



An analysis of the Relationship between Stress and Smoking Behavior among the Youth in the Indian Medical Colleges

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Abstract

The study was conducted to check the smoking prevalence among the students. The objective of the present study was to explore and analyze factors associated with smoking behavior among college students. The main objective of the research was to check the impact of stress on smoking behavior, to check the impact of peer smokers on smoking behavior of youth. To check the impact of attitude toward smoking among college students, to check the correlation between stress and addiction towards smoking, to check that how availability and affordability were playing role in smoking behavior. The present study was conducted in one private college i.e., Deccan Medical College Hyderabad, India. The study employed stratified random sampling technique to select the sample from the whole population. Total numbers of respondents were 30. The questionnaire was used as a data collection tool. In the current study, the data were analyzed using SPSS program. The results of the study reveal that availability of cigarettes was easy, as most of the smokers buy cigarettes from stores. The study shows that cigarettes were affordable.

Keywords: Stress, Smoking Behavior, Youth, Attitude and Smoking, Peer Smoking, Parental Smoking.



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Introduction

Smoking refers to the active use of tobacco products. In the standard for cigarettes smoking behavior, the term smoking refers to the active smoking behavior, the intentional inhalation for tobacco smoke by a smoker. College life is an important transition period during which young adults begin to explore tobacco use. Many studies have reported that tobacco smoking is rising in young adults between the ages of 18-24 years, as they are the targets of tobacco industry, marketing and increased the prevalence of smoking among college students. Smoking, a manmade epidemic, occurs all over the world and is accompanied by a host of diseases that threaten the health and shorten the life of the consumer. The World Health Organization (WHO 2008) estimates that, globally, 47% of men and 12% of women smoke, with about 4.9 million people dying each year because of smoking. This figure is expected to rise to 10 million deaths by 2030 if the present trend continues. Prevalence rates and trends vary from country to country, often dependent on the level of monitoring of tobacco use behavior. While the rate of cigarette smoking is decreasing in the developed economies, the reverse is happening in the third world and in Africa in particular. India with a population of 1,417 million in 2023 the second most populous country in the world. The health and demographic situation in India are characterized by a high birth rate (29 per 1000) a comparatively low death rate (8 per 1000) and a consequent rapid population growth rate of 1.9 %. The infant mortality rate of 72 per 1000 live births and maternal mortality of 400 per 10000 deliveries is still very high. Tobacco use in India is common and one of the highest in the Southeast Asian Region. There are about 22 million smokers in the country and 55% of the households have at least one individual who smokes tobacco. As a result, India accounts for a sizeable proportion of the cigarettes consumed in South Asia. In India about 100,000 people die annually from diseases caused by use of tobacco. Thousands of studies attest to the harmful effects of smoking. The longer people smoke, the greater the risks they face. Tobacco contains nicotine, a highly addictive substance, and more than 4000 other substances that are potentially harmful to health when smoked or chewed.

Regular smoking is usually established in early adulthood, and studies show that people who begin smoking at an earlier age are less likely to succeed in quitting (Everett *et al.*, 1999). With each puff of cigarette smokers, meet more than 4000 chemicals and at least 43 of these are known to cause cancer. However, the chemicals in tobacco can cause other ailments as well. Tobacco contains nicotine the addictive drug in cigarettes. People smoke to reduce the craving for nicotine, which is a poisonous stimulant. A stimulant is a drug that increases the action of the central nervous system, the heart and other organs. Nicotine raises blood pressure and increases heart rate. The flavor of cigarettes is due mostly to the tar in tobacco. Tar is a thick, sticky, dark fluid produced when tobacco burns. Several substances in tar are known as carcinogens, cancer-causing substances .tar penetrates the smokers' airways and lungs. Combined with the drying effect of cigarette smoke, tar paralyzes or destroys cilia, the waving hairlike projections that work to keep the respiratory tract clear. Carbon Monoxide is colorless, odorless, poisonous gas in cigarette smoke that passes through the lungs into the blood. This is the same gas in automobile fumes that, if inhaled could prove fatal. It unites with the hemoglobin in red blood cells preventing them from carrying the oxygen needed for energy to the body cells. (Broson Merki *et al.*,1996: 441). The objective of this study was to describe cigarette-smoking behavior among Undergraduate students at Deccan Medical College Hyderabad, India. In addition to basic demographics such as age, locality, father income and smoking status, survey questions allowed examination of student attitude towards smoking. Relationships between addiction and stress level were analyzed. In addition, this new information should further our understanding of the smoking perceptions and tendencies among students. The study is undertaken to determine the factors of smoking behavior among the college students. The following were the main objective of the study: To investigate the prevalence of smoking behavior among the students. To investigate the factors associated with smoking. To investigate attitude towards smoking. This study will clarify the current state of student tobacco prevalence among college students. This study will be helpful for researchers to learn different aspects of the social research process. This study will be providing a guideline to researchers who want to conduct research on the similar topics. The study was conducted in one private college i.e., Deccan Medical College Hyderabad, India students from

other colleges were not included so the result of the research cannot be applied on the students from other colleges or on the whole youth of India.

