



**IJCRR**  
Section: Healthcare  
Sci. Journal Impact  
Factor: 5.385 (2017)  
ICV: 71.54 (2015)

# "Social Factors Influencing Tobacco Use Among School Students in Al-Quwayiyah Governorate"

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## ABSTRACT

**Background:** Smoking is one of the most fatal forms of tobacco which causes millions of death globally. School students represent a high risk group for engaging in risky behaviors, such as tobacco smoking and illegitimate use of substance. These students are at high risk of initiating and continuing smoking as they are likely to be exposed to peers who are habitual smokers.

**Objectives:** This study seeks to determine the prevalence and risk factors for smoking among secondary and higher secondary students aged 12-19 years in different location at Al-Quwayiyah, Saudi Arabia.

**Results:** Using a sample of 300 students we evaluated prevalence and factors associated with smoking. Out of seventy nine (26.33%) of total smokers only 31 (39.24%) respondents were current tobacco smokers and remaining 48 (60.75%) were even smokers. But majority of the students 152 (50.66%) reported to have tried smoking cigarettes or any form of tobacco. Overall, a high proportion of secondary school students (27.36%) are smokers as compared to higher secondary (24.54%). The main social influences that lead the students to initiate to smoking reported in this study were friends (43.03%), parents (29.11%), siblings (13.92%) and media/advertisement (13.92%) respectively. Encouragingly (86.53%) of secondary school and (77.77%) higher secondary students are ready to quit smoking, at the same time both secondary (73.68%) and higher secondary school students (81.82%) believe that "Shisha" smoking is not injurious to health.

**Conclusion:** These findings suggest that the current health promotion interventions do not target the contemporary social and environmental contexts of students in Al-Quwayiyah. To address parental influence on smoking behavior, it is necessary to initiate smoking cessation programs for parents and guardians.

**Key Words:** Smoking, Students, Social factors, Al-Quwayiyah

## INTRODUCTION

Smoking is one of the most fatal forms of tobacco and causes millions of death globally<sup>1,2</sup>. Between 82,000 and 99,000 young people start smoking every day<sup>3</sup>. According to reports of World Health Organization (WHO) it has been estimated that over 3.5 million people die every year and they predict by the end of 2030, tobacco use will kill 10 million people a year<sup>4</sup>. Tobacco smoking has many side effects on general health as documented; it says the cigarette smokers have 10 years of less life span than that of non-smokers<sup>5,6</sup>. The youth of today is the hope of the future. What future holds for a nation depends on how its citizens conduct their affairs. Good

health is essential in preparing the fated young generation in the Saudi Arabia<sup>7</sup>.

In Saudi Arabia, the numbers of tobacco smokers are increasing rapidly because of the easy availability of cigarettes, tobacco products, and weak enforcement of existing regulations<sup>8</sup>. Cigarette and "shisha" smoking are one of the major causes of morbidity and mortality in developing countries like Saudi Arabia<sup>9</sup>. Many research reports from Arab countries state that smoking behaviors are strongly associated with gender as that the majority of smokers are males<sup>10,11</sup>.

School students represent a high risk group for engaging in risky behaviors, such as tobacco smoking and illegitimate

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**ISSN: 2231-2196 (Print)**

**ISSN: 0975-5241 (Online)**

**Received: 10.05.2018**

**Revised: 18.06.2018**

**Accepted: 03.08.2018**

substance use<sup>12, 13</sup>. These students are at high risk of initiating and continuing smoking as they are likely to be exposed to peers who smoke. At the same time, they face social, emotional, and educational challenges when they enter the university settings<sup>14, 15</sup>. Smoking behavior is significantly associated with parents smoking, friends and religious belief<sup>16</sup>.

For many school children's smoking decision started at very early and within short period of time approximately two to three months these teenagers can be converted in to regular smokers<sup>17</sup>. At the same time most of the adults starts smoking between the ages of 13 to 17 years and addicted before the age of 20<sup>18</sup>. The experimental smoking by adolescent can dramatically increase the risk of an adolescent become an adult smoker<sup>19</sup>. To date, there are no proven programs to help teens to quit smoking<sup>20</sup>. Tobacco smoking leads to serious health risks such as various forms of cancer, respiratory disease, cardiovascular disease, peptic ulcer, female infertility, sexual dysfunction in male, and many other diseases<sup>21, 22</sup>. Therefore the prevention and control of smoking and use of tobacco products must be one of the main public health priority<sup>23</sup>.

If these teenagers are not started smoking before the age of 19 they are un likely to become regular smokers when become adults<sup>24</sup>, and the more likely they are to die prematurely from a smoking-related disease so the efforts should be taken to delay or prevent children from starting to smoke. Although some of the children does not smoke but they developed an intention to smoke in future<sup>25</sup>. Research study on adolescents has demonstrated that individual perceptions are formed by distal factors at the social level, such as family and friends<sup>26, 27</sup>.

