Research Article

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Proportion of smokers and its determinants among migrant workers in Mysore, Karnataka, India

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ABSTRACT

Background: The World Health Organization (WHO) estimated that about 4 million deaths worldwide annually are attributable to tobacco use. There are more than 20 million of construction workers in India at present. The unhygienic situation, working pattern, absence of any recreational activity and company of friends force them to indulge in various abuse activities. The objective of the studies was proportion of smokers in migrant workers in Mysore city and to know the determinants of smoking among migrant workers in Mysore city, India.

Methods: A cross-sectional study design was conducted among 375 migrant workers in Mysore city, from 01.08.2105 to 01.10.2015. "Direct interview method" of primary source of information technique was used for data collection. A pre-tested semi-structured was used to meet the objectives of the study.

Results: The overall proportion of smokers was 35%. The mean age of initiation of smoking was 20.35 years and the reason was peer pressure, duration of smoking was 12.46 years. 46% of smokers had intention to quit smoking, others gave a reason as addiction (67.2%) for not quitting. Significant association was found between tobacco use and socioeconomic parameters such as age group, marital and socioeconomic status. It was also found that workers who were migrants for more than 20 years had significantly higher proportions of smokers.

Conclusions: The proportion of smokers was 36.2%. Significant determinants of smoking were those aged more than 40 years, those of lower socio economic status, those married and more than 20 years as a migrant worker.

Keywords: Smoking pattern, Determinants of Smoking, Migrant workers

INTRODUCTION

The World Health Organization has identified tobacco smoking and binge alcohol drinking as two of the leading risk factors for premature mortality worldwide. ^{1,2} In India, 14% per cent of the population above age 15 smoke tobacco (24% for men and 3% for women). ³ Smoking is already responsible for about 1 in 5 deaths for men and 1 in 20 deaths for women at ages 30–69. ⁴ There are currently about 1.1 billion smokers in the world, 70% of whom are in low-income countries. There are estimates that over the next 50 years, 450 million may die because of tobacco use. ⁵ An estimated 150 million of the young people use tobacco. ⁶ The World Health Organization (WHO) estimated that about 4 million

deaths worldwide annually are attributable to tobacco use, a number expected to more than double by 2030.⁷ Tobacco related deaths are increasing in India, and account for approximately a sixth of the world's tobacco related deaths. It is expected that by the year 2030 about 80% of these deaths will be in developing countries.⁸ Smoking is responsible for a large number of premature deaths in India. The majority of smoking related deaths in India occur in the prime working age group of 15-59 years.⁹ In India tobacco consumption in various forms is the single most important avoidable factor in the growth of non-communicable diseases. It has also been observed that the Tobacco demand in India has remained high and has shown no signs of declining. The 52nd round of the NSS on Morbidity and Private Health Expenditure,

conducted between June 1995 and June 1996 by the National Sample Survey Organization (NSSO) of the Government of India, collected information on current regular smoking and chewing of tobacco for all individuals aged 10 years and above. The survey estimated tobacco use prevalence among males to be at 51.3% and among females at 10.3%.

Construction sector is ever growing industry. The construction industry has registered enormous growth worldwide during last few decades. There are more than 20 million of construction workers in India at present. Migration from different states to other states in India has now become so rampant that its impact is felt in every aspect of life. Very few studies have explored the problems of construction workers even though they are more susceptible to various myriad of occupational hazards. Majority of employees in the construction sector are aged between 15 and 45, live in single sex quarters, and migrate to their place of work. Hence, tobacco and alcohol abuse or other risk-taking behavior is quite common in any area of this sector. Workers in this industry need to do heavy physical work while living in shabby environment. The unhygienic situation, working pattern, absence of any recreational activity and company of friends force them to indulge in various abuse activities.

There are many misconceptions regarding the tobacco and alcohol, that it helps increase concentration, suppresses appetite, reduces anxiety and tension, causes skeletal muscle relaxation and induces feeling of pleasure. With this background an attempt is made.

The objective of the studies was proportion of smokers in migrant workers in Mysore city and to know the determinants of smoking among migrant workers in Mysore city, India.

METHODS

To assess the proportion of smokers and determinants of smoking among the construction workers, a crosssectional study design was chosen and the maximum inflated sample size is 363 rounded off to 375, which is calculated using estimation technique with prevalence of smoking in migrants as 21.6% with 5% level of significance and precision 20%. The sampling frame considered for the study was all migrant sites in Mysore city during the study period 6th January, 2015 to 31st July, 2015. Simple random technique was used for selection of construction sites and in those sites all the eligible workers were considered for the study. Construction sites were selected till the required sample size was met. "Direct interview method" of primary source of information technique was used for data collection. Informed written consent was obtained from each study subject. A pre-tested semi-structured and structured questionnaire was used to meet the objectives of the study. An inclusion criterion was all migrant construction workers who give consent.

