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Tobacco Abuse in Adolescents: The Role of Psychosocial Factors

By Anita Sharma, Jyoti Sharma

Himachal Pradesh University, Shimla, India

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Tobacco Abuse in Adolescents: The Role of Psychosocial Factors

Anita Sharma^α, Jyoti Sharma^Ω

Abstract - The present investigation was done to examine the role of anxiety, stress, family conflict and family control in the determination of adolescents smoking. For accomplishing these objectives, a sample of 240 students studying in different schools from two districts of Himachal Pradesh (Shimla and Solan) was taken. The age range of the sample was 14-19 years. 2x2x2 factorial design was used to study the significance of difference between groups (smokers and nonsmokers), schools (public and private) and gender (males and females) on anxiety, stress, family conflict and family control. Results revealed that smokers irrespective of gender and type of school were significantly higher on anxiety, stress, family conflict and family control. Further, on family control the interaction effects of group or school and gender or school have been found to be significant.

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I. INTRODUCTION

The adolescent years are among the most stressful times in a person's life. It is a period of "growing up". There are many risk factors for initiating smoking by adolescents such as personal factors (e.g. age, sex, personality constructs, values, self esteem, self image, stress, anxiety, depression, boredom etc.), social factors (family, school, peer, media influence etc.) and belief about smoking (positive attitudes and perceived positive benefits and norms about smoking etc.).

The popular belief is that it is stress which is related to daily hassles and family life patterns that makes an individual to follow drug addiction to overcome these stresses. Youngsters suffering the insecurities of adolescence may find the image they would like to convey (Aloise Young et al., 1996), consistent with this point, teenagers whose ideal self image is close to that of a typical smoker are most likely to smoke (Barton et al., 1982). Low self esteem, dependency, powerlessness and social isolation all increase the tendency to imitate other behaviour (Bandura, 1977). Social influences to smoke appear to be among the most critical factors in smoking acquisition.

The smoking habit is strengthened by such positive rein-forcers as pleasure from the smell of

tobacco smoke, feelings of relaxation and satisfaction of physical and psychological needs. Irfat Khan and Srivastava (2008) found that smokers were significantly high on the level of stress and anxiety both, the strong association between smoking, stress and anxiety, Whereas, close relationships between parent-child being in a healthy relationship protect their children from the smoking habits. Anxiety has been implicated in smoking initiation, maintenance and relapse (Morissette et al., 2007). The interaction between personality of the individual and his environment make him prone to various kinds of addictive products. Family environment serves as a precipitating and one of the most potent factors of antisocial activities. Defective discipline and lack of moral atmosphere at home are considered responsible for antisocial behaviour, crimes and delinquency among the students. Otten et al. (in press), found that smoking-specific parenting practices, assessed by parental reactions to smoking, house rules on smoking and communication about smoking, were indeed predictive of adolescents' smoking related cognitions. Content specific parental monitoring efforts are commonly considered key factors in explaining and deterring adolescent smoking behaviour and include parent-child communication about substance use and substance specific rules (Juon et al., 2002; Huver et al., 2007).

Adolescence is often a difficult period for youth in Indian society because parents do not tend to realize that their children are growing up and their behaviour towards adolescents needs to reform. Where parents are autocratic possessive, very much controlling and interfering, adolescents perceive it negatively and show aggressive and risk taking behaviour like smoking, drug addiction etc. authoritative parenting has been found to have favorable effects on adolescent smoking (Pierce et al., 2002; Simons Morton, 2002; O'Bryne et al., 2002; Huver et al., 2007).

Adolescents who reported low levels of parental support, affection, monitoring and more family control and conflict, they are prematurely impelled to go to the bad companies. A family with poor and unhealthy environment creates stress and anxiety among its members. Levels of stress i.e. daily life hassles and life events regarding family matters are significantly more in drug users as compared to normal's (Chasson et al., 2003).

