

Knowledge, attitude and practices on anti-tobacco measures imposed under the Cigarette and Other Tobacco Products Act among adult males in rural areas of Tamil Nadu, India

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Abstract

Assessment of knowledge and attitude of adult men towards anti-tobacco measures will help us further in strengthening of regulatory activities and thereby reducing the prevalence of tobacco use. The objective of the present study was i) to assess the knowledge of men towards anti-tobacco measures imposed under Cigarette and Other Tobacco Products Act 2003 and its association with their socio-demographic factors; and ii) to study the attitudes and practice of men towards anti-tobacco measures imposed under COTPA 2003. A cross-sectional study was done among 714 males aged 18 years and above in Vadagarai village of Thiruvallur district of Tamil Nadu and interviewed with pretested questionnaire. The study was done during March to September 2009. Majority of them were aware and favoring the act, *i.e.* 96.2% of the study population were aware of the COTPA 2003 and 95.24% were favoring the act. Most of them felt that anti-tobacco measures did not have any impact among tobacco users. Preventive steps like behavioral change communication, fiscal measures and further more strong enforcement of the act will be needed to decrease the prevalence further.

Introduction

Tobacco use is a serious public health problem. Tobacco is a risk factor for six of the eight leading causes of deaths in the world.¹ Every eight seconds someone, somewhere in the world, dies as a result of tobacco use. Around five million people die globally every year due to the effect of tobacco and this is likely to exceed eight million by 2030.² The International Classification of Diseases (ICD-10) has recognized that tobacco dependence is a disease.³ Tobacco use causes a wide range of major diseases which impact nearly every

organ of the body. These include several types of cancers, coronary heart disease, cerebrovascular disease and lung diseases.⁴ Research has generated scientific evidence that second-hand smoke causes the same problems as direct smoking, including cardiovascular disease, lung cancer, and lung ailments such as bronchitis and asthma attacks.⁵⁻⁸ World Health Organization (WHO) recommends five policies for controlling tobacco use: smoke-free environments; support programmes for tobacco users who wish to stop; health warnings on tobacco packs; bans on the advertising, promotion and sponsorship of tobacco; and higher taxation of tobacco.⁹ In India, tobacco consumption continues to grow at 2-3% per annum.¹⁰ India's anti-tobacco legislation, first passed at the national level in 1975, was largely limited to health warnings and proved to be inefficient. The adoption of a WHO Framework Convention on Tobacco Control (WHO FCTC) by the World Health Assembly on 24th May 1999 was an important landmark to achieve comprehensive tobacco control worldwide.¹¹ India was the 7th country that ratified the WHO FCTC on 5th February 2004. In 2003, The Central Government passed the Cigarettes and Other Tobacco Products Act (COTPA) applicable to all tobacco products.¹² Maximum number of violations were recorded in Tamil Nadu and ranks first among the states. A total of 9,648 people have been fined and a whopping Rs 11,42,950 collected as fine from the southern state for violating the ban on smoking in public places in effect since October 2nd 2007.¹³ Due to the scarcity of studies regarding the awareness of COTPA, this study was done to assess the knowledge, attitude and practices of adult males towards anti-tobacco measures imposed under the act.

Materials and Methods

A cross sectional study was done among adult males aged 18 years and above in Vadagarai village in Thiruvallur district of Tamil Nadu.

The sample size was calculated on the basis of 35% prevalence rate of smoking in rural area according to NFHS-3 survey with allowable error 10%, sample size came to 714.¹⁴ Vadagarai HSC was chosen randomly from Naravarikuppam block Primary Health Centre. In order to get 714 men aged 18 years and above, it was decided to survey 445 households in Vadagarai subcenter, with a total of 1581 households with population of 2539 men above 18 years. The households were sampled by systematic random sampling. The sampling interval was 4 and the first household was selected randomly choosing a number within the sample interval. The next household was

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Key words: tobacco, COTPA, socio-demographic factors, regulatory activities.

Contributions: KA, RD, data collecting and analyzing; GM, manuscript writing.

Conflict of interests: the authors declare no potential conflict of interests.

Acknowledgements: we are thankful to those who have participated in the study.

Received for publication: 15 August 2013.
Revision received: 19 September 2013.
Accepted for publication: 25 September 2013.

