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Awareness of anti-tobacco advertisements and its influence on attitude toward tobacco use among 16 to 18-year-old students in Belgaum city: A Cross-sectional study

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Abstract:

INTRODUCTION: Tobacco epidemic is one of the biggest public health threats the world has ever faced. Tobacco use is a significant public health problem worldwide and the single-most preventable risk of human health. Mass media anti-tobacco advertisements can reach large sections of the society and increase awareness about the harms of tobacco use and increase quit attempts.

METHODOLOGY: This cross-sectional study was conducted to find out the awareness of anti-tobacco advertisements and to assess the influence of anti-tobacco advertisements among 16 to 18-year-old students in Belgaum city. A self-structured, close-ended, 26-item questionnaire was distributed to 600 preuniversity students. 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: Majority of the study participants (89.4% males and 86.7% females) were aware of the anti-tobacco advertisements. Television and movie theaters were considered as the most effective means for anti-tobacco advertisements. Nearly 90.8% had noticed the statutory warning which is shown during tobacco products' usage on television/movies. Almost 78.35% of males and 90.6% of females had a positive change in attitude toward tobacco use due to influence of anti-tobacco advertisements.

CONCLUSION: There is an increased awareness on anti-tobacco and this has been proved to be effective in motivating them to quit tobacco as well as stop them from initiating tobacco use.

Keywords:

Antitobacco advertisements, attitude, awareness

Introduction

Tobacco imposes a colossal burden of disease leading to adverse health, social, economic, and environmental effects. Tobacco addiction is the most widespread addiction in the world. The tobacco epidemic is one of the biggest public health threats the world has ever faced, killing nearly

six million people a year. Approximately one person dies every 6 s due to tobacco, accounting for one in ten adult deaths.^[1] Tobacco use is a significant public health problem worldwide and the single-most preventable risk of human health.

In India, the Global Adult Tobacco Survey 2, 2016–2017, reports that 28.6% of adults aged 15 and above (26.7 crores) use tobacco

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in any form. Every fifth adult (19.9 crores) use smokeless tobacco and every tenth adult (10.0 crores) smokes tobacco.^[2]

The prevalence of ever use of tobacco in Belgaum was found to be 37.97% in men and 12.5% in women and the most commonly used tobacco form was smokeless tobacco.^[3]

Various tobacco control efforts are undertaken at individual and community levels. At individual level, withdrawal clinics, medication, behavioral modification, and multicomponent programs are being appreciated. Increased tobacco costs, anti-tobacco media campaigns, declining social acceptability of smoking, and restricted access for minors are all the methods approached through community. Mass media anti-tobacco advertisements are one such effort through community.^[4]

There has been a great progress in global tobacco control efforts over the past 5 years, with both the number of countries protecting their people and the number of people worldwide protected by effective tobacco control measures, more than doubling since 2007. However, far more work is needed in almost every country.^[5]

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 increases in smoking cessation and declines in adult tobacco use prevalence.^[6]

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.^[7] The advertising literature suggests that exposure to specific messages can reinforce people's existing beliefs and affect their behavior.^[8]

In India, antismoking campaign started by the display of pictorial health warning on all tobacco products in 2008, followed by the screening of the first two anti-tobacco advertisements titled "Mukesh" and "Sponge" in movie theater and television nationwide in 2012.

In order to curb the growing tobacco epidemic, awareness and behavioral 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 the adolescents in Belgaum city. Therefore, the study aimed to assess the role of anti-tobacco advertisements among 16 to 18-year-old students in Belgaum city.

Methodology

This study was conducted in Belgaum city of Karnataka state in India, the study group being preuniversity students.

A list of all the preuniversity colleges was obtained from the concerned authorities and two colleges were randomly selected for the study. The study participants included both the 1st- and 2nd-year preuniversity students. Permission to conduct the study was obtained from the principals of the respective colleges. Information about the suitable time, when students are free, was obtained. Ethical clearance to conduct the study was obtained from the Ethical Committee of KLE VK Institute of Dental Sciences. A total of 600 students participated in this study.

The study population comprised students from two preuniversity colleges of Belgaum city. Written informed consent was obtained from the parents of all the participants and assent was obtained from all the study participants. To ensure confidentiality and prevent response bias, teachers and school authorities were requested not to be present at the time of data collection.

The questionnaire used to collect the data was a self-structured close-ended questionnaire. The questionnaire was also reviewed by experts and ensured of content validity. A pilot study was conducted among 15 students. 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. The students who participated in the study were not included in the final sample and no modification was required in the questionnaire. The final questionnaire consisted of 26 questions.

