International Journal of Health Sciences and Research
www.ijhsr.org ISSN: 2249-9571

Original Research Article

Prevalence of Symptomatic Reproductive Tract Infections/Sexually Transmitted Infections in a Rural Community Adjacent to Truck Stops Located Near Chennai, Tamil Nadu

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Received: 04/02/2016 *Revised: 19/02/2016* *Accepted: 23/02/2016*

ABSTRACT

Background: In order to estimate the prevalence of symptomatic Reproductive Tract infections/Sexually transmitted infections in a rural community adjacent to truck stops, a survey was undertaken by National Institute of Epidemiology, ICMR, and Chennai.
Methodology: The rural area, which is about 55 kms, from Chennai city near 2 major truck stops namely, Santhavellore and Sendhamangalam, covering 25 villages with a population of 37,000 was considered for the study. The villages were divided into 3 parts namely, the ones which were situated at a distance of less than 3 kms, 3 kms to 6 kms and beyond 6 kms and up to 10 kms. The sample size was calculated based on Probability Proportional to Size (PPS) sampling. Seven villages with an eligible population of 5,279 in 15 to 49 years of age group formed the sample size. Order of questioning was framed as nil sensitive, less sensitive and sensitive. The data was collected between July 2003 and 5th July 2004, using semi-structured interview schedule with 3 forms; all the eligibles were asked questions on their health related problems and details on their treatment seeking behavior. The identified symptomatic RTI/STIs were referred to nearest Government health facility where arrangements were made in advance for the syndromic management of their symptoms. All the data were entered and analysed in SPSS version 11. We have used descriptive analysis and chi square linear trend analysis.
Results: The population of 5,279 were distributed as 2,402 up to 3 kms radius from the truck stops; 1,304 from a radius of 3 kms to 6 kms and 1,483 beyond 6 kms and up to 10 kms. Among them 699 (13.2%) were reported with RTI/STI symptoms. They were 350 (14.6%) from a radius of less than 3 kms, 189 (13.6%) from, 3kms to less than 6 kms and 160 (10.8%) from beyond 6 kms to 10 kms distance from the truck stops. The chi-square trend analysis showed, that nearby villages had a significantly higher prevalence of symptomatic RTIs/STIs among the respondents than the villagers who were residing in far off villages (P<0.001).
Conclusions: Thus it is reported from the survey conducted in 7 villages near the 2 major truck stops, that nearer to the truck stops the prevalence of symptomatic RTIs/STIs was higher and away from the truck stops it was found to be decreasing, which showed the risky nature of truck stops.

Keywords: Reproductive tract infection, sexually transmitted infection, RTI, STI, Rural community.

INTRODUCTION

Sexually transmitted infections (STIs) are a major public health problem worldwide, particularly in developing countries where they collectively rank among the five most important causes of healthy productive life lost. [1] Reproductive tract infections (RTIs) affect the health and social well being of women, particularly those in the reproductive and economically

most productive age groups, and their off-springs. [2] Globally, prevalence and incidence estimates of selected curable STIs have a very high range. [3] The studies conducted in India indicate high prevalence of RTIs. [4] Reproductive tract infections (RTIs)/sexually transmitted infections (STIs) are recognized as public health problem and rank second as the cause of healthy life lost among women of reproductive age after maternal morbidity and mortality in developing countries. [5]

Evidence in India and elsewhere shows that the community of truckers is vulnerable to STIs and HIV due to a higher prevalence of risky sexual behaviour, which results from a variety of social and economic factors as well as their work patterns. Reportedly, close to 36% [6] of truckers are clients of sex workers and 15-20% [7] of clients appear to be truckers. A large number of FSWs operating on the highways are from villages nearby and offer sex to increase their income. Lack of information for self-protection among these women is a concern. They may have multiple sexual partners, including female sex workers (FSWs) on the highways, or have other fixed partners en route or at places where they stop for rest or food. [8]

With an aim to estimate the prevalence of symptomatic Reproductive Tract infections/Sexually transmitted infections in a rural community adjacent to truck stops, a survey was undertaken by National Institute of Epidemiology, ICMR, and Chennai.

MATERIALS AND METHODS

Study site and population

The study area was situated at about 55 kms from Chennai city on National Highway number 4 covered 25 villages with a population of about 37,000, situated adjacent to 2 major truck stops namely, Santhavellore and Sendhamangalam, in a radius of 10 kms distance from the truck stops. The villages were divided into 3 parts namely, the ones which were situated at a distance of less than 3 kms distance, 3 kms to 6 kms and beyond 6 kms and up to 10 kms. The unit of study was village and the sample size was calculated based on Probability proportional to size (PPS) sampling. The eligible population was between 15 and 49 years of age. Seven villages namely Mambakkam, Kunnam, Santhavellore, Pappankuzhi, Sendhamangalam, Ramanujapuram and Madhuramangalam were selected as sample villages. These seven villages had an eligible population of 5,279.

Data collection

Semi structured interview schedules were used for collecting data from each household. Form 1 had census data which covered selection of the eligibles in each household; Form 2 focused on general complaints of the children, men and women of the household during the past 1 year and action/s taken for the complaints. Form 3 would report about their complaints related to RTI/STI and awareness of STI and HIV/AIDS. Order of questioning was framed as nil sensitive, less sensitive and sensitive, to avoid more refusal/non-response and for better co-operation. We had both male and female field investigators and the interviews were gender specific. Before the start of the survey, the interviewers were given training for doing census and data collection. For all the selected 7 villages, mapping was done followed by giving unique door number for each household. Pre-testing of the tools were done in 25 households and after appropriate editing of the tools, main survey was initiated.