About ^α : Assistant Professor, Psychology Department, Himachal Pradesh University, Shimla, India.

About ^Ω : Research Scholar, Psychological Department, Himachal Pradesh University, Shimla, India.

Close relationships, healthy open communication and perceived parental support are especially important during adolescence, as they experience many physical and emotional changes and upheavals. Adolescents who have positive relationships with their parents are more likely to report high levels of perceived well-being. Adolescents who report difficult talking with their parents are more likely to smoke cigarette to allay their anxiety and stress.

On the basis of the above studies, the present investigation aims to examine the level of anxiety, stress, family conflict and family control among adolescent's smoker and nonsmokers.

II. METHOD

A factorial design of the order of 2X2x2 was used to compare the scores on stress, anxiety, family conflict and family control for group (smokers and nonsmokers), schools (public and private) and gender.

III. SAMPLE

A sample of 240 students (males and females) of school level was drawn randomly from Shimla and Solan district of Himachal Pradesh. The subjects were taken of the age group of 14 to 19 years.

IV. TOOLS

a) State-Trait Anxiety Inventory (STAI) (Spielberger, Sharma and Singh 1973)

The Hindi version of the STAI was used in this study, in order to measure the trait anxiety of the subjects. The STAI provides internally consistent, reliable and valid scores for measuring both state and trait anxiety. In the present study, only the A-Trait scale of the STAI was used. It consists of 20 statements. Scoring was done with the help of scoring key. The test re-test reliability of the Hindi STAI is quite stable which range from .77 to .83 over the 30 to 90 days period.

b) ICMR Psychosocial Stress Questionnaire (Srivastava, 1991-92)

The stress questionnaire is designed by "Indian Council of Medical Research (ICMR)" New Delhi to assess the extent of basic components of psychological stress. Teenagers usually face with some specific stress situations. In view of these fact additional short measures of stress consisting of 7-items, for educated teenagers, was prepared. In order to indicate the frequency of amount of stress experienced by the respondent each item in two measures of psychosocial stress was to be rated on 4 point scale, i.e. not at all/ little/ mild or sometimes/ moderate or many times/ severe or often (corresponding numerical scores from 0 to 3 respectively). Next, translated and standardized Hindi version of Srivastava's Special Stress Scale for teenagers (students) Jyoti Sharma and Anita Sharma,

2010 was administered. The test-retest reliability of Srivastava's Special Stress for teenagers and its translated version was found to be .88 which is significant at .01 levels.

c) Family Environment Scale (Form-R) (Moos and Moos, 1986)

Family environment scale was used in the present study. The scale consists of 90 true-false items related to family behavior consisting of 3 main dimensions viz. relationship, personal growth and system maintenance dimension. a.) the relationship dimension (RD) is assessed by three subscales: cohesion, expressiveness and conflict. b.) the personal growth (PGD) is assessed by five subscales viz. independence, achievement orientation, intellectual cultural orientation, active-recreational orientation and moral religious emphasis. c.) the system maintenance dimension (SMD) is assessed by two subscales viz. organization and control.

In the present study, only two sub dimensions viz. family conflict and family control have been used. Raw scores were obtained by placing the scoring stencil on the protocols as per direction in the manual. The validity and reliability of the scale is above .85 as per the manual.

d) Smoking Core Questionnaire (Sharma and Sharma, 2010)

A self report questionnaire with 20 items was developed to identify the smokers. In this questionnaire, questions asked about subject's use of tobacco, knowledge and attitude towards tobacco and towards stopping smoking.

V. RESULTS

In the first place, means were calculated for the factor of anxiety, stress, family conflict and family control and then ANOVAs were computed for the same. The details of the values obtained are shown in Table-1 and 2.

