sampling. The data was collected over a period of six weeks from a total of 245 truck drivers OBSERVATIONS: A total of 245 in depth face-to-face interviews were conducted in the present study .The observations made are as under:The mean age of the respondents was 29.5 years with a range of 17 to 48 years (SD = 8.21). In the Study Group , 35 respondents were illiterate and the rest (210) were educated. In the group, 133 respondents were married, 5 were divorced/ widowed/separated and the rest (107) were un-married.The average age of marriage in was 25.5 years with a range of 20-32 years (SD= 3.29). The mean duration in occupation for study group was 10.4 years with a range of 2 to 28 years (SD=7.19). 140 respondents in study group had taken drinks containing alcohol in the past one year. out of 245 respondents 224 had ever had sexual intercourse .The mean age at first sexual intercourse was 19.6 years . All respondents who had ever had sexual intercourse were sexually active in the past one year also .Among sexually active respondents 70 had only one partner in life, while as 154 had multiple partners. 119 respondents had sexual intercourse with a non- commercial partner & 35 had sexual intercourse with both commercial & non-commercial partners in the last 1 year. None of the respondents reported any homosexual experience in the last one year.All 224 sexually active respondents in were aware of male condom but only 133 had ever used them. CONCLUSION :The vulnerable sub-populations were studied for knowledge of behavioral indicators of IV drug abuse and sexual history. Despite the high awareness level of Long distance truck drivers & their helpers about STDs & HIV / AIDS, the prevalence of un-protected non – regular sex was high in this group (42.86%). However IV drug abuse was not reported by any respondent in this group.

INTRODUCTION

Acquired immuno deficiency syndrome, the disease which was unknown to the medical world some two decades back, and which surfaced as an unusual chest infection in five homosexuals in U.S.A. in 1981, has within this short span of time spread throughout the length and the breadth of the world, assuming the dimensions of a truly global pandemic, resulting in the death of more than 20 million people world wide, and another 40 million are waiting for the same fate. [1]

AIDS grew into the public health disaster of our time, a global phenomenon that has tested social, cultural, religious and scientific beliefs. Twenty three years later -- with expensive drug therapies but no cure or vaccine in sight, AIDS continues to spread rapidly, especially in sub-Saharan Africa and South East Asia. Many researchers warn that the worst is yet to come. [2]

Realizing the magnitude of the problem United Nations Secretary General Kofi Annan has said, "We must make people everywhere understand that the AIDS crisis is not about a few foreign countries far away. This is a threat to an entire generation; this is a threat to an entire civilization" [3]

The global HIV/ AIDS problem is not only a major health care issue but it has far reaching consequences, with a huge impact on the social and economic fronts as well. The lost productivity of a key demographic group---- the young---- is compounded by increased health care costs and its likely impact on the already fragile health care services. Large increase in the number of patients with AIDS is expected in near future. Those with HIV will soon progress to AIDS. For example, between 1993 and 1996, there was a FOUR FOLD increase in AIDS cases reported to W.H.O.

Tuberculosis has re-emerged as one of the most devastating opportunistic infections in AIDS patients (60-75% of AIDS patients in south east Asia will develop tuberculosis. Many of the Developing World's had won child survival gains are being eroded and even reversed in some countries due to the HIV pandemic.[4]

AIDS is primarily a sexually transmitted disease; it mainly strikes adolescents, young adults, and those in early middle age, killing the very people on whom the society relies for production and reproduction. Current UNAIDS figures estimate that globally, 21.8 million adults have died of AIDS, leaving an enormous number of children as orphans (13.2million). Before the advent of AIDS approximately 2% of all children in the developing countries were orphans. It is estimated that by 1997 this proportion increased to 7%, and has today reached 11% in some countries.[5]

AIDS kills people in the prime of life, people who labor in the fields and factories, who run critical services like schools and hospitals, corporations and Governments. In India, by the year 2000, the overall cost on account of AIDS was estimated at US $11 billion. The estimated cost of health care for an AIDS patient varies from US$ 800 TO 1500 per year (even without anti-retroviral drugs). In case of death, the indirect costs may exceed US $ 22,000. Growing absenteeism and replacements due to deaths from AIDS among the workforce strike at the root of the industrial productivity and profitability.[6]

Spread of the HIV/AIDS epidemic:-HIV/ AIDS is spread mainly through the three following ways:-

Through an exchange of body fluid, primarily during sexual intercourse between an infected person & his/her partner (man to woman, woman to man, man to man).

