

## Research Article

# A study on sexual risk behaviors of long-distance truck drivers in central India

Aditya Thakur\*, Manju Toppo, Rama Lodha

Department of Community Medicine, Gandhi Medical College, Bhopal, M.P., India

**Received:** 21 May 2015

**Accepted:** 22 June 2015

**\*Correspondence:**

Dr. Aditya Thakur,

E-mail: [adityathakur701@gmail.com](mailto:adityathakur701@gmail.com)

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## ABSTRACT

**Background:** The sexual behavior of trucking populations has been associated with the transmission of sexually transmitted infections (STI) and HIV in India and elsewhere in the world. The objective of the study was to describe the Health seeking and sexual risks behaviors among the long distance truck drivers and to estimate the prevalence of STI symptoms in the long distance truck driver.

**Methods:** Cross sectional study conducted on the Long Distance truck drivers plying on national highway passing through Bhopal state Highway, who halted at road side group of “Dhabas” (road side hotels) at 3 exits ways of Bhopal City M.P (India). A total of 309 truck drivers approached over a period of 90 days. Out of these 251 consented for the study.

**Result:** The study revealed that 49 % of the long distance truck driver had CSW exposure in last 6 months. The prevalence of STI symptoms was found to be 21.51 % among the long distance truck drivers. The Truck Driver who had exposure with CSW more than five times in the last 6 months were found to be more careless regarding using condoms while having intercourse with the CSW’s.

**Conclusion:** Effort like availability of condoms in the high risk group settings is required. Dhabas should be made to function as a sentinel centre for promoting awareness for HIV/AIDS and STIs.

**Keywords:** STIs, HIV & AIDS, Long Distance Truck drivers, Dhabas, CSW’s

## INTRODUCTION

In 21<sup>st</sup> century HIV/AIDS continues to be a major public health problem In India, It has been emerged as the most grave public health problem since independence. The sexual behavior of trucking populations has been associated with the transmission of sexually transmitted infections (STI’s) and HIV in India and elsewhere in Asia, Africa, South America and the United States.<sup>1-9</sup> The most of incidence of HIV and STI occurs in places where trucks are loaded and unloaded, or where truck drivers stop to have their documentation inspected (which can take a considerable length of time).<sup>10</sup>

The truck drivers, due to the itinerant nature of their occupation and being far away from their families for a long time tend to have multiple sexual partners and visit commercial sex workers. The truck drivers thus add up to a well-known high risk group of population in the spread of HIV/AIDS. The trucking industry in India is largely unorganized and almost entirely in the private domain, structured around a loose system comprising truck operators, intermediaries and users. In the late 1990s, almost 77 % of India’s truck fleet was owned by operators with no more than five trucks, whereas only approximately 6 % of trucks were owned by operators with more than 20 trucks. India has a large trucking population estimated at 5-6 million truckers and helpers, and about 2-2.5 million are classified as long-distance

truckers.<sup>1,3</sup> It has been found that around one-third of the long distance truck drivers in India have sex with female sex workers (FSWs) and a substantial proportion of them have sexual relationships with unpaid casual female partners.<sup>4,5</sup> The greatest incidence of HIV occurs in places where trucks are loaded and unloaded, or where truck drivers stop to have their documentation inspected (which can take a considerable length of time).

Long-haul truck drivers and their commercial sex contact (CCs; women and men with whom they exchange money and/or drugs for sex) have been implicated in the spread of human immunodeficiency virus (HIV) and other sexually transmitted infections (STIs) along Major transportation routes in developing countries.<sup>6</sup>

Studies in the country have found high HIV (2-13 %) and high STI prevalence (3-16 %) among long distance truck drivers.<sup>4,11,12</sup>

Therefore the present study aimed to examine the risk behaviors and Prevalence of STI's among Long distance truck drivers in association with their age, education, length of time away from home and CSW's exposure.

