

RESEARCH ARTICLE

Is Exposure to Tobacco Advertising, Promotion and Sponsorship Associated with Initiation of Tobacco Use among Current Tobacco Users in Youth in India?

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Abstract

Background: The rise in consumption of tobacco products among youth is a public health concern in India. Several studies have shown that advertisements promoting tobacco products influence decisions and behaviour of youth towards smoking. **Objective:** To ascertain which method of Tobacco Advertising, Promotion and Sponsorship (TAPS) was more influential for initiating tobacco use in youth in India. **Materials and Methods:** The secondary data of youth (15-24 years) from nationally representative Global Adult Tobacco Survey (GATS) conducted in 2009-2010 was analyzed. Odds ratio and p-value were used to know the association between TAPS and initiation of use of tobacco products among youth. Logistic regression was used to determine the most significant means of TAPS altering the youth's behaviour towards tobacco products. **Results:** Out of 13,383 youths, 1,982 (14.7%) used smokeless forms of tobacco and 860 (6.38%) used smoke forms. Logistic regression reveals that promotional activities mainly through cinemas ($p < 0.05$) and providing free samples of tobacco products ($p \leq .001$) were most influential means of initiating consumption of tobacco products among youth. **Conclusions:** The smoking in youth is associated with watching advertisements particularly in cinema and promotional activities like distribution of free samples, coupons and sales on the price of tobacco products. Stronger legislative measures should be enforced to curb promotional advertisements in cinemas and distribution of free samples.

Keywords: Tobacco advertising - TAPS - tobacco - mass media - tobacco initiation - India

Asian Pac J Cancer Prev, 16 (15), 6299-6302

Introduction

Youth is most vulnerable to various types of social, physical and environmental influences. Peer acceptance, rebelliousness, popularity, gender identity are some of the key reasons of youth experimentation to different types of exposure mainly smoking (Muttappallymyalil et al., 2012). Every day around 80,000-100,000 young people around the world become addicted to tobacco (The World Bank, 1999). Therefore, tobacco industry feels that young people are vital to their products and in turn can either increase or maintain their market share (National Cancer Institute 2008; CDC- Fact Sheet- About Tobacco Industry Marketing 2011).

Advertisements in mass media are powerful and influential tool for behaviour change as they form a positive product image in mind of an individual. The media influences the behaviour of individual in two ways: frequency of exposure and content of exposure (www.lung.org/stop-smoking/about-smoking/facts-figures/tobacco-industry-marketing.html). A number of studies have examined the relationship between youth's smoking habits and tobacco advertisement, promotion and sponsorship (TAPS) (MacFadyen et al., 2001; Hoek

et al., 2010; Gendall et al., 2011). Tobacco products primarily cigarettes are one of the most heavily advertised products in the world (WHO Framework Convention on Tobacco Control guidelines, 2003). Research shows that about one – third of youth is attracted towards different tobacco products due to various kind of advertisements and promotional activities (WHO Report On The Global Tobacco Epidemic 2013). Worldwide 78% of young people of age group 13-15 years are regularly exposed to different types of advertisements, promotional activities and sponsorship related to tobacco products. TAPS strengthen the tobacco industry's influence over media, sporting and entertainment businesses (WHO Framework Convention on Tobacco Control Guidelines, 2003). Marketing in the form of showcasing and dangles at point of sale (POS) for tobacco products increase the likelihood among youth to buy them and in turn also weaken the tobacco control law (<http://www.tobaccopolicycenter.org>; Goel et al., 2014). Tobacco products are often placed near edible items or day to day use items or at eye's level, encouraging young people to see them as harmless everyday items. A study conducted in United States stated that if tobacco products are kept out of sight, it can reduce their consumption by 83% (Henriksen et al., 2004).

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All the studies carried out so far has undoubtedly shown the association between TAPS and initiation of tobacco use in youth but none of the studies has shown that which method of advertisement was more influential for initiating tobacco use in youth. So, the aim of this study was to assess the most influential method of TAPS and its association with youth's initiation to tobacco use in India.

Materials and Methods

This was a cross sectional study involving a nationally representative household survey, Global Adult Tobacco Survey (GATS), of adults 15 years of age or older using a standard core questionnaire, sample design, and data collection and management procedures which were reviewed and approved by international experts. Stratified multi-stage cluster sampling designs and an interview consisting of a household screening component and an individual component administered to the selected respondent was used. GATS India was conducted in 2009-2010 in 29 states of the country and two Union Territories of Chandigarh and Puducherry. The initial sample size was 79,690 households with 69,296 completed individual interviews. The data for the present study was analyzed in May 2014. There are 13383 youth (age 15-24 years) who participated in the survey. Variables analyzed included youth initiation to tobacco products (dependent variable) and socio demographic variables like sex, occupation, education, residence, exposure to

Table 1. Prevalence of Tobacco Use in Youth in India by Sociodemographic Characteristics , GATS 2009-2010

