

## Original Research Article

# Influence of anti-tobacco advertisements on the attitude of slum dwellers about use of tobacco: a cross-sectional study from Mandya city

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### ABSTRACT

**Background:** As per the Cigarette and Other Tobacco Products Act (COTPA) rules, the anti-tobacco health spots and disclaimers are being provided by the Ministry of Health and Family Welfare, India. These advertisements are aimed at creating awareness about the ill effects of tobacco use. Mass media anti-tobacco advertising campaigns play an important role as part of a comprehensive tobacco control program and are associated with increase in smoking cessation and declines in adult tobacco use prevalence.

**Methods:** This cross-sectional study was conducted to assess the influence of anti-tobacco advertisements among slum dwellers of Mandya city. A self-structured, close-ended questionnaire was used to interview 700 slum dwellers. The questionnaire consisted of sociodemographic data, tobacco usage status, questions related to awareness about anti-tobacco advertisements, and influence of anti-tobacco advertisements on attitude toward tobacco use. Frequency distributions and percentages were examined for each item and Chi-square test was used.

**Results:** Out of 700 participants 54.5% were males and 45.5% were females. Nearly 87.7% of males and 70.2% of females had noticed the statutory warning which is shown during tobacco products' usage on television/movies. Almost 66.4% of males and 68.0% of females had a positive change in attitude toward tobacco use due to influence of anti-tobacco advertisements.

**Conclusions:** There is awareness against use of tobacco and this awareness should be used to motivate them to quit tobacco as well as to stop them from initiating tobacco use.

**Keywords:** Anti-tobacco advertisements, Attitude, Awareness, Slums

### INTRODUCTION

Tobacco is the most ordinary form of recreational drug used. Everyone knows Tobacco is bad for health but only few people, however, realize different ways in which it cause irreversible damage to one's body and mind. Use of tobacco harms almost every part of the body. Tobacco is a greater cause of death and disability than any single disease. Nearly 6 million people worldwide die due to tobacco use and leads to one death every 6 seconds each year as per World Health Organization (WHO).<sup>1</sup>

The nexus between tobacco consumption and poverty is well documented; however, the tobacco control measures are uniformly applied, without due consideration for the high-risk target group. In India, nearly 300 million people live in extreme poverty.<sup>1</sup> About 28.6% of the population consume tobacco.<sup>2</sup> Nationally representative surveys and community-based studies have shown that tobacco consumption among the poor has continued. The cyclical relationship between tobacco use among the poor and exacerbation of poverty due to tobacco related diseases is also well-documented. Health care costs involve not only direct medical costs but also indirect morbidity and mortality costs.<sup>3</sup> India is a low- and middle-income

country (LMIC). Government expenditure on health has continuously declined and public spending on health is 1.15% of gross domestic product.<sup>4,5</sup> Health expenditure is mostly out of pocket in India and it also consequently exacerbates the poverty rates due to high out-of-pocket expenditure for treatment of tobacco-related diseases. In India, socio-economic and health inequalities are rampant.<sup>6</sup> Tobacco-related diseases are a cause and consequence of poverty. It is not merely a social and cultural problem but it is also multifaceted and encompasses biomedical, economic, and geopolitical.<sup>7</sup> Tobacco use in India is projected to have devastating consequences. Tobacco control policies have the opportunity to break this vicious cycle. Tobacco control should be a top priority not only merely as a health issue but also as a poverty reduction mechanism. Effective implementation of tobacco control policies provides an opportunity for India to fulfil its commitments to meet the goals – 2030 agenda of Sustainability Development Goal of poverty reduction and good health. Despite all the efforts, tobacco consumption is a major health issue globally, and in India, one-third of the population uses tobacco.<sup>8</sup>

Media is the most important source to publicize information and create awareness among the society. The inherent health hazards of tobacco have caused government to launch anti-tobacco campaigns every year in an attempt to curb tobacco use. The First legislation in India regarding tobacco was the Cigarettes (Regulation of Production, Supply and Distribution) Act, 1975, which mandated statutory health warnings on all cigarettes packs since 1975. The anti-tobacco campaign emerged since smoking ban in public places in the year 2008. In India, anti-tobacco campaign started by the display of pictorial health warning on all tobacco products in 2008, followed by the screening of first two anti-tobacco advertisements titled 'mukesh' and 'sponge' in movie theatre and television nationwide in 2012. Two more advertisements were introduced named 'child' and 'dhuan' a year later. Many government campaigns have been issued in the interest of public health but no anti-tobacco campaign was released before 2008. It is evident that tobacco users find it extremely difficult to quit tobacco and many a time because of the lack of information about its side effects. These anti-tobacco campaigns are trying to fill this gap and motivate people to quit tobacco. Government spends 100's of crore annually for anti-tobacco campaigns every year, but this amount needs to be justified with respect of decreasing tobacco consumption rate among people.

