

Smoking and Depression among Rural Adolescents

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Abstract

Background: One factor that influences smoking in adolescents is depression. Cross-sectional research has found significant co-morbidity between depression and cigarette smoking in adolescents. **Objectives:** To find out the factors related to smoking and depression among adolescents in the selected villages of Savar Upazilla of Bangladesh. **Materials and method:** This descriptive type of cross sectional study was carried out with the objective to assess the factors related to smoking and depression among adolescents in a rural community of Bangladesh. Total 270 respondents were selected from the village by non-probability convenience sampling technic and data were collected by face to face interview with the help of semi structured pre-tested questionnaire. The 6-ITEM Kutcher Adolescent Depression (KADS-6) Scale was used to measure the presence of depression. **Results:** Out of 270 respondents, 55.18% lived in nuclear family and majority (52.96%) of the respondents was smoker and started smoking around the age of 14.5 years. Peer smoking and parent smoking play an important role to start smoking among the adolescents. In this study 69.23% of the respondents were influenced about smoking by their friends. **Conclusion:** More than half of the adolescents had already started smoking. Tobacco use is an unhealthy behavior that remains remarkably resistant to modification. This study is very important in the point of public health.

Keywords: Cigarette smoking; Adolescent health; Depression; Socioeconomic status.

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Introduction

Tobacco use is one of the major preventable causes of premature death and disease in the world. Adolescent depression is often multi-factorial and raises the risk of undesirable behaviors and outcomes.¹ Depression and smoking show high rates of co-morbidity, with

both typically beginning in adolescence and serving as leading causes of psychosocial, economic, and medical morbidity.²⁻⁴

Using a life course perspective, adult diseases could originate by adverse exposure during

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developmental phases in one's lifetime. Exposure to high levels of nicotine during adolescence may affect later adulthood health by causing damage in sensitive developmental phases or by having a cumulative negative effect over time.⁵ In addition, the link of depression with smoking has been extensively recognized which in turn result in health hazards and carry over smoking later in life.^{6,7}

Tobacco use is the leading global cause of preventable death. The World Health Organization (WHO) attributes nearly 6 million deaths a year to tobacco. This figure is expected to rise to more than 8 million deaths a year by 2030. Most people who use tobacco begin using it before the age of 18 years.⁸ Tobacco-attributable deaths are projected to decline by 9% between 2002 and 2030 in high-income countries, but to double from 3.4 million to 6.8 million in low and middle income countries.^{8,9} This study has identified depression as a significant public health problem among adolescent in Bangladesh. Smoking addiction is very common aspect for this generation. This smoking addiction is gradually destroying the youth of the society.

Materials and method

This is a descriptive type of cross sectional study conducted to find out the factors related to smoking and depression among adolescent in a rural community of Bangladesh. The places of study were in and around Dhamrai Upazilla Health Complex, Dhamrai, Savar, Dhaka, Bangladesh. This study included 270 purposively selected adult male. A pretested semi-structured questionnaire was used for data collection. It contained socio-demographic and smoking related questions. The 6-ITEM Kutcher Adolescent Depression (KADS-6) Scale was used to measure the presence of depression.¹⁰

The study was conducted from July 2017 to November 2017 by the department of Community Medicine in Delta Medical College and Hospital. Data were collected by face to face interview by pretested semi-structured questionnaire. After data collection data were checked, verified, compiled and analyzed by (SPSS) version 19. Data were analyzed by using descriptive statistics, percentages and the inferential statistics. The difference in proportion is considered statistically significant whenever $p \leq 0.05$.

Results

The socio-demographic characteristics of total 270 interviewed adolescents from rural area (Dhamrai, Savar) are given in Table I. Out of 270 respondents, 55.18% lived in nuclear family and 44.81% lived in joint family. Majority of the fathers of the respondents (68.99%) had good occupation and maximum (67.40%) mothers of the respondents were housewife and majority of them (50.74%) had no or poor education.

Table I: Distribution of respondents by socio-demographic characteristics (N=270)

Variables		Frequency	%
Type of family	Nuclear Family	149	55.18%
	Joint Family	121	44.81%
No. of family members	Up to 2	87	32.22%
	3 to 4	127	47.04%
	5 or >5	56	20.74%
Father's Occupation	Service Holder	90	33.33%
	Business	96	35.66%
	Retired and Others	84	31.11%
Mother's occupation	Housewife	182	67.40%
	Service	46	17.04%
	Business	42	15.56%

This study shows that 52.96% respondents were smoker and started smoking around the age of 14.5 years. Peer smoking and parent smoking play an important role to start smoking among the adolescents. In this study, 69.23% of the respondents were influenced about smoking by their friends. (Table II)

