

Smoking and Peer Preference in College Students: an exploratory study

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ABSTRACT

Background: Smoking in adolescents is related to multiple factors like genetics, family variables and peer preference and influence. The aim of the following study was to study the prevalence of smoking and age of initiation college students while comparing peer preferences in smoker and non-smoker college students.

Methods: 100 college students were divided on the basis of current smoking status into two groups. These two groups were administered the Evers-Pasquale peer preference test and the Global Youth Tobacco Survey (GYTS). Sociodemographic variables were assessed using a semi-structured proforma. The data was then statistically analysed.

Results: The prevalence of current smoking was 54%. Almost 44% of college students had initiated smoking at or after 16 years of age, whereas only 4% of the entire sample had initiated smoking before 10 years of age. Close to one fifth (18.52%) of current smokers smoked daily and smoked cigarettes first in morning suggesting dependence. Students who currently smoked were most likely to engage in any activity in the company of best friends, followed by cool friends ($p = 0.0001$).

Conclusion: Smoking and peer pressure are linked and there is a need for tobacco intervention programmes to be directed at adolescent specific factors. Further research is needed to understand other factors promoting smoking like personality factors, social influence, genetic factors etc.

Keywords: Smoking, peer pressure, peer influence, tobacco, adolescents, college.

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INTRODUCTION

By 2030, tobacco is expected to be the single biggest cause of death worldwide, accounting for about 7 million deaths a year [1]. Cigarette smoking is more detrimental for health than many other forms of tobacco. Smoking is more common in nonmetropolitan areas with lower socioeconomic status and lower level education [2]. Tobacco consumption is increasing in developing countries with a lower age of initiation of smoking in adolescents [3]. A disturbing trend is seen in developing countries like India with adolescents and children initiating smoking. Though tobacco consumption is decreasing in Western countries [4], the prevalence of smoking in adolescents has increased in the last 40 years [5].

Smoking in adolescents is related to long term dependence, severity of smoking and higher morbidity and mortality [6]. Initiation of smoking is complex with contribution of social, environmental, cognitive, and genetic influences [7]. Some researchers suggest that instead of direct peer pressure to smoke, adolescents

attribute smoking to trying to conform to a group. According to selection theory, adolescents choose friends having similar characteristics like smoking. The attitudes towards smoking may be different in smokers and non-smokers. There is increasing evidence to show that peer influence is a pivotal factor in adolescent smoking. Smoking is often a way for adolescents to instantly become independent and fit in with peers who smoke. Relationship of peers with smoking is complex and may influence or deter smoking [8].

Literature suggests that 89.8% of users start smoking before 19 years of age [9]. However, there is limited evidence for differences in peer pressure and attitudes in adolescent smokers and non-smokers. In the context of the abovementioned statistic, our study addresses this gap in the existing knowledge regarding differences in peer pressure and attitudes in adolescent smokers and non-smokers in college students of age group 18-20 years. The primary aims of this study were to study the prevalence of smoking and age of initiation in urban college students, and to compare peer preferences and indicators of use in smoker and non-smoker college students.

METHODOLOGY

The study was conducted in second year degree college students in a large metropolitan city in India. A semi structured proforma containing details pertaining to socio demographic variables, The Global Youth Tobacco Survey (GYTS) [10] and the Evers Pasquale's peer preference test [11] was used. After informed consent was obtained, students (study participants) were interviewed with the peer preference test. Proformas were distributed in the classroom and returned after completing them.

A total sample of 100 was obtained from 119 second year degree college students with an inclusion rate of 84.03%. Students were divided in two groups depending on current tobacco use. Smokers were defined as anyone who had smoked at least 100 cigarettes in their life and who currently smokes cigarettes [12]. Non-smokers included never smoked and experimental smokers who were currently not smoking in the last 30 days. Thus, two groups were formed, Group A: Current smokers (n=54), and Group B: non-smokers and experimental smokers (n=46).

Ever Pasquale's peer preference test is a 12-item scale scored on a 4-point Likert rating where No=1 and Yes=4. It assesses the likelihood of the adolescent engaging in any activity in four different scenarios if they were with their best friends, cool friends, people they don't like and when they were alone. Higher score indicates greater likelihood of the adolescent conforming to situations in presence of peers. Total score is obtained with the mean of summation of scores [11].

