

Research Article**Prevalence and Factors Influencing Youngsters' Smoking in Shkodra City**Miranda Osmani^{1*}, Dritan Barbullushi²¹Health Center, nr. 3, Shkoder, Albania²Regional Hospital, Shkoder, Albania***Corresponding author**

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Abstract: A current issue is the use of smoking in school. The most successful method to fight the increase of this problem is action through education. The aim of the study was to provide for epidemiological data on the use of smoking in schools and determine factors influencing the spread of smoking in this part of the population. The study was conducted in Shkodra County and included 1,500 youngsters of ages 13-18 and 19-22 that were given an anonymous questionnaire. To analyze the data were used the Fisher test, *t*- student test and ANOVA test. 32,4% of the interviewees were smokers. Out of this percentage, 58,2% were male and 41,8% were female. Regarding age, 55,3% belong to 19-22 age group, while 44,7% belonged to 13-18 age group. Smoking is a concerning phenomenon among youngsters. The majority of smokers are male, but an increase of female smoking is observed.**Keywords:** Age group, Prevalence, Smoking

INTRODUCTION

Many studies have documented the link existing between cigarette's smoke and respiratory and cardiovascular illnesses [1-3]. When a proper prophylactic activity is conducted on the populace, helped also by an effective health care education, positive results have been achieved regarding incidence and prevalence of smoking [1, 3, 4]. A current problem is the extension of smoking in the school group age [1, 2, 4]. The majority of smokers start smoking as children, due to the complete or partial lack of knowledge on the harms caused by smoking [5, 6]. Other factors include advertisements, parents or teachers' role model, encouragement by friends or group pressure [7]. All these make that children, being the most fragile part of the society, succumb to smoking. Today in the world, about 80 to 110 thousand young people become smokers each day. In England, 40% of youngsters smoke (22% males and 18% females). In Albania, 80% of smokers start smoking before the age of 20 [8]. The occurrence of the habit of smoking increases with age. This shows a trend occurring in young people with the passing of time. About 80% of smoking cases under 16, it is thought to be a harder smoking potential at a grown age [9].

The age when smoking starts is closely related with possible damages to the respiratory system. It's a given that smoking on young people of 10-18 age group can hinder the increase of some functional spirometric indexes, with adverse effects exclusively on female

gender [10]. Passive exposure to smoking by mothers during pregnancy represent, on the other hand, a dangerous element toward the development of the infant's respiratory apparatus [11] or the possibility of early signs of respiratory illnesses.

Educational interventions, it seems, are the most effective to fight the increase in smoking in this level, because in this age group young people encounter the possibility to start smoking and also have a greater chance of avoiding it or quit altogether [12]. Educational intervention in schools starts with the recognition of factors influencing the use of smoking by adolescents.

MATERIAL AND METHODS

With this study we aimed to: extract epidemiological data on the use of smoking in 13-18 and 19-22 age groups, evaluate the prevalence of smoking according to gender lines M/F and to determine how the educational, cultural and economic level of the family influences smoking.

The target group of the study was pupils and students of elementary schools (7th, 8th, and 9th classes) and middle schools (representing the 13-18 age groups). The 19-22 age groups were represented by university students. During January 2013, a transversal study was conducted in the Shkodra County, engaging 1,500 young people in the 13-22 age groups. This age group was divided into two categories, representing the start

of adolescence and the challenge of physical and emotional changes – 13-18 age group; and years when important decisions on life and career are taken – 19-22 age group. The technique used for selecting the sample was “cluster selection”, cluster representing one class of a school. Classes were chosen at random. The participants in the study were 300 pupils of elementary schools (20%), 422 high school pupils (26,7%), and 778 university students (53,3%). The questionnaire was anonymous and was comprised of two parts:

General demographic data of the interviewees (gender, year of birth, place of birth, residence, parents educational level, parents employment status, family income level). Attitude of the individual toward smoking (how often is used smoking, age when smoking started, presence of smoking parents, drugs use). To analyze the data were used: Fisher test to compare the distribution of socio-demographic characteristics, lifestyles and dangerous behavior. *T*-Student test, ANOVA test, Mann-Whitney test were used to compare average values of numerical variables between male and female respondents.

RESULTS

The respondents were divided into 45,5% male and 54,5% female. 46,7% of them were on the 13-18 year old age group while 53,3% belonged to the 19-22 age group. Regarding place of birth, 55,5% were born in the city, while 44,5% of them were born in the countryside. 56,4% of the interviewees resided in the city, 43,6% of them lived in the countryside. The educational level of respondents' fathers varied from middle school (50,4%) to high education (37,3%) and elementary (12,3%). The educational level of respondents' mothers varied from middle school (47%) to high education (38,2%) and elementary (14,8%). As regards the employment status of the parents, 74% of respondents had their fathers employed; employed mothers were represented with 69%. The greater part of the respondents came from families with average income (60,4%). 21,4% belonged to families with high income, and 18,2% belonged to low-income families. Table 1 shows in detail the socio-demographic characteristics of interviewees.