Literature Review

Smoking and Stress

Adolescents reporting high levels of stress are more likely to smoke and stress has been implicated as a factor in smoking initiation and maintenance (Tyas & Pederson, 1998). Poor coping skills have been associated with a higher risk of smoking. Problem solving is found to be higher in those young people who have never smoked, whereas drug use and ventilation of feelings are more likely to be used as coping strategies in those young people who have ever smoked (Pederson, Koval, & O'Connor, 1997). Smoking is found to be consistently reported as a coping mechanism (Wills & Shiffman, 1985, cited in Tyas & Pederson, 1998).

Attitude to Smoking

Having more positive attitudes towards smoking and towards smokers have been repeatedly related to an increased risk of smoking (Buller *et al.*, 2003; Conrad *et al.*, 1992; Derzon & Lipsey, 1999; Tyas & Pederson, 1998; US Department of Health and Human Services, 1994; Zapata *et al.*, 2004). Buller *et al.* (2003) found that adolescents who had ever smoked or who were current smokers held more positive attitudes toward the mental effects, appearance features and safety of smoking and were less concerned about negative physical and social consequences. They also found current smokers to be more likely than past smokers to believe that smoking helps them meet people.

Zapata *et al.* (2004) report that the more strongly adolescents believed smoking provided emotional benefits such as relaxation, and assistance in dealing with boredom and problems, the more likely they were to have smoked. They also found recent smoking to be associated with the belief that people who smoke like the feeling of it.

In addition, Griffin *et al.* (1999) found that less heavy smoking in Year 12 girls was predicted by anti-smoking attitudes held in Year 6. Those who believe that smoking tastes bad are less likely to have smoked in the past 30 days (Zapata *et al.*, 2004). Finally, Flay *et al.* (1998) found that lower scores on an outcome expectancy scale measuring beliefs about the negative health effects of smoking significantly predicted experimental and regular use of cigarettes. Despite this evidence, attitudes may not be as important as other factors in influencing adolescent smoking.

One study found that favorable beliefs and opinions about smoking did not predict smoking uptake in the presence of socio-demographic, behavioral and environmental factors (McNeill, Jarvis, & Stapleton, 1988; Stanton & Silva, 1991). Another study found no relationship with positive attitudes when controlling for friends' smoking (Stanton & Silva, 1991). Of course, this does not mean that addressing attitudes may not be an effective intervention to prevent smoking or to encourage cessation.

Availability

Unsurprisingly, those that report cigarettes as being easier to obtain are more likely to have smoked (Zapata *et al.*, 2004). The findings from the Conrad *et al.* literature review (1992) also support the availability of Cigarette as a predictive factor for adolescent smoking.

Parental Smoking

Parental smoking provides a means by which adolescents may perceive smoking in a positive context: the modeling of acceptable and beneficial behavior (US Department of Health and Human Services, 1994). Exposure to positive smoking models may increase the likelihood that an adolescent accepts a cigarette when one is offered (Darling & Cumsille, 2003). Tyas and Pederson (1998) note that twice as many studies reviewed demonstrated a relationship

between parental smoking and adolescent smoking than found no significant effect. Some cross-sectional studies have found this relationship to be particularly strong (Buller *et al.*, 2003). It is possible that parental smoking is differentially influential at certain points in the youth smoking trajectory.

In one study, parental smoking significantly predicted trial, experimentation, and regular use, with the strongest effect for regular use (Flay *et al.*, 1998). Smoking by an older sibling has repeatedly been shown to be predictive of adolescent smoking (Tyas & Pederson, 1998; US Department of Health and Human Services, 1994).

Peers Smoking

US Department of Health and Human Services (US Department of Health and Human Services, 1994) defined peers by the as persons of about the same age who feel a social identification with one another. Most studies find smoking by peers to be one of the strongest risk factors for adolescent smoking, particularly in relation to trialing smoking (Buller *et al.*, 2003; Conrad *et al.*, 1992; Derzon & Lipsey, 1999; Sasco & Kleihues, 1999; Scal *et al.*, 2003; US Department of Health and Human Services, 1994). There is also substantial evidence to suggest that peer smoking is more influential than parental smoking on adolescents (Griffin *et al.*, 1999; Tyas & Pederson, 1998).