The Global Youth Tobacco Survey was used to assess tobacco use indicators like the attitudes and opinions of adolescents to smoking. The GYTS aims to track tobacco use among youth in countries around the world, using a common methodology and core questionnaire. It also makes it possible to recognize patterns and determinants of smoking. It is a self-administered scale assessing the tobacco use indicators [10].

STATISTICAL ANALYSIS

Statistics were performed using SPSS 10 software. Group differences were analysed using unpaired t test, ANOVA, non-parametric tests and Fishers test as applicable. Two tailed p value was obtained for all statistical analyses.

RESULTS

The prevalence of current smoking was 54%. However, 64% of college students had ever smoked. Majority of the college students (64%) in 18-20 years age group had ever smoked and 54% were current smokers. Six of the ten girls in the study currently smoked, whereas 53% of the college students got pocket money between INR 300-400. Students in both groups belonged to upper and middle socioeconomic class. Almost 44% of college students initiated smoking at or after 16 years of age, whereas only 4% of the entire sample initiated smoking before 10 years of age. Despite numerical differences, groups had no significant differences in socio-demographic variables like age, gender, disposable income (pocket money) and socioeconomic status (Table

1). About 7.41% of group A and 13.04% of group B were girls. However, it did not achieve statistical significance.

The mean age of initiation of smoking was 14.34 years in group A and 15.1 years in experimental smokers in Group B. Only 7.41% of ever smokers initiated smoking before 10 years of age in our study. Most students (44%) initiated smoking at or after 16 years of age (Table 1).

Table 1: Sociodemographic profile of both groups

Variable	Group A (N=54) Mean ± SD N (%)	Group B (N=46) Mean ± SD N (%)	Statistics	p value
Age of smoking (years)	18.74 ± 0.78	18.60 ± 0.80	t = 0.83 df = 98	0.407 ^a
Gender Male Female	50 (92.59) 4 (7.4)	40 (86.95) 6 (13.04)	X ² = 1.389	0.506 ^b
Socioeconomic status Upper class Middle class	30 (55.55) 24 (44.44)	26 (56.52) 20 (43.47)	X ² = 0.982	1 ^b
Pocket money (in INR)	631.87 ± 230.231	676.580 ± 287.93	t = 0.987 df = 98	0.986 ^a

^aUn-paired t test used in the statistics, ^bChi-square test used in the statistics

It was found that 7.41% of group A and 26.09% of group B students had none of their closest friends as non-smokers. More than half (53.7%) of smoker participants reported that their parents were smokers. Both these results were statistically significant (Table 2).

Table 2: Groups and their Closest Friends as Smokers

	Group A (N=54) N (%)	Group B (N = 46) N (%)	Statistics
None	4 (7.41)	12 (26.09)	X ² = 6.4803 p = 0.039* significant df = 2 Chi square test used in calculation
Some	26 (48.15)	17 (36.95)	
Most / All	24 (44.44)	17 (36.95)	

Close to one fifth (18.52%) of current smokers smoked daily and smoked cigarettes first in morning suggesting dependence. Though one third of Group A students did not admit to smoking daily, they expressed the desire to smoke first thing in the morning, indicating early signs of addiction. When both the groups were assessed on the GYTS (Table 3) differences in tobacco use indicators were seen. The majority of group B (non-smokers) opined that smoking made no difference in making friends for both the genders. 77.78% & 83.33% of Group A (smokers) opined that smoking makes a difference in making friends in boys and girls respectively. The difference in attitudes in both the groups was statistically significant with smokers viewing a positive effect of smoking in social circle.

Table 3 – Group data on having parents as smokers

Parents that smoke	Group A (n = 54) N (%)	Group B (n = 46) N (%)	Statistics
No	25 (46.29)	40 (86.96)	p < 0.0001* Fischer's exact test used in the calculation
Both	2 (3.7)	0 (0)	
Father only	27 (50)	6 (13.04)	

Majority of group A i.e., 75.93% opined that smoking makes attendance of social function more comfortable, whereas only 23.91% of group B opined that same. This difference was statistically significant. Positive effects of weight reduction by smoking were opined by 81.48% of group A and 43.48% of group B respondents. This difference was statistically significant & in keeping with the other studies. 35.19% of group A and 78.26% of group B respondents thought that it is difficult to quit smoking once started and this difference was statistically significant.