First door to door survey was conducted by trained male and female field investigators from 16th July 2003 to 5th July 2004, by using semi-structured interview schedule. Before collecting the data, written informed consent was obtained from each respondent. If the respondents were minors (15-18 yrs.) ascent was obtained from the minors and consent from their respective natural guardians. Door to door census was carried out followed by identification of eligibles. All the eligibles were asked

questions on their health problems and details on their treatment seeking behavior. Then they were administered Form 3, which had questions on RTI/STI. The identified symptomatic RTI/STIs were referred to nearest Government health facility where arrangements were made in advance for the syndromic management of their symptoms. During the field visits the investigators carried minimum medicines (paracetamol and multivitamins) for giving to the needy persons belonging to the local community.

Data analysis

All the data were entered and analysed in SPSS version 11. We have used descriptive analysis and chi square linear trend analysis.

Ethics statement

The study protocol was approved by the Institutional Human Ethics committee of NIE.

RESULTS

Out of the total 5279 eligible population, 2449 (46.4%) were males; 1721 (32.6%) were in the age group of 20 to 29 years; 1874 (35.5%) had studied up to 10th std.; 3506 (66.4%) were married (Table 1).

Total eligible population was 5,279 who were distributed as 2,402 up to 3 kms radius from the truck stops; 1,304 from a radius of 3 kms to 6 kms and 1,483 beyond 6 kms and up to 10 kms. In this there were 699 (13.2%) prevalent RTI/STI symptomatics reported. They were 350 (14.6%) from a radius of less than 3 kms, 189 (13.6%) from, 3 kms to less than 6 kms and 160 (10.8%) from beyond 6 kms to 10 kms distance from the truck stops (Table 2). The chi-square trend analysis showed a significant relationship ($p<0.001$) among the respondents, nearer to the truck stops had a higher prevalence rate and away from the truck stops, had decreased prevalence rate.

Table 1: Demographic details of the respondents

S.No.	Variables	No.	%
1.	**Age Group in years**		
	15 – 19	924	17.5
	20 – 29	1721	32.6
	30 – 39	1373	26.0
	40 – 49	1261	23.9
2.	**Literacy status**		
	Illiterates/can read & or write	1652	31.3
	Primary (1st to 5th Std)	961	18.2
	Middle (6th to 10th Std)	1874	35.5
	11th and 12th Std	486	9.2
	Technical/ Degree and above	306	5.8
3.	**Marital status**		
	Unmarried	1579	30.0
	Married	3506	66.4
	Sep/divorced	44	0.8
	Widowed	150	2.8

Table 2: Prevalence of symptomatic RTI/STIs in the rural community adjacent to truck stops

Villages	Distance from Truck stops	Estimated population	Eligibles covered	Symptomatic RTIs/STIs	%	
Santhavellore	Less than 3 kms	3670	1910	282	14.8	
Pappankuzhi		600	250	30	12.0	14.6
Sendhamangalam		916	242	38	15.7	
Mambakkam	3 to 6 kms	1063	572	80	14.0	
Kunnam		1743	822	109	13.3	13.6
Ramanujapuram	More than 6 kms to 10 kms	1301	654	73	10.5	
Madhuramangalam		1655	829	87	13.2	10.8
Total		**10,948**	**5,279**	**699**		**13.2**

DISCUSSION

Men and women working in truck stands may be at higher risk for STI/HIV because of possible sexual mixing among truck drivers, sex workers, and those persons working/living in truck stand setting. [9-11] STIs/RTIs can result in increased susceptibility to HIV in addition to pelvic inflammatory diseases, infertility, adverse pregnancy outcomes. [12] District Level Household Survey-3 survey [13] reports 18.3% prevalence of symptoms of RTI/STI in India. Prevalence of all RTIs ranged from 11% to 72% in the self-reported community-based studies, [14] whereas 17–40% in studies which have used clinical examination among self-reported symptomatic women. In the present study the symptomatic RTIs/STIs prevalence was found to be 13.2%.

Limitation: This study tells us about the symptomatic prevalence of RTIs/STIs which were collected verbally of the sample

villages and not the laboratory tested RTIs/STIs.

CONCLUSION

It is reported from the survey conducted in 7 villages near the 2 major truck stops, that nearer to the truck stops the prevalence of symptomatic RTIs/STIs was higher and away from the truck stops it was found to be decreasing, which showed the risky nature of truck stops.

ACKNOWLEDGMENTS

The authors thank Prof. V.I. Mathan, Ex. ICMR Chair of Epidemiology for all his contributions towards the conduct of this study and all the field staff who were involved in data collection and the statistical assistants for their involvement is statistical analysis. They also thank Mr. Paul A. Tamby for the data management of the survey. The authors thank all the respondents of the villages for their responses, and the state government Health department staff for their continued support.

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How to cite this article: Subramanian T, Elangovan A, Gupte MD. Prevalence of symptomatic reproductive Tract infections/sexually transmitted infections in a rural community adjacent to truck stops located near Chennai, Tamil Nadu. Int J Health Sci Res. 2016; 6(3):1-5.

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