

IDENTIFYING SOCIAL, PSYCHOLOGICAL AND DEMOGRAPHIC FACTORS LEADING TO SMOKING INITIATION IN COLLEGE BOYS

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ABSTRACT

Objectives: To identify social, psychological and demographic risk factors of cigarette smoking in college boys.

Methodology: Cross-sectional research design was used in this research. Purposive sampling technique was used for data collection. Sample of total 500 (smokers = 350, non-smokers = 150) was obtained from 10 public colleges of Lahore city. A comprehensive self-structured questionnaire which contained items related to social, psychological and demographic information was prepared and employed for data collection. Descriptive statistics, alpha reliability analysis, chi-square, and logistic regression model were carried out for data analyses.

Results: Significant positive association of group pressure ($\chi^2 = 14.52$), modeling ($\chi^2 = 12.93$), social deviance ($\chi^2 = 10.70$), advertisement propaganda ($\chi^2 = 05.16$), fashion ($\chi^2 = 14.65$) and easy availability ($\chi^2 = 06.33$) was found with smoking initiation in college boys. Similarly, psychological factors of curiosity ($\chi^2 = 12.84$), stress-reduction ($\chi^2 = 14.71$), depression ($\chi^2 = 04.92$), PATS ($\chi^2 = 09.46$) and competition with friends ($\chi^2 = 03.02$) were found. Social factors (B = .57, OR=1.62, 95% CI, 1.40-1.87, $p < .001$), psychological factors (B = .21, OR=1.45, 95% CI, 1.02-1.70, $p < .05$), and demographic factors of father's smoking behavior (B = .39, OR=1.51, 95% CI, 1.30-2.10, $p < .01$), friend who smoke (B = .58, OR=2.89, 95% CI, 1.45-3.72, $p < .001$), and monthly pocket money (B = .48, OR=1.55, 95% CI, 1.08-2.12, $p < .001$) were found.

Conclusion: Social, psychological and demographic variables are significantly associated with smoking behavior in college boys.

Key Words: Smoking, Social factors, Group pressure, Modeling, Psychological factors, Depression, Stress-reduction

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INTRODUCTION

Smoking is one of the most significant preventable causes of death and disease and a great risk to health¹. Despite knowing its bad affects upon health, smoking is on rise. It is estimated that current prevalence rate of global smoking would increase and cause about 10 million deaths by the year 2030². There is threat that 70% of deaths would occur due to diseases caused by cigarettes smoking in developing countries³. Regardless of its health risks, smoking is common across the world, especially in developing countries like Pakistan.

Pakistan is among those few countries in the worlds where use of tobacco is alarmingly increasing⁴. Presently the number of tobacco users in Pakistan amounts to 25 million, especially a great number of women is in-

involved in cigarette smoking. It is also established that most of the adolescent smokers are below eighteen years of age⁵. Ultimately they suffer health problems at a very young age and become a burden on society in terms of treatment expenditures.

Knowledge of the health risks and negative consequences associated with smoking are usually ignored. One of the reasons may be perceived social and psychological support of smokers⁶. This is potentially reflected in the increased frequency of smoking among adolescents whose friends, siblings, and parents smoke⁷. In fact most early smoking experiences of adolescents occur in the presence of smoking peers⁸.

The college education is a perilous time in the starting of smoking habit in young adults. Most smokers

start smoking during their adolescence or early adult years. The earlier they start to smoke, the more probably they are to become consistent smokers^{9,10}. Those concerned about the health, academics, welfare and education of adults should be anxious to find ways to prevent them from smoking habit.

Research evidence supports the social factors as crucial one in initiating smoking in young ones⁹. Adolescents learn many habit patterns from imitating them by their role models. Smoking is one of the habits which can be initiated by social pressure from the peer group. Only very strong personalities can resist against the group pressure. Smoking is also considered as a stress reduction measure and is widely used against the negative psychological states of anxiety and depression of an individual. In Pakistan, several causes are attributed to the pervasiveness of smoking in young adults which include social and psychological in broader perspectives. Therefore the current research was conducted to provide comprehensive data focusing on social, psychological and demographic factors leading to smoking in college boys so that preventive measures could be taken against the extensive use of cigarette smoking.

The following hypotheses were framed from the previous literature.

Social, psychological and demographic factors will be associated with smoking behavior of college boys.

Social, psychological and demographic factors would predict smoking initiation in college boys.