As per the Cigarette and Other Tobacco Products Act (COTPA) rules, the anti-tobacco health spots and disclaimers are being provided by the Ministry of Health and Family Welfare, India. These advertisements are aimed at creating awareness about the ill effects of tobacco use.

Mass media anti-tobacco advertising campaigns play an important role as part of a comprehensive tobacco control program and are associated with increase in smoking cessation and declines in adult tobacco use prevalence.<sup>9</sup>

An anti-tobacco advertisement is a multidimensional stimulus: it can vary in terms of the message it conveys, in terms of the amount and type of effect it arouses, and in terms of executional properties. The dimension which has received the most attention in the literature to date has been the theme or message being communicated. The advertising literature suggests that exposure to specific messages can reinforce people's existing beliefs and affect their behaviour.<sup>10</sup>

In order to curb the growing tobacco epidemic, awareness and behavioural change is required at the mass level. Media is an important source to create awareness among the society. Literature review revealed that there is a paucity of literature regarding the role of anti-tobacco advertisements among slum dwellers. Therefore, the study aimed to assess the role of anti-tobacco advertisements among slum dwellers in Mandya city.

## METHODS

### *Study area*

The present study was conducted at slums of Mandya city.

### *Type of study*

A cross-sectional study.

### *Study period*

The present study was conducted from 1st March 2019 to 15th March 2019.

### *Study population*

A cross-sectional study was conducted among the slum dwellers of Mandya city. There are 24 notified slums in Mandya city as per Karnataka slum development board statistics 2016. The total populations of these slums were 18452.

### *Inclusion criteria*

Slum dwellers of Mandya city and  $\geq 18$  years of age of both sex.

### *Exclusion criteria*

Slum dwellers who don't give consent for the study, who were not present at home at the time of interview and those who were very sick to be interviewed.

### **Estimation of sample size**

Formula used for sample size calculation:

$$\frac{Z^2 PQ}{d^2}$$

where, Z=1.96 for 5% significance level, P=37% as per study conducted by Kaur J et al.,<sup>11</sup> Q=1-P, d=allowable error taken as 10% of 37. By using above formula sample size came out to be 681 which is rounded off to 700.

### **Sampling method**

Probability proportionate to size m.

### **Method of collection of data**

A list of all the slums were prepared from the Karnataka slum development board statistics 2016 and by applying probability proportional to size sampling method selected slums were included in the study. Ethical clearance for the study was obtained from the institutional ethics committee Mandya Institute of Medical Sciences, Mandya.

Written informed consent was obtained from the study subjects. The questionnaire used for collection of data was a pre-tested semi-structured questionnaire. The questionnaire was first reviewed by experts and ensured of content validity. A pilot study was conducted among 15 slum dwellers. In the study, the respondents were asked for feedback on clarity of the questions and whether there was difficulty in answering the question or ambiguity as to what sort of answer was required. Questionnaire was divided into five broad sections: the first section consisted of socio demographic profile, second section consisted of tobacco usage, third section consisted of awareness about anti-tobacco advertisement, fourth section consisted of attitude towards tobacco usage and the fifth section consisted of influence of anti-tobacco advertisement on attitude.

A group of eleven house surgeons were involved for the data collection. An orientation meeting was called in the department of Community medicine. All the eleven house surgeons were briefed about the study and the questionnaire, they were given the study protocol and discussion was carried out so as to make them understand and clarify their doubts regarding the study and the questionnaire. Later the house surgeons were divided into five groups with two or three members in each group. Each group were allotted two slums to cover.

After going to the allotted slums they were asked to go to the center of the slum and to select randomly one street. From that street they were asked to cover all the houses and when the street finishes they were asked to turn right

and cover next street and were supposed to follow this till they achieved the sample size.

### **Statistical analysis**

Data thus obtained was coded and entered into Microsoft excel worksheet. This was analyzed using Epi Info 2008 version 3.5.1. The frequency distribution of the study subjects according to age, sex, type of family, educational status, tobacco usage, type of occupation, awareness about anti-tobacco advertisement, attitude towards tobacco use and influence of anti-tobacco advertisement on attitude. Descriptive statistics were generated for all questions. Frequency distributions and percentages were calculated for each answer. Descriptive statistics and Chi-square test were used. The statistical significance level was set at  $p < 0.05$ .