Through exchange of infected blood during transfusion, or by skin piercing instruments e.g. shaving contaminated needles & syringes during injecting during use or rarely at health care settings.

From an infected mother to her unborn child during pregnancy and delivery & after birth through breast-feeding.

It must be noted that majority of HIV/AIDS infected are acquired through casual, unprotected, multi-partner sex. 80-90% of HIV infects in the SE ASIA are transmitted through heterosexual contacts. [7]

Behavior is the Engine that runs the AIDS epidemic. The spread of AIDS epidemic is not uniform in different geographical areas. Even within a defined population the spread is not uniform. In whom & how fast the HIV spread depends largely on the behavior & practices (mainly concerned to sexual behavior & IV drug abuse). According certain sub-groups have been classified as HRB (high risk behaviour) groups and it is these people who are most susceptible to HIV/AIDS. How fast the HIV spreads depends primarily on the prevailing risk behaviours among these groups. These groups include Commercial Sex Workers and their clients, Truck drivers and their helpers, Migrant Laborers, Urban Slum Dwellers, Street Children, I.V. drug abusers etc. [8]

A person may be infected with HIV for a decade or more without showing any symptoms, HIV prevalence rates can reflect a combination of recent infections and infections that are many years old. Consequently, the prevalence rate is very slow to reflect changes in new infections. Prevalence that is stable or falling may mean that people are behaving more safely and fewer are becoming infected than in previous years. It may, however, simply reflect the fact that HIV-infected people are dropping out of the tested population because they have died, moved away, or are too sick to go to the health facility where they might be tested. It may mean that nearly everyone with risk behaviour is already infected, or that the group of people tested has changed over time. Indeed, the relationship between HIV incidence and prevalence is so complex that in some cases falling prevalence may mask a still rising incidence of HIV infections, especially among young people.

Clearly, then, HIV prevalence rates do not serve as a good indicator of changes in new infections or as a measure of the success of programmes designed to reduce new infections. HIV incidence is costly and problematic to measure, since it involves testing the same group of individuals repeatedly over time or using costly testing methods on large numbers of people to detect a small number of new infections. Other physical markers that track sexual risk behaviour more closely than HIV are curable sexually transmitted diseases (STDs). Bacterial STD prevalence rates more closely reflect incidence rates because they are usually treated with antibiotics upon detection. However, surveillance of STDs in most countries is of lower quality than HIV surveillance. It is also extremely incomplete in the many countries where most surveillance data are collected in the public sector, while most treatment occurs in the private sector. Although measuring changes in new HIV and STD infections is difficult, it is possible to track changes in the behaviours that lead to those infections. There are several reasons to do this, and they vary in importance according to how widespread HIV is in a country and which communities are affected.

Behavioural data serves as an early warning system for HIV/AIDS. Effective prevention is prevention that enables people to adopt safer behaviours and protect themselves from the risk behaviour of their partners. But effective prevention requires more than just knowing who is at risk. It also requires understanding why they engage in risk behaviour, motivating them to reduce their risk, developing their prevention knowledge and skills, improving their access to the means of prevention in ways that are appropriate and accessible to them, and providing a supportive social and policy environment for behaviour change. These requirements create a strong need for qualitative data to illuminate and clarify the determinants of risk in specific subpopulations and situations. Unless the context and forms of risk behaviour are well understood in each specific vulnerable subpopulation or risk situation, it is not possible to provide and effectively support relevant safe alternative behaviours. Thus, behavioural research data can help communities and programme planners design initiatives carefully focused on breaking the links in the chain of transmission in a particular country, region, or group. In addition, behavioural research data can quantitatively indicate who is most at risk of contracting or passing on HIV infection, and why. Such data can document levels of risk in specific communities that may be particularly vulnerable to rapid HIV spread or identify characteristics of individuals who may have higher risk, allowing prevention efforts to be prioritised and directed so as to have the greatest impact. This kind of behavioural information can act as a call to arms for many people –– politicians, religious and community leaders, and people who may themselves be at risk –– signalling that the threat of HIV is very real even in areas where it is not yet visible. Such data are a powerful tool in pressing for action (Meeting the Behavioural Data Collection Needs of National HIV/AIDS and STD Programmes A joint IMPACT/FHI/UNAIDS Workshop: Report and Conclusions May 1998). [9] **MATERIALS AND METHODS**

