# Prevalence of smoking among high school students

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## ABSTRACT

**Objective:** Smoking is the single and most important preventable cause of morbidity and morality worldwide. This study was carried out to ascertain the prevalence of smoking among high school students in Alkharj and the influencing factors for smoking.

**Method:** This study was carried out by means of a Questionnaire. The study was conducted by the Department of Family and Community Medicine in Al-Kharj Military Hospital, Kingdom of Saudi Arabia. The participants were students of age 15 years and above in randomly selected Alkharj high schools.

**Results:** Out of 819 correspondence 166 (20%) were current smokers, 134 (16%) were ex-smokers. Five hundred and nineteen (64%) were non-smokers. The average starting age for current smokers was 13.8 years (13years-15 years). 105 (63%) of current smokers smoked less than 10 cigarettes per day (light smokers). the influence of friends 96 (58%) and the presence of smoking in the family 53 (32%) were the 2 most important factors influencing the rate of smoking in current smokers. Ninety-five percent of smokers know that smoking is harmful and 60% know that smoking is harmful for others. One hundred and one (61%) of current smokers, have tried to quit smoking but failed.

**Conclusion:** The prevalence of smoking is high among school students in Alkharj. Most current smokers know the harmful effects of smoking. A collaborative effort is needed by all concerned to reduce the number of school students who smoke.

**Keywords:** Smoking, students, prevalence.

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The cost from the diseases related to smoking are immense in terms of human suffering, constrains on health service resources and lost employment. Smoking related medical disorders are major health hazards in the Kingdom Saudi Arabia[1-4] the rate is increasing[3,4,5] and are responsible for many preventable morbidity and morality disorders.[6-8] Lung cancer is a major cause of death among Saudi males.[8] In 1995, 3 million people died world wide from illnesses caused by smoking and this is expected to reach 10 million in 2025 if the current rate of smoking continues.[9] Smoking can cause cancer of the oral cavity, trachea, pharynx, larynx, esophagus, and urinary bladder.[10] In 1981, the Kingdom of Saudi Arabia imported 36.5 millions kgm of tobacco, compared to 4.5 millions kgm imported in 1972.[11] Studies showed a linkage between smoking, drinking, and illicit drug use among 15-16 year olds[12] and between cigarette advertising and onset of smoking in children.[13] School performance is also affected by smoking.[12] Studies in the United Kingdom (UK) showed that by the age of 15 years, 25% of children are regular smokers and by the age of 19 years, 30% of the population are smokers.[9] There are 1.1 billion smokers, which is about one 3rd of the world population, who are aged more than 15 years.[14] We conducted this study to ascertain the prevalence of smoking in school students aged more than 15 years, so that effective measures can be taken to prevent this major health hazard problem.

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**Methods.** This self-administered questionnaire study was conducted in the Department of Family and Community Medicine, at Al-Kharj Military Hospital, Kingdom of Saudi Arabia. The majority of the questions had yes or no answers. Schools were been selected randomly from all areas of Al-Kharj and questionnaires distributed according to number of students in the schools. Student advisors explained to the students on how to answer the questions, the purpose of the study, and ensured confidentiality. Fifty three responses out of 872 were omitted from analysis because they were incomplete. Smokers were defined as those students who are currently smoking at least one cigarette per day. Ex-smokers are students who quit smoking for one month or more. Non-smokers are students who never smoke in their life. Light smoker are students who smoked 10 or less than cigarettes per day.

**Results.** Out of 819 students, 166 (20%) were current smokers. One hundred and thirty four (16%) were ex-smokers and 519 (64%) were non-smokers. In the smokers group, 42 (25%) were in the age group of 12 and below (average age 10.5), 81 (49%) were in the age group of 13-15 years (average age 14) and 43 years (26%) were in the age group of 16 years and above (average age 16.6). The average starting age for current smokers was 13.8 years (13-15 and 14.3 years (13-15 years) for ex-smokers. Ninety seven (61%) of current smokers were below 18 years compared to 98 (82%) of ex-smokers. One hundred and five (63%) of current smokers smoke 10 or less than 10 cigarettes per day compared to 110 (82%) of ex-smokers. The most common reason for starting smoking is the influence of friends, 96 (58%) for currents smokers and 74 (55%) for ex-smokers. The presence of smoking in the family was another factor, 53 (32%) for current smokers and 16 (12%) for ex-smokers. Advertisement was a factor in 21 (13%) for current smokers and 14 (11%) for ex-smokers. One hundred and four (63%) of current smokers tried to stop smoking but failed either because of influence of friends, (47%) or lack of will (44%), 62 (37%) out of current smokers did not try to stop smoking. Thirty one percent of current smokers claimed to have asthma compared to 24% for ex-smokers and non-smokers. Eighty two (51%) of current smokers parents know about their smoking habit compared to 25 (19%) of ex-smokers. Twenty percent of current smokers found difficulty in obtaining cigarettes.

**Discussion.** Our study has shown that the prevalence of smoking is high in school students, 20% are current smokers and 16% are ex-smokers. A recent study in the Kingdom of Saudi Arabia showed that the rate of current smokers among students in The College of Applied Medical Sciences was 29%[15] which is higher than a previous study carried out 10 years before.[3] Studies in Egypt[16] and in England[17,18] showed similar results. A study from the United States of America (USA) showed that between 1993 and 1997, cigarette smoking prevalence increased by 28% among US college students.[19] Nineteen years is the age by which most adult smokers have acquired the habit of smoking.[9] Our study showed that 95% of current smokers were aware of the harmful effects of smoking on themselves and 60% to others around them which was higher than the findings in the previous study (which was approximately 70%).[15] Sixty three percent of current smokers in our study tried to stop smoking compared to 70% who expressed a desire to cease cigarette smoking in a previous study. The presence of smokers in the family was a contributing factor for influencing smoking (32%) and this was proven in a previous study.[15] The influence of friends was also an important contributing factor (58%). Advertising played a role in 13% of current smokers which was lower than a previous study.[13,14] Perhaps the reason for that is the prohibition of direct advertising of tobacco products in the Kingdom of Saudi Arabia. Passive smoking was proven to be harmful and can cause ischemic heart disease[19] and lung cancer[20] and banning of smoking at work places has resulted in a 25% reduction of daily smoking in continuing smokers.[14] In the Kingdom of Saudi Arabia smoking is prohibited in public areas such as hospitals and airports. Our study showed that 62% of current smokers' parents were educated compared to 88% for non-smokers, which differs from another study, which showed no significant association.[15] Only 20% of current smokers found difficulty in obtaining cigarettes which raises the issue of importance of restricted tobacco sales to minors and the need to increase the price of tobacco[21] as the price in Kingdom of Saudi Arabia is low compared to other countries.[22] Our study has shown no difference in the smoking rate between current smokers, ex-smokers, and non-smokers in relation to whom they live with at home. Smoking cessation is cost effective and is one of the few medical interventions where population-wide health gains can be achieved.[23] Studies have shown that 5% of smokers could be helped to give up smoking by single opportunistic intervention by a General Practitioner.[24] Recently in the UK smoking cessation guidelines for heath professionals were published which are aimed at heath commissioners, managers and clinicians.[25] There are many measures to control tobacco and are effective in decreasing tobacco use.[26-28]

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