

Original Research Article

Awareness about anti-tobacco public education campaigns: a comparative study of anti-smoking and smokeless tobacco campaigns among urban and rural high school children

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ABSTRACT

Background: Even as propagation of anti-tobacco campaigns is widespread, data on its awareness and efficacy remains obscure. Where rising levels of tobacco consumption among the youth not only poses a risk to individual health but also jeopardises the country's socioeconomic prospects, the need of the hour is to recognize youth centric information, education, communication (IEC) campaigns.

Methods: A descriptive cross-sectional study was carried out among high school students from a selected urban (n=172) and rural (n=172) school. A semi-structured pretested questionnaire was employed to collect information. Data obtained was summarized using descriptive statistics and Chi square test.

Results: The awareness about anti-tobacco (smokeless) campaign was found to be 98.4 % among urban and 77.6% among rural high school children, whereas, the awareness about anti-smoking campaign was found to be 98.3% among urban and 76.2% among rural high school children. Overall awareness among urban children was significantly higher than that among rural children ($p < 0.001$).

Conclusions: The study assessed the extent to which anti-smoking and anti-tobacco (smokeless) campaigns have successfully reached the target masses and to what extent they have been successful in communicating the hazards effectively which is crucial to exterminate the tobacco related problems.

Keywords: Tobacco, Public education campaigns, Students, Smokeless tobacco

INTRODUCTION

Tobacco imposes a colossal burden of catastrophic effects on health, socio-economic and environmental status. Smokers are more likely than non-smokers to develop heart diseases, stroke and lung cancer.¹ In addition, exposure to environmental tobacco smoke can cause harm to smokers and non-smokers alike. Apart from ill effects on an individual's overall health, it leads to increased absenteeism from work, increased healthcare cost, as well as socio-economic and mental anguish on the family.

Tobacco has an adverse impact on the country's economy, instead of devoting resources to tobacco; people could be employed in other productive economic activities, generating employment and tax revenues.² Tobacco use continues to grow at 2-3% per annum, and by 2020 it is predicted that it will account for 30% of all deaths in the country.³

India is now demonstrating an unremitting resolve to contain the menace of tobacco through a comprehensive strategy that combines demand and supply reduction

measures. India's first national anti-tobacco legislation, passed in 1975, was largely limited to health warnings and proved inefficient.³ A breakthrough bill to regulate tobacco use came in 2003, "Cigarettes and Other Tobacco Products Act" that outlawed smoking at public places, forbade tobacco sale to minors, and banned advertisements at sports and cultural events.³

It meticulously defined smoking as the "usage of tobacco in any form whether in the form of cigarette, cigar, beedis or otherwise with the aid of a pipe, wrapper or any other instrument".⁴

Subsequently, in 2011, the government directed that movies and television programs showing tobacco consumption display disclaimers regarding ill effects of smoking. It also proposed the inclusion of pictorial warnings on tobacco products. The government is also propagating the use of personalized messages, and had made a 28-year old oral cancer patient the new face of its anti-tobacco campaign.

In our country, 4% youth (age 13-15) smoke cigarettes and almost 12.5 % use other types of tobacco products.⁵ In addition, 21.9% is exposed to second hand smoke at home and 36.6% in public places.⁵ These numbers continue to rise unabated. In order to create awareness among youth about the ill effects of smoking, government has initiated several information, education and communication (IEC) campaigns that are part of district tobacco control program model under National Tobacco Control Program.⁶ Hence, we undertook a systematic study to assess the extent of penetrance of these campaigns among school children in the age group of 13-15 years.

METHODS

A cross-sectional study was conducted among high school students (aged between 13 to 15 years of age) in the urban and rural field practice area of Ramaiah Medical College from March 2023 to March 2024. All students studying in 8th, 9th and 10th standards who were available on the days of study and accorded consent were included in the study.

Schools were selected purposively one each from the urban and rural field practice areas of the department of community medicine. There were 188 children in the urban school and 210 children in the rural school.