Variable	n	ns	% s	nsl	%sl
Total	13383	860		1982	
Sex					
Male	6135	805	13.1	1269	20.7
Female	7248	55	0.7	713	9.8
Residence					
Urban	5266	320	6.1	586	11.1
Rural	8117	540	6.7	1396	17.2
Education					
No formal education	1361	97	7.1	320	23.5
Less than primary school	1126	124	11	286	25.4
Primary school completed	1590	126	7.9	344	21.6
Less than secondary school	3217	205	6.4	491	15.3
Secondary school completed	2578	132	5.1	272	10.6
Higher school completed	2217	121	5.5	194	8.8
College/ University	1084	48	4.4	64	5.9
Post graduation	202	6	2.9	6	2.9
Occupation					
Govt. Employee	136	14	10.3	19	13.9
Non Govt. Employee	1746	196	11.2	450	25.8
Self employed	2197	335	15.2	599	27.3
Student	5329	198	3.7	407	7.6
Homemaker	3484	49	1.4	384	11
Unemployed, able to work	409	61	14.9	103	25.2
Unemployed, unable to work	55	6	10.9	17	30.9

*ns- no. of youth using smoked form of tobacco; nsl- no of youth using smokeless form of tobacco; %s- percentage of youth using smoked form of tobacco; %sl-percentage of youth using smokeless form of tobacco

television, radio, internet, billboards and all other methods of advertisement (independent variables). SPSS version 16 was used to calculate odds ratio and p- value to find association between TAPS and initiation of tobacco use in youth. The study was exempted from ethics review by the chairperson of the Ethics Advisory Group of International Union against Tuberculosis and Lung Disease, Paris, France as it was a secondary analysis of existing dataset and did not involve any direct interaction with human participants.

Results

There were 13383 individuals in the age group of 15-24 years with 45.8% males and 54.2% females. Most of the youth population belonged to rural (60%) background, and almost one third had studied less than fifth standard (Table-1). Smokeless form of tobacco was

Table 2. Multivariate Regression Analysis showing Association between Tobacco use among Youth and TAPS

Mode of TAPS	Form of tobacco use	Unadjusted OR(95%CI)	Adjusted OR(95%CI)	p-value
TV	Smokeless	0.7(0.6-0.9)	0.8(0.6-0.9)	0.02
yes	121			
no	941			
Newspaper	Bidi	0.6z(0.4- 0.9)	0.6(0.4-0.9)	0.02
yes	24			
no	544			
Cinema	Cigarette	1.4(1.1-1.2)	1.4(1.1-1.8)	0.00
yes	74			
no	817			
Cinema	Bidi	1.4(1.03-2.1)	1.4(1.1-1.9)	0.03
yes	38			
no	408			
Cinema	Smokeless	1.4(1.1-1.7)	1.3(1.1-1.6)	0.00
yes	101			
no	467			
Free samples	Cigarette	2.8(1.8-4.2)	2.5(1.7-3.5)	0.00
yes	27			
no	136			
Free samples	Bidi	2.4(1.5-4)	2.2(1.4-3.4)	0.00
yes	19			
no	108			
Free samples	Smokeless	2.5(1.8-3.5)	2(1.6-2.5)	0.00
yes	57			
no	122			
Sales price	Cigarette	1.9(1.3-2.8)	1.8(1.3-2.5)	0.00
yes	34			
no	233			
Sales price	Bidi	1.8(1.2-2.8)	1.7(1.2-2.5)	0.00
yes	26			
no	186			
Sales price	Smokeless	2.2(1.7-2.9)	1.8(1.5-2.2)	0.00
yes	83			
no	200			
Coupons	Cigarette	2.3(1.4-3.6)	2.1(1.4-3.1)	0.00
yes	22			
no	128			
Coupons	Smokeless	1.8(1.3-2.6)	1.6(1.2-2.1)	0.00
yes	43			
no	127			

*only associations which are significant are shown

more commonly used in youth as compared to smoked form of tobacco (14.7% vs 6.4%). Young females were less likely to use both smoked (0.7% vs 12.9%) and smokeless form (9.8% vs 20.4%) of tobacco as compared to their male counterparts. Rural youth population (17.2% and 6.7%) consumes more tobacco (smoked and smokeless respectively) as compared to urban population (11.1% and 6.1%). The use of smoked form of tobacco showed a statistically significant association with residence of respondent. The use of tobacco was significantly higher in semi-skilled and unskilled youth workers (self employed and unemployed), whereas smokeless form of tobacco was equally popular among all occupational categories. The smoked and smokeless forms of tobacco use in youth are statistically associated with variables like education and occupation ($p \leq 0.001$). An inverse relation was seen between smoked tobacco use and level of education, wherein, the use of smoked and smokeless form of tobacco was more among people who had less than primary school of education.