METHODOLOGY

Cross-sectional research design was used in the present research. Sample of the study consisted of two groups of college boys students (N = 500, smokers = 350, non-smokers = 150). The age range of the sample was from 16-19 years (M = 17.5, SD = 3.2). Sample was collected from 10 public colleges of Lahore city by using purposive sampling technique.

Inclusion criteria for group 1 (n = 350) was the students who were regular smokers and who smoke at least 5 cigarettes per day. Furthermore, the students who were regular students of intermediate class and were willing to participate in the study. Only boys were recruited for data collection.

Group 2 consisted of 150 intermediate students who were non-smokers. They reported that they never smoked in their lives. Group 2 served the comparison purpose of the research.

Social, psychological and demographic factors were taken as independent and continuous variables. Smoking was considered as dependent variable and it was dichotomized into two categories; smokers were coded

as yes =1 and non-smokers as no = 0. Smoking was taken as nominal scale variable.

Following instruments were used for data collection:

Demographic information form was prepared taken into consideration the literature review. The factors which could affect the initiation of smoking include; age, pocket money, monthly income of parents, father's education and occupation, mother's education and occupation, number of friends who are smokers, and number of siblings was taken on the demographic information form.

A 22 items questionnaire related to the factors of smoking was prepared by the researchers and was standardized by calculating its reliability coefficients for all subscales. The following process was adapted for the standardization of the scale.

Items were generated by conducting 3 focus groups and cigarette smoking students were included in focus groups. Each focus group comprised of 8-12 members. They were asked to describe the reasons for their smoking initiation at such early age. Three main themes were derived from those focus groups which were recognized as social, psychological and demographic factors of smoking initiation.

Principle component analysis was run to identify the factors of smoking initiation and mainly two leading factors namely social and psychological appeared in the PCA.

Reliability study was conducted by using the sample of present study and sufficient alpha coefficients were obtained (see table 2).

Permission was obtained from concerned authorities for data collection. Relative information was also discussed with participants. Scale was filled by participants individually after giving their informed consent. Data was collected from 10 public colleges of Lahore city.

RESULTS

The following results were obtained after the data analyses.

Results depicted in table 2 indicate statistically significant differences between smokers and non-smokers on all social variables of group pressure (p<.001), modeling (p<.001), social deviance (p<.001), media advertisement (p<.001), fashion (p<.001) and easy availability (p<.01) between smokers and non-smokers.

Results showed in table 3 explain significant differences on psychological variables between smokers and non-smokers which include, curiosity (p<.001), stress-reduction source (p<.001), depression (p<.05),

Table 1: Demographic characteristics of the research participants (n = 500)

Demographics	Smokers (n = 350)		Non-smokers (n = 150)		Demographics	Smokers (n = 350)		Non-smokers (n = 150)		
	f	%	f	%		f	%	f	%	
Father's education					Pocket money in Rs.					
Uneducated	155	44	36	24	500-2000	240	68	135	90	
Up to matriculation	180	51	104	69	2000 and more	110	31	15	10	
Up to MA	15	4.2	10	7	No. of friends					
Mother's education					Who smoke		302	86	22	14
uneducated	267	76	45	3	Who do not smoke		48	14	128	85
Up to matriculation	83	23	75	5	AP					
Family system					Grade A1 and A		76	22	46	30
Joint family	273	78	110	73	Grade B		142	41	52	34
Nuclear family	77	22	40	26	Grade C		32	9	52	34
Father's smoking status					Mother's smoking status					
Yes	204	58	24	16	Yes		102	29	-	-
No	146	42	126	84	No		248	70	150	100

Note: f = frequencies, % = percentages, AP = Academic performance in previous annual standard examination

Table 2: Association of social factors of smoking behavior in college boys (n = 500)

Social factors	Smokers (n = 350)			Non-smokers (n = 150)			χ ²	P value
	f	%	α	f	%	α		
Group Pressure	180	51	0.74	54	36	0.86	14.52***	.001
Modeling	98	28	0.78	16	10	0.79	12.93***	.001
Social Deviance	86	24	0.61	10	.01	0.83	10.70***	.001
MA	106	30	0.69	32	21	0.72	05.16***	.001
Fashion	172	49	0.82	19	12	0.91	14.65***	.001
Easy Availability	82	23	0.75	28	18	0.70	06.33**	.01

Note: f = frequencies; % = percentages; χ² = chi-square; **p<.01, ***p<.001, MA = media advertisement

Table 3: Association of psychological factors of smoking behavior in college boys (n = 500)