Table II: Distribution of respondents by their information about smoking

Variables		Frequency	%
Among all the respondents (N=270)			
Smoking habits	No	127	47.04%
	Yes	143	52.96%
Best friend smoker	No	106	39.26%
	Yes	164	60.74%
Parents smoker	No	148	54.81%
	Yes	122	45.19%
Smoker in the family (other than parents)	No	145	53.70%
	Yes	125	46.26%
Among smoker (n=143)			
Smoking starting age	10-12	20	14.02%
	13-15	72	50.38%
	16-18	51	35.16%
Influenced about smoking	Friends	99	69.23%
	Family	10	6.99%
	Others (watching)	34	23.78%
	5 or less	66	46.15%
Sticks of cigarette per day	6 to 10	55	38.46%
	11 to 20	20	13.98%
	More than 20	2	1.39%

This study shows that various factors of the depression among the respondents like 31.85% for domestic violence, 35.55% for stressful events of life, 21.48% due to failure in love and 17.40% for familial disharmony. (Table III)

Table III: Distribution of respondents by their information about depression (N=270)

Variables		Frequency	%
Depression	Normal	153	56.67%
	Depressed	117	43.33%
Domestic violence lead to leave home	No	184	68.15%
	Yes	86	31.85%
Stressful events in the last year	No	174	64.45%
	Yes	96	35.55%
Fall in love	Successful affair	65	24.70%
	Failure in affair	58	21.48%
	Not fall in love	147	54.45%
Familial disharmony	No	223	82.60%
	Yes	47	17.40%
Face any type of violence	No	215	79.63%
	Yes	55	20.37%

Discussion

The study was aimed to find out the factors related to smoking and depression among rural adolescent. This was a cross sectional study based on rural adolescents. The 6-ITEM Kutcher Adolescent Depression (KADS-6) Scale was used to measure the presence of depression.¹⁰ In this study all the respondents were selected from the rural community around the Dhamrai Upazilla

Health Complex. Smoking behavior was measured by a number of questions.

In this study, mean age of starting smoking was 14.5 years. In Bangladesh, Global Adult Tobacco Survey 2009 showed nearly 19 percent smokers started smoking between 10 and 15 years of age, while 25 percent between 15 and 16 years.¹¹ Regular smoking patterns were established at ages 15-16, a critical time point to determine whether they could finish high school.¹² Patton et al. found mean age of the smoking initiation was 13.5 ± 0.6 years and their age range was 12 to 17 years. They took class 7 to class 11 students.¹³ In another study, Simantov et al. also found mean age of the smoking initiation 14.5 ± 0.5 and their age range was 13.7 to 16.8 years.¹⁴ So most of the adolescent started their smoking from age 14 years as it seems to be the most crucial period for every adolescent. So these study findings are similar to present study findings.

This study, also found the person who influenced the respondents about smoking. Peer smoking is a very important factor to start smoking. This study shows 69.23% of the respondents were influenced about smoking by their friends. Another study also revealed that the clearest linear trend was apparent in those reporting most of their friends to be smoker.¹² Similar relation was also found in another study, they also describe that peers play an important role to initiate smoking.¹⁴ Peer smoking mediated these developmental influences such that higher depression symptoms predicted an increase in the number of smoking peers, which in turn predicted smoking progression. The assessment of the alternative directional path indicated that smoking progression predicted a deceleration of depression symptoms from mid to late adolescence.

In our study, 45.19% respondents' parents were smoker. Parents smoking behaviour reflect on child behavior. Simantov et al. also described their study that the increased risk of smoking among

adolescent with history of parents smoking.¹⁴ The existence of direct linkages between maternal lifetime smoking status, teenage depression, and teenage sensation seeking with positive teenage lifetime smoking status supports the premise that youth may be influenced by the modeling behaviors of their parents, when vulnerable to depression or needs for high sensation, as suggested by social learning theory and as supported by past literature.¹⁵

The findings of this study also indicate that, 14-31.85% respondents left home due to domestic violence, 35.55% respondents were depressed due to some stressful events of life, and 21.48% were depressed due to unsuccessful affair. In our study, 17.40% had familial disharmony and another 82.60% had not. But another study found some relation between familial disharmony and depression.¹⁶⁻¹⁹

Conclusion

This study has identified depression as a significant public health problem among adolescent and smoking addiction has also been the common aspect for this generation. The results suggest that tobacco smoking prevention programs should include strategies of addressing different causes of depression and stress among adolescents in order to handle interpersonal conflicts and negative feelings, so as to prevent their involvement in substance use.

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