#### Objectives:

1. To describe the Health seeking and sexual risks behaviors among the long distance truck drivers.
2. To estimate the prevalence of STI's symptoms in the long distance truck driver.

#### METHODS

It is a descriptive type of Cross sectional study conducted on the Long Distance truck drivers at the "Dhabas" (road side hotels) on the outlets of Bhopal city in Madhya Pradesh. The Long Distance Truck drivers plying on national highway passing through Bhopal state Highway, who halted at road side group of "Dhabas" at 3 exits ways of Bhopal City M.P, India, were enrolled in a cross-sectional study conducted for 3 months from April 2014 to June 2014. Two "Dhabas" were identified on each of the 3 outlets of the Bhopal city. Visits were planned bi-weekly for 3 months between 12:00 hrs to 18:00 hrs of the Day. A total of 309 truck drivers approached over a period of 90 days. Out of these 251 consented for the study.

The study was conducted according to World Helsinki Declaration and all the truck drivers who stopped at the chosen "Dhabas" were invited to participate and those who consented for the interview were taken to a separate enclosure in order to maintain privacy and confidentiality. Anonymity of the participants was maintained by avoiding any information revealing the identity of the participants in the questionnaire. A self-administered, pre-tested, structured, close-ended questionnaire was used for data collection.

#### RESULTS

A total of 251 long distance truck drivers participated in the study. Mean age of the truck drivers is 38.39 yrs with standard deviation of  $\pm 8.54$  years and range is 18-63 years. Table 1 shows that about 6 % respondents are of 25 years or less than 25 years, 31.5 % respondents between 26-35 years and maximum respondents are of 36 years or more than 36 years. Maximum respondents have primary school education i.e. 31.08 % followed by middle school 26.69 %, higher secondary or above about 14.74 % & there is high percentage of illiterate respondent about 27.49 %. Most of the Study participants were married i.e. 90.87 %. Addiction of Alcohol, cigarette, smokeless tobacco was higher in the respondents. Maximum number of respondents fall under the category of below 5 years of duration as a long distance truck driver i.e. 63.29 %. While 67.33 % of the participants take round trip on an average of 1 week or more (Table 1).

**Table 1. Socio-demographic profile of the Long distance truck drivers.**

Age group	Percent (%)	95 % CI
≤ 25	6.0	3.06 - 8.94
26-35	31.5	25.75 - 37.25
≥36	62.5	56.51 - 68.49
<b>Mean</b>	38 yrs	SD = $\pm 8.54$
<b>Range</b>	18-63 yrs	
<b>Education</b>		
Illiterate	27.49	21.97 - 33.01
Primary school	31.08	25.35 - 36.81
Middle school	26.69	21.22 - 32.16
Higher secondary and above	14.74	10.35 - 19.13
<b>Marital Status</b>		
Married	90.87	87.31 - 94.43
Unmarried	9.13	5.57 -12.69
<b>Addiction</b>		
Yes	93.23	90.12 - 96.34
No	6.77	3.66 -9.88
<b>Duration as Truck Driver</b>		
2 Year	41.42	35.33 - 47.51
3- 5 year	31.87	26.11 - 37.63
6-10 years	20.73	15.72 - 25.74
> 10 years	5.98	3.05 -8.91
<b>Number of days taken for round trip</b>		
1-3 days	6.78	3.67 -9.89
4- 7 days	25.89	20.47 - 31.31
1 week -4 weeks	62.55	56.56 - 68.54
>1 month	4.78	2.14 -7.42

86.85 % (n= 218) of the truck driver accepted that they had exposed to CSW at least one time in their driving career. Out of total 251 truck drivers interviewed 49 % (n= 123) of them had a recent CSW exposure in last 6