Many other researchers' reports that parents smoking have strong gender differences concerning the influence and temptation of children towards smoking. For example, girls are influenced more by their mother's smoking habits, whereas father and friend smoking have been found to be stronger influences for boys<sup>28, 29</sup>. Smoking among students in Saudi Arabia has been poorly investigated and our initial hypothesis was that it is possible that school students may be lacking knowledge on adverse effects of cigarette and "Shisha" smoking. The aim of this study was to estimate the prevalence of tobacco smoking among secondary and higher secondary students of Al-Quwayiyah, Saudi Arabia and to identify factors effecting on initiation and prevalence of tobacco smoking

## MATERIAL & METHODS

**Research Design** A descriptive cross-sectional study was conducted from 1st of January to 30th of May 2018 with the aim of "Social Factors Influencing Tobacco Use among the school students in Al-Quwayiyah Governorate". The study

was conducted in, secondary and higher secondary schools located in different locality of Al-Quwayiyah province, Saudi Arabia. A sample of 300 out of 325 students were collected (twenty five of the students were excluded from the sample because they did not complete the questionnaires)

**Method of Data Collection** After obtaining approval from the Ministry of higher education the research assistants were identified the schools and explained the purpose of the study to all students. Then an objective type questionnaire was prepared in both English and Arabic was distributed to the students. An oral consent was obtaining from all participants. Students were spent 10-20 minutes to complete the questionnaire and allowed students complete the questionnaire themselves to ensure confidentiality. After all questionnaires being filled by each participant, all data were analysed using SPSS 20 software, for descriptive and inferential statistical significance tests.

## RESULTS

**Table 1** shows the characteristics of study participants. A total of 300 (93.75 %) out of 320 students from 5 schools out of 6 participated in this study. The mean age of the participants was 15 years (Standard Deviation [SD] = 2.16) with an age range of 12-19 years.

The main social influences that lead the students to initiate to smoking reported in this study were friends (43.03%), parents (29.11%), siblings (13.92%) and media/advertisement (13.92%) respectively.

Out of Seventy nine (26.33%) total smokers only 31(39.24%) respondents were current tobacco smokers and remaining 48 (60.75%) were even smokers. But majority of the students 152 (50.66%) reported to have tried smoking cigarettes or any form of tobacco .Overall, a higher proportion of secondary school students (27.36%) compared to higher secondary (24.54 %) were smokers but the difference was not statistically significant. Ever smoking prevalence increased in higher secondary school 58 (52.72%) compared with secondary school students 94 (49.47%) which is shown in (**Table 2**).

Among tobacco smokers, almost 64.55% attempted to give up tobacco smoking at any stage after initiation; however, some 26.58% were unable to successfully quit. Students were asked which factors influenced smoking continuation. Majority of the respondents (46.83%) and (31.64%) reported mental stress and fun with friends are the reason they continued to smoke tobacco. Other reasons for continued smoking/use of other tobacco products were difficulties in a relationship with family (10.12%) and educational problems (1.39%). Overall, 59.49% (n =47) reported the use of tobacco products other than cigarettes. These tobacco products were shisha (58.22%) and "Naswar" or sniff (1.26%). There

was a high prevalence of tobacco smoking among the students fathers (n=180, 60%) have been reported in this study (Table 2).

**Table 3** shows proportion of students by knowledge about adverse effect of smoking; both secondary (71%) and higher secondary (83.63%) students agree students should not smoke, only small group disagree with this statement (28.9%) and (16.3%) respectively. Compared to secondary school students (67.36%) higher secondary students (92.7%) believes that smoking cause health problems at the same time both secondary (73.68%) and higher secondary students (81.82%) believe that "Shisha" smoking not injurious to health .

**Table 4** included the question about the personal attitudes of students towards quitting of smoking; both secondary (86.53%) and higher secondary students (77.77%) wants to quit the smoking and they (76.92%) and (66.66%) respectively think that they have ability to quit smoking. Majority of the secondary (69.23%) and higher secondary (55.44%) students tried quitting smoking recently.

## DISCUSSION

Cigarette smoking is rapidly increasing among the young people in Gulf countries such as Saudi Arabia. Many studies were conducted on tobacco use among the adults and most of these studies showed that tobacco usage was prevalent among young adults<sup>(30, 31)</sup>.

In this study the mean age of the participants was 15 years (Standard Deviation [SD] = 2.16) and majority (49.36%) of them started smoking after 10 years. Which is similar to the study conducted in India by Narain *et al.*,<sup>32</sup> in which they report nearly 70%-80% of the students initiated the habit of tobacco smoking between 10 to 15 years of age. But study by Everett SA *et al.*<sup>33</sup> at United States, not similar with our study in which they report 11.1% of adolescents initiated smoking at age 10 years or younger. Many research study reports that adolescents who experience tobacco use before age 14 also use alcohol and other drugs<sup>34, 35</sup>. Whilst these linkage are not yet reported in Saudi Arabia.

