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Knowledge, Attitudes & Predictors of Smoking Among Male Intermediate and Secondary School Students in National Guard Housing Schools, Dammam, Saudi Arabia

Medical Science

KEYWORDS : smoking, intermediate, students

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ABSTRACT

Background : In this study we investigated the prevalence of cigarettes and SHISHA smoking as well as the assessment of associated factors, knowledge, and attitude behind smoking among intermediate and secondary school male students in National Guard Housing, Dammam, Eastern Region, Kingdom of Saudi Arabia.

Methods: A cross-sectional study was conducted to involve the whole intermediate and secondary school male students (aged 12-20 years) in National Guard Housing in Dammam, KSA, using a self-administered modified version of the Global Youth Tobacco Survey (GYTS) questionnaire between 1st of April and 30th of April, 2015.

Result: Among 521 students (309 intermediate students, 212 secondary students) all of them completed the given questionnaire making the response rate 100%, the prevalence of those ever smoked cigarettes was 51.4% (42.4%, 64.6%) of intermediate and secondary students respectively, while the current smokers was 32.24% (27.5%, 39.15%) of intermediate and secondary students respectively.

Regarding the prevalence of SHISHA ever smoked was 37% of all students (27.8%, 50.5%) for intermediate and secondary school respectively, while the current smokers of SHISHA was 28% (22.65% of intermediate students, 35.84% of secondary students).

Significant association was found between smoking and having parents who smoke, having friends who smoke, lack of age restriction in selling tobacco products, higher age students who progressed in their class levels, but not significantly associated with total income of family, parent's level of education, or school performance.

Conclusion: Cigarettes and SHISHA smoking prevalence among the students is high, alarming, and getting bigger by time, which indicate the importance of having a great role of health education provision and implementation of new unconventional antismoking programs by involving technology, media, family, friends and role models to protect the new generations and prevent further complications of smoking.

Introduction:

Tobacco smoking is a great health problem and a direct cause of high morbidity and mortality all over the world, which could be prevented. According to the estimate of global mortality and burden of disease,

Total tobacco-attributable deaths are projected to rise from 5.4 million in 2005 to 6.4 million in 2015 and 8.3 million in 2030. Tobacco is projected to kill 50% more people in 2015 than HIV/AIDS, and to be responsible for 10% of all deaths globally. [1]

Smoking is more prevalent globally among males than among females. In developing countries, it is estimated that about 48% of males and 7% of females are smokers. [2] Most smokers start the habit during adolescence; less than 2% of them start smoking after their 22nd birthday. [3-4]

These shocking predictions highlight show the importance of developing strategies to study the patterns and associated factors of tobacco use, and develop an effective prevention and cessation interventions.

Materials and Methods:

Study setting: This study had been conducted in Eastern region of Saudi Arabia,

National Guard Housing compound between 1st of April 2015 to 30th of April 2015. There are 2 schools for male students in National Guard housing in Dammam, (intermediate and secondary schools). All the students were covered in the study.

Study Design: Observational cross-sectional study

Study Population: All students between the ages of 12 and 20 years in both intermediate and secondary schools in Dammam, National Guard Housing, which around 309 students in intermediate school (59.3%) and 212 students in secondary school

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(40.7%) reaching total of 521 students.

Sampling: Sampling technique is convenient sampling, including all the students who are physically presented at the time of the study.

Data Management and Analysis:
Data were analyzed using SPSS version 21.0 all variables were summarized and reported across the study sample using descriptive statistics. Continuous variables such as age at time of interview and age at first cigarette smoking were collected and entered as categorical variables and then summarized and reported as frequency distributions in the same manner as all other categorical variables such as gender and grade level. A logistic regression analysis were used to analyze the relationship between the dependent variable "ever smoking" and independent variables including gender, friends who smoke, parents who smoke, etc. All results were summarized using an odds ratio with a 95% confidence interval. A P-value of 0.05 or less were considered as

Result:
A total of 512 male students studying at National Guard housing school (intermediate and secondary school) in Dammam, (309 intermediate students, 212 secondary school student). All agreed to participate and completed the questionnaire making the response rate 100%. Total prevalence of students who had ever smoked a cigarette was 51.4%

(42.4% of intermediate school, 64.6% of secondary school)

On the other hand, the prevalence of students who had ever smoked SHISHA was 37.0% (27.8% of intermediate school, 50.5% of secondary school) [Table2]. The prevalence of students who had smoked at least one head of SHISHA in the past 30 days ("current smokers") was 28.0% (22.65% of intermediate school, 35.84% of secondary school)

[Table 2] For those who are current cigarettes smokers a higher prevalence was observed when their parents smoke (both or either) by 31.5% compared to "never smoked" students (19.36%), and 25.59% of current cigarettes smokers have most of their friends smoke cigarettes. [Table 2]. 41.07% of current cigarettes smokers prefer to smoke in public places (parks, shops, coffee shops), and 37.5% of them wants to stop smoking now. 32.62% of students thought people smoke cigarettes due to lack of confidence, and 45.68% of them thought boys who smoke have more friends. The percentage of students who think smoking is harmful to a person's health was 78.88%.