Ethical clearance was obtained from the ethical review board, requisite permission was sought from the concerned authorities and consent was procured from parents of the children. A semi-structured pretested questionnaire was employed to collect information. The questionnaire was read out by the investigator for the students at the outset, with explanations and clarifications given for each question and students were asked to answer the questions. Details of socio demographic characteristics, awareness about the public education campaigns (questionnaire had two separate parts about anti-tobacco (smokeless) and anti-

smoking campaigns) and information on whether the campaign had influenced their knowledge regarding ill effects of tobacco and consumption habits were collected.

Rationale for sample size and statistical analysis

In a global tobacco youth survey conducted in Assam, it was observed that 70% of the students (13-15 years) saw anti-smoking messages in the past 30 days.⁶ In the present study, assuming the proportion of students who are aware about anti-smoking campaigns as 70% and with a relative precision of 10% and desired confidence level of 95%, the minimum sample size required was estimated to be 172. However, for ethical reasons and to ensure inclusion of all the children from a class, students from urban area (BK Nagar, Bengaluru) and students from rural area (Kaiwara) were enrolled for the study.⁷

Statistical package for the social sciences (SPSS) version 18.0 was used for all analyses. Descriptive statistics like mean (± 2 SD) and proportions were used to summarize quantitative and qualitative variables respectively. Chi square test was used to test for statistical significance between proportions for qualitative variables. $P < 0.05$ was considered as statistically significant.

RESULTS

There were 210 children in the rural and 188 children of class 8-10 in the urban schools surveyed. There was no significant difference in the class wise and gender wise distribution between the urban and rural study populations ($p = 0.32$ and $p = 0.59$ respectively).

The awareness about anti-tobacco (smokeless) campaign was found to be 98.4% (that is 185 out of 188 children) among urban and 77.6% (163 among 210 children) among rural high school children, which was statistically significant ($p = 0.000$).

Further, the difference in awareness about anti-smoking campaign, found to be 98.3% (that is 178 children out of 181, excluding 7 children who did not respond to the questions) among urban and 76.2% (that is 160 children out of 210 children) among rural high school children, was statistically significant ($p = 0.000$).

Overall awareness about anti-tobacco (smokeless) campaign and anti-smoking campaign was found to be 86.4% (338 out of 391 children, excluding 7 children who did not answer the question) and 86.7% (348 out of 398 children) respectively.

There was also a significant difference in the levels of awareness about anti-tobacco (smokeless) and anti-smoking campaigns between urban and rural areas ($p = 0.000$) (Tables 1 and 2) and between boys and girls.

Newspaper was said to be the most effective source (98.9%) of anti-tobacco (smokeless) campaigns amongst

urban children and radio amongst rural children (85.5%). Newspaper, magazine, internet, wall paintings, street plays and textbooks were all said to be the most effective sources (100%) of anti-smoking campaigns amongst urban children and radio amongst rural children (79.8%).

Table 1: Comparison between awareness levels about anti-tobacco (smokeless) campaign in urban and rural areas.

Awareness about anti-tobacco (smokeless) campaign	Urban N (%)	Rural N (%)
No	3 (1.6)	47 (22.4)
Yes	185(98.4)	163 (77.6)
Total	188 (100)	210 (100)

P=0.000, df=4, $\chi^2=112.02$

According to children, the most common source of information regarding both anti-smoking and anti-tobacco campaigns was found to be movies in urban area whereas radio was the most common source of information

regarding both anti-smoking and anti-tobacco campaigns in rural areas.

Table 2: Comparison between awareness levels about anti-smoking campaign in urban and rural areas.

Awareness about anti-smoking campaign	Urban N (%)	Rural N (%)
No	3 (1.7)	50 (23.8)
Yes	178 (98.3)	160 (76.2)
Total	181* (100)	210 (100)

P=0.000, df=1, $\chi^2=112.02$; *non responders=7

The common sources of information about anti-tobacco (smokeless) and anti-smoking campaigns in the study area are as shown in Figures 1 and 2. There was significant difference in various sources of information in urban and rural areas ($p<0.001$) except newspaper as a source for anti-smoking campaign ($p=0.623$), magazines for both anti-tobacco (smokeless) ($p=0.139$) and anti-smoking campaigns ($p=0.26$), and wall paintings as a source for anti-tobacco (smokeless) campaign ($p=0.79$).