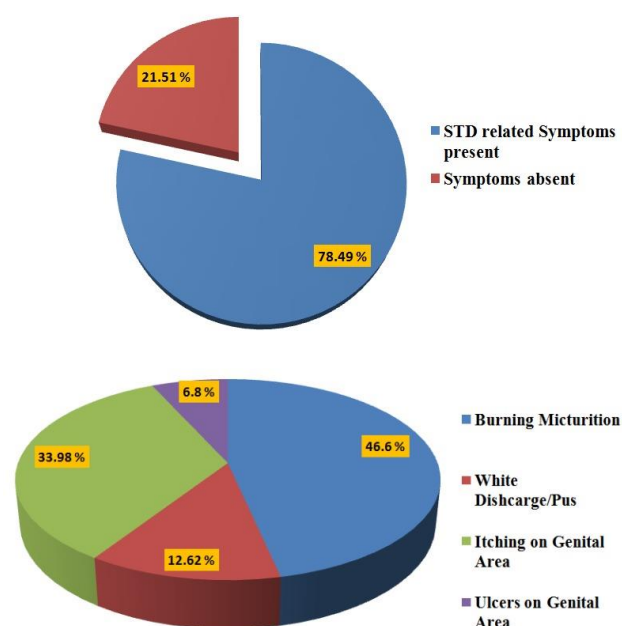
months. The Table 2 shows that truck drivers who take on an average more than 1 week of time for the round trip were more prone to CSW exposure in last 6 months may be because they were away from their home for a long time. While those truck driver who took on an average less than 1 week of time gets less Exposure to CSW in last 6 months. The difference between them was found to be statistically highly significant. Whereas the association between the truck drivers who has exposure with CSW in last 6 months and those who have STD related symptoms was found to be statistically significant ( $P = < 0.0001$ ) as assessed by Chi – square test. Those who had exposure to with the CSW had more STD related symptoms as compare to non-exposed. STI's was present in 33.3 % (n=41) respondents who had exposure with CSW. STI's Prevalence was low among those who worked as drivers for less than 5 years.

**Table 2. Association between the CSW exposure in respondents, their average trip duration and STD related symptoms.**

Average no. of days for round trip	CSW Exposure in last 6 months		Chi-square value	P Value
	Yes (%)	No (%)		
1-3 days	3 (2.4)	14(11)	$\chi^2 = 27.86$ df = 3	<0.0001*
4 - 7 days	19(15.4)	46(36)		
1 week - 4 weeks	91(74)	66(51.5)		
More than 1 month	10(8.2)	2(1.5)		
<b>STD related Symptoms</b>				
Present	41(33.3)	13(10.2)	$\chi^2 = 19.95$ df = 1	<0.0001*
Absent	82(66.7)	115(89.8)		
<b>Total</b>	<b>123 (100)</b>	<b>128(100)</b>		

\*Statistically Highly Significant

Figure 1 shows the prevalence of STD related symptoms of about 21.51 % (n=54) in truck drivers in duration of last 6 months. It also shows the distribution of STD related symptoms as most of the long distance truck driver i.e. 46.6 % had a symptoms burning micturition, 33.98 % had a itching on genital area, remaining had the complaint of white Discharge/pus and Ulcers on Genital Area. Table 3 shows the inconsistent condom use among the married & unmarried truck driver who put their wives or girlfriends at risk of getting infected with STI. Consistent condom use with any paid sexual partner was assessed in-terms of condom use while having exposure with CSW in last 6 months.



**Figure 1. Prevalence and distribution of STD related symptoms in long distance truck driver in duration of last 6 months.**

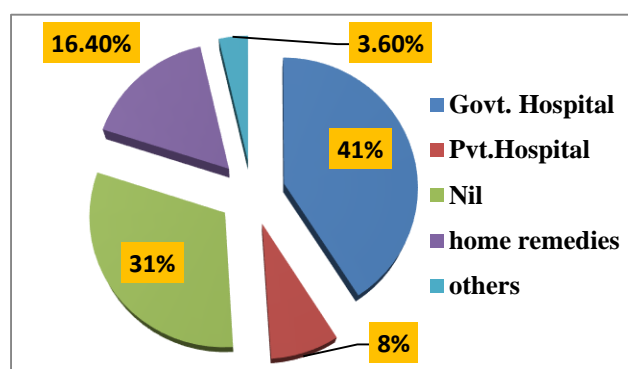
**Table 3. Association between the frequencies of CSW exposure in truck drivers with history of condom usage.**