Our results indicate a smoking rate of 27.36% and 24.54% among the students of secondary and higher school respectively. This rate is almost similar to the study report of Magda *et al.*,<sup>9</sup> Where they reported a smoking rate of students was 20%. This is perhaps due to children in the secondary school are likely to spend more time with their parents and siblings at the same time children's from higher secondary spend their time with friends.

In our study we found that 63.46% secondary and 55.55% higher secondary students were even smokers and only 39.24% reported current smokers but 50.66% tried once to

smoke tobacco products such as Shisha (69.07%) and cigarette (30.92%) respectively. Many research study reports that experimental smoking and even smoking in school children within short period of time approximately two to three months these teenagers can be converted in to regular smokers<sup>7</sup>. However, the prevalence and risk factors associated with tobacco smoking varies greatly from one country to the other<sup>36</sup>.

In the present study, friends (43.03 %) and parents smoking (29.11%) shows relatively high influence on students smoking initiation followed by media/ advertisement (13.92%) and siblings (13.92%). The results of the present study correlate with the study report of Simmons *et al.*<sup>37</sup>. In which they suggest that friend and Siblings smoking may be important influences on school children's towards smoking. Friends smoking were negatively associated with non-smoking intentions in both boys and girls. Similarly, research study in Dammam, Saudi Arabia reports there was a high prevalence of cigarette smoking among fathers (13.7%), and (2.4% ) of mothers smoked shisha influence smoking attitudes of children's<sup>29, 38</sup>.

Our results indicate that sibling and media/advertisement (13.92%) may represent more salient influences on school student's cognitive vulnerability to smoking than parents smoking<sup>(39-41)</sup>. A possible explanation for the divergence in findings is that teenagers usually prefer to have fun with friends and witness their parents smoking tobacco products. Students may assume that smoking is not as harmful; otherwise their friend/sibling and parents would not smoke. The social influence emerges as the key factor of smoking habit among adolescents. The contribution of social influence may be indirect, especially friends, siblings and parents but friends have a significant influence on school going students life<sup>42</sup>.

In the present study we analyze students knowledge about adverse effect of smoking Compared to secondary school students (67.36%) higher secondary students (92.7%) believes that smoking cause health problems and 63.63% of higher secondary students agree that smoking leads to weight loss but 52.6% secondary students does not agree with this statement. Here the higher secondary student's shows their good knowledge regarding adverse effect of tobacco smoking but at the same times both secondary (73.68%) and higher secondary students (81.82%) believe that "Shisha" smoking not injurious to health.

The main reason behind such findings may be because the higher secondary students attended the an awareness program about cigarette smoking recently in their school .at the same time both students witnessed their parents and relatives regularly use "Shisha" which is nowadays a tradition among the Saudi nationalities and they start believing that "Shisha" does not cause any adverse effect on health.

Overall both secondary (71%) and higher secondary (83.63%) students agree students should not smoke, only small group disagree with this statement (28.9%) and (16.3%) respectively.

Of the 26.33% respondents who reported as smoker's 86.53% secondary and 77.77% of the higher secondary students indicated that they want to quit smoking and 76.92% secondary students and 66.66% higher secondary students believes that they have the ability to quit smoking at any time but 26.58% had difficulty in quitting. Encouragingly, most children in our study displayed strong nonsmoking intentions and refusal self-efficacy.

Which is consistent with study report of Cheangaivendan C. et al.,<sup>(43)</sup>.in which they report about two third of the participants attempted to quit smoking in past and more than half of the participants had shown intent to quit smoking in near future similarly Binnal A et al.,<sup>(44)</sup> reports that the quit smoking among the participants ranging from 10 to 80%.Health promotion programs and awareness programs in schools may help them in quitting smoking.

The limitation of this study include a small samples and did not collect gender specific data due to which gender differences could not be compared. In addition our study did not distinguish between the influence father and mother. Finally the results are drawn from a local area with high smoking prevalence, which limits the generalizability of the results to other region of Saudi Arabia.

## CONCLUSION

Findings of the present study revealed that smoker and non-smoker students in the higher secondary school had more awareness and positive attitude than those in the secondary school related to smoking. But the prevalence of smoking is much higher in secondary school compared to higher secondary school. The main reasons of smoking among student are friends and parents.

These findings suggest that the current health promotion interventions do not target the contemporary social and environmental contexts of students in Al-Quwayiyah. To address parental influence on smoking behavior, it is necessary to initiate smoking cessation programs for parents and guardians. Our findings also constitute the need for aggressive intervention targeting school students should be explored.

