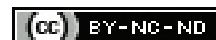


Sexual Practices and Misconceptions Regarding Condom Usage and Status of Voluntary HIV Testing among Truck Drivers Employed in Transport Sector of Haryana- A Cross-sectional Study

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ABSTRACT

Introduction: Truck drivers serve as a bridge population between high risk group and general population. Their nature of job demands travelling for days which compromises their lifestyle and health needs.

Aim: To describe the sexual practices and misconceptions regarding condom usage and the status of voluntary Human Immunodeficiency Virus (HIV) testing among truck drivers and helpers.

Materials and Methods: This was a cross-sectional study conducted during a health screening camp, conducted by team from a tertiary care centre of district Faridabad among truck drivers employed in a transport company. All the participants were interviewed by a trained counsellor using a structured, closed ended questionnaire. Data was analysed by using SPSS version 21. Fischer's-exact and Chi-square tests were applied

to test differences in proportions. Student t-test was applied to test the differences in mean between two groups. A p-value <0.05 was considered statistically significant.

Results: Total 117 male truck drivers and helpers participated in the study, of which 87.2% were sexually active with condom usage rate of 41.2%. Majority of the sexually active participants (92.8%) had more than one sexual partner in the last year. Condom usage was significantly higher among those having multiple partners than single partner ($p < 0.001$). Having sex with wife (36.4%) and preferred sex without condom (21.1%) were two major reasons elicited for non-usage of condoms. Almost half (46.2%) preferred to buy condoms from chemist shop. Only 14.7% of all the sexually active participants were ever tested for HIV.

Conclusion: Truck drivers with multiple sexual partners were prevalent; however, usage of condoms was high among them.

Keywords: Bridge population, Health camp, Human immunodeficiency virus

INTRODUCTION

In the report released by National AIDS Control Organisation (NACO) in 2017-18, an estimated 0.2% of truck drivers were living with Human Immunodeficiency Virus (HIV). NACO also categorises truck drivers as a bridge population because they often have unprotected sex with high risk groups such as female sex workers as well as their regular sexual partners, which increases the risk of transmitting HIV into the general population [1]. High risk sexual practices like multiple sex partners and inconsistent or no condom use during sexual acts are commonly reported among truck drivers [2,3]. Although level of knowledge about Sexually Transmitted Diseases (STDs) and HIV/AIDS is relatively high among them but this is rarely converted into action due to improper interpretation [2,3]. Due to frequent mobility, accessibility to general healthcare is low among Long Distance Truck Drivers (LDTDs). Stigma attached to HIV/AIDS further worsen the situation. National AIDS Control Programme (NACP-IV, 2012-2017, extended to 2018), has made the elimination of stigma and discrimination a major focus [4]. Implementation of HIV and AIDS (Prevention and Control) Act, 2017 is another praiseworthy step in the same direction by Government of India [5].

Hence, the present study was planned to study the sexual practices, misconceptions regarding condom usage and status of voluntary HIV testing among truck drivers and their helpers.

MATERIALS AND METHODS

This community-based cross-sectional study was conducted during a health screening camp (October, 2018) organised in Transportation

Company at Faridabad, Haryana. As requested by the company, a health screening camp for diabetes, asthma, Chronic Obstructive Pulmonary Diseases (COPD) and colour blindness including general health check-up was organised by a team from the tertiary care hospital and medical college of district Faridabad. Keeping in view a large number of truck drivers, as their employees, HIV counselling services were also provided by an expert HIV counsellor. The ethical clearance was sought from Institutional Ethical Committee. (IEC no. 134/A/11/16/Academics/MC/2016/174).

Inclusion and Exclusion criteria: During the one-day camp, out of total 153 employees, 117 truck drivers and their helpers were interviewed. The study enrolled only those that were currently working in the transportation company. All the participants had income less than 21,000 per month and were covered under Employee State Insurance (ESI) Act. Those who were uncomfortable in answering all the questions and did not consent to participate were excluded.