The present study was conducted within the municipal limits of Srinagar city. The subpopulations studied were:Long distance Truck Drivers and their helpers.Study .The study among Long distance Truck Drivers and their helpers was conducted at the two Main Truck Terminals of the Srinagar city at i) Panthachowk and ii) Parimpora. The study was conducted by in-depth face to face interviews with the target populations using the questionnaire based on Family Health International's instrument for Behavioral surveillance surveys with suitable modifications. The parameters studied included:1) Respondent profile 2) alcohol & IV drug use 3) sexual behavior & condom usage . The sampling strategy used for Long distance truck drivers was time / location cluster sampling. The Study was conducted at the two main truck terminals of the Srinagar city each holding around 50 to 150 trucks a day. The NGO running the targeted intervention project with Truck drivers namely Better World was approached for building a rapport with the study population. The interviews were conducted twice in a week at each of the sites and at each visit a total of 10% truck drivers available at that time were interviewed using systematic random sampling. The data was collected over a period of six weeks from a total of 245 truck drivers.

OBSERVATIONS

A total of 245 in depth face-to-face interviews were conducted in the present study .The observations made are as under:

Respondent Profile:-

The mean age of the respondents was 29.5 years with a range of 17 to 48 years (SD = 8.21). The age distribution of the respondents is shown in table 1

TABLE 1: Age distribution of respondents

Age Group	Group (TH)
15 – 24	84 (34.29%)
25 – 34	91 (37.14%)

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35 – 44	56 (22.86%)
45 & above	14 (5.71%)
Total	245 (100%)

In the Study Group , 35 respondents were illiterate and the rest (210) were educated. The literacy status is described in the table 2 .

TABLE 2: Educational Status of respondents

Group	Total	Illiterate	Primary	Middle	Secondary	Under graduate	Graduate & above
(TH)	245	35(14.28%)	35 (14.28%)	77 (31.42%)	91 (37.14%)	7 (2.85%)	0

In the group, 133 respondents were married, 5 were divorced/ widowed/separated and the rest (107) were un-married.The average age of marriage in (TH) was 25.5 years with a range of 20-32 years (SD= 3.29). The marital status is described in the table 3.

TABLE 3: Marital Status of respondents

Study group	Married	Un-married	Divorced / widower/ separated	Total	Average age at marriage
(TH)	133 (54.28%)	107 (43.67%)	5 (2.04%)	245	25.5 years

The mean duration in occupation for study group (TH) was 10.4 years with a range of 2 to 28 years (SD=7.19). (See table 4)

TABLE 4: Duration in profession for study group

S No	Duration in profession	Group (TH)
1	0 – 5 years	91 (37.14%)
2	6 – 10 years	56 (22.86%)
3	> 10 years	98 (40%)
4	Total	245 (100%)

ALCOHOL INTAKE &IV DRUG USE:-

140 respondents in study group had taken drinks containing alcohol in the past one year. (See table 5, 6 & 7)

TABLE 5: Alcohol intake in last one year

S No	Alcohol intake in last one year	Yes	No	Total
1.	Study Group (TH)	140 (57.14%)	105 (42.86%)	245 (100%)

TABLE 6: Alcohol intake in last four weeks

S No	Alcohol intake in last 4 weeks	Everyday	At least once a week	Less Than once a week	Never in the last 4 weeks	Total No of respondents who have taken alcohol in the past year
1.	Group (TH)	21 (15%)	35 (25%)	56 (40%)	28 (20%)	140 (100%)

TABLE 7: IV Drug abuse in the last one year

S No	IV Drug abuse in the last one year	Yes	No	Total
1.	Study Group (TH)	0	245	245

SEXUAL BEHAVIOR & CONDOM USAGE: -

In the StudyGroup (TH) out of 245 respondents 224 had ever had sexual intercourse .The mean age at first sexual intercourse was 19.6 years for Study Group (TH). All respondents who had ever had sexual intercourse were sexually active in the past one year also. (see table 9 & 10)

TABLE 8: Respondents who ever had sexual intercourse in life

S NO	Group	Ever had sexual intercourse in your life?		Total	Average age at first sexual intercourse
		Yes	No		
1. Study group (TH)		224 (91.43%)	21 (8.57%)	245 (100%)	19.6 (SD=4.07) (range 12 – 29)

TABLE 9: Respondents who were sexually active in the past year.