Our findings in this study indicate that both "cigarette and SHISA" smoking's are significantly associated with having a parent who smoke, having a close friend who smoke, lack of age restrictions for selling "cigarettes and SHISHA", and also associated with higher age and school level as the secondary school students more prevalent than intermediate school students. On the other hand, they are not significantly associated with the total income of the family, parent's level of education, school performance and grades of students, school-based programs about danger of smoking.

Characteristics of Knowledge in ever smoking students. [Table 1]

	Overall number	Yes	NO	P value
Has anyone in your family discussed the harmful effect of smoking with you?	268	177 (66.04)	91(33.95)	0.009
Do you think smoking cigarettes is harmful to your health?	268	203 (75.74)	65(24.25)	0.000
Once someone has started smoking do you think it would be difficult to quit?	268	97 (36.19)	171 (63.80)	0.000
Do you think the smoke from other people's cigarettes is harmful to you?	268	168 (62.68)	100 (37.31)	0.003

Characteristics of associated factors of smoking in students. [Table 2]

	Number of students	Total number of smoking	P value
Current cigarettes smokers who their parents smoke (both or either)	53 (31.5)	168	0.004
Current cigarettes smoker who have most of their friends smoke cigarettes	43 (25.59)	168	0.000
Ever smoked cigarette who have some of their friends smoke cigarettes	95 (35.44)	268	0.000
Ever smoked cigarette who will accept cigarette offered from friend to smoke it.	127 (47.3)	268	0.000
Refusal to sell cigarettes due to age in ever smoked cigarettes students last month.	41 (15.3)	268	0.000
Ever smoked cigarette who take cigarettes from shops themselves.	81 (30.22)	268	0.000
Ever smoked cigarettes which people's smoked at their presence at home for 7 days in last week	84 (31.34)	268	0.000

Discussion
To our knowledge this study is the first study in Saudi Arabia identified several aspects of both cigarettes and SHISHA smoking among male intermediate and secondary school students aged between 12 and 20 years old in one conclusive study utilizing the GYTS. The overall prevalence of students who had ever smoked a cigarette was 51.4% (42.4% of intermediate school, 64.6% of secondary school) moreover the prevalence of ("current smokers") was 32.24% (27.5% of intermediate school, 39.15% of secondary school) which is higher than the fact sheet and country reports of Global Youth Tobacco Survey in

Saudi Arabia which was released in 2010 (Ages 13-15) indicating that 34.6% of male students had ever smoked cigarettes and 13.0% of male students were current cigarette smokers.[20] Other study in Riyadh in 2012 among high school students reported the prevalence of male cigarettes smoking is (56.4%, 30.6%, for "ever smoked" and "current smoker" respectively). [21]

These alarming figures reflect the tobacco industry's focused advertising in developing countries that have not yet applying strict antismoking policies. [25].

Our findings also show that smoking prevalence significantly

increased as students progressed in their studies reaching the highest in secondary school. These findings, which reporting a significant association with the students' grade, agree with a previous survey of medical students from Riyadh.[21] Also having a parent who smokes was associated with smoking, a smoking parent was significantly associated with a student being a "current smoker." The strongest influencing factor for "ever smoked" status was related to friends who smoke or having been offered cigarettes "peer pressure". This finding is supported by previous literature from the KSA previous studies. [21, 26, 27] Studies from Pakistan and China also showed a strong peer effect of smoking, which may reflect the limited interaction between teenagers and their family. [28, 29] Lack of age restrictions for selling cigarettes was another factor associated with both "ever smoked" and "current smoking" status.

Conclusion:

Cigarettes and SHISHA smoking prevalence among the students is high, alarming, and getting bigger by time, which indicate the importance of having a great role of health education provision and implementation of new unconventional antismoking programs by involving technology, media, family, friends and role models to protect the new generations and prevent further complications of smoking.

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