Study tool and data collection: The study tool used was a structured, close ended questionnaire. The questionnaire consisted of three parts: the first part covered socio-demographic profile and information regarding substance abuse. Second part of the questionnaire was used to assess the sexual practices and misconceptions regarding condom usage prevalent among truck drivers. Third part of the questionnaire dealt with their status of HIV Testing. After the general health screening by the physicians, the participants visited the counsellor. All the truck drivers were interviewed after obtaining the informed consent in a separate enclosure to maintain privacy and confidentiality during data

collection. After the completion of interview, the truck drivers were educated about various modes of acquiring and preventing HIV infection and promotion of use of condoms.

STATISTICAL ANALYSIS

Data was entered in Microsoft Excel. Commercially available statistical software (SPSS version 21) was used for analysis. Results are expressed as absolute numbers and percentages. Fischer's-exact and Chi-square tests were applied to test differences in proportions. Student t-test was applied to test the differences in mean between two groups. Differences were considered to be statistically significant at p-value <0.05.

RESULTS

The present study included all male participants with mean age 31.36 years (SD±7.46). Majority of the study participants were migrants (97.4%) and having qualification either less than high school (38.5%) or graduate (17.9%). Total of 23.1% of the study participants were married, 51.3% participants were chronic alcoholics and habit of tobacco intake was observed in 53.8% [Table/Fig-1].

Socio-demographic variable	N (%)	95% CI of proportion
Age group (years)		
≤20	9 (7.7)	3.4-12.8
21-40	99 (84.6)	77.8-90.6
41-60	9 (7.7)	3.4-12.8
Mean	31.36	SD=7.46
Education		
Less than high school	45 (38.5)	29.9-47.9
High school	18 (15.4)	9.4-21.4
Higher secondary	33 (28.2)	20.4-36.8
Graduate	21 (17.9)	11.1-24.8
Marital status		
Married	27 (23.1)	16.2-30.8
Unmarried/Divorced/Separated/Widower	90 (76.9)	69.2-83.8
Residence		
Migrant	114 (97.4)	94.9-100
Non-migrant	3 (2.6)	0-5.1
Chronic alcohol intake		
Yes	60 (51.3)	41.9-60.7
No	57 (48.7)	39.3-51.3
Chronic tobacco intake		
Yes	63 (53.8)	44.5-62.4
No	54 (46.2)	37.6-55.5

[Table/Fig-1]: Socio-demographic profile of the study subjects (N=117).

Majority of study participants were sexually active (102; 87.2%). Among the sexually active participants, condom usage (general use) was found to be 41.2% (42/102). Condom used during the last intercourse was reported by 5.9% of participants. Education status did not show any significant trend of regular condom usage as it was prevalent among 46.2% of those who were educated less than high school and among 57.1% were graduates. Half of the chronic alcoholics reported of using condom (50%), as compared to 28.6% of non-alcoholics (p=0.041). Condom usage was reported by 38.1% of those consuming tobacco in any form. Majority of the sexually active study participants (92.8%) had more than one sexual partner in last 12 months. Around one fourth (25.9%) of the sexually active participants with 2-3 partners were using condom. And this proportion increased as the number of sexual partners increased (p<0.001). Among the sexually active study participants, 14.7% (15/102) were married; 80% of the married sexually active participants (12/15) were not staying with their spouse. Majority of

participants stayed sometimes with their spouse/partner (73.5%) and out of these 92% had 2-3 sexual partners and 8% had four or more partners [Table/Fig-2].