Questionnaire was divided into three broad categories: the first section consisted of sociodemographic data (nine questions) and tobacco usage status (five questions).

In the second section, five questions related to awareness of anti-tobacco advertisements were included. These required the respondents to express yes or no responses. The third section comprised seven questions that were related to the influence of anti-tobacco advertisements

on attitude toward tobacco use. These required the respondents to express their degree of agreement and disagreement using a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The 5-point Likert scale was later converted into a 3-point Likert scale.

All the students present in the class on the day of the study were given the questionnaire after obtaining verbal assent from them. They were explained the purpose and nature of the study and were instructed about the method of filling the form.

Before administering the questionnaire, the students were briefed about the objectives of the study and the surveys were kept anonymous. The questionnaires were administered to the students who volunteered to participate in the study. The questionnaires were distributed during the break time and the participants were given sufficient time to fill the questionnaire. To determine the test-retest reliability of the survey questions, 15 students who completed the survey during the initial administration completed the survey 1 week later.

Statistical analysis

The completed questionnaires were entered into a database using MS Excel (Microsoft Corporation, Redmond, WA, USA). To test the reliability of the survey items, Cronbach's alpha co-efficient was used, which was found to be 0.71. Descriptive statistics were generated for all questions. Frequency distributions and percentages were examined for each answer. Descriptive statistics and Chi-square test were used. The statistical significance level was set at $P < 0.05$. The statistical analysis was conducted using SPSS v. 19.0 (SPSS Inc., Chicago, IL, USA).

Results

The completed questionnaires were collected from 600 participants. On reliability analysis, Cronbach's alpha co-efficient value was found to be 0.71, indicating good internal consistency. Among the study population, 21.3% had tried tobacco product in any form and 10.3% were current users.

A total of 600 students participated in this study. Among them, 322 were male and 278 were female. The participants were categorized into three groups with respect to age ranging from 16 to 18 years, with a mean age of 17.10 ± 0.7 years. The mean age of the females was 17.09 ± 0.7 years and of the males was 17.11 ± 0.7 years. A total of 124 (20.7%) participants belonged to 16 years' age group, 293 (48.8%) participants belonged to 17 years' age group, and 183 (30.5%) belonged to 18 years' age group [Table 1].

When asked about the tobacco usage status, 116 (36.0%) males reported that they had tried tobacco and 60 (18.6%) said that they were current tobacco users. Among females, 12 (4.3%) said that they had tried tobacco in any form, whereas 2 (0.7%) said that they were current tobacco users [Table 2].

A majority of students ($n = 561$; 93.5%) had noticed information about the dangers of using tobacco products on television, radio, or movie theaters. About 76% ($n = 456$) of the students had noticed information about the dangers of using tobacco products in newspapers or in magazines. Nearly 54.7% ($n = 328$) had come across any anti-tobacco messages in sports events, community events, and markets. A total of 545 (90.8%) students had noticed the statutory warning which was shown during tobacco products' usage on television/movies. A total of 536 (89.3%) students reported that television/movie theaters are the most effective method for promotion of anti-tobacco advertisements [Tables 3 and 4].

When asked about the influence of anti-tobacco advertisements on attitude toward tobacco use, the responses rated were as follows:

Almost 36.8% of the students strongly agreed that anti-tobacco advertisements will encourage the tobacco users to quit tobacco and 56.8% strongly agreed that more of anti-tobacco advertisements should be promoted. When asked if famous personalities/celebrities using tobacco products influenced them to initiate the use of tobacco products, 45.5% strongly disagreed with the same.

Table 1: Distribution of study participants by age and gender

| Gender | Age | | | Total (%) |
|--------|--------------|--------------|--------------|------------|
| | 16 years (%) | 17 years (%) | 18 years (%) | |
| Male | 64 | 159 | 99 | 322 (53.7) |
| Female | 60 | 134 | 84 | 278 (46.3) |
| Total | 124 (20.7) | 293 (48.8) | 183 (30.5) | 600 (100) |

$\chi^2=0.266$, $df=2$, $P=0.875$

Table 2: Association of gender with tobacco usage status

| Gender | Tried tobacco in any form, n (%) | Current tobacco user, n (%) | Past tobacco user, n (%) |
|---------------|----------------------------------|-----------------------------|--------------------------|
| Male | | | |
| Yes | 116 (36.0) | 60 (18.6) | 9 (2.8) |
| No | 206 (64.0) | 262 (81.4) | 313 (97.2) |
| Female | | | |
| Yes | 12 (4.3) | 2 (0.7) | 0 (0) |
| No | 266 (95.7) | 276 (99.3) | 278 (100) |
| χ^2 (df) | 89.38 (1) | 51.67 (1) | 7.89 (1) |
| P | <0.05* | <0.05* | <0.05* |

*Statistically significant

When asked if anti-tobacco advertisements have stopped you from initiating the use of tobacco products, 249 (41.5%) students strongly agreed with the same. Nearly 51.5% of the students strongly agreed that anti-tobacco advertisements have influenced to change their attitude toward the use of tobacco products [Table 5].