RESULTS

Socio-demographics: out of 375 workers, majority were males (77%) nearly half (51.2%) workers belonged to the age group of 21-39 years. The mean age of workers was 30 years. 78% of the workers were unmarried, most of the workers (97%) were following hindu religion. Nearly 63% workers were illiterate. Out of 375 migrants, majority (34%) of workers had migrated from Andhra Pradesh, followed by West Bengal (17.8%) and Orissa (10.4%) (Table 1). most of them stayed within premises of construction site. The mean working hours per day is 10.22 hours. The mean years as a migrant worker was 6.54 years mean number of migrant states travelled were 2.7.majority had no night shift (79.8%).

Table 1: Socio-demographic profile of the study subjects.

Parameters	Subcategory	No. of workers (%) N=375	
Age group (years)	≤20	93 (24.8)	
	21-39	192 (51.2)	
	≥40	90 (24)	
Marital status	Unmarried	83(22.1)	
	Married	292(77.9)	
Religion	Hindu	365(97.3)	
	Muslim	10(2.7)	
Education	PUC	18(4.8)	
	High school	57(15.2)	
	Primary school	65(17.3)	
	Illiterate	235(62.7)	
	Andhra Pradesh	127(33.87)	
	West Bengal	67(17.87)	
State of Origin	Orissa	39(10.4)	
Š	Madhya Pradesh	37(9.87)	
	Bihar	34(9.06)	
	Others	71(18.93)	
	lower lower	108(28.8)	
Socioeconomic	upper lower	185(49.3)	
Status	lower middle	72(19.2)	
	upper middle	10 (2.7)	

Smoking pattern: The overall proportion of smokers was 35% nearly two third. 85.6% smokers were smoking bidi (hand rolled). The mean age of initiation of smoking was 20.35 years and duration of smoking was 12.46 years. Among smokers 97% were smoking every day and mean money spent for smoking per week was 120.69 rupees. 46% of smokers had intention to quit smoking and majority quoted health problems as a reason for their intention to quit (82%). Among those who had no intention to quit smoking (54%) majority quoted the reason as addiction (67.2%) (Table 2).

Table 2: Smoking pattern of the study subjects.

Parameter	Subcategory	No. of workers (%)
Smoking (N=375)	Yes	131 (35)
	No	244 (65)
Type of smoking (N=131)	Bidi	112 (85.5)
	Cigarette	7 (5.3)
(14–131)	Both	12 (9.2)
Intention to quit smoking (N=131)	Yes	60 (45.8)
	No	71 (54.2)
Reason to quit smoking (N=60)	Health problems	49 (81.7)
	Lack of money	9 (15)
	Friends and family	2 (3.3)
Reason for no intention to quit smoking (N=71)	Addicted	47 (66.2)
	Pleasure	11 (15.5)
	Working env	4 (5.6)
	Not interested	9 (12.7)

The main reason for initiation of smoking was peer pressure which was followed by without any specific reasons, relief from work tension (Table 3).

Table 3: Factors affecting initiation of smoking.

Reason for first use	Frequency	Percentage	
Company of friends/ Peer pressure	48	36.6	
Relief from work tension	29	22.1	
To keep myself awake	3	2.3	
Family tension	3	2.3	
Family H/O	1	0.8	
Curiosity	4	3.1	
Increase my work performance	1	0.8	
Influenced by movies	1	0.8	
Without any specific reasons	41	31.3	
Others	1	0.8	
Total	131	100	

Table 4: Determinants of smoking among study subjects.

Parameter	Sub category	Smoking		Chi square	n valua
		Yes	No	value	p value
Age group	≤20	16 (17.2%)	77 (82.8%)	20.925	p<0.001*
	21-39	71 (37%)	121 (63%)		
	≥40	44 (48.9%)	46 (51.1%)		
Marital status	Unmarried	21 (25.3%)	62 (74.7%)	4.351	0.037*
	Married	110 (37.7%)	182 (62.3%)	4.331	
Education	PUC	6 (33.3%)	12 (66.7%)	0.463	0.927
	High school	19 (33.3%)	38 (66.7%)		
	Primary school	25(38.5%)	40 (61.5%)		
	Illiterate	81 (34.5%)	154 (65.5%)		
	Lower lower	51 (47.2%)	57 (52.8%)	10.786	0.013*
Socio Economic Status	Upper lower	53 (28.6%)	132 (71.4%)		
	Lower middle	23 (31.9%)	49 (68.1%)		
	Upper middle	4 (40%)	6 (60%)		
Night shift	Yes	31 (40.8%)	45 (59.2%)	1.438	0.230
	No	100 (33.4%)	199 (66.6%)		
Working hours	<8	11 (24.4%)	34 (75.6%)	2.475	0.116
	>8	120 (36.4%)	210 (63.6%)		
Years as migrant worker	<5	67(27.3%)	178 (72.7%)	21.932	p<0.001*
	6-10	29(42.0%)	40(58.0%)		
	11-15	7 (50.0%)	7 (50.0%)		
	16-20	22 (57.9%)	16 (42.1%)		
	>20	6 (66.7%)	3 (33.3%)		