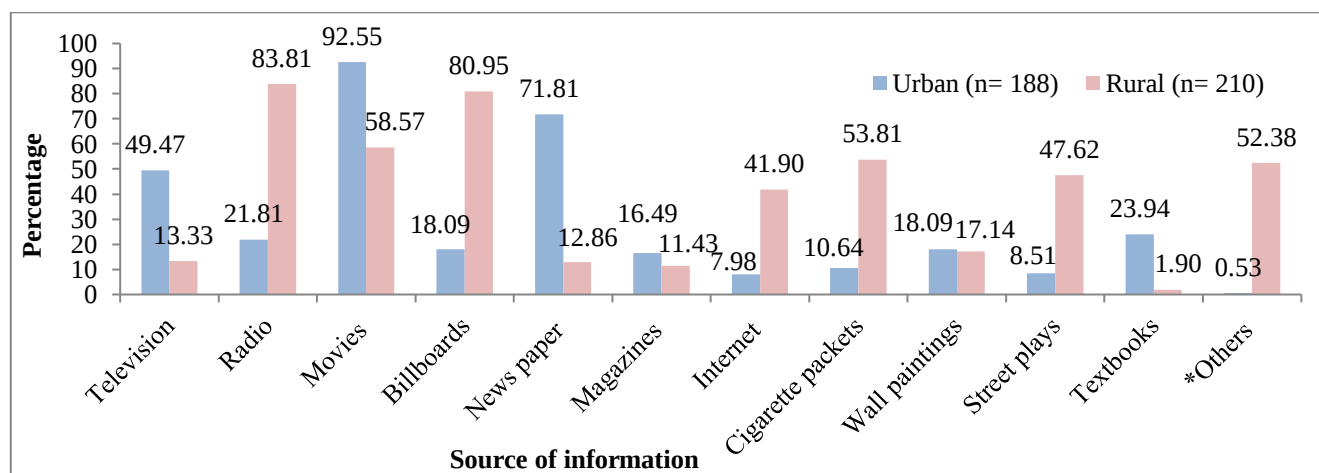


Figure 1: Common sources of information about anti-tobacco (smokeless) campaign in the study.

