

## Effect of smoking on academic performance among dental students

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### Abstract

**Aim:** The prevalence of smoking is relatively high among adolescents. The association of cigaret smoking by high school students with poor academic performance has been investigated in different studies. Our study conduct on the internship students of dental school (Al Farabi colleges for dentistry/Jeddah)) to assess the relationship among the smoking status considered strong predictor(s) on academic achievement.

**Materials and Methods:** 275 students were filled the response of the questionnaire out of which 140 were females and 135 were males. The questionnaire distributed was divided into multiple sections to assess gender, smoking, type and the period of smoking, family situation ( married ), final accumulative grade before graduation, and opinion of the student if there is any influence between the smoking and academic performance.

**Results:** Smoking was more frequent among male than female but the influence of smoking factor among students who had low academic achievement was insignificance. Our results suggest that low academic achievers may be more vulnerable to smoking but it is not the dominant factor affecting academic achievements.

**Keywords:** Performance, Smoking, Achievement, Dental student.

### Introduction

The Student's performance (academic achievement) plays an important role in producing the best quality graduates. Many practical studies are carried out to investigate factors affecting college Student's performance.<sup>1-2</sup> Student academic performances is challenging aspects influenced by multiples factors: social, psychological, economic, environmental and personal factors.<sup>3,4</sup>

The brain area responsible for executive functions and attention performance. Adolescent smokers suffer from attention deficits, which aggravate with the years of smoking. Many physical changes occur in the brain and body as a result of tobacco abuse. These physical changes can make learning and concentration more difficult and can negatively affect school performance.<sup>5</sup>

Students' performance are the product of Socio-economic, psychological and environmental factors. Also there are numbers of factors affecting the academic performance including teaching style, language assessment and academic stress.<sup>6</sup>

Academic performance of the student is strongly affected by internal and external classroom factors..<sup>2</sup>

Internal classroom factors includes students competence in English, class schedules, class size, English text books, class test results, learning facilities, homework, environment of the class,

complexity of the course material, teachers role in the class, technology used in the class and exams systems.

External classroom factors include extracurricular activities, family problems, work and financial, social behaviors and other problems.

### Materials and Methods

In this study we try to identify the relationship between academic Student's performance and smoking as predicting affecting factor for low grade acheivement.

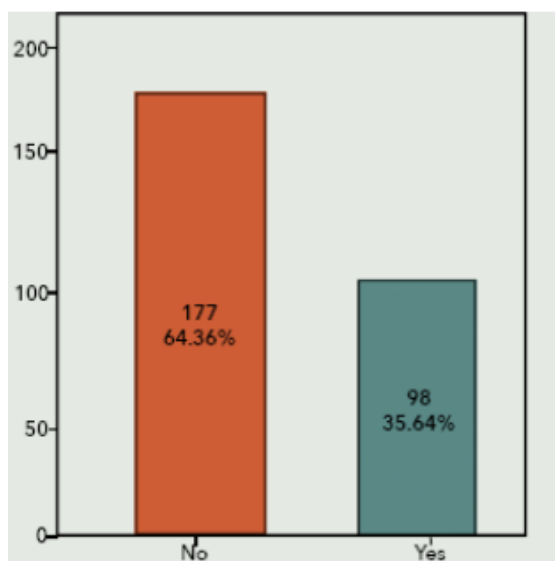
Overall 275 students were recruited among the dental students in private dental school of Al-Farabi College, Jeddah /KSA (internship students - already their final grade of graduated were determined ).

An anonymous self-administered questionnaire was established contained multiples questions which were formulated to evaluate the factors related to smoking which could be have influence on the academic performance. The questionnaire was edited in English and distributed to the recruited group. The questionnaire was divided into multiple sections to assess gender, smoking, type and the period of smoking, frequency, final accumulative grade before graduation, and opinion of the student if there is any influence between the smoking and academic performance. For all questions a single-item scale was used to record the respondents' replies.

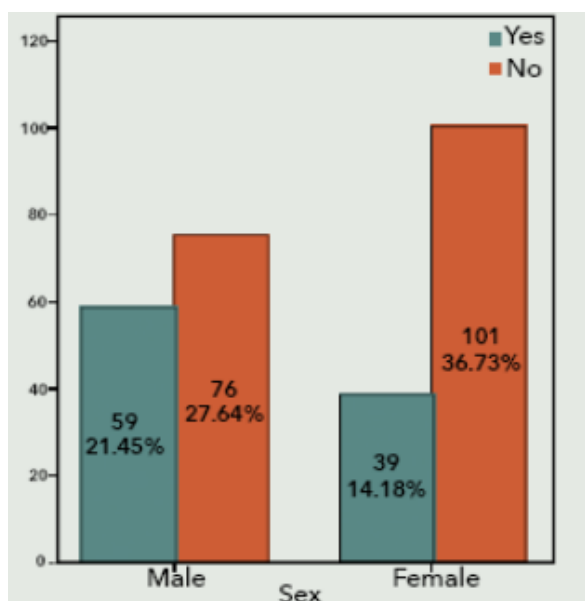
**Results**

There were 275 respondents in the study. The respondents comprised 135(49.09%) male and 140(50.91%) female, The sample age composition was from 23 years to 26 years.

