

Mass Media Exposure to Tobacco Messages among Secondary School Children in Mumbai

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Summary

The objectives of this study were to explore differences in exposure to media messages (pro- and antitobacco messages, marketing and promotions) between students consuming tobacco, areca nut, nonconsumers, and those intending to quit and to examine differences between municipal and private school students. The Global Youth Tobacco Survey was completed by secondary school students (N = 534) from municipal and private schools in Mumbai. Overall, the number of students who reported ever use of tobacco was quite low (5.1%). There was no significant difference in exposure to media messages between users of tobacco, areca nut, and nonusers. There were significantly higher numbers of ever users of tobacco in private compared to municipal schools. There was a significant association between exposure to marketing and promotions and intention to quit, but not with the other exposure variables. Media exposure may be related to intention to quit but not to quitting behavior.

Key words: Adolescents, Media communication, Tobacco advertising

Use of tobacco in adolescence is associated with a range of health-compromising behaviors¹ and prolonged tobacco consumption is linked to several chronic diseases. During adolescence, a number of habits can be acquired via exposure to mass media. Tobacco companies use mass media to promote positive messages about tobacco use and often aim for people at younger ages. A study done among 6th and 8th graders in 32 schools in Delhi and Chennai revealed that exposure to tobacco advertisements and receptivity to tobacco marketing were significantly related to increased tobacco use among students.² Globally, a host of studies have found

associations between point of sale promotion³ or owning a tobacco promotional item⁴ and smoking prevalence. In India, since 2003, there is a ban on all forms of direct and indirect advertisement of tobacco products. Yet, tobacco companies continue to market their products through implicit and surrogate advertisements.

Media can also be used to promote messages for tobacco control. In 1990, the Indian Council of Medical Research and All India Radio started a radio project to reach out to the youth.⁵ Two community-based surveys showed that about 4% of tobacco users in Goa and 6% of users in Karnataka quit their habit after hearing the program.⁶ In recent times, a nationwide study showed that the odds of a student to be a smoker were significantly lower if they were exposed to antismoking media messages over the past 30 days through television, radio, billboards, posters, newspapers, magazines, movies, and drama.⁷

In the present study, the aim was to explore the relation between exposure to media messages (antitobacco, protobacco, and exposure to marketing and promotions) and tobacco use, intention to quit and cessation. Differences in exposure to tobacco messages between municipal and private school students were also explored.

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The sample for this study came from coeducational secondary (grades 5-10) municipal and private schools in Mumbai, India. The study design comprised a two-stage sampling procedure that was employed for both types of schools. Six municipal schools were selected (by simple random sampling). There are six grades from 5th to 10th. Each of the six municipal schools was allotted a grade by simple random sampling (lottery method). The same procedure of grade allotment was done for the six private schools. The grades for each of the private schools matched the grade for the municipal school in that area. All students from the selected classes present on the day of the survey were eligible to participate. The final sample consisted of 534 school children between the ages of 9 and 16 years. This study was analytical and cross-sectional in nature. The data collection was done between November and December 2009.

The Global Youth Tobacco Survey (GYTS) 2008⁸ was used for the current study. The GYTS was revised for this study to include questions on the forms of tobacco consumption other than cigarettes. Also, items to assess exposure to antitobacco mass media messages were added. The questionnaire was administered in English and Marathi according to the medium of instruction in the schools. Aside from demographic information, the following variables were studied through the questionnaire: ever (lifetime) use of any form of tobacco; current use (last 30 days); intention to discontinue tobacco; reported quitting behavior; exposure to anti- and protobacco messages; and exposure to marketing and promotions by tobacco companies.

The variables of exposure to pro- and antitobacco messages and marketing and promotions were created by grouping respondents into two categories. Respondents who answered "never seen" or "not exposed" were assigned a score of 0, those who answered "seen sometimes" and those who answered "seen a lot" were assigned a score of 1. In the present study, scales for protobacco exposure (13 items) and antitobacco exposure (7 items) were found to have adequate reliability (Chronbach's alpha). However, the scale for exposure to marketing and promotion (4 items) had inadequate reliability, possibly due to fewer items.

The Education Department of the Municipal Corporation of Greater Mumbai (MCGM) gave permission to conduct the study in municipal schools. Private schools were approached individually.