CSW Exposure in last 6 months	Condom Used every time		Chi-square value	P Value	Odds Ratio (95 % CI)
	Yes (%)	No (%)			
≤ 5	32(72.7)	39 (49.4)	$\chi^2 = 6.32$ df = 1	0.0119*	2.73 (1.23 - 6.06)
>5	12(27.3)	40(50.6)			
<b>Total</b>	<b>44(100)</b>	<b>79(100)</b>			

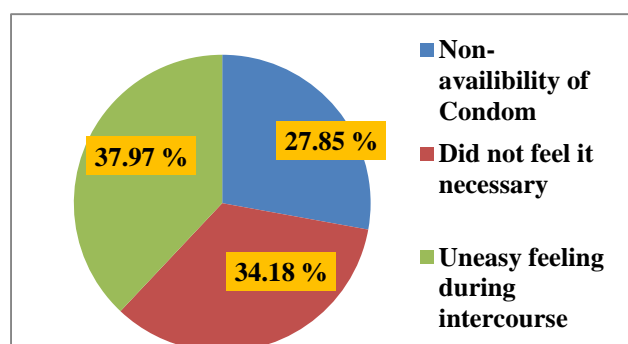
\*Statistically Significant

The Truck Driver who had exposure with CSW more than five times in the last 6 months were found to be more careless regarding using condoms while having intercourse with the CSW's. While those truck drivers who had exposure for less than 5 times in last 6 months were found to be more careful while using Condoms. Odds ratio was 2.73 i.e. odds of using condom was 2 times less in truck driver who had more than 5 time CSW exposure as compare to those who had less than 5 times CSW exposure in the last 6 months. Chi square test was applied and it was found to be significant.

Health seeking pattern of those who had STD in the Past, revealed that nearly one fourth did not seek any treatment (Figure 2). Of those who sought help (69 %), 49 % went to Government Hospital. The rest either resorted to home remedies or other forms of treatment. Health seeking behavior indicated that, though 49 % of the truck drivers sought professional medical aid in case of STD, still the rest of them (51 %) were not likely to get proper care. They could also be potential carriers of infections to their spouses and others. Figure 3 shows that the Distribution of Respondent according to reason for not using condom during encounter with CSW, most of the reasons were non availability of condom, did not feel it necessary and uneasy feeling during intercourse.



**Figure 2. Health seeking behavior among long distance truck driver.**



**Figure 3. Distribution of respondent according to reasons for not using condom during encounter with CSW.**

## DISCUSSION

The study conducted on 251 long distance truck drivers who halted at road side group of “*Dhabas*” at 3 exits ways of Bhopal City, M.P. The prevalence of STI related symptoms in the truck driver was found to be 21.51 %. In our study the mean age of the truckers was 38 years with the range of 18-63 years. whereas in the findings of Pandey et al., the median age of truckers was 30 years, with a range of 18–70 years and other findings of Baishali et al., who reported the mean age of transport workers to be 31 years (range 17–66 years) on the Siliguri–Gawhati highway in India.<sup>4,13</sup>

In the study 27.5 % of the truckers were illiterate which was similar to the findings of the study of Baishali et al., which reported illiteracy of 28 % among transport workers.<sup>13</sup>