About 98(35.64%) of respondents were smoking while 177(64.36%) of respondents were not smoking Fig. 1. Furthermore, within the smoking sample 59(60.20%) of respondents were male and 39(39.80%) were female. The prevalence of current smoking was higher among males than females Fig. 2.

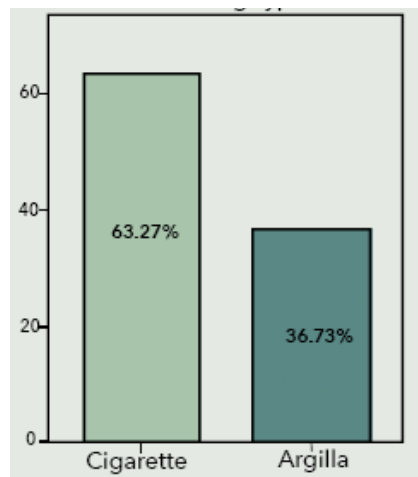


**Fig. 1:** percentage of smoking



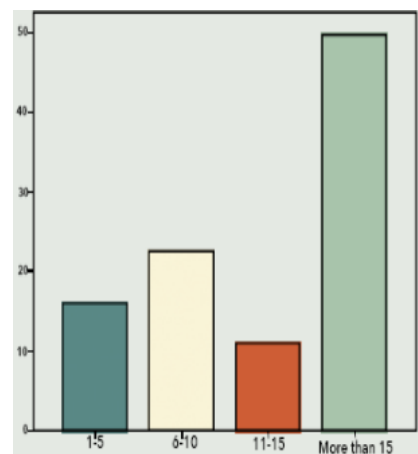
**Fig. 2:** Smoking related to sex

Type of smoking was 63.3 % on cigarette and 36.7% for bubbly (Shisha- Argilla ) Fig 3.

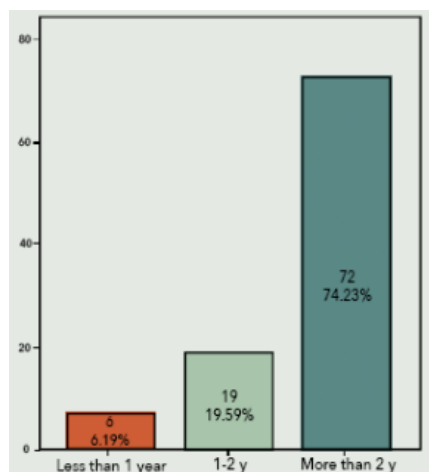


**Fig. 3:** smoking type

The rate of daily smoking in the majority of smoker is more than 15 /per day with prevalence of more than 2/y as beginner in smoking. Fig. 4,5.



**Fig. 4:** Daily cigarette



**Fig. 5:** Begin smoke

Also the Majority of smoker 78.82 indicated the needed of smoking during the period of exam which give them some comfort according to stress condition they were lives during the exam preparation Fig. 6.

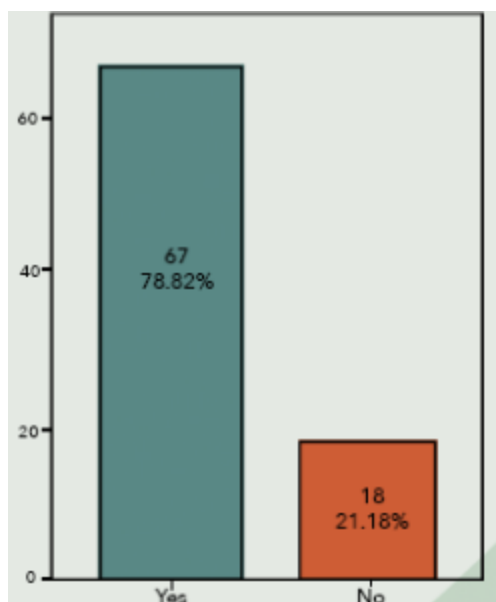


Fig. 6: Exam smoking

We try also to investigate the opinion of respondents regarding the influence of negative aspect of smoking in academic performances with positive response for 40.73 Fig. 7.