Significant association was found between tobacco use and socio-economic parameters such as age group, marital and socio economic status. The tobacco use was significantly more in more than 40 years of age (p<0.001). The tobacco use was significantly more in the married workers (p=0.037). Those who are of lower socio

economic status had significantly higher prevalence of smoking (p=0.013). It was also found that workers who were migrants for more than 20 years had significantly higher proportions of smokers (p<0.001) (Table 4).

DISCUSSION

It is clear from this cross-sectional study that smoking is highly prevalent among construction workers. The reasons underlying this may be low socio economic status, occupation involving hard labour and poverty coupled with ignorance. Several studies have documented a positive relationship between tobacco consumption and low socioeconomic status. One major factor for heavy tobacco use in this group may be the fact that they were doing night shift work. The educational level of the construction workers was found to be very low. Consistent with earlier studies, this study found that lower the education, higher the prevalence of tobacco consumption, while overall tobacco use falls as education level rises. NFHS (2005) showed that 77.8% of tobacco use is seen among illiterates as compared to 52.9% among literates.⁸ A study on smoking prevalence among men in Chennai (India) in 1997 showed that the highest rate is found among the illiterate population (64%).¹¹ Hence, education is an important factor to be considered in any tobacco control programme. According to NFHS-3 smoking tobacco use in Karnataka, among men is 27.9%, 28.7% in rural and 26.7% in urban. In a prevalence survey of tobacco use in Karnataka and Uttar Pradesh, the overall prevalence of 'ever use' of any kind of tobacco was 29.6% in Karnataka and 34.6% in Uttar Pradesh.¹² The average age at initiation of tobacco use was 20.87 years. Those who started with addiction are more common in the 11-20 years (53.7%) and 21-30 years (38.6%) age-groups. According to NFHS-3, 2007, increase in tobacco use was particularly large among young males aged 15-24 years and among low wealth index.8 This data reveals the failure of tobacco control programmes in the vulnerable section of the community.

Another study that was conducted amongst construction laborers in Mumbai, found that those who regularly consumed alcohol and tobacco were 14.65% and 50.48%, respectively. Smoking of tobacco was found to be the most common type of this adverse habit in males while its chewing was found to be more common in females. 14

Similarly, in another study that was conducted amongst migrant labourers, it was seen that only 1.45 per cent (n=4) of the respondents had never ever smoked or consumed tobacco .Almost one third of the study population, that is, 33.09 per cent (n=91) had started smoking at the age of 14 or 15 years while 28.36 per cent (n=78) had started at 16 or 17 years. 15

Tobacco use in India has been higher among males than among females in India. However, the male-female gap was lower in the case of use of smokeless tobacco. The use of smokeless tobacco was equally high among

middle-aged and elderly males and females. This indicates that adult females in India were as vulnerable as males, and at a high risk of using smokeless tobacco, especially in the higher age groups. With an increase in age, the odds of using tobacco significantly increase in India. Elderly and middle-aged females had significantly higher odds of consuming every type of tobacco. Smoking and dual use of tobacco among males were more common in the younger and middle-aged adults.¹⁶ Age has been found to be an important determinant of tobacco use in earlier studies. ^{17,18}Tobacco use was found more common among the uneducated people in the country. Education was one of the most important determinants of tobacco use irrespective of the type of use. Uneducated males and females in India were at a higher risk of using tobacco. This can often be attributed to less knowledge and awareness among the uneducated people. Being poor was significantly associated with a higher risk of use of smokeless tobacco among males, and use of smokeless tobacco and dual use of tobacco among females in India. The relation between these socioeconomic markers and tobacco consumption is similar to relations observed in developed countries and other studies done in previous decades in India. 17,19

CONCLUSION

The proportion of smokers among migrant construction workers was 36.2%. Significant determinants of smoking were those aged more than 40 years, those of lower socio economic status, those married and more than 20 years as a migrant worker.

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