## **RESULTS**

A total of 700 slum dwellers participated in this study. Among them, 375 were male and 325 were female. Most of the study subjects 36.8% were in 31-45 year age group. Majority 62.9% of the participants belonged to nuclear family. About 94.4% of the participants had BPL card (Table 1).

When asked about the tobacco usage status, 231 (61.6%) males reported that they had tried tobacco and 191 (50.9%) said that they were current tobacco users. Among females, 44 (13.5%) said that they had tried tobacco in any form, whereas 37 (11.4%) said that they were current tobacco users (Table 2).

A majority of study subjects (n=649; 92.7%) had noticed information about the dangers of using tobacco products on media such as television, radio, or movie theaters. About 83.4% (n=584) of the subjects had noticed information about the dangers of using tobacco products in non-media such as newspapers or in magazines. Nearly 37.4% (n=262) had come across any anti-tobacco messages in sports events, community events, and markets. A total of 557 (79.6%) subjects had noticed the statutory warning which was shown during tobacco products' usage on television/movies. A total of 582 (83.1%) subjects were aware about the existence of law against tobacco use (Table 3 and 4).

When asked about the influence of anti-tobacco advertisements on attitude toward tobacco use, the responses rated were as follows: almost 37.1% of the subjects agreed that anti-tobacco advertisements will encourage the tobacco users to quit tobacco and 57.1% agreed that more of anti-tobacco advertisements should be promoted. When asked if famous personalities or celebrities using tobacco products influenced them to initiate the use of tobacco products, 49.6% agreed with the same.

When asked if famous personalities or celebrities should be involved in anti-tobacco advertisements, 263 (37.6%) subjects strongly agreed with the same. Nearly 331 (47.3%) of the subjects agreed that anti-tobacco health warning helps the tobacco users to quit tobacco (Table 5).

Majority of the study participants (66.4% males and 68.0% females) had a positive change in attitude toward tobacco use due to the influence of anti-tobacco advertisements (Table 6).

**Table 1: Socio-demographic characteristics of study subjects.**

Characteristics of respondents	Number	%
<b>Gender</b>		
Male	375	54.5
Female	325	45.5
<b>Age group</b>		
18-30	201	28.8
31-45	257	36.8
46-60	165	23.6
>60	76	10.8
<b>Type of family</b>		
Nuclear	440	62.9
Joint	170	24.2
Three generation	90	12.9
<b>BPL Card</b>		
Yes	661	94.4
No	39	5.6

**Table 2: Association of gender with tobacco usage status.**

Gender	Tried Tobacco in any form (%)	Current tobacco user (%)	Past tobacco user (%)
<b>Male</b>			
Yes	231 (61.6)	191 (50.9)	32 (8.5)
No	144 (38.4)	184 (49.5)	343 (91.5)
<b>Female</b>			
Yes	44 (13.5)	37 (11.4)	4 (1.2)
No	281 (86.5)	288 (88.6)	321 (98.8)
<b>p value</b>	<0.05	<0.05	<0.05

Test of significance used is chi square test.

**Table 3: Distribution of responses based on their awareness about anti-tobacco advertisement.**

Questions	Response	
	Yes (%)	No (%)
In the last 30 days have you seen dangers of using tobacco products in media?	649 (92.7)	51 (7.3)
In the last 30 days have you seen dangers of using tobacco products in non-media?	584 (83.4)	116 (16.6)
Have you come across any anti-tobacco messages in sports events, community events, markets?	262 (37.4)	438 (62.6)
Do you notice the statutory warning which is shown during tobacco products usage on T.V/movies?	557 (79.6)	143 (20.4)
Are you aware about anti-tobacco laws that have been implemented?	582 (83.1)	118 (16.9)

**Table 4: Gender based awareness about anti-tobacco advertisement.**

Questions	Gender		P value
	Male (%)	Female (%)	
In the last 30 days have you seen dangers of using tobacco products in media?			
Yes	366 (97.6)	283 (87.1)	<0.05
No	9 (2.4)	42 (12.9)	

Continued.

Questions	Gender		P value
	Male (%)	Female (%)	
In the last 30 days have you seen dangers of using tobacco products in non-media?			
Yes	352 (93.9)	231 (71.4)	<0.05
No	23 (6.1)	93 (28.6)	
Have you come across any anti tobacco messages in sports events, community events, markets?			
Yes	168 (44.8)	93 (28.6)	<0.05
No	207 (55.2)	234 (71.4)	
Do you notice the statutory warning which is shown during tobacco products usage on T.V/movies?			
Yes	329 (87.7)	228 (70.2)	<0.05
No	46 (12.3)	97 (29.8)	
Are you aware about anti tobacco laws that have been implemented?			
Yes	345 (92.0)	237 (72.9)	<0.05
No	30 (8.0)	88 (27.1)	

Test of significance used is chi square test.