Condoms are an effective prevention method of any STI's other than HIV because some STI's infection may increase a person risk of acquiring HIV, Preventing STI's may be effective in reducing HIV incidence. In our study we found that 86.85 % of the truck driver had exposure of CSW at least once in a life time and out of the total truck drivers (n=251), 49 % (n=123) of them had visited the Commercial sex workers in last 6 months. 64.22 % (n=79) of them don't use condom regularly. Singh et al have reported that though 62 % of truck drivers had sexual intercourse with CSWs only 25 % used condom regularly.<sup>14</sup> In a survey carried out by Ahmed SI in 1992, 82% of truck drivers reported CSW exposure and none of them had used condoms.<sup>15</sup> Bansal RK in 1995, reported that 88.6 % had visited CSWs.<sup>16</sup>

Mishra et al., in their study in 1998 found 80 % of truck drivers visited commercial sex workers and of these 75 % had either never used a condom or had used it very irregularly.<sup>17</sup> Manjunath JV et al., in their study in 2000 found that 66 % of truck drivers had visited commercial sex workers and 60.5 % had never used a condom. Only consistence and correct use of condoms offers effective prevention against STI's.<sup>12</sup> Condom education and promotions should therefore be integrated with other HIV prevention strategies to address a range of behaviors in truck drivers.

We found the highly significant relationship between the number of days spent outside home and exposure with commercial sex workers. Truck drivers who stayed away from home on an average of more than 1 week has more exposure of CSW while of those who stay less than a week away for home. Similar finding were found in study of Chaturvedi et al., in 2006, truck drivers who were away from home for more than 20 days were 15 times more likely to have exposure to commercial sex workers.<sup>18</sup> This is probably due to the fact that they spent a long duration away from their regular sex partners. Most of the truck drivers in our study gave the history of CSW exposure along the road side *Dhabas* in highway.

In our study we found some mix responses on asking the reasons for not using condoms while having sex with CSW these were non availability, uneasy feeling (decrease pleasure) or unnecessary similar to the finding of study done by Pandey A et al., in 2012 and McCree DH et al., in 2010.<sup>4,19</sup> Program targeted on STI's should not only encourage condom use, but also make sure of the availability of the condoms through putting a vending machine in the *Dhabas* which is located along the highways.



The health seeking behavior among truck drivers indicate that they tend to seek health care facilities only when the disease progresses or else they prefer to seek cures from home remedies or unqualified practitioners who are more accessible. Truck drivers are the itinerant personals, it is hard to for them to seek regular health checkup due to their busy schedule and weeks long round trips. A targeted intervention should be approached to make them avail the health care facilities periodically and regularly.

### Limitations

The helpers who also travels with the long distance truck drivers were excluded by the design making findings of this study to be applicable only for the drivers and not for the helpers.

### CONCLUSION

Constant effort is required for positive behavior changes among long distance truck drivers. Effort like availability of condoms in the high risk group settings, awareness among truckers about being at risk of acquiring STI & HIV are required to make. Drivers should be made aware that they must use condoms with their partners (regular & non regular) to protect themselves as well as their spouse. Promotion of condom usage by truck drivers by involving transport company owners, truck drivers unions, NGOs etc. Ensuring easy availability of condom. Research is regularly needed to find effective strategies to persuade truck drivers to change their hazardous sexual behavior.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