Psychological Factors	Smokers (n = 350)		Non-smokers (n = 150)		α	χ ²	P value
	f	%	f	%			
Curiosity	210	60	68	45	0.88	12.87***	.001
Stress-reduction	180	51	49	32	0.84	14.71***	.001
Depression	174	49	68	45	0.62	04.92*	.05
PATS	192	54	42	28	0.80	9.46***	.001
CWF	61	17	21	14	0.67	3.02*	.05

Note: *p<.05, ***p<.001, PATS = positive attitude towards smoking, CWF = competition with friends

Table 4: Social, psychological and demographic factors as predictors of smoking in college students (n = 500)

Predictor Variables	B	S.E	Wald	Sig.	LL	OR 95% CI	UL	P value
Constant	-11.69	2.31						
Social Factors	.57***	.30	10.41	.000	1.40	1.62	1.87	.001
Psychological Factors	.21*	.10	5.27	.018	1.02	1.45	1.70	.05
Father's Smoking	.39**	.20	8.87	.002	1.30	1.51	2.10	.01
Friends Who Smoke	.58***	.38	8.65	.000	1.45	2.89	3.72	.001
Monthly Pocket Money	.48***	.42	12.90	.000	1.58	1.55	2.12	.001

Note: $R^2 = 58.54$, Hosmer & Lemeshow = 10.91, (Cox & Snell) = .51, Nagelkerke = .87, Model $\chi^2(12) = 70.14$, LL= Lower Limit, UL= Upper Limit, * $p < .05$, ** $p < .01$, *** $p < .001$, SE = standard error

positive attitude towards smoking ($p < .001$) and on competition with friends ($p < .05$) between smokers and non-smokers. Psychological factors emerged great difference for smoking initiation in smoker students.

Table 4 shows the result of logistic regression analysis which depicted social factors as the significant predictor of smoking in college students. The odds ratio for social factors of smoking is 1.62 and $B = .57$. Each unit increase in scores of social factors is associated with increase in the odds of smoking by a factor of 1.62 (95% CI, 1.40-1.87, $p < .001$). Next, the odds ratio for psychological factors is 1.45 and $B = .21$. Therefore, as psychological factors enhance by one scale unit chances of smoking in an individual is increased by 1.45 times. Then, odds ratio for father's smoking is 1.51 and $B = .34$. The coefficient is positive and odds ratio is 1.51. Consequently, it is concluded that as father's smoking is increased by one scale unit likelihood of smoking in an person is increased by 1.51 times. The odds ratio for friends who smoke is 2.89 and $B = .58$. Every unit in the score of friends who smoke adds in the odds of smoking by a factor of 2.89 (95% CI, 1.45-3.72, $p < .001$). Lastly, odds ratio for monthly pocket money is 1.55 and $B = .48$ and each unit increase in scores of monthly pocket money is related in escalating the odds of smoking by a factor of 1.55 (95% CI, 1.58-2.12, $p < .001$).

DISCUSSION

In the present research, social factors emerged as major determinants of smoking initiation behavior in college students. Amongst all social factors peer pressure appeared as a significant correlate and predictor of smoking initiation in college boys. Perception of direct peer pressure and experimentation of smoking in smoking initiation has supported by many researches^{11,12}. It is established that an adolescent is far more likely to smoke if his or her best friend smokes¹³. There is also

research evidence that peer smoking is more influential than parental smoking in adolescents¹⁴. Friends' smoking and having received cigarette offers from friends have been found to predict various stages of the adolescent's smoking. Flay and colleagues found friends' smoking to be predictive of trial, experimentation and regular smoking as well as switching from trial to regular smoking¹⁵. Cigarettes provide a sense of belonging to a group (if group members are also smokers). A study found that young people who smoke cigarettes feel great support from their peers¹². There is a perception of direct peer pressure to initiate smoking among some groups¹¹.

Next finding in social factors is the role of modeling in smoking initiation. Modeling is to follow the styles of living of those who act as our role models. It is often observed that family members have great influence upon teenagers. Consequently they start smoking if the elders in the family are smokers. These findings are consistent with the findings from earlier researches which concluded that parents, siblings and celebrities influence the smoking initiation in teenagers⁴. It is an established fact that individuals who smoke at home turn out predictors of smoking in teenagers^{16,17}.

Next main finding of the present research is the significant association of social deviance with the smoking initiation in adolescents. Smoking at all ages, especially during adolescence has been defined as deviant behavior. Actually this social disapproval is based not only on smoking as violation of norms of healthful behavior, but also as a violation of norms of good and acceptable behavior. The disapproval has become more stringent as smokers of all ages are increasingly defined as pariahs and as morally condemned¹⁸.