An adolescent is far more likely to smoke if his or her best friend(s) smoke(s) (Tyas & Pederson, 1998). As the number of smokers among the friendship group increases, so does the risk of smoking (Buller *et al.*, 2003; Griffin *et al.*, 1999; Sasco & Kleihues, 1999; Simons-Morton, 2004). Perceptions of the prevalence of peer smoking are highly influential. The larger the proportion of peers (e.g., young people in general) that are perceived to smoke, the more likely an adolescent is to smoke (Zapata *et al.*, 2004). Peer influences are believed to interact with an adolescent's personal susceptibility (described as the absence of a firm decision not to smoke) to influence smoking behavior (Buller *et al.*, 2003). Susceptible adolescents are particularly likely to be influenced by peers.

Adolescent and Young Adult Smoking Dependence

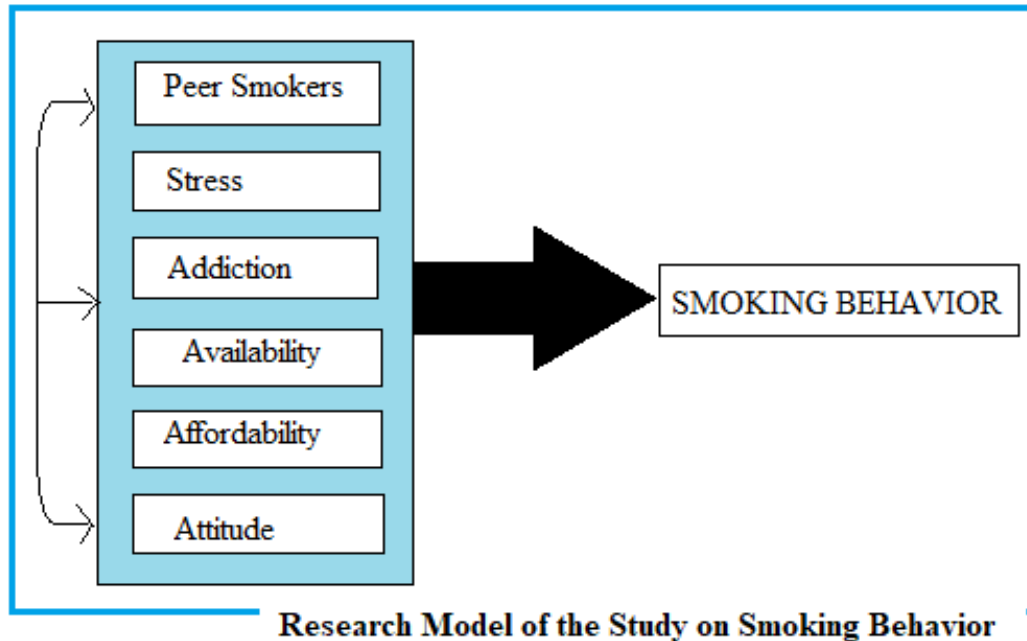
Adolescent and young adult smokers generally smoke cigarettes less frequently than older adults (DiFranza *et al.*, 2000) do. This can lead to an assumption that most young smokers (particularly adolescents) are not dependent on nicotine, and that it is only the social factors that contribute to the continues use. Indeed, adolescents commonly share this view (Rugkasa *et al.*, 2001; Siqueira *et al.*, 2000). While adolescents see dependence as an integral element of smoking among adults, there is a common belief that it does not develop until after several years of smoking, or only once smokers reach adulthood (Rugkasa *et al.*, 2001).

It is likely that this assumption contributes to high experimentation rates. In a study of reasons for smoking among adolescents, 31% cited a belief that they could quit smoking at any time as a reason for initiating smoking (Siqueira *et al.*, 2000). Such frequent and regular smoking is certainly sufficient to produce dependence. Indeed, dependence can occur at very early stages of smoking pathways (DiFranza *et al.*, 2000; Mayhew *et al.*, 2000). There is evidence that significant dependence producing changes occur in the brain after only the second use (DiFranza *et al.*, 2000). Nicotine dependence can also occur at relatively low levels of use. DiFranza *et al.* (2000) found that almost half of those adolescent smokers who only smoke occasionally report nicotine dependence.

Theoretical Framework

Figure 1

Theoretical Framework based on Literature Review



Research Method

Methodology is usually a guideline for solving problems, with specific components such as phases, tasks, methods, techniques, and tools” (Irny *et al.* 2005). Scientific method is the pursuit of truth as determined by logical considerations. The ideal of science is to achieve a systematic interrelation of facts. Scientific method attempts to achieve “his ideal by experimentation, observation, logical arguments from accepted postulates and a combination of these three in varying proportions” (Ostle *et al.* 1975). The major objective of this chapter is to explain various tools and techniques employed for the data collection, analysis, and interpretation of the data, relating to the present problem under study. “The collection of all possible observations where finite or infinite relevant to same character of interest is called population (1994: 03).” “Population is that set of individuals which is to be studied (Waller. A. Ray; 1979:193). I took all the students at Deccan Medical College Hyderabad, India as population. “A sample forms a manageable subset of a population” (Haralambos 2004).