Table - 1 : General means table for Groups, Schools and Gender on Anxiety, Stress, Family Conflict and Family Control

S.no	Variables	Groups		Schools		Gender	
		Smokers	Non-Smokers	Public	Private	Males	Females
1.	Anxiety	46.49	41.41	44.22	43.68	43.14	44.76
2.	Stress	11.17	9.33	10.30	10.20	9.98	10.52
3.	Family conflict	4.94	3.85	4.46	4.33	4.51	4.28
4.	Family control	5.28	4.34	5.25	4.37	4.83	4.79

Table-2 : Analysis of Variance for Anxiety, Stress, Family Conflict and Family Control along with Groups, Schools and Gender.*a) Anxiety*

Source of variance	Sum of squares	df	Mean square	F-Ratio
Groups(A)	1550.417	1	1550.417	16.004**
Schools(B)	17.067	1	17.067	.176
Gender(C)	156.817	1	156.817	1.619
Groups x Schools(AxB)	46.817	1	46.817	.483
Groups x Gender(AxC)	41.667	1	41.667	.430
School x Gender(BxC)	4.817	1	4.817	.050
Groups x schools x Gender(AxBxC)	24.067	1	24.067	.248
Error	22475.733	232	96.878	
Total	24317.402	239		

b) Stress

Source of variance	Sum of squares	df	Mean square	F-Ratio
Groups(A)	203.504	1	203.504	19.427**
Schools(B)	.704	1	.704	.067
Gender(C)	17.604	1	17.604	1.681
Groups x Schools(AxB)	.704	1	.704	.067
Groups x Gender(AxC)	10.838	1	10.838	1.035
School x Gender(BxC)	1.838	1	1.838	.175
Groups x schools x Gender (AxBxC)	10.004	1	10.004	.955
Error	2430.300	232	10.475	
Total	2675.496	239		

c) Family Conflict

Source of variance	Sum of squares	df	Mean square	F-Ratio
Groups (A)	71.504	1	71.504	31.432**
Schools (B)	.938	1	.938	.412
Gender (C)	3.038	1	3.038	1.335

Groups x Schools (AxB)	.004	1	.004	.002
Groups x Gender (AxC)	6.338	1	6.338	2.786
School x Gender (BxC)	.704	1	.704	.310
Groups x Schools x Gender (AxBxC)	5.104	1	5.104	2.244
Error	527.767	232	2.275	
Total	615.397	239		

d) Family Control

Source of variance	Sum of squares	df	Mean square	F-Ratio
Groups (A)	52.267	1	52.267	25.489**
Schools (B)	14.017	1	14.017	6.835**
Gender (C)	.067	1	.067	.033
Groups x Schools (AxB)	15.000	1	15.000	7.315**
Groups x Gender (AxC)	2.817	1	2.817	1.374
School x Gender (BxC)	35.267	1	35.267	17.198**
Groups x Schools x Gender (AxBxC)	6.017	1	6.017	2.934
Error	475.733	232	2.051	
Total	601.185	239		

** : Significant at $p < .01$ level.

VI. INTERPRETATION

- a) **Anxiety:** The F-ratio for the groups (smokers and nonsmokers) is 16.004** $P < .01$ level. The means of groups are 46.49 and 41.41 which clearly shows that more anxiety is found in smokers followed by nonsmokers. The rest of the F-ratios for schools (public and private), gender and interactions are not significant.
- b) **Stress:** The F-ratio for the groups (smokers and nonsmokers) is 19.427** $p < .01$ level. The means of groups are 11.17 and 9.33 which reveals that smokers score significantly higher on the stress variable as compared to the non smokers. The rest of the F-ratios for schools (public and private), gender and interactions are not significant.
- c) **Family Conflict:** The F-ratio for the groups (smokers and nonsmokers) is 31.432** $p < .01$ level. The means of groups are 4.94 and 3.85 which indicates that smokers score significantly higher on the family conflict variable as compared to the nonsmokers. The rest of the F-ratios for schools, gender and interaction are non significant.
- d) **Family Control:** On this factor of family environment, the F-ratio for the groups (smokers and nonsmokers) is 25.489** at $p < .01$ level. The means of groups are 5.28 and 4.34 which indicates that smokers score significantly higher on family control variable as compared to the nonsmokers. The F-ratio for schools has also turned out to be significant at .01 level