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Healthcare in Low-resource Settings 2014; 2:1883
doi:10.4081/hls.2014.1883

identified by adding the sampling interval with the first randomly chosen number and only one adult male was interviewed in each house. If there were more than one adult male in the same house, the participant was randomly chosen using lot system and then interviewed.

A semi-structured questionnaire was used. It was translated into local language, pretested and standardized. It consisted of three parts of which Part I deals with questions related to socio-demographic profile, Part II deals with questions regarding their knowledge and attitude towards anti-tobacco measures imposed under COTPA 2003 and Part III deals with questions regarding their practice towards anti-tobacco measures. The interview was conducted in the house of the participants by the investigators themselves.

Data entry was made in Excel software in codes and analysis was done by SPSS software. Levels of awareness, attitude and practices regarding COTPA were expressed in percentage and their association with socio demographic factors was tested for significance using chi-square test.

Results

Mean age of the sample population was 35.34±13.98 years with range of 18-85 years.

Half of them were between 18-30 years. Most of them were Hindus (82.5%). Literacy rate of the sample population seems to be high (88.09%). Half of the participants were from upper lower socio economic group (49.01%) and about two third (76.05%) were unskilled, semi-skilled and skilled laborers (Table 1).

Awareness about COTPA

Analysis of the study population shows that 96.2% were aware of the COTPA 2003, the awareness regarding anti-tobacco measures showed that 96.2% knew that smoking was prohibited in public place and 88.0% knew that there was an age limit below which sale of

tobacco products was banned. Source of information were newspaper (36.39%), television (21.83%), radio (10.77%), friends (4.37%) and a combination of all (26.64%) (Tables 2 and 3). There was a statistically significant association between the level of education and awareness about the act and its regulations ($P < 0.0001$) (Table 4).

Smokers and COTPA

Out of 714 study population, 262 (36.7%) were smokers. Among smokers 92.4% were aware of the act and 88.5% of smokers were favoring the ban on smoking in public places. About violation of act among smokers

($n=262$), 8.0% were fined for smoking in public place. Regarding the effect of COTPA among smokers ($n=262$), 65.8% were of the opinion that the act did not change their smoking pattern, 33.8% told that anti-tobacco measures reduced their smoking habit and 0.4% quit totally due to this regulation.

Discussion

Studies done in Andhra Pradesh¹⁵ and Assam¹⁶ in India have reported awareness of COTPA as 47.5 and 45.7% respectively. Our

Table 1. Socio-demographic details of the participants.

Age	N	%	Occupation	N	%	Religion	N	%	Socio-economic status	N	%	Education	N	%
18-30	357	50	Unemployed/student	39	5.46	Hindus	589	82.5	Upper (Class-I)	13	1.82	Illiterate	85	11.91
31-40	112	16.68	Unskilled/semiskilled/skilled	543	76.05	Christians	87	12.2	Upper middle (Class-II)	87	12.18	Literate	629	88.0
41-50	123	17.23	Clerk, shop-owner, farm-owner	97	13.59	Muslims	38	5.3	Lower middle (Class-III)	160	22.40			
51-60	93	13.02	Semiprofessional/professional	13	1.82				Upper lower (Class-IV)	350	49.01			
≥61	29	4.06	Retired/old age dependent	22	3.08				Lower (Class-V)	104	14.56			

Table 2. Age group in years, their awareness of COTPA and prohibition of smoking in public place.

Age	Total (%)	Aware of COTPA	Aware about prohibition of smoking in public places	Aware about age limit for sale of tobacco
18-30	357 (50%)	351 (98.3%)	351 (98.3%)	329 (92.16%)
31-40	112 (16.68%)	107 (95.54%)	107 (95.54%)	95 (84.82%)
41-50	123 (17.23%)	118 (95.93%)	118 (95.93%)	110 (89.43%)
51-60	93 (13.02%)	91 (97.85%)	91 (97.85%)	80 (86.02%)
>61	29 (4.06%)	20 (68.96%)	20 (68.96%)	16 (55.17%)
Total	714 (100%)	687 (96.2%)	687 (96.2%)	630 (88.2%)

COTPA, Cigarette and Other Tobacco Products Act.

Table 3. Education status and awareness of COTPA.