**Table 5: Distribution of responses with respect to attitude towards tobacco use.**

Attitude towards tobacco use	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
<b>Anti-tobacco advertisement will encourage the tobacco users to quit tobacco?</b>	87 (12.4)	207 (29.6)	129 (18.4)	260 (37.1)	17 (2.4)
<b>More of anti-tobacco advertisement should be promoted?</b>	33 (4.7)	110 (15.7)	111 (15.9)	400 (57.1)	46 (6.6)
<b>Famous personality or celebrities using tobacco products influences you to initiate the use of tobacco products?</b>	24 (3.4)	123 (17.6)	104 (14.9)	347 (49.6)	102 (14.6)
<b>Famous personality or celebrities should be involved in promoting anti-tobacco advertisements?</b>	39 (5.6)	175 (25.0)	105 (15.0)	263 (37.6)	118 (16.9)
<b>Anti-tobacco health warning helps the tobacco users to quit tobacco?</b>	78 (11.1)	146 (20.9)	129 (18.4)	331 (47.3)	16 (2.3)

**Table 6: Association of influence of anti-tobacco advertisement on attitude with respect to gender**

Influence of anti-tobacco advertisement on attitude of tobacco use	Gender		P value
	Male	Female	
	N (%)	N (%)	
<b>Positive change</b>	249 (66.4)	221 (68.0)	>0.05
<b>No change</b>	126 (33.6)	104 (32.0)	
<b>Total</b>	375 (100)	335 (100)	

Test of significance used Chi square test.

## DISCUSSION

The present study was the first of its kind to assess the influence of anti-tobacco advertisements among slum dwellers of Mandya city. The study population consisted of slum dwellers as they are the high-risk group for tobacco usage. Tobacco use is more commonly seen in lower socio economic class people. There is an increasing concern regarding the usage of tobacco among slum dwellers due to unemployment, stress, peer group pressure and lack of awareness.

In the present study, the subjects were identified according to their tobacco usage experience, as the

experience gives us an insight about the magnitude of the tobacco usage in the community. The percentage of current tobacco usage among the participants was approximately 32.5%. This was more than national average of 28.6 this difference may be due to the variations in the study population as the present study was done in slum dwellers.<sup>2</sup> But in a study conducted by Bhattacharyya et al in Magalaya it was found that tobacco usage was as high as 71.7% among slum dwellers aged more than 15 years.<sup>12</sup>

There was a statistically significant association between tobacco usage status among ever tried, past and current tobacco use with gender. Male gender was associated



more with tobacco use. Moreover there was statistically significant difference in the awareness about anti-tobacco advertisement among males as compared to females. Similar result was found by Gadiyar et al and Jayant et al in their study.<sup>13,14</sup>

Advertisements are like a double edged sword it can not only influence a person to buy the product but also anti-tobacco advertisements can effectively help them to quit or stop initiating its use. Advertisements are an effective medium to reach large population and to impress on them the risks of tobacco use. In vast country like India with diverse population advertisements plays an important role to communicate the risks of tobacco use to consumers.

Majority of the subjects (92.7%) had noticed information about the dangers of using tobacco products on media in last 30 days and 83.1% had knowledge of existence of law against tobacco use. This high percentage can be attributed to the fact that the media such as television and movie theatres were creating awareness about the ill effect of tobacco. Similar results were obtained in a study conducted by Kaur et al and Zawahir et al.<sup>11,15</sup>

As per the rules of COTPA act it is mandatory to display a disclaimer at the bottom right hand corner of the screen whenever tobacco use scenes are depicted. In the present study, 79.6% of the study participants did notice the statutory warning which was shown during tobacco product usage on television and movies, this finding was similar to the findings of Karibasappa et al where more than half of them were aware about the statutory warning.<sup>16</sup>

## CONCLUSION

This research indicates that there is an increased awareness about anti-tobacco advertisements among the slum dwellers and this can be used effectively in enhancing knowledge as well transforming beliefs and values of the self and community about the tobacco use. The findings from this study suggest that study subjects have a positive response to anti-tobacco advertisements. Majority of the participants also showed a positive change in their attitude due to the influence of these advertisements. It can be concluded that preventive intervention in tobacco use has found anti-tobacco advertisements to curb tobacco as an effective measure to change the attitude and societal norms toward tobacco use. It is recommended that more of anti-tobacco advertisements should be promoted and implemented as they are powerful tools to reduce tobacco use.

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