(6.835**, $p < .01$) with the means of schools being 5.25 and 4.37 which indicates that public school students score significantly higher on family control as compared to the private school students. The interaction effect between groups and school has also yielded a significant F-ratio of 7.315** at $p < .01$. The result reveals that the public school smokers score significantly higher on family control as compared to private school smokers. Whereas, public school non smokers and private school non smokers are more or less perceive the same control. The interaction between schools and gender has also turned out to be significant at .01 level (17.198** at $p < .01$) which shows that the public school females score significantly higher on family control as compared to public school males, whereas, private school males score significantly higher on family control as compared to private school females.

VII. DISCUSSION

Tobacco is one of the most addictive substances we know however, is fully legal for use by adults and readily available for use by adolescents. According to Himachal Pradesh Voluntary Health Association (HPVHA) survey in Shimla town 12 percent people of 15-19 years are smokers. In the state 29.3 percent of school going children are smokers. In private school, the number of smokers is about 31 percent and 10 percent of the girls are addicted to tobacco usage.

Today adolescents are exposed to a variety of stresses (i.e. attending classes, examination, fear about results, misconception about teachers and parents, fear of self image, fear and concern about future, fear about isolation and rejection etc.). Adolescents who see cigarette a way to handle negative feelings are more likely to ignore the long term health consequences of smoking. The smokers feel relaxed when smoking and tense without nicotine, thus their tobacco and cigarettes are seen as helping them cope with the stresses and strain of everyday life (Warburton, 1992). Overtime smoking also becomes a crutch for many used to handle stress, anxiety, boredom and tension etc. (Lloyd and Taylor, 2006). According to Mental Health Foundation (2007), cigarette smoking is linked with a wide range of psychiatric diagnoses including anxiety, agoraphobia and panic disorder but especially with depression.

Smoking behaviors are negatively reinforced when they are followed immediately by removal of or lessening of an unpleasant condition. According to smokers, smoking is sometimes seen as a device for controlling unpleasant effects. After smokers become addicted, they must continue to smoke to avoid the aversive effects of withdrawal that is, when addicted

smokers begin to feel tense, anxious or depressed after not smoking for some period of time, they can remove these unpleasant symptoms by smoking another cigarette (Steven et al., 2005). Okuyemi and colleagues (2006), demonstrated that smokers may have greater sensitivity to anxiety eliciting stimuli than nonsmokers.

On the other side, family is a strong unit and plays vital role in shaping attitudes behavior of its member particularly that of children and adolescents. Adolescents who reported low level of parental support and affection, more family conflict and family control were more likely to engage in high delinquent behavior (Kosten, Novak and Kleber, 1984). Stable family relationships and parental guidance are extremely important molding influences for children and this stability is lacking in families of dependent youth. The tension that exists in many "intact" families of smokers results from hostility, argument and primarily the factors of family environment viz. less cohesion, less independence and more conflict. This type of tension-filled family environment is obviously not conducive for making the youngsters feel secure and contented (Verma, 2006).

Table-3 : Interaction table on the variable of Family Control for Group and Schools