S NO	Group	Had sexual intercourse in past one year?		Total
		Yes	No	
1.	Study group (TH)	224 (91.43%)	21 (8.57%)	245 (100%)

Among sexually active respondents in Study Group (TH) 70 had only one partner in life, while as 154 had multiple partners. The number of partners in each group is depicted in the table 10 .

TABLE 10: Total number of sexual partners in life

S No	Group	Total number of sexual partners in life				
		a) one	b) 2 – 5	c) 6 – 9	d) 10 or more	Total
1.	Study group (TH)	70 (31.25%)	98 (43.75%)	14 (6.25%)	42 (18.75%)	224 (100%)

In the Study Group (TH) 119 respondents had sexual intercourse with a non- commercial partner & 35 had sexual intercourse with both commercial & non-commercial partners in the last 1 year. (see table 11) None of the respondents reported any homosexual experience in the last one year.

TABLE 11: No of respondents reporting non-regular sex in last one year

S No	Group	No of respondents reporting non-regular sex in last one year				Total No of sexually active respondents
		CSW only	NCP only	Both CSW & NCP	Total	
1.	Study group (TH)	0	119 (53.12%)	35 (15.63%)	154 (68.75%)	224 (100%)

CSW : commercial sex worker NCP : non commercial partner

These observations can also be represented as following taking the all the respondents as frame of reference (see table 12)

TABLE 12: No of respondents reporting non-regular sex in last one year

S No	Group	No of respondents reporting non-regular sex in last one year			Total No of respondents
		CSW	NCP	Total	
1.	Study group (TH)	35 (14.29%)	154 (62.86%)	154 (62.86%)	245 (100%)

All 224 sexually active respondents in Study Group (TH) were aware of male condom but only 133 had ever used them.

DISCUSSION

Being one of the coldest regions on the Country's AIDS map should not make us complacent, because there are a number of factors which make Srinagar/ Kashmir vulnerable to rapid spread of HIV /AIDS once it gains a firm foothold in this region of the country. According to UNAIDS & WHO classification of Three different epidemic states, Srinagar/ Kashmir comes under low-level epidemic state as the sentinel surveillance data from 2003 through 2004 has not demonstrated HIV prevalence in any defined sub-population going above the 5% mark (in fact

the 2004 data has shown a prevalence of HIV less than 1% even in high risk groups). However HIV is slowly but surely permeating our population like a silent tide as demonstrated by the reports of VCTCs (voluntary counseling & testing centres) & blood banks. It is the right time to wake up to the clarion call & gear up our armament to face one of the deadliest challenges of modern times.

In order to handle the epidemic of AIDS in the most effective manner the first requirement is an effective surveillance system, which can track the spread of this silent scourge. It was in this context that the present study was undertaken.The present study was undertaken among vulnerable subpopulations viz long distance truck drivers.

LONG DISTANCE TRUCK DRIVERS & THEIR HELPERS

As there is no railway link between Kashmir & the rest of the country, the entire transportation of cargo & foodstuffs on either side of the Pir Panjal range is dependent upon the trucking industry. The trucks carrying poultry from Punjab, livestock from Rajasthan, foodstuffs from north India & industrial products from the rest of the country find two main halting points within Srinagar – the Pantha chowk & the Parimpora Truck terminals. The Pantha chowk terminal is mainly used by trucks carrying items meant for onward stations like Baramulla & Ladakh while the truck terminal at Parimpora is mainly used as an unloading station for products meant for Srinagar. At each of these truck terminals at least 50 to 150 trucks are stationed at any particular time. At an average it takes anywhere between two weeks to more than a month for a truck to make its appearance again on the terminal after its departure & these truck drivers & their helpers happen to spend most of their time in close proximity to their trucks, leaving quite little time to spend with their families.

The socio-demographic characteristics studied in this group revealed that this population was relatively young (mean age of the respondents was 29.5 years), the literacy level was high (85.72%) and more than half of them were currently married.(55% of the respondents were married). The mean duration in profession for this group was 10.4 years with a range of 2 to 28 years.