Majority of the study participants (78.3% males and 90.6% females) had a positive change in attitude toward tobacco use due to the influence of anti-tobacco advertisements [Table 6].

Table 3: Distribution of responses based on their awareness about anti-tobacco advertisements

| Question | Response | |
|--|------------|------------|
| | Yes (%) | No (%) |
| In the last 30 days, have you noticed information about the dangers of using tobacco products on television, radio, or movie theaters? | 561 (93.5) | 39 (6.5) |
| In the last 30 days, have you noticed information about the dangers of using tobacco products in newspapers or in magazines? | 456 (76.0) | 144 (24.0) |
| Have you come across any anti-tobacco messages in sports events, community events, markets? | 328 (54.7) | 272 (45.3) |
| Do you notice the statutory warning which is shown during tobacco products usage on television/movies? | 545 (90.8) | 55 (9.2) |
| Are you aware about the anti-tobacco laws that have been implemented? | 367 (61.2) | 233 (38.8) |

Table 4: Association of awareness about anti-tobacco advertisements with the distribution of gender in the population studied

| Questions | Gender | | χ^2 | P |
|--|---------------|-------------|----------|--------|
| | Female, n (%) | Male, n (%) | | |
| In the last 30 days, have you noticed information about the dangers of using tobacco products on television, radio, or movie theaters? | | | | |
| Yes | 259 (93.2) | 302 (93.8) | 0.095 | 0.75 |
| No | 19 (6.8) | 20 (6.2) | | |
| In the last 30 days, have you noticed information about the dangers of using tobacco products in newspapers or in magazines? | | | | |
| Yes | 201 (72.3) | 255 (79.2) | 3.88 | <0.05* |
| No | 77 (27.7) | 67 (20.8) | | |
| Have you come across any anti-tobacco messages in sports events, community events, markets? | | | | |
| Yes | 146 (52.5) | 182 (56.5) | 0.965 | 0.326 |
| No | 132 (47.5) | 140 (43.5) | | |
| Do you notice the statutory warning which is shown during tobacco products' usage on television/movies? | | | | |
| Yes | 252 (90.6) | 293 (91.0) | 0.021 | 0.88 |
| No | 26 (9.4) | 29 (9.0) | | |
| Are you aware about the anti-tobacco laws that have been implemented? | | | | |
| Yes | 165 (59.4) | 203 (63.0) | 0.85 | 0.35 |
| No | 113 (40.6) | 119 (37.0) | | |

*Statistically significant

Discussion

The present investigation was the first to explore the awareness and knowledge about anti-tobacco advertisements and to assess the influence of anti-tobacco advertisements among 16 to 18-year-old students in Belgaum city. Male students were in greater proportion as compared to females, representing that the population of males in Belgaum is more than that of females.^[9]

The study population consisted of preuniversity students as they are the high-risk group for tobacco usage. Tobacco use primarily begins in early adolescence.^[10,11] There is an increasing concern regarding the usage of tobacco among our youth who succumb to the habit due to peer pressure and lack of awareness.

In the present study, the students were identified according to their tobacco usage experience rather than frequency of tobacco use, as experience might be the main factor influencing attitudes and opinions on tobacco cessation. This was based on the premise that for people of this age, behaviors are not so ingrained and tobacco use experience rather than frequency might be the main factor influencing attitudes and opinions on tobacco interventions.^[12] The percentage of current tobacco usage among the preuniversity students was approximately 10.3%. This was similar to a study conducted by Kapoor *et al.*,^[13] where the prevalence of ever use of tobacco was 12% among school- and college-going students. According to the survey conducted by Gururaj and Girish,^[14] 4.9% of 13 to 15-year-old students practiced