	Private	Public
Smokers	4.78	5.77
Non-smokers	4.35	4.34

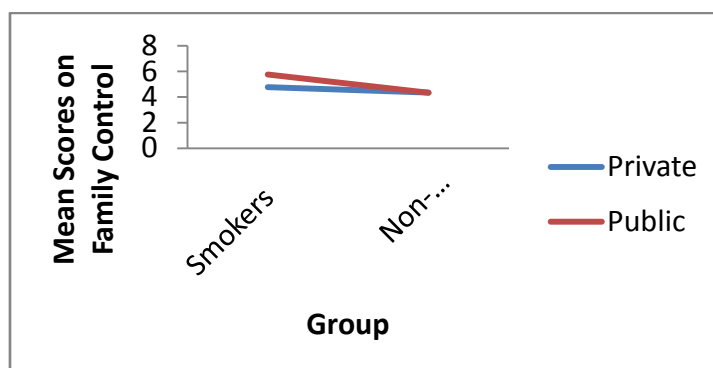


Figure-1 : Interaction Effect of Group, Gender on the variable of Family Control

The interaction effect between groups and schools has also yielded a significant F-ratio at $p < .01$ level on the variable of family control. The results could best be depicted through the two ways interaction between groups and schools can be conformed through

the curves (fig.1). The curve reveals that public school smokers score significantly higher on family control as compared to private school smokers. Whereas, public school nonsmokers and private school nonsmokers are more or less perceive the same control.

Table-4 : Interaction table on the variable of Family Control for Schools and Gender

	Males	Females
Public	4.69	5.42
Private	4.97	4.16

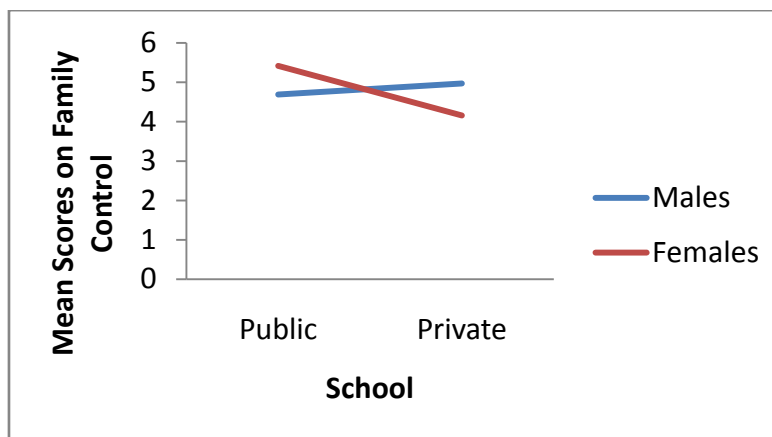


Figure-2 : Interaction Effect of Gender and Schools for the variable of family control

The interaction effect between schools and gender has been yielded a significant F-ratio at $p < .01$ on the variable of family control. The results could best be depicted through the two ways interaction between schools and gender which have been found to be significant and conformed through the curves (fig.2). The curve reveals that public school females score higher on family control as compared to public school males, whereas, private school males score significantly higher on family compared to private school females.

Poor family environment triggers stress and anxiety which further results into delinquent behaviour among adolescents. The results clearly reveal that individual personality or emotional upset like stress and anxiety and the importance of family environment in one's life in the onset of drug addiction. Strict control in females leads to not acquiring the habit of smoking. Hampel and Petermann, (2005); Seiffgekenke and Beyers, (2005), highlighted that girls experience more stress and anxiety than boys with regard to future related problems. Maladjustment among students has been found one of the major factors responsible for causing delinquency and crime (Kour, 2008). Female become the chief targets of family conflict and control because of their weaker sex and undefined and multiple role (Sharma et al., 2008). Female belonged to more controlled environment, where parents keep a check on their children, guided them, supporting, giving love and care and affection to follow adaptive behaviour as compared to males (Chassin et al., 1991; Gotlib and Avison, 1993). Ameerjan (1994), reported that girls perceive their parents in a more positive way as they are socialized to be more nurturing, obedient and responsible as compared to boys. In cases where parents are more interfering, controlling, enforcing rules, exercising hostile control, their adolescent children are found to be more frustrated than where such a parental behaviour is absent. Drug addict's families have been found to be poorly cohesive, full of conflict with excessive control leading to stress and anxiety.

In a nutshell, the results of the present study show that family conflict, family control, stress and

anxiety contribute significantly to the development of drug addiction and delinquency.

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