When Group A was assessed on Ever Pasquale's peer preference test, it was shown that students who currently smoke are most likely to engage in any activity in the company of best friends, followed by cool friends. They were least likely to engage in any activity with people they didn't like. This difference was statistically significant ($p < 0.0001^{***}$, Bartlett stat=20.379) (Table 4).

Table 4 – Scores between both groups of Evers-Pasquale Test

	Group A (n=54)	Group B (n=46)	Statistics
	Mean \pm SD		Group A $p < 0.0001^*$ Bartlett's Stat = 20.37
Best Friends	3.231 \pm 0.322	2.465 \pm 0.58	
Cool Friends	2.746 \pm 0.397	2.171 \pm 0.61	Group B $p < 0.0001^*$ Bartlett's Stat = 1.298 *significant ($p < 0.05$)
Don't Like	2.366 \pm 0.575	1.813 \pm 0.553	
Alone	2.475 \pm 0.518	2.365 \pm 0.652	

When Group B was assessed on Ever Pasquale's peer preference test, it was observed that they were most likely to engage in any activity with best friends followed by when they were alone. They were least likely to engage in any activity when alone. This difference was statistically significant ($p < 0.0001^{***}$, Bartlett's stat = 1.29) (Table 4).

DISCUSSION

Smoking in women is not culturally and socially acceptable in India [13]. But current change in trend is seen with increased use in women in developing countries in response to marketing tactics [14]. The disposable income in terms of pocket money was and in group A & B respectively. Researchers have found that availability of pocket money is related to smoking. However, we did not find any difference in both the groups [15].

Interestingly a gender bias was seen with group A opining that boys who smoke make more friends but girls who smoke have less friends. This probably reflects the poor cultural acceptance of smoking in women [16]. It was found that 7.41% of group A and 26.09% of group B students had none of their closest friends as non-

smokers. Adolescents choose friends who are similar in characteristics and attitudes and this is seen strongly in non-smokers [7], which is consistent with our study. In Group A, 44.44% of the students had most or all of their friends as smokers. Adolescents whose more than three or almost all friends are smokers are more likely to be smokers [7]. More than half (53.7%) of smoker participants reported that their parents were smokers, which is consistent with other studies showing adolescents who smoke were more likely to have smoker parents than non-smoker adolescents.

When both the groups were compared for peer preference, Group A was significantly more likely to initiate an activity in the company of best friends, cool friends and people they didn't like. There was no significant difference in situations when students from both the groups were alone. This shows that smokers are more likely to conform and be influenced in not just in the company of best and cool friends but also when they are with people whom they don't like. Smokers were greatly influenced by peers as compared to non-smokers.

The main study limitations were that the study group does not represent the entire 18-20 years age group. Also, smoking was self-reported and not confirmed by any biochemical test.

CONCLUSION

The study results indicated that half of the students in smokers group had a dependence pattern. Smokers were more likely to have either or both parents as smokers and less likely to have any non-smoker close friend. Additionally, smokers are more likely to believe that smoking has positive effects like having more friends, making participation in social events more comfortable and causing weight loss. Approximately half to two-third of non-smokers felt that smoking makes no difference in making friends or being more comfortable. Compared to non-smokers, smokers minimized their perception of habitual smoking by underestimating the difficulty to quit. Though smokers and non-smokers maybe equally likely to participate in any situation when alone, smokers show a high likelihood of activity participation in the presence of any peer like best friends, cool adolescents and people they didn't like. Peer influence was significant in smokers. In addition to peer pressure, tobacco intervention programmes need to be directed at adolescent specific factors. Behavioural intervention and coping strategies need to be targeted at these impressionable minds. Further, research is needed to understand other factors promoting smoking like personality factors, social influence, genetic factors etc.

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