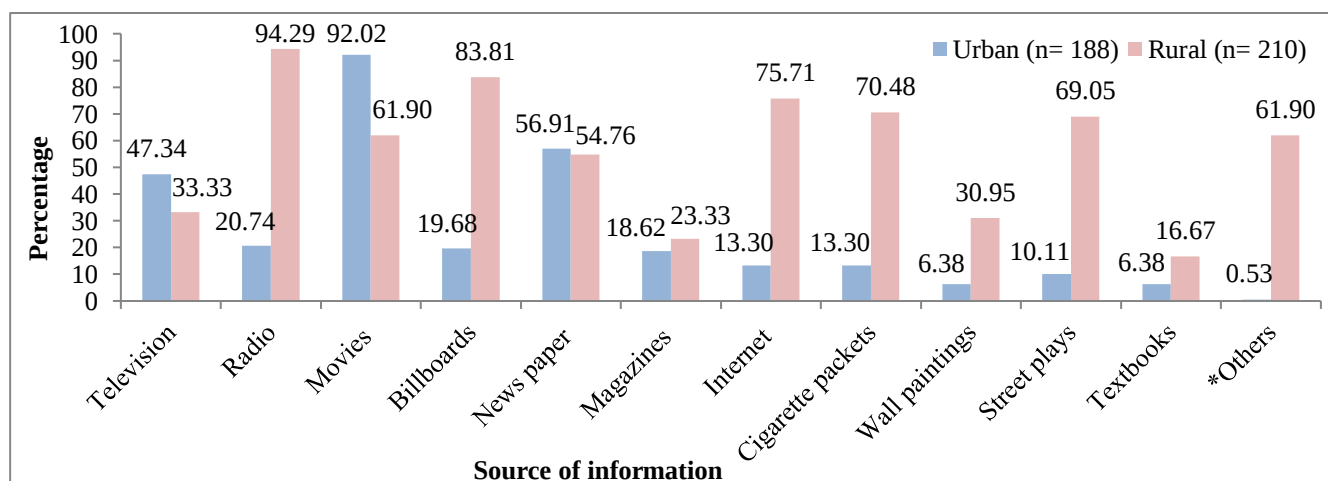


Figure 2: Common sources of information about anti-smoking campaign in the study area (*not specified by children).

Further, 68% of children who were aware of anti-smoking campaigns were unaware of anti-tobacco (smokeless) campaigns as compared to 10.6% of the children who were aware of the anti-tobacco (smokeless) campaigns but were unaware of anti-smoking campaigns. This difference was found to be statistically significant ($p=0.000$).

It was also found that 19.1% children reportedly smoked in the urban area and 49% in rural area. 20.7% children reportedly consumed tobacco (smokeless) in urban area as compared to 48.1% in rural area.

Among the children who smoked previously, 5.9% said there was no change in the consumption habits in urban area as compared to 6.7% in rural area after coming across anti-smoking campaigns. 3.3% of children in urban area and 35.7% children in rural area among those who previously used tobacco (smokeless) stated that there was no change in the consumption of tobacco (smokeless) after coming across anti-tobacco (smokeless) campaign.

Few children did not wish to disclose the status of tobacco consumption in front of their peers (i.e. 5 children in the urban and 11 in the rural area).

DISCUSSION

In a study conducted under the global tobacco youth survey (2003), which was similar to present study, it was found that 70% respondents saw anti-smoking media messages in the past 30 days. In the present study, 86.7% respondents came across anti-smoking campaigns in the past 30 days (Table 3).

Table 3: Comparison of results of present study with other studies.

Variable	Global tobacco youth survey (2003)	Shah et al (2013)	Karibasappa et al (2011)	Pre-sent study
Awareness of anti-smoking campaigns (%)	70	72.3	72.7	86.7

The overall awareness about anti-smoking campaigns was found to be higher in the present study as compared to previous studies, which may be accounted for by a difference in sample size, regional variations and increased awareness over the years due to the advent of new campaigns. Further, the studies by Shah et al and Karibasappa et al were conducted among the adult population while the present study targeted high school children, which could also be a reason for the disparity observed.^{8,9}

In another study carried out by Zollinger et al, it was found that 85.1% rural children were aware of anti-tobacco

campaigns as compared to 90.2% of urban children.¹⁰ In the present study, the awareness about anti-tobacco (smokeless) campaign was found to be 98.4% among urban and 77.6% among rural children.

The aforementioned study also found that compared to rural youth, suburban youth were more likely to recall media messages about the dangerous health effects of tobacco use, which is consistent with the findings of the present study.

Limitations

Our study was conducted in the urban and rural locales of South India (Bengaluru). A pan India study is required to bridge the geographical barriers in assessing the reach of these programmes.

CONCLUSION

The Cigarettes and Other Tobacco Products Act, 2003 was passed with the objective of defining, communicating and curtailing tobacco consumption and its hazards. The present study bridges the gap between its propagation and assessing its impact which is crucial to devise effective communication methods to exterminate this menace.

Our study assessed the extent to which anti-smoking and anti-tobacco (smokeless) campaigns have successfully reached the target masses and to what extent they have been successful in communicating the hazards effectively.

Recommendations

The difference in the awareness of anti-tobacco (smokeless) campaign and anti-smoking campaign as found in the present study needs to be addressed by increasing the number of campaigns against smokeless forms of tobacco, as the use of the latter is also as widely prevalent and associated with various forms of health problems like cardiovascular diseases and cancers.

The awareness about these campaigns among children in rural setup was found to be significantly lesser as compared to their urban counterpart. Hence, campaigns targeting and reaching the rural population should be enhanced.

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