A sample of 30 students had been selected through simple random method from the population. The questionnaire was constructed according to the objectives and variables of the study. The demographic characteristics of the respondents such as age, locality, and father income, were also included in the questionnaire, the questionnaire was prepared in English.

A two-point scale (Nominal Level) i.e., yes/No was used in the questionnaire while the respondents were requested to choose the appropriate option. After data has been collected, the researcher turns to the task of analyzing them. After the data collection, the data were analyzed by using a statistical package for social sciences (SPSS) program. The following statistical techniques were used to analyze the data: Each variable of investigation was analyzed into frequency distribution. The formula of calculating percentage is as under:

Chi-square Test

To test the association between independent and dependent variables, a chi-square test has been used. The formula for chi-square test was following:

$$X^2 = \sum = (Fo - Fe) / Fe$$

Fo = Observed frequency

Fe = Expected frequency

Σ = Sum of the observations.

Results and Discussion

Testing of Hypothesis

H₁: Increase in stress higher the addiction level of smoking among college students.”

H₀: There is no association between stress and addiction.

Table 1

Cross tabulation between really felt needed of cigarette and feel pleasure when smoke.

		Do you feel pleasure when you smoke?			Total
		yes	no	I don't smoke	
have you ever felt like you really needed a cigarette	yes	4	0	0	4
	no	1	4	0	5
	I don't smoke	0	0	21	21
Total		5	4	21	30

Chi-square = 49.200 P-value = 0.000 d.f = 4

The above table shows the cross tabulation of the variables “do you feel pleasure when you smoke” and “have you ever felt that you really needed a cigarette”. From the results P value is depicted 0.000 that represents a highly significant result and the degree of freedom from result is obtained is 4. The data have proved that both variables are correlated to each other as most smokers i.e., 5 smokers feel pleasure when they smoke, out of them 4 smokers have ever felt needed of cigarette. While only one smoker did not ever feel needed of cigarette. The results show that if a smoker ever felt needed of cigarette, they feel pleasure when they smoked.

Conclusion

The purpose of the study was to check the prevalence of smoking behavior among the college students. From the results, smoking behavior was prevalent among the students, i.e., every third out of tenth student was smoker. The study shows that the student has posed negative attitude toward smoking, but smoking was still prevalent. From the result smoking was prevalent in all categories of age i.e., age plays no significant role in smoking behavior among the students. It was found from analysis that stress played a significant role in addiction and ultimately toward smoking i.e., most of the respondents tried to quit smoking but they could not. Most the respondent’s closest friends were smokers as compared to their family members. The results of the study reveal that that the availability of cigarettes was easy, as most of the smokers buy cigarettes from stores. The study shows that cigarettes were affordable i.e., most of the respondents had enough money to buy the cigarette. The conclusion of this study was drowning through quantitative research methods. Relationships of variables and statistical analysis was done through statistical Package for Social Sciences (SPSS). Chi square test was applied to test the hypothesis; the hypothesis gave significant result.

Recommendations

Students entering college can face great changes in their social environment. Some students are living away from home, and they are free from direct parental supervision. It is important for parents to have a check on the activities of their children, and they should spend proper time with their children as it can create a good friendly environment, and they should always avoid smoking in the presence of their children. It is important for the teachers to recognize that prevalence of smoking increases in college students, so they arrange different seminars and programs regarding smoking in which they address and educate the students about the negative health effects of smoking, and create a good interaction with their students, and to tell them about negative health consequences of smoking. As the availability of cigarettes in our country is very easy, so the government should take responsibility and the learning institutions to ban the sale of cigarettes from those stores, which are nearer to those institutions. To increase the non-affordability of cigarettes among the youth the government should increase the taxes and prices. The prevalence of smoking is very high in college students and will continue to increase unless intervention programs are implemented urgently. Thus, the study recommends that previously mentioned factors should be considered when designing effective tobacco control programs to reduce smoking prevalence among college students.

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Declaration of Interest

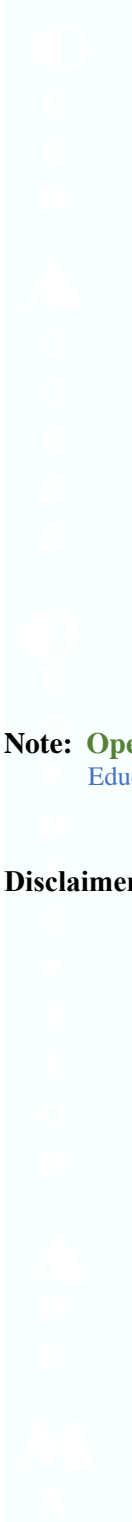
The authors declare that there no conflicts of interest.

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