Stepwise multiple regression showed that promotional activities mainly distribution of free samples, sales in the price of tobacco products and coupons of the tobacco products were significantly associated with initiation of tobacco use (smoked and smokeless form) among youth ($p \leq 0.001$). Among pro advertisements cinema had the strongest association with initiation of tobacco use among youth (OR=1.44 for cigarette; OR=1.46 for bidi). Among tobacco products, cigarette smoking showed most significant association with watching cinema ($p=0.006$; OR=1.44) followed by association of smokeless tobacco with cinema viewing ($p=.004$; OR=1.40) (Table-2)

Discussion

The study established direct association of TAPS particularly cinema viewing with youth's initiation to tobacco use in India. The results of this study are in consonance with other studies, where in it was found that cinema plays a significant role in altering youth's behaviour (Arora et al., 2008; National Cancer Institute 2008; Shah et al., 2008; Alzalabani et al., 2012). A sex stratified nationally- representative cross sectional survey in India had also demonstrated that monthly cinema attendance is associated with increased smoking among women (relative risk (RR): 1.55; 95% confidence interval (CI): 1.04-2.31) and men (RR: 1.17; 95%CI: 1.12-1.23) and increased tobacco chewing among men (RR: 1.15; 95%CI:1.11-1.20). It also showed that daily television and radio use is associated with higher likelihood of tobacco chewing among men and women while daily newspaper use is related to lower likelihood of tobacco chewing among women (Viswanath et al., 2010) This may be due to the fact that youth watch cinema more frequently and may get influenced by the popular stars or any major character in the movie and tries to imitate them (Sargent et al., 2001; Alzalabani et al., 2012). Studies have shown that watching a movie character smoking or using any tobacco product forms a product image in youth's mind and thus incites them to consume tobacco (Tanski et al., 2008).

The tobacco industry invests huge amount on tobacco

related advertisements, thus luring the youth toward tobacco use (National Cancer Institute 2008, http://global.tobaccofreekids.org/files/pdfs/en/APS_evidence_en.pdf). Surrogacy of tobacco products on television has been documented to be one of the main advertisement modality being used by the tobacco industry (Sushma et al., 2005). The newspapers on the other hand do carry pro-tobacco advertisements, however, is not so popular among youth especially from low socio-economic group where tobacco consumption is higher. Moreover, they also carry anti-tobacco stories, which may mask the effect of pro-tobacco advertisements abuse (National Cancer Institute, 2008).

Similar to our study, a study by Patel et al has observed that tobacco promotional activities like distribution of free samples, pricing strategies or discounts offered in the form of coupons also showed a significant association with consumption of tobacco products (Patel et al., 2012). Exposing or introducing new smokers to different brands or introducing newer brands to already existing smokers may lead to glamorization of tobacco market (Rigotti et al., 2005). Tobacco promotional activities has outpaced by more than two times in comparison to general advertisements (<http://www.tobaccopolicycenter.org/documents/SGR%20NY%205-25-12>). Free samples or coupons can be considered as incentives for early smokers to stick to a brand or try a new brand.

The present study showed a gradient of tobacco consumption behaviour with education and occupation which was similar to the studies conducted earlier (Sorensen et al., 2005). Education has traditionally shown a negative effect on smoking behaviour. Individuals who are getting or who had good education are less likely to involve themselves in tobacco consumption habit (Zhu et al., 1996). Gender pattern in smoking behaviour in our study was similar to other studies which state that men smoke nearly five times as compared to women (Hitchman et al., 2011)

The inherent limitations of any cross-sectional study also hold true here as the temporal association between TAPS and tobacco use cannot be established. The question related to a particular media use in the survey was restricted to last 30 days, which may not fully document the effect of media on tobacco use. Further, many other types of TAPS (billboards, hoardings etc.) were not taken during the survey, which may also be important means of communicating pro-tobacco messages.

However, since the study has used secondary data from nationally representative survey, this association between TAPS and tobacco use among youth can be applied nationally and similar settings across developing nations.

Thus the current analysis clearly demonstrates a link between mass media exposure to advertising and tobacco use. It also revealed that cinema is the major source of advertising tobacco products and promotional activities, which has clearly outpaced the other methods of advertisements. The government should take strict action in prohibiting the pro-tobacco advertisements in mass media and distribution of free samples and coupons of tobacco products. A comprehensive ban on TAPS is very important. It is found that a comprehensive ban on TAPS can reduce tobacco consumption by 7% irrespective of

other tobacco control interventions (WHO Framework Convention on Tobacco Control Guidelines, 2003). One of the co-authors of present study had earlier suggested that building effective policies and integrating tobacco control in education curricula helps in achieving high compliance to smoke free legislations (Goel et al., 2014; Yadav et al., 2014). Further, anti-tobacco advertisements, case studies, stories should find more space in mass media, so as to reduce the tobacco use and related illnesses.

Acknowledgements

This research was supported through an operational research course, which was jointly developed and run by the Centre for Operational Research, International Union Against Tuberculosis and Lung Disease, the Operational Research Unit, Medecins sans Frontieres, Brussels and School of Public Health, PGIMER, Chandigarh.

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