Additionally, the next finding with respect of social factors contributing to smoking is media advertisements of smoking. Young adults start smoking due to

high influence of media for smoking advertisements especially when their favorite celebrities are advertising. This finding is consistent with previous findings which conclude that parents, siblings, celebrities and close friends are significant predictors of smoking in young adults⁴.

Current research also concludes that college students start smoking due to fashion. Consumption of cigarette may increase status, appearances and peer group approval. This also enhances the image of autonomy of those students. Fashion has ephemeral value in cigarette smoking but very soon it becomes the habit pattern¹⁹.

Easy availability is another major factor contributing to smoking initiation in college students in the present research. According to the 2015 Monitoring the Future Survey, almost half (47 %) of eighth graders and two-thirds (67 %) of tenth graders say cigarettes are easy for them to get. Where and how young smokers get their cigarettes, however, can vary considerably from country to country, depending on factors such as whether the jurisdiction strictly enforces the laws prohibiting tobacco sales to minors or require retailers to keep all tobacco products behind the counter²⁰. Since there is no restriction in the sale of cigarette smoking to adolescents in Pakistan, shopkeepers think money is better than children dying in cancer.

Role of social factors in smoking may be explained in the light of social learning theory. According to this theory, behaviors are learned through modeling, as well as through rewards and punishments and favorable and unfavorable definitions associated with the behavior^{21,22}.

Furthermore, psychological factors appeared as significantly associated with smoking initiation in college students. Amongst psychological factors stress is common in teenagers due to different reasons. Smokers found themselves away from stress by puffing off and releasing it with smoke²⁰. A US study suggests that a large cohort of college student smokers initiate tobacco use to cope with academic stress which is one possible reason for this increase in smoking in college students²³.

Having more positive towards and liking towards smoking and towards smokers has been repeatedly related to an increased risk of smoking initiation²⁴. Positive attitude forms because individual lives in an environment where smoking is prevalent. Researches conducted in this field have established that lifelessness, tension and stress were significantly associated with smoking initiation among teenagers²⁵.

It is also concluded that positive perceptions of smoking-related benefits as predictors of adolescent smoking initiation. The researchers found that adolescents who held the highest positive perceptions of

smoking-related benefits were 3.31 times more likely to initiate than those who do not have such perceptions²⁶.

Findings of the existing research indicate that one major psychological factor which lures teenagers to start smoking is to seek pleasure, felicity and found comfort. According to psychoanalysis school of thought pleasure principle describes that id impulses of smokers attract them to start smoking²⁷. There is also a sense of curiosity prevalent among adults about the aftereffects of smoking. They start smoking to satisfy their motivation for curiosity to know. These findings are consistent with previous researches who concluded that curiosity was the main causal factor followed by pleasure seeking, competition with friends and stress in smoking initiation in college boys²⁸.

Demographic variables also play significantly in predicting smoking behavior in the current research. Amongst them father's and friends smoking and monthly pocket money appeared as significant predictors of smoking initiation in college boys. As discussed early modeling is a great source of inspiration for smoking initiation. The students who have the purchasing power start smoking at an early stage. So their heavy monthly pocket money turns out to be a significant factor in smoking initiation. It is also supported from the previous literature that smokers spend all of their pocket money in the purchase of cigarettes⁴. Similarly supportive environment plays a significant role among college students to start smoking.

LIMITATIONS

Sample of the present research was obtained only from Lahore city. Therefore the external validity of the present research can be limited to other areas of Pakistan. The participants were only from educational sector which may have not given reliable picture of factors of smoking initiation in college students. Next main limitation of the research was its limit to only one gender. The results cannot be applied to both genders.

CONCLUSION

Peer pressure, modeling, fashion, easy availability, stress, depression, pleasure-seeking behavior, curiosity, father's smoking status and sufficient pocket money are the main causal factors of smoking initiation in college students.

IMPLICATIONS

After the identification of causal factors of smoking, parents, teachers and researchers can prevent smoking habit of boys by giving awareness to them. This research can be a mile stone in departing knowledge by covering all eminent factors of smoking initiation in college students. This study is also important for

the implementation of anti-smoking campaigns.

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CONTRIBUTORS

MM conceived the idea, planned the study, and drafted the manuscript. AB helped acquisition of data and did statistical analysis. All authors contributed significantly to the submitted manuscript.