Table 5: Distribution of responses' influence on attitude toward tobacco usage

| Attitude towards tobacco use | Strongly disagree, n (%) | Disagree, n (%) | Neutral, n (%) | Agree, n (%) | Strongly agree, n (%) |
|---|--------------------------|-----------------|----------------|--------------|-----------------------|
| Antitobacco advertisements will encourage the tobacco users to quit tobacco | 50 (8.3) | 30 (5) | 131 (21.8) | 168 (28) | 221 (36.8) |
| More of anti-tobacco advertisements should be promoted | 56 (9.3) | 27 (4.5) | 29 (4.8) | 147 (24.5) | 341 (56.8) |
| Famous personalities/celebrities using tobacco products influence you to initiate the use of tobacco products | 273 (45.5) | 75 (12.5) | 58 (9.7) | 113 (18.8) | 81 (13.5) |
| Celebrities/famous personalities should be involved in promoting anti-tobacco advertisements | 40 (6.7) | 40 (6.7) | 47 (7.8) | 131 (21.8) | 342 (57.0) |
| Antitobacco advertisements have stopped you from initiating the use of tobacco products | 61 (10.2) | 38 (6.3) | 95 (15.8) | 157 (26.2) | 249 (41.5) |
| Antitobacco advertisements have influenced to change your attitude toward the use of tobacco products | 30 (5.0) | 32 (5.3) | 72 (12.0) | 157 (26.2) | 309 (51.5) |
| Antitobacco health warnings help the tobacco users to quit tobacco | 42 (7.0) | 35 (5.8) | 75 (12.5) | 168 (28.0) | 280 (46.7) |

Table 6: Association of influence of anti-tobacco advertisements on attitude toward tobacco use with the distribution of gender in the population studied

| Influence of anti-tobacco advertisements on attitude toward tobacco use | Gender | |
|---|-------------|---------------|
| | Male, n (%) | Female, n (%) |
| Positive change in attitude | 252 (78.3) | 252 (90.6) |
| No change in attitude | 70 (21.7) | 26 (9.4) |
| Total | 322 (100) | 278 (100) |

$\chi^2=17.03$, $df=2$, $P<0.05$

tobacco in Karnataka. Lower tobacco usage was also noticed in the general population, with 4.2% tobacco usage in India^[15] in students aged 12–20 years. The higher tobacco consumption can be attributed to the fact that Belgaum is the hub of tobacco in Karnataka and there is increased tobacco consumption as well as lack of awareness.

There was a statistically significant association between tobacco usage status and gender. Male gender was associated more with tobacco use. This result was in comparison with the study conducted by Jayant *et al.*^[16]

Advertisements can act like a double-edged sword. When pro-tobacco advertisements can be effective in enticing a person to buy the product, anti-tobacco advertisements can be one of the effective means to help them quit and also stop them from initiating the use.

Antitobacco advertisements are an easy and effective means to reach large population and increase awareness about the risks of tobacco use. In a country like India where we have multilingual society, these advertisements are essential to communicate the risks of tobacco use to consumers. It has also become the need of the hour to create social acceptability to abandon tobacco consumption by disseminating its ill effects.

Majority of the students (93.5%) had noticed information about the dangers of using tobacco products on television

or movie theaters. This could be attributed to the fact that there is continuous screening of anti-tobacco advertisements in television and movie theaters which were aimed at creating awareness about the amount of tobacco tar produced by cigarettes and beedis. Similar results were obtained in a study conducted by Kaur *et al.*^[17] and Zawahir *et al.*^[18]

In the present study, 90.8% of the students noticed the statutory warning which is shown during tobacco product usage on television and movies. This finding is comparable with a previous study done by Karibasappa *et al.*,^[4] where more than half of them were aware about the statutory warning. As per the COTPA rules, it has been made mandatory to display a disclaimer at the bottom right hand corner of the screen when tobacco use scenes are depicted. This is a positive indication that the teenagers do read and recognize these warnings.

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Celebrity factor was also an important factor in drawing people's attention. Majority of the participants acknowledged that celebrities should be involved in promoting anti-tobacco advertisements. This could be attributed to the fact that adolescents are more likely to imitate observed behavior than to do what they are told. However, a higher proportion of students were of the opinion that famous personalities/celebrities did not influence them to initiate the use of tobacco products. This is in contrary with a study conducted by Kaur *et al.*^[17]

It has been reported that mass media-based awareness programs have a positive impact on cessation of tobacco use. The findings from this study suggest that youth have a positive response to anti-tobacco advertisements. The results are in accordance with the study conducted by Thrasher *et al.*^[19] Majority of the participants also showed a positive change in their attitude due to the influence of these advertisements.

Conclusion

Various approaches and strategies are being tried to combat the menace of tobacco use. Mass media anti-tobacco advertisements have been used in this regard in the form of audiovisual spots, radio spots, advertisements in print media, and educational campaigns. This research indicates that there is an increased awareness about anti-tobacco advertisements among the youth and these have been effective in enhancing knowledge as well transforming beliefs and values of the self and community about the tobacco use.

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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Conflicts of interest

There are no conflicts of interest.

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