Data were collected from 534 school children, of which

262 (49.1%) were from municipal schools and 272 (50.9%) from private schools. With regard to use of tobacco, 5.1% of the students reported ever use of tobacco, 2.6% students reported ever use of areca nut, and 92.3% stated they had never used tobacco. Of these, only 1% of the respondents reported current use of tobacco products. However, 3.0% of the sample expressed an intention to quit tobacco use and 1.9% reported having actually quit. In some cases, there were differences in numbers of students falling into certain categories as the measures were incorrectly completed. Ever use of tobacco was significantly associated ($\chi^2 = 14.908$, $P < 0.05$) with type of school (municipal vs. private). There were a greater number of students who had ever used any tobacco product in the private schools when compared with the students in the municipal schools.

Chi-square analyses were done to examine the association between intention to quit and quitting behavior and exposure to media messages. There were no significant associations found between intention to quit and exposure to anti- and protobacco messages [Table 1]. However, there was a significant association found between exposure to marketing and promotions and intention to quit. In the case of quitting behavior, there was no significant association between cessation and exposure to any tobacco messages.

T-test analyses revealed that there was a significant difference in media exposure between students from the different schools [Table 2]. Specifically, students from private schools reported greater exposure to both anti- and protobacco messages than those from municipal schools.

In the present study, the role played by media messages in tobacco use was explored among adolescents by looking at consumption of tobacco products across different schools, and by assessing its relationship with students' intention to quit and their quitting behavior. It was found that more students from private schools had tried tobacco products when compared with students from municipal schools. A possible reason for this is that students in private schools face academic competition and have little time for leisure activities adding to higher stress levels compared to their counterparts in municipal schools. A related finding was that exposure to media messages (pro- and antitobacco) is more among students from private schools. Thus, exposure to messages about tobacco (both pro and anti) may place children and adolescents at greater risk of trying tobacco products. It is also possible

Table 1: Exposure to tobacco-related media messages between those who do not intend to quit and never users

Exposure		Tobacco use		Total	χ^2	Significance
		Nonuser	Intend to quit			
Exposure to antitobacco messages	No exposure	49	0	49	1.65*	ns
	Some moderate exposure	323	18	341		
Total		372	18	390		
Exposure to protobacco messages	No exposure	52	2	54	0.00*	ns
	Some moderate exposure	320	16	336		
Total		372	18	390		
Exposure to marketing/promotions	No exposure	317	10	327	7.24*	0.007
	Some moderate exposure	41	6	47		
Total		358	16	374		

*All chi-square values reported here are continuity corrections as the cell frequencies in some cases are less than the expected counts

Table 2: Exposure to tobacco-related media messages between municipal and private school students

	School type	Score obtained by students		T value
		Mean	SD	
		Exposure to antitobacco messages	Municipal schools (N = 262)	
	Private schools (N = 272)	4.49	2.90	
Exposure to protobacco messages	Municipal schools (N = 262)	6.74	6.08	t = -3.624, P < 0.01
	Private schools (N = 272)	8.58	5.61	
Exposure to marketing and promotions by tobacco companies	Municipal schools (N = 249)	0.22	0.67	t = 0.960, P = ns
	Private schools (N = 261)	0.17	0.44	

that the antitobacco messages that the participants were exposed to were not targeted to an adolescent audience, and thus, may have reduced impact while still drawing attention to tobacco. Earlier studies in Delhi and Chennai have reported differences in tobacco use among students from different schools,⁹ however, there is little literature on the exposure of different school students to tobacco-related messages.

There were no significant relationships found between intention to quit and exposure to pro- and antitobacco media messages. This is contrary to results reported in a community survey in two parts of India where it was found that exposure to an antitobacco program on the radio increased quitting behavior.⁶ However, there was a significant association found between exposure to marketing and promotions and intention to quit. Thus, as discussed earlier, any media message related to tobacco may prompt a change in tobacco-related behavior. This significant relationship warrants further exploration in a longitudinal analysis, which would establish causality.

Intention to quit does not necessarily translate into actual quitting. There was no significant association found between exposure to tobacco messages and quitting behavior. It is possible that the small number of students falling into certain categories may have reduced

chances of finding significant associations. Also, use of a common questionnaire may lead to underreporting or over reporting of behaviors.

Thus, in the present study, media was found to play a small role in intention to quit tobacco, but not for cessation behavior. The school background (which is related to other factors) had a larger role to play in ever use of tobacco. Factors like the availability of money, influence of parents and family members, peer pressure, stress, and household income may play a greater role in influencing tobacco consumption at certain ages. Importantly, programs and antitobacco campaigns should aim to reach an adolescent audience that is at the stage of initiating use of tobacco.

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