

## Role of Regulatory Approach in the Prevention of Smoking among Professional Students in India

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### Abstract:

**Background:** This study was done to know the effect of anti-smoking legislation among different professional students as, in this age group individuals tend to involve in such adverse habits.

**Materials & Methods:** In this cross-sectional study, three different professional students (Arts, Engineering and Dental) were considered. A pretested self administered structured questionnaire was used to know the attitude of students towards anti smoking legislation like smoking habits, awareness of anti-smoking legislation etc. Statistical analysis used: Data was analysed using ANOVA and students't test.  $p < 0.05$  was considered as the level of significance.

**Results:** The total study subjects were 990 including 396 - smokers and 594 - non smokers. 84.7% knew about anti-smoking legislation and around 70.2% answered that it was good to ban smoking in public places. Non smokers gave significantly more positive response towards law against smoking.

**Conclusion:** Overall results were supporting for the anti-smoking legislation. But there is a lack of enforcing mechanism in support of legislation, so a total ban on smoking may give us better and healthy results.

**Key Words:** Anti-smoking legislation, professional students, smoking

### Introduction

Globally, tobacco is the single greatest cause of preventable death. It leads to many diseases affecting chiefly the heart, liver and lungs. Smoking has been recognised as a major risk factor for heart attacks, strokes, chronic obstructive pulmonary disease and cancer (particularly cancers involving lungs, larynx and oral cavity, and pancreas) thus, providing a worldwide challenge to public health.<sup>1</sup>

Smoking tobacco is the most common form of consuming tobacco worldwide. Each year 5 million people die as a result of smoking, with 1 of every 10 adult deaths attributed to smoking.<sup>2</sup> Second-hand or passive smoking has been found to increase the risk of lung cancer, heart disease and many other diseases. Concerns about these health risks and their costs have justified limits to smoking in the presence of non-smokers.<sup>3</sup>

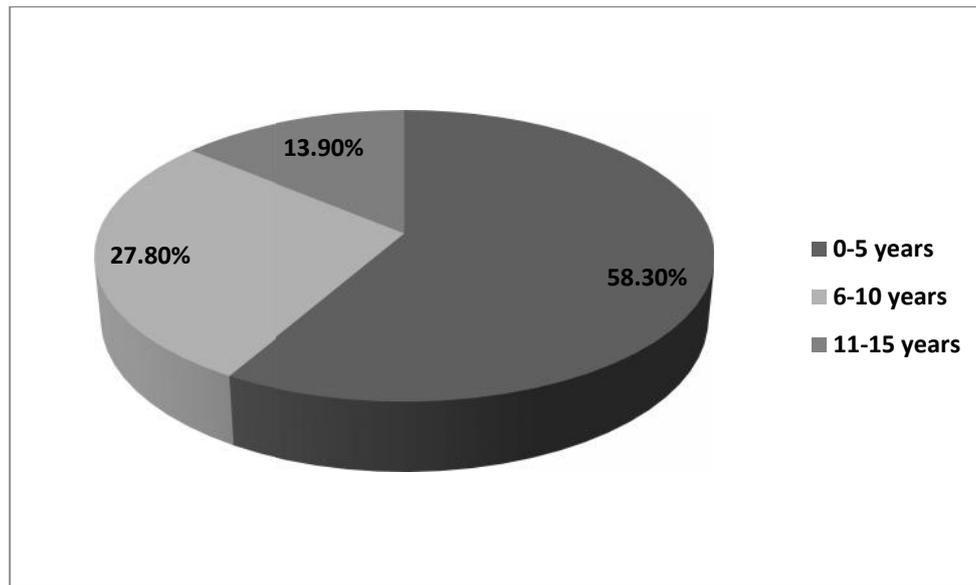
Despite considerable progress in the treatment of tobacco-related diseases, the best way to reduce one's risk is to stop smoking. Many regulatory approaches are being used to control smoking. Research has shown that anti-smoking policies can help smokers with time-inconsistent preferences for giving up or reducing the amount they smoke.