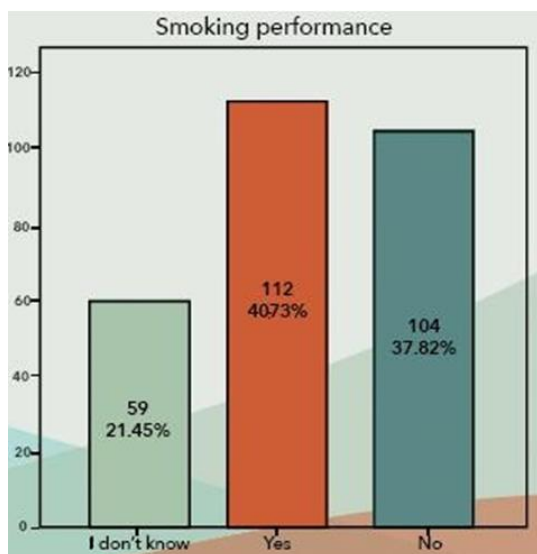


Fig. 7: Smoking performance

Finally when we try to find the combination between the smoking and the final accumulated score with our sample of research we could not find evidence supporting this hypothesis Fig. 8.

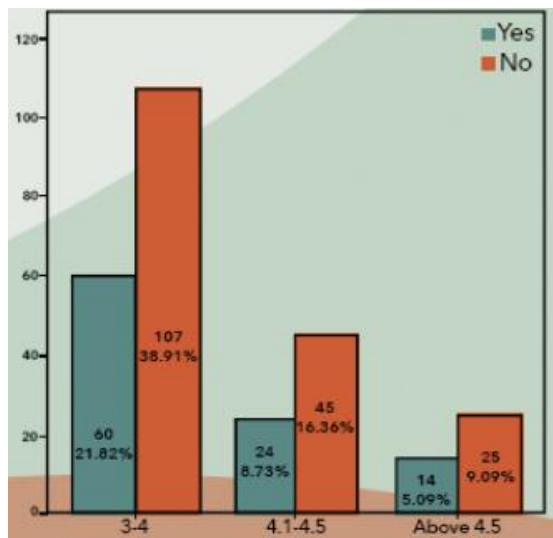


Fig 8: Accumulated score and smoking smoking related to sex

**Discussion**

Recent researche demonstrate that approximately 20% of Saudi Arabia citizens are tobacco smokers and similar rates have been reported among adolescents.<sup>7,8</sup>

Smoking behavior often starts during the adolescence Moreover, smoking affects achievement of students, by decrease attentiveness, cognitive, and memory functions.<sup>9</sup>

In this study our hypothesis was to investigate if the smoking can be considered a barrier to optimal learning.<sup>3</sup>

The participants in this study are dental students in the period of internship. According to their level in dental school the respondents in this study had higher education level and the participants were motivated towards the influence of smoking on academic performance which indicates the importance of medical outbreak of smoking in academic achievement.

The prevalence of those who had ever smoked was 64.36. Smoking was more frequent among males 21.45 than females 14.18. The smoking patterns referred in the questionnaire covered only cigarette smoking. Approximately half of smoker sample (49.6%) reported that their daily cigarettes 15 or more student who are non smokers reported higher academic achievement.

Our approach is focus on what different factors that influence student performance would help us to improve student achievement.

Individual academic performance was classified in three levels according to their final accumulation scour (between 3-5) before graduated, good ( 3-4), very good ( 4.1-4.5) and very good ( more then 4.5 ).

The relationship between cigarette smoking and academic achievement was Investigated. it was found that the highest grades were obtained by nonsmokers.

Nevertheless, relation between smoking and poor grades is not well demonstrated. Our results suggest that low academic achievers may be more vulnerable to smoking but it is not the dominant factor affecting academic achievements.

It is not surprising that smoking behavior were somewhat weaker among students with low academic achievement because the relationship between academic achievement and smoking is multifactorial. The reasons for a lower educational level are not yet clear and need more investigation.

### Conclusion

Relation between smoking and poor grades is well studied but studies that examine the mechanism between academic achievement and smoking are lacking.<sup>1</sup>

Our results suggest that low academic achievers may be more vulnerable to smoking but it is not the dominant factor affecting academic achievements.

Unfortunately we could not use family socioeconomic status in our analyses. However the study may helpful for both college's policy makers and parents of the students.

Further continuing research is needed to determine whether low grades lead to smoking or smoking abuse leads to low grades.

### Conflict of interests

The authors have no conflicts of interests related to the contents of this article.

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