## ACKNOWLEDGMENTS

We thank the Ministry of education for availing the schools and giving permission for conducting this study. Authors acknowledge the immense help received from the scholars whose articles are cited and included in references of this

manuscript. The authors are also grateful to authors / editors / publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

**Funding:** No funding sources.

**Conflict of interest:** None declared

**Ethical approval:** Approved by the Ministry of Education. Al-Quwayiyah, Saudi Arabia.

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**Table 1: Characteristics of study populations**

Age in complete year	No of respondents (n) 300	Proportion (%)
12-13 years	90	30%
14-15 years	82	27.33%
16-17 years	75	24%
18-19 years	53	17.66
School category	6	
Total students	300	
Secondary school	4	66.66%
Number of Students	190	63.33%
Higher Secondary School	2	33.33%
Number of Students	110	36.66%

n: total number of participants

**Table 2: Descriptive characteristic of the study population N= 300**

	All (N=300) M±SD or %	Secondary School (n=190) M±SD or %	Higher Secondary School (n=110) M±SD or %	P value
<b>I Social influence?</b>				
a) Parent smoking	23 (29.11)	14 (26.92)	09 (33.33)	0.05 NS
b) Sibling smoking	11 (13.92)	07 (13.46)	04 (14.81)	
c) Friends smoking	34 (43.03)	23 (44.23)	11 (40.74)	
d) Media/advertising	11 (13.92)	08 (15.38%)	03 (11.11)	
<b>II Regular smoker?</b>				
a) Current smokers	31 (39.25)	19 (36.53)	12 (44.44)	0.83 NS
b) Even smokers	48 (60.75)	33 (63.46)	15 (55.56)	
<b>III age of starting smoking?</b>				
a) Before 10	16 (20.25)	11 (21.15)	05 (18.51)	0.00** S
b) At 10	24 (30.37)	16 (30.76)	08 (29.62)	
c) After 10	39 (49.36)	25 (48.07)	14 (51.85)	
<b>IV Reason for starting smoking?</b>				
a) Mental stress	37 (46.83)	23 (44.23)	14 (51.85)	0.92 NS
b) Bad relation family	08 (10.12)	06 (11.53)	02 (7.4)	
c) Fun with friends	25 (31.64)	16 (30.76)	09 (33.33)	
d) Exam/ study	09 (11.39)	07 (13.46)	02 (7.4)	
<b>V How often do you smoke?</b>				
a) Every day	11 (13.92)	06 (11.53)	05 (18.51)	0.0.66 NS
b) Once in a week	29 (36.70)	20 (38.46)	09 (33.33)	
c) A few times in a week	20 (25.31)	13 (25)	07 (25.92)	
d) A few times a month	19 (24.05)	13 (25)	06 (22.22)	
<b>V Type of tobacco used</b>				
a) Cigarette	32 (40.50)	22 (42.30)	10 (37.03)	0.12 NS
b) Shisha	46 (58.22)	30 (57.69)	16 (59.25)	
c) Sniff /Tumbac	01 (1.26)		01 (3.70)	

n= number of participants, (\*) statistically significant at  $p \leq 0.05$  (\*\*) statistically significant at  $p < 0.01$

**Table 3: Proportion of students by knowledge about adverse effect of smoking N= 300**

Personal attitudes forward smoking	Secondary School n=190 (63.33%)		Higher secondary n= 110 (36.66%)		p. value
	Yes	No	Yes	No	
Students should not smoke?	135 (71%)	55 (28.9%)	92 (83.63%)	18 (16.3%)	0.33 NS
Smoking cause health problem?	128 (67.36%)	62 (32.6%)	102 (92.7%)	08 (7.27%)	0.04* S
Tobacco smoking leads to weight loss?	90 (47.36%)	100 (52.6%)	70 (63.63%)	40 (36.36%)	0.03* S
"Shisha" smoking injurious to health?	50 (26.3%)	140 (73.68%)	20 (18.18%)	90 (81.82%)	0.14 NS

n= number of participants, (\*) statistically significant at  $p \leq 0.05$  (\*\*) statistically significant at  $p < 0.01$

**Table 4: Data on quitting smoking included three questions N=79**

Personal attitudes towards quitting smoking	Secondary School n=52 (27.36%)		Higher secondary n= 27 (24.54%)		p.value
	Yes	No	Yes	No	
Do you want to stop smoking?	(86.53%)	(13.46%)	(77.77%)	(22.22%)	0.36 NS
Do you think that you have ability of quit smoking?	(76.92%)	(23.07%)	(66.66%)	(33.33%)	0.12 NS
Do you tried to stop smoking recently	(69.23%)	(30.76%)	(55.55%)	(44.44%)	0.31 NS

n= number of participants, (\*) statistically significant at  $p \leq 0.05$  (\*\*) statistically significant at  $p < 0.01$