Table 1: Socio-demographic characteristics of the interviewees

Variable	Interviewees (%)
Gender	
Male	45.5(%)
Female	54.5(%)
Age group	
13-18	46.7(%)
19-22	53.3(%)
Place of birth	
City	55.5(%)
Countryside	44.5(%)
Residence	
City	56.4(%)
Countryside	43.6(%)
Type of school	
Elementary	20(%)
High	26.7(%)
University	53.3(%)
Father's education	
Elementary (0-8 yr)	12.3(%)
High (9-12 yr)	50.4(%)
University (>12 yr)	37.3(%)
Mother's education	
Elementary (0-8 yr)	14.8(%)
High (9-12 yr)	47(%)
University (>12 yr)	38.2(%)
Father's employment status	
Employed	74(%)
Unemployed	26(%)
Mother's employment status	
Employed	69(%)
Unemployed	31(%)

Income level	
Low	18.2(%)
Average	60.4(%)
High	21.4(%)

Out of 1,500 subjects, 1,014 of them were declared non-smokers (67.6%), while 486 admitted smoking (32.4%). The smoking contingent was comprised by 58.2% male and 41.8% female respondents. By analyzing the data as regards age groups, 55.3% of smokers belonged to the 19-22 age group, while 44.7% belonged to the 13-18 age group. Regarding the residence, 82.1% of smokers lived in rural areas, and 17.9% in urban areas. On the parents' educational level, fathers of 47.2% of smokers had high school education, mothers being represented with 43.3% in this category. While on the parents' employment status, 65.2% of

smokers had employed fathers and 47.7% employed mothers. The majority of smokers come from average income families (60.3%). 198 of the interviewees responded positively to the question if they "use other toxic substances".

Table 2 shows the relationship between smoking and socio-demographic characteristics of the respondents. In this table are presented the percentage, OR, Interval of Confidence, the value of *P* based in logistic binary regression and the Degrees Free.

Table 2: Relationship between actual smokers and socio-demographic characteristics of youngsters and their parents

Variable	Non-smoker (N=1014)*	Smoker (N=486)*	OR [†]	95%CI [†]	P [‡]
Gender					
Male	29.9(%)	58.2(%)	1.64	1.27-2.12	<0.001
Female	70.1(%)	41.8(%)	1.00	Reference	
Age group					0.158 [‡]
13-18	59 (%)	44.7(%)	1.31	0.56-1.43	0.639
19-22	41 (%)	55.3(%)	1.00	Reference	-
Place of birth					
City	15.7(%)	17.2(%)	1.01	0.70-1.44	0.973
Countryside	84.3(%)	82.8(%)	1.00	Reference	
Residence					
City	10.5(%)	17.9(%)	1.16	0.83-1.76	0.547
Countryside	89.5(%)	82.1(%)	1.00	Reference	
Father's education					0.867
Elementary (0-8 yr)	14.3(%)	15.6(%)	0.88	0.65-1.39	0.885
High (9-12 yr)	51.1(%)	47.2(%)	0.97	0.63-1.16	0.678
University (>12 yr)	34.6(%)	37.2(%)	1.00	Reference	-
Mother's education					0.071
Elementary (0-8 yr)	16.5(%)	18.5(%)	1.12	0.79-2.14	0.066
High (9-12 yr)	46.7(%)	43.3(%)	1.03	0.78-1.25	0.859
University (>12 yr)	36.8(%)	38.2(%)	1.00	Reference	-
Father's employment status					
Employed	74.6(%)	65.2(%)	1.29	0.95-1.68	0.219
Unemployed	25.4(%)	34.8(%)	1.00	Reference	
Mother's employment status					
Employed	53.2(%)	47.7(%)	0.87	0.56-0.89	0.002
Unemployed	46.8(%)	52.3(%)	1.00	Reference	
Income level					
Low	16.0(%)	19.2(%)	1.76	1.02-2.44	0.059
Average	58.4(%)	60.3(%)	1.25	0.84-1.69	0.049
High	25.6(%)	20.5(%)	1.00	Reference	0.129

Number and percentage of respondents according to columns.

† ratio OR: smokers vs nonsmokers, 95% interval of confidence and the value of *P* based on logistic binary regression.

‡ general value of *P* and the degree free.

DISCUSSION

The study on smoking in school aged youngsters produced data pertaining the situation and degree of

smoking usage, thus making possible the evaluation of dynamics and trends regarding its prevalence and relevant risk factors.

In the study there have been identified statistically substantial changes related to the models of smoking according to variables under examination. The risk factors for smoking resulted to be the male sex gender, greater age, being a rural area resident, belonging to an average income family, and high school parents' education level. Males, and mainly those in greater age, tend to agree more on different, dangerous, behavior related to smoking, compared to females and younger persons, suggesting that these two groups engage more easily on dangerous behavior pertaining smoking. This holds true also for people belonging to high school education level families. On the other hand, females, younger persons, and those living in urban areas, substantially perceive as dangerous the behavior related with the use of smoking.

Though not in so much high levels, dangerous behaviors were present also on the youngsters interviewed. As expected, also in this issue there were sharp differences regarding age and gender. So, males reported more dangerous behavior such as smoking and drug use. The intensity of this kind of behavior is increased with age.

Comparison of the study's findings with other national and international studies

ESPAD study (European School Survey Project on Alcohol and Other Drugs), conducted on 2011 and targeting pupils of the 15-16 age group, with a representative sample of more than 6,000, showed a smoking prevalence of 40%. Meanwhile, YRBS study (Youth Risk Behavior Surveillance System) conducted on 2009 and targeting pupils of the 15-19 age group, with a representative sample of 4,000, showed a smoking prevalence of 59.1%. Our own study has shown a prevalence of 32.4% for the 13-22 age group. This discrepancy between figures comes as a result of different target age groups, however in all three studies it is being reported that smoking prevalence is higher in males and in higher age groups.

CONCLUSIONS

Our study provides data on the use of smoking in the schools of Shkoder County. It clearly shows the concerning trend of smoking since young age, as well as present risk factors influencing this phenomenon. This study will help health care professionals and educational specialist to improve their activity in

specific issues with impact on the health of children. More specifically, it is recommended:

- Developing programs promoting healthy habits;
- Strengthening the role of the educational system to institutionalize the health care education in school curricula;
- Promoting the role of the family in the prophylaxis of dangerous behavior.

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