Anti-smoking advertisement has been a prominent component of tobacco control initiatives in the United States, and has been associated with declines in smoking prevalence among both youth and adults where such advertising has been employed.<sup>4</sup> Mass media antismoking advertising campaigns play an important role by reducing the education gap in smoking prevalence.<sup>5</sup>

The law had been passed against smoking which includes regulations on the advertising, sale, supply, and consumption of tobacco products. But even a complete tobacco ban may not be effective in tobacco control, unless it is well-known and supported by the public. So, it was felt essential to investigate the public's knowledge about different regulatory approaches, and compliance with the tobacco control ordinances.<sup>6</sup>

Because of college students' lifestyles and peer group relationship, they are more likely to be regularly exposed to

**Data analysis:** Data was analyzed using the Statistical Package for Social Sciences version 16.0. The individual



**Graph 1:** Showing duration of smoking habit among study population.

smoking in bars, clubs and college housing. Therefore this study was taken up among college going students to evaluate role of regulatory approach in the prevention of smoking.

#### Materials and Methods

This cross sectional study was done during a time period from February to April 2013 among three different professional colleges (Arts, Engineering and Dental sciences). Using simple random sampling a total of 990 subjects was included in the present study. The mean age of study sample was  $22.15 \pm 2.262$  years. A prior official permission was obtained from the respective Institutes and a written informed consent was obtained from the willing participants.

**Questionnaire:** The study proforma was designed with the help of a pretested self administered structured questionnaire in English. It was validated by pilot survey among 50 subjects. The questionnaire comprised of demographic information, prevalence of smoking habit, factors that make you to smoke, introduction of Sign-boards, attitude towards antismoking legislation etc.

**Methodology:** All the institutes were visited by the investigators and the questionnaire was filled by the volunteering students. Approximately ten minutes were provided to fill in the questionnaire proforma. It was mandatory to answer all the questions of the proforma. Any incomplete proforma was excluded from the study.

scores were summed up to yield a total score. The Student's t-test and ANOVA test were applied for the statistical evaluation of means at  $p < 0.05$ . and Chi-square test was used for comparisons of proportions.

#### Results

The total study subjects were 990 including 396 - smokers and 594 - non smokers. It was observed that most of the participants (58.3%) recently started smoking (0-5 years), 27.8% started between 6-10 years and few (13.9%) between 11-15 years (Graph 1).

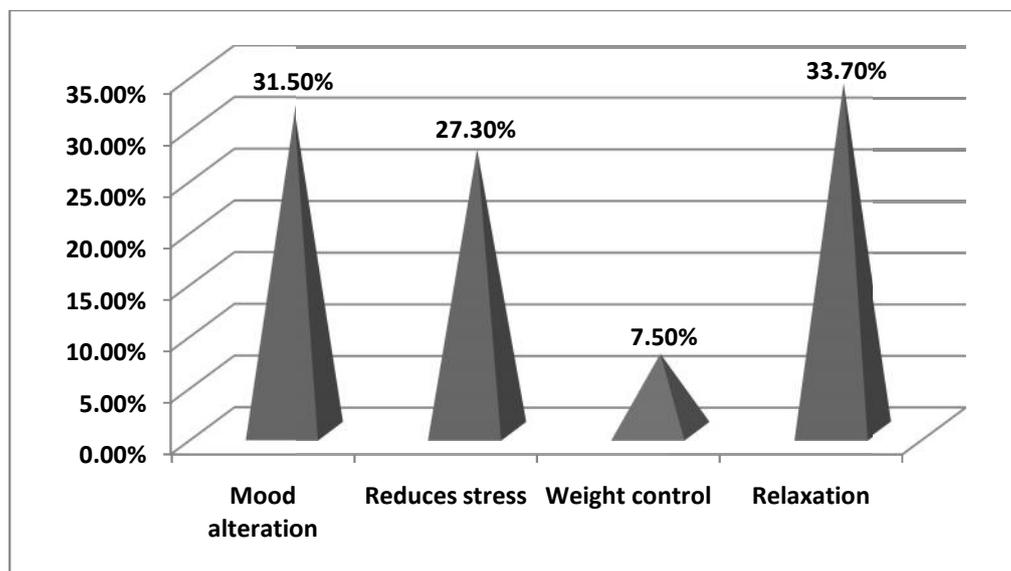
When it was asked regarding aggravating factors to smoke, most common answer was relaxation (33.7%), followed by mood alteration (31.5%), stress reduction (27.3%) and weight control (7.5%) as shown in Graph 2.