These figures correlate well with the VIII wave of BSS conducted by APAC (AIDS Prevention & Control) in its PATH Project (Prevention along the Highways) conducted from October to December 2003 in Tamil Nadu[10] where the mean age of respondents was 28.7 years & 58% were married. However the literacy level in that survey was 98%. This difference in literacy level can be explained by the fact that literacy level in southern parts of the country is overall higher than the northern parts. The second wave of BSS conducted by SRI-IMRB in Pondicherry between October 2002 & January 2003 [11] has shown that the Truckers & Helpers in that region have a different socio-demographic profile with mean age of the respondents as 26 years & more than 60% of respondents being un-married. The round 4 of BSS conducted by New ERA study team in Nepal in May 2002 [12] showed the mean age of Truckers as 25.4 years & literacy level of 95% with 53.2% respondents being married. Behavioral Surveillance Survey conducted by National AIDS standing Board in five provinces of Vietnam in the year 2000 showed that mean age of Long distance truck drivers across the five provinces was between 30 to 35 years with a literacy rate of 97.6 to 100 % & 54 to 70% of respondents being currently married [13]. In Zambia the country badly affected by HIV /AIDS the BSS conducted by TDRC (Tropical Disease Research Centre) in Long distance truck drivers showed mean age of respondents as 37 years with 88% having completed at least primary schooling & 86% being currently married [14]. These observations indicate that the socio-demographic profile of Long distance truck drivers varies from place to place & country to country.

More than half the respondents had taken alcohol in the last one year (57.4%) out of which 4/5th (45%) had taken alcohol in the last 4 weeks, but none of the respondents reported IV Drug Abuse in the past one year. Thus IV Drug Abuse is not a factor in the vulnerability of Long distance truck drivers to HIV/AIDS on J&K Highways.

Most of the respondents in this group were sexually active (91.43%) with more than half reporting non-regular sex in past one year (62.86%). All the respondents reporting non-regular sex in past one year (62.86%) had contact with non- commercial partner/s (casual sex), and 14.29% also had contact with Commercial Sex Worker/s (paid sex). These figures are significant and thus heterosexual promiscuity forms a major factor in making this group vulnerable to HIV /AIDS (none of the respondents in this group reported any homosexual experience in the past one year). These figures are much higher as compared to APAC BSS in Tamil Nadu which showed a declining trend in non- regular sex from 48% in 1996 to 26% in 2003. However in that survey 22.1% truckers had had sex with a CSW in last one year while only 14.29% truckers had sex with a CSW in the present study. The Pondicherry BSS (2002-2003) revealed involvement of Truckers in non-regular sex being 27.2%. (20% having had contact with CSWs). These observations indicate that the Long distance truck drivers & helpers on J&K Highways have a higher involvement in non-commercial sex (casual sex) than in commercial sex (paid sex with CSW) as compared to southern parts of the country. The survey conducted by New ERA study team in Nepal showed that the involvement of truckers with commercial sex workers was much higher in that country with 61.3% respondents reporting sex with a CSW in past one year. Araoye MO, et al from the Department of Epidemiology, University of Ilorin, Nigeria during a survey in Transportation Drivers found the prevalence of casual and commercial sex 43% and 30.6%, respectively [15].

SUMMARY

The socio-demographic profile of the respondents showed that all the sub-populations studied were relatively young with a mean age of 29.5 years for Truckers & their helpers. The literacy level was high for Study Group (TH) 85.72%.More than half of the respondents in study group were married (54%).

IV drug abuse was not reported by any of the respondents in study group (TH) .The Behavioral indicators showed that more than half (62.86%) of the Truckers & their helpers had engaged in non-regular sex in past one year.

Though condom awareness was high in the study groups but condom usage was low . Consistent condom usage in spousal (16%) & casual sex (31%) was overall much lower than consistent condom usage in commercial sex the same group (60%).

CONCLUSIONS AND RECOMMENDATIONS

The vulnerable sub-populations were studied for knowledge indicators for awareness on HIV/AIDS & STDs & behavioral indicators of IV drug abuse and sexual history. Despite the high awareness level of Long distance truck drivers & their helpers about STDs & HIV / AIDS, the prevalence of un-protected non – regular sex was high in this group (42.86%). However IV drug abuse was not reported by any respondent in this group. Utilization of voluntary counseling & testing services was low and IPC (interpersonal communication) was considered as the best way to approach these sub-populations

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