Variables	Condom use		Total N (%)	p-value
	Yes n (%)	No n (%)		
Sexually active	42 (41.2)	60 (58.8)	102 (100)	
Age (years) (Mean±SD)	30.29±4.82	34.35±7.48	32.68±6.79	0.001
Duration of service (years) (Mean±SD)	5.81±3.99	5.67±6.96	5.73±5.83	0.909
Stay with spouse/partner				
Always	6 (100)	0	6 (100)	0.001
Sometimes	24 (32)	51 (68)	75 (100)	
No	12 (57.1)	9 (42.9)	21 (100)	
Sexual partners in last 12 months				
One	3 (100)	0	3 (100)	<0.001
2-3	21 (25.9)	60 (74.1)	81 (100)	
4-5	12 (100)	0	12 (100)	
>5	6 (100)	0	6 (100)	
Chronic alcohol intake				
Yes	30 (50)	30 (50)	60 (100)	0.041
No	12 (28.6)	30 (71.4)	42 (100)	
Chronic tobacco intake				
Yes	24 (38.1)	39 (61.9)	63 (100)	0.535
No	18 (46.2)	21 (53.8)	39 (100)	
Education status				
Less than high school	18 (46.2)	21 (53.8)	39 (100)	0.108
High school	3 (20.0)	12 (81.0)	15 (100)	
Higher secondary	9 (33.3)	18 (66.7)	27 (100)	
Graduate	12 (57.1)	9 (42.9)	21 (100)	

[Table/Fig-2]: Prevalence of condom usage among sexually active truck drivers and helpers and factors influencing their sexual behaviour (N=102).

When inquired about the reasons for non-usage of condoms during last intercourse, majority responded that a condom is not required while having sex with wife (36.4%) [Table/Fig-3]. Preferred location for buying condoms was a chemist's shop in 46.1% (47/102).

Reasons for non-usage of condom in last intercourse (n=60)	Number (%)
Intercourse with wife, hence not needed	22 (36.4)
Under influence of alcohol	2 (3.0)
Shy	11 (18.2)
Forgot	4 (6.1)
Preferred without condom	12 (21.1)
Other	9 (15.2)

[Table/Fig-3]: Reasons for non-usage of condom during last intercourse.

Only 14.7% (15/102) of all the sexually active participants were ever tested for HIV. Trends from the study show that HIV testing was more prevalent among those who were serving for longer durations in the profession (7.02±5.49 years) as compared to those who were in the profession for short duration (5.47±5.89 years). Half of the sexually active participants living with their spouse/partner (50%) tested for their HIV status as compared to 12% of those who sometimes stayed with the spouse (p-value=0.041). Total 20% (3/15) of the married sexually-active participants got tested for HIV, out of which none stayed with their spouse. The 13.7% (12/87) of unmarried/divorced/widower sexually-active participants tested for HIV. Surprisingly, participants having low education status underwent HIV testing whereas none of the graduates from the sexually active study population tested themselves for HIV status [Table/Fig-4].

Variables	Ever been tested for HIV		Total N (%)	p-value
	Yes n (%)	No n (%)		
Sexually active	15 (14.7)	87 (85.3)	102 (100)	
Age in years (Mean±2SD)	33.40±3.11	32.55±7.25	32.68±6.79	0.452
Duration of service in years (Mean±2SD)	7.02±5.49	5.47±5.89	5.73±5.83	0.353
Stay with spouse/partner				
Always	3 (50.0)	3 (50.0)	6 (100)	0.041
Sometimes	9 (12.0)	66 (88.0)	75 (100)	
No	3 (14.3)	18 (85.7)	21 (100)	
Sexual partners				
One	3 (100)	0	3 (100)	<0.001
2-3	9 (11.1)	72 (88.9)	81 (100)	
4-5	3 (25.0)	9 (75.0)	12 (100)	
>5	0	6 (100)	6 (100)	
Alcohol				
Yes	12 (20)	48 (80)	60 (100)	0.091
No	3 (7.1)	39 (92.9)	42 (100)	
Tobacco use				
Yes	15 (23.8)	48 (76.2)	63 (100)	<0.001
No	0	39 (100)	39 (100)	
Education status				
Less than high school	9 (23.1)	30 (76.9)	39 (100)	0.022
High school	0	15 (100)	15 (100)	
Higher secondary	6 (22.2)	21 (77.8)	27 (100)	
Graduate	0	21 (100)	21 (100)	

[Table/Fig-4]: Distribution of sexually active subjects according to their HIV testing status and associated factors (N=102).
p-value <0.05 considered significant

DISCUSSION

Total 87.2% of study population was sexually active while 23.1% were currently married. Among the sexually active truck drivers, condom usage (general use) was 41.2% and 5.9% in the last intercourse. Sexual intercourse with wife was one of the major reasons of not using condoms; 14.7% of sexually active participants got their HIV status checked. Sawal N et al., in his retrospective analysis found condom usage to be 45% [6]. Condom usage during last intercourse was reported by Schneider JA et al., as 19%, and this was higher as compared to current study (5.9%) [7].