Educational status	Total (%)	Awareness of COTPA		Awareness about prohibition of smoking in public places		Awareness about age limit for sale of tobacco	
		N (%)	P	N (%)	P	N (%)	P
Illiterate	85 (11.9%)	70 (82.4%)	<0.0001	70 (82.4%)	<0.0001	60 (70.6%)	<0.0001
Primary school	292 (40.9%)	285 (97.6%)	<0.0001	285 (97.6%)	<0.0001	260 (89.0%)	<0.0001
Middle school	237 (33.19%)	232 (97.9%)	<0.0001	232 (97.9%)	<0.0001	215 (90.7%)	<0.0001
High school	49 (6.86%)	49 (100.0%)	<0.0001	49 (100.0%)	<0.0001	44 (89.8%)	<0.0001
College/diploma	51 (7.14%)	51 (100.0%)	<0.0001	51 (100.0%)	<0.0001	49 (96.1%)	<0.0001
Total	714 (100.00%)	687 (96.2%)	<0.0001	687 (96.2%)	<0.0001	628 (88.0%)	<0.0001

COTPA, Cigarette and Other Tobacco Products Act.

Table 4. Attitude towards COTPA and anti-tobacco measures.

Variable	Attitude (%)		
	Positive	Negative	Do not know
About COTPA and its regulation	680 (95.24)	34 (4.76)	-
Implementation of ban on smoking in public places by government authorities	189 (26.5)	455 (63.7)	70 (9.8)
Pictorial health warning	189 (26.5)	427 (59.8)	98 (13.7)

COTPA, Cigarette and Other Tobacco Products Act.

study found the awareness level to be 96.2% which was far better than the above studies. Similar finding was observed in Rakesh *et al.* where it was found to be 88% among members of Panchayat raj institution, Haryana.¹⁷

Of the age group between 18-25 years, 97.8% were aware of the act and of prohibition of smoking in public places. 69.0% of the age group above 61 years were aware of the act and prohibition of smoking in public places. So, young people were more aware of the act than elders. Of the age group between 18-25 years, 92.0% was aware that there was age limit below which sale of tobacco products was banned. Of the age group above 61 years, 55.2% was aware of the age limit. So, young people were more aware of the age limit below which sale of tobacco products was banned. This finding was contradictory to the findings from Rao *et al.*¹⁵ and Sharma *et al.*¹⁶ where they found that the awareness of COTPA increased significantly with increasing age. Of literates, 98.1% were aware of the act and were aware of prohibition of smoking in public places. Of illiterates, 82.8% was aware of the act and were aware of prohibition of smoking in public places. Literates were more aware about the act than illiterates. Rao *et al.*¹⁵ and Sharma *et al.*¹⁶ have reported similar findings. Of literates, 90.3% and 70.6% of illiterates were aware of age limit below which sale of tobacco products was banned.

Analysis shows that majority of them, *i.e.* 95.24% were favoring the act; this was similar to the findings from Rao *et al.*,¹⁵ Sharma *et al.*¹⁶ and American University of Armenia¹⁸ Majority of the study population, *i.e.* 63.7% felt that measures against smoking in public places were not followed correctly. Moreover, more than half, 59.8% felt that pictorial health warning did not have any impact on smoking habit.

Among smokers 92.4% were aware of the act and most of them, *i.e.* 88.5% of smokers were favoring the ban on smoking in public places. In addition 8.0% of smokers were fined for violating the ban on smoking in public places. Regarding quitting, 33.8% of smokers reported that their smoking habit got reduced because of the anti-tobacco measures under the act. In countries with pictorial health warnings, such as Canada and Australia, these numbers were higher: more than 40% of Canadian smokers reported that the pictorial warnings have motivated them to quit smoking;¹⁹ in Australia, picture warnings have supported 62% of former smokers in their efforts to quit.¹⁹ In our study, 0.4% reported that they had totally quit smoking because of fine due to violation but majority of them, *i.e.* 56.9% reported that act did not have any impact on their smoking habit.

Conclusions

Majority of the participants were aware of the act and favoring the act. But most of them felt regulations under the act were not followed properly. Most of the smokers felt that anti-tobacco measures imposed under the act did not have any impact on their smoking status. The policy makers should consider newer options such as starting a help line for quitting tobacco to regulate the use of tobacco with consideration that most of the smokers were reluctant in quitting tobacco even after the implementation of various anti-tobacco measures under COTPA. Apart from these steps, counselling sessions have to be arranged for those tobacco users who are reluctant to quit. To conclude, the steps taken by the government bodies in the future should be strictly followed and it should be continuously monitored.

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