### REFERENCES

1. National AIDS Control Organization (NACO), Ministry of Health & Family Welfare, Government of India. Targeted intervention for truckers: Operational guidelines, NACP III. New Delhi: NACO; 2007.
2. Pandey A, Benara SK, Roy N, Sahu D, Thomas M, Joshi DK, et al. Risk behaviour, sexually transmitted infections and HIV among long-distance truck drivers: a cross-sectional survey along national highways in India. *AIDS*. 2008;22(5):S81-90.
3. Bryan AD, Fisher JD, Benziger TJ. Determinants of HIV risk among Indian truck drivers. *Soc Sci Med*. 2001;53:1413-26.
4. Pandey A, Mishra Rm, Sahu D, Benara Sk, Biswas M, Sengupta U, et al. Heterosexual risk behaviour among long distance truck drivers in India: Role of marital status. *Indian J Med Res*. 2012;136(7):44.
5. Lichtenstein B, Hook EW, Grimley DM, St Lawrence JS, Bachmann LH. HIV risk among long-haul truckers in the USA. *Cult Health Sex*. 2008;10:43-56.
6. Alam N, Rahman M, Gausia K, Yunus MD, Islam N, 3. Chaudhury P, et al. Sexually transmitted infections and risk factors among truck stand workers in Dhaka, Bangladesh. *Sex Transm Dis*. 2007;34:99-103.
7. Chen XS, Yin YP, Gong XD, Liang GJ, Zhang WY, Pomeroy G, et al. Prevalence of sexually transmitted infections among long-distance truck drivers in Tongling, China. *Int J STD AIDS*. 2006;17:304-8.
8. Sunmola AM. Sexual practices, barriers to condom use and its consistent use among long distance truck drivers in Nigeria. *AIDS Care*. 2005;17:208-21.
9. Wong WC, Tam SM, Leung PW. Cross-border truck drivers in Hong Kong: their psychological health, sexual dysfunctions and sexual risk behaviors. *J Travel Med*. 2007;14:20-30.
10. International Labour Organisation. Report and analysis of "A Truck Driver's Life: Working Conditions and Sexual Health". HIV and Long-distance Transport in Paraguay. Santiago: International Labour Organisation; [Accessed January 10, 2015]. [http://www.ilo.org/wcmsp5/groups/public/@ed\\_protect/@protrav/@ilo\\_aids/documents/publication/wcms\\_184517.pdf](http://www.ilo.org/wcmsp5/groups/public/@ed_protect/@protrav/@ilo_aids/documents/publication/wcms_184517.pdf).2012.
11. Bal B, Ahmed SI, Mukherjee R, Chakraborty S, Niyogi SK, Talukder A, et al. HIV infection among transport workers operating through Siliguri-Guwahati national highway, India. *J Int Assoc Physicians AIDS Care (Chic)*. 2007;6:56-60.
12. Manjunath J, Thappa D, Jaishankar T. Sexually Transmitted Disease and Sexual Lifestyle Of Long-Distance Lorry Drivers — A Clinical-Epidemiological Study In South India. *International Journal of STD AIDS*. 2002;13:612-17.
13. Baishali B, Iftikar AS, Mukherjee R, Chakraborty S, Kumar NS, Arunangshu T, et al. HIV infection among transport workers operating through Siliguri-Guwahati national highway, India. *J Intl Assoc Physicians AIDS Care*. 2007;6:56-60.
14. Singh YNK. Singh R, Joshi GK, Rustagi, Malaviya AN. HIV infection among long-distance truck drivers in Delhi, India. *Journal of Acquired Immune Deficiency Syndrome*. 1993;6:323.
15. Ahmed SI. Truck drivers as a vulnerable group in North East India. In: Aggarwal OP, Sharma AK and Indrayan. *A HIV/AIDS Research in India*, NACO, Ministry of Health & Family Welfare, Govt. of India, 1997, 497.
16. Bansal RK. Truck drivers and risk of STDs including HIV. *Indian J Community Med*. 1995; 20(1-4):28-30.
17. Mishra R. STD and HIV/AIDS: A KAP Study Among Truck Operators. *Health Millions*. 1998;224(5):11-3.
18. Chaturvedi S, Singh Z, Banerjee A, Khera A, Joshi RK, Dhrubajyoti D. Sexual Behaviour Among Long Distance Truck Drivers. *Indian J Community Med*. 2006;31(3).

19. McCree DH, Cosgrove S, Stratford D, et al. Sexual and Drug Use Risk Behaviors of Long-Haul Truck Drivers and Their Commercial Sex Contacts in New Mexico. *Public Health Reports*. 2010;125(1):52-60.

**Cite this article as:** Thakur A, Toppo M, Lodha R. A study on sexual risk behaviors of long-distance truck drivers in central India. *Int J Res Med Sci* 2015;3:1769-74.