In a study conducted by Singh RK and Joshi HS more than half of truck drivers of their study area reported of having more than one sexual partner in last three months. The present study also has 92.8% of participants having more than one sexual partner [8]. Possible reasons could be long absence from home and readily available commercial sex partners at their resting places. A higher proportion of condom usage was reported by Singh RK and Joshi HS among those who visited Commercial Sex Workers (CSW) as compared to those who did not [8]. Present study also observes better condom usage among those having multiple partners as compared to single partner. Although CSW visit was not enquired about in the current study but multiple sexual partners were considered as a proxy of high risk behaviour. Improved condom usage was probably due to the fear of contracting sexually transmitted diseases as the number of partners increase.

Similar to current study Sawal N et al., did not report a significant relationship between pattern of condom usage and education status [6]. Lagarde E et al., their study among adults aged 15-49 years from sub-Saharan Africa, also reported a significant increase in condom usage with increasing education of both men and women [9]. The two surveys in Tanzania also identified educational level as a determinant of condom use [10,11]. The mean age of condom users

was lower as compared to nonusers in current study. The younger generation seems to be more aware about usage and advantages of condom as compared to older age group. Alcohol users tend to have reported more usage of condoms as compared to non-alcohol users. Thakur A et al., in their study on truck drivers reported addiction to alcohol and tobacco in around 91% respondents and a low condom usage (36%) overall [12]. However, contrasting observation is reported when alcohol is taken with other stimulator drugs. No effect of alcohol use was also reported by a study in Sub Saharan Africa [9].

Pandey A et al., Singh RK and Joshi HS, Thakur A et al., and Mc Cree DH et al., in their study reported nonavailability of condoms, uneasy feeling during intercourse and not feeling necessary to use as some of the common reasons given by the truck drivers while visiting CSWs [2,8,12,13]. The responses on reasons of not using condoms are alarming as even after about three decades of launch of NACP, there are certain myths regarding usage of condoms which must be addressed properly in order to prevent risk behaviour among truck drivers.

Sex education for safe sex among the truck drivers is required so that they understand the importance of using condoms. Social vaccine as pointed by Ubaidullah M comprises of spreading education on how to protect oneself, hundred percent condom uses and changing sexual behaviour [14].

Preferred location for buying condoms in this study was chemist shop. The reason behind this preference may be that exceptionally high mobility observed among truck drivers and helpers affects their health seeking behaviour. Policy makers should strengthen the arrangements for condom distribution on highways by ensuring availability of the condoms through installation of vending machines at the Dhabas (roadside restaurants).

Limitation(s)

The single centric design of the study limits the findings to be generalised to all the truck drivers of the country. The study was conducted in a camp, hence, the small sample size and non-probability sampling strategy was there.

CONCLUSION(S)

Long distance truck drivers and helpers have high risk sexual behaviour owing to their nature of work and longer durations of staying away from their homes. The major reason cited by the study participants for non-usage of condoms was that it is not required while having sex with wife. This myth may prove catastrophic and needs to be addressed on an urgent basis as truck drivers serve as a bridge population between high risk groups and general population in spread of HIV/Sexually Transmitted Infections (STIs). As most of the truck drivers were buying condoms from Chemist shops there is a need to strengthen the public system to gain faith of the community and to promote social marketing of condoms. The conclusion drawn from the present study is that health screening camps organised by various public and private agencies in the premises of factories/companies should be utilised for screening and counseling for HIV/STDs as well as for condom promotion.

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