In the present study, 84.7% knew about anti-smoking legislation, and most of them (67.3%) think that it will change attitude of the people towards smoking and will help to quit. Approximately 70.2% mentioned that it was good to ban smoking in public places like buses, roads trains etc. 55.6% expressed that mere anti smoking law by the government will not be helpful. Majority of the participants (80.4%) believed that anti smoking sign boards in public places might be helpful. It was found that (23%) smokers had decreased the frequency of smoking after the introduction of the legislation.

Significantly more positive attitude was seen among non smokers as compared to those who smoke as illustrated in

Table 1. When the data was compared according to different professional students, Dental students gave more positive response followed by Engineering and Arts students at  $p=0.011$  (Table 2).

government regarding ban on smoking in public places. In present study, the prevalence of smoking was 40% among all the students where as Rani et al found smoking prevalence as 49.4% in Mizoram, however in Punjab it was



**Graph 2:** Showing different factors that aggravates to smoke.

Cigarette smoking among young adults continues to be a major public health concern.<sup>7</sup> The most recent study of mortality associated with smoking in India (2008), estimates that at least 930,000 adult deaths in India could

shown as 13.9%.<sup>11</sup>

It was observed that more than eighty percent participants knew about anti smoking legislation. This is also a matter of concern as these professionals are believed to play a

**Table 1:** Showing attitude towards antismoking legislation among study population.

Smoking status	No (%)	Mean	SD	p-value
Smokers	396 (40%)	2.83	0.899	0.000*
Non smokers	594 (60%)	3.39	1.381	

**Table 2:** Showing attitude towards antismoking legislation according to different professional students.

Profession	No	Mean	SD	p-value
Dental	396	3.45	1.165	0.011*
Engineering	264	3.05	1.482	
Arts	330	3.00	1.097	

be attributed to smoking, and that this would rise to over one million annually from 2010.<sup>9</sup> In effect, one in every ten adult deaths in India is smoking-related.<sup>8</sup> Tobacco industry targets college students with marketing and special promotions centered in bars and clubs close to college campuses.<sup>9</sup>

Recent anti-smoking legislation, which came into act from October 2008, was an attempt from the Government of India to reduce smoking behaviour in public places.<sup>10</sup> Thus the study was planned to check the regulations of the

major role in successful anti-smoking campaign. There is enough evidence and data to demonstrate that smoking causes a large spectrum of diseases.<sup>12</sup> Consistent with the previous research, this study has shown community awareness of the effects of environmental tobacco smoke and contribution of the legislation, to create a healthy environment.<sup>13</sup> The attitude of smokers was less as compared to non smokers towards regulatory approach and the results were consistent with study conducted by Chaudhary et al in 2010.<sup>10</sup>

It is also seen in other studies that an absolute prohibition on smoking tends to reduce the number of smokers.<sup>14</sup> In the present study a higher frequency of participants (23%) had decreased the frequency of smoking after the introduction of this legislation and the results were higher as observed by Chaudhary et al.<sup>10</sup> Mostly students answered that it was good to ban smoking in public places like buses, trains etc. However these findings were not consistent with the previous study.<sup>13</sup>

There was an overall support for the legislation but more positive response was from non smokers. Similarly, when compared according to different professional students Dental students showed good attitude than the rest. A probable reason could be that dental students come across patients with premalignant and malignant lesions among patients with tobacco related habits. Overall students believe that anti smoking sign boards in public places might be helpful to reduce smoking which was not consistent with the results found by Saika K among members of Japanese Cancer Association in 2008.<sup>15</sup>

Support of youth against smoking is important for successful policy implementation and sustainability. Anti-smoking policy aimed at putting additional pressure on smokers to change their behaviour- opposed to one merely aimed at ensuring smoke-free air for non-smokers- needs more vigorous enforcement. In case of complete smoking ban, there is even greater need for enforcement.

### Conclusion

This study concluded that non smokers showed more positive to antismoking legislation than smokers and similarly dental professionals also showed positive attitude. But there is a lack of enforcing mechanism in support to legislation, so complete ban on smoking and its implementation may give us better outcomes.

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