



RESEARCH ARTICLE

SMOKING RATE AMONG RESPIRATORY THERAPY MALE STUDENTS

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ABSTRACT

Objective: Nowadays, Smoking is expanding around the world to younger people, even in Middle East, which is more common among older people. Moreover, the bad effects of smoking on health are more than benefits. Therefore, many organizations are being held to raise awareness about stopping smoking around the world. We aimed to assess the effect of majoring in the respiratory therapy field on students' smoking habits. **Methods:** The participating subjects were respiratory therapy students senior and junior A Semi-structured questionnaire that is include the information about the smoker. It administered to 130 participants by using stratified random to select the subjects in proportion to the population. **Result:** The study examined the prevalence of smoking among respiratory therapy students in Riyadh after majoring. The results of our study have shown that there is no significant difference between senior and junior students regarding their smoking habits. According to result, the majoring on Respiratory therapy has no effect on smoking habit of the students. **Conclusion:** This study is aimed to investigate the effect of majoring in the respiratory therapy field on students' smoking habits and we found that there are no significant differences between the senior and junior students regarding their smoking rate. In addition, as the increased number of female students who will graduate from the college of applied medical science, respiratory therapy program, Riyadh. Due to that, there is a need to understand the prevalence among female students. Moreover, we need more studies to evaluate the reasons

INTRODUCTION

Generally, in the Middle East smoking is more common among older male, and nowadays it is expanding around the world to include younger population (Theron *et al.*, 2010). The fundamentally in charge of the joining of smoking predominance rates among men and women are the decreasing the smoking habit between them and the differences between initiation and cessation (Fiore *et al.*, 1989). Smoking can cause many health consequences for both the smoker and nearby nonsmoker (Royal College of Physicians, 2007). One million deaths in the 20th century was caused by cigarette smoking, which is considered as addictive. In 1926, King Abdul Aziz prohibited tobacco smoking and that was the main start for tobacco control in the Kingdom of Saudi Arabia (Medhat, 2009). Markers of tobacco utilization in The Kingdom of Saudi Arabia was superior to other nations of the Middle East and

developed nations (Moradi-Lakeh *et al.*, 2015, Saeed, 1996). The present topic was chosen to study the effect of majoring in the respiratory therapy field on the smoking habits of students. The research result may create evidence that studying respiratory therapy provides orientation about the risk of smoking to the students.

LITERATURE REVIEW

A study demonstrated that with a specific goal to keep young people from smoking, and hep smokers to stop this habit there is an urgent need to advance a multidisciplinary health education programs (Al-Turki, 2006; Abdulaziz, 2011). A study was conducted in college of medicine, King Saud University, Riyadh, Kingdom of Saudi Arabia showed that, "13% of the students were current smoker, 5.3% were ex-smokers, and approximately 80% of medical student never

smoked compared with another study, which showed that regular smoking has a prevalence rate of 13.3% among medical students at the College of Medicine in Abha, The Kingdom of Saudi Arabia. Another study showed that 29% were current smokers among the college students of Applied Medical Science in Riyadh, The Kingdom of Saudi Arabia.” (Al-Turki, 2006; Abdulaziz, 2011; Abdalla *et al.*, 2014). A study was conducted in the faculty of medicine, King Fahad Medical City showed the contact with smoker especially friends are the real hazard elements for start of the propensity (Abdulaziz, 2011). The essential motivations for not smoking, stopping, or trying to stop are health and religious contemplation (Abdulaziz, 2011). Studies proved that smoking is in high rate among health care students in Saudi Arabia (Abdulaziz, 2011). Cigarette smoking is developing around the country in all social groups and among all college students (Ben Rejeb, 2016). Impressive amounts of undergrads both have started to smoke frequently and endeavoring to stop (Zhu, 2014; Patkar *et al.*, 2003). A national push to decrease smoking has to be extended to gathering understudy. Health care students are the future wellbeing experts of the society (Zhu, 2014). This sets them in a place to impact social standards with respect to smoking (Zhu, 2014; Ylli Vakefliu, 2002). For nations with a high smoking commonness, it might be essential to plan an early interventions and programs that aim to create a smoke free society (Zhu, 2014). In this manner, the smoking conduct of health care students in such social orders is of intrigue (Ben Rejeb, 2016; Zhu, 2004; Patkar *et al.*, 2003; Ylli Vakefliu *et al.*, 2002; Huiyun Xiang, 1999). In the mid-1990s, there were around 1,100 million smokers on the planet, around 33% of the worldwide populace at the age of 15 years old and over (15-16). Tobacco is evaluated to have brought on around 3 million passing a year in the mid-1990s, and the toll is relentlessly expanding (Bolliger *et al.*, 1997). Some examines are relied upon to raise to 10 million passing for each year by the 2020s or the mid-2030s (Bolliger *et al.*, 1997; World Health Organization Avenue Appia, 2008). This involves passing among individuals who are smoking today (Bolliger *et al.*, 1997). Also, the qualities of smokers fluctuated within individual nations, and in connection to the World Bank's low-medium-high inclination of financial improvement (18). Furthermore, in many creating nations grown-up per capita, cigarette utilization has expanded notably (Masironi, 1988). For example, by 42% in Africa, 24% in Latin America and 22% in Asia (Masironi, 1988). In many industrialized nations, the rate of smokers has begun to fall lately (Masironi, 1988). For example, in the United Kingdom, the rate of male smokers tumbled from 65% to 45% and that of female smokers from 45% to 34% (Masironi, 1988; Hunt, 2004). Since the beginning of 20th century the rate of smoking tobacco has been decreased. For nations with a high smoking rate, it might be essential to plan an early interventions and programs that aim to create a smoke free society.

MATERIALS AND METHODS

The subjects were 130 male students from the juniors and seniors King Saud bin Abdulaziz University for Health Sciences, college of applied medical sciences, respiratory therapy program and Almareffa college, respiratory therapy students. The subjects ranged between 19 And 23 of age. A questionnaire was developed, including information such as college, age, smoking habit, smoking rate, and the age of starting smoking, the usage of other types of tobacco, reasons of smoking, family members smoking habits. The

questionnaires were distributed and collected from 107 participants. All of the participants completed the questionnaire (100%). The participants smoking status was defined as current smokers, non-smokers, and Ex-smokers. Data was entered into an Excel sheet. Data were analyzed using SPSS statistical software. The population size of N=195 students from all the 3 colleges; [CAMS (N₁=60), Inaya (N₂=80) and Marifa (N₃=55)] with a margin of error of 5% at 95% confidence level, the required sample size, n has calculated as 130. Stratified random sampling is used to select the subjects in proportion to the population size calculated as

$$n_i = n/N \times N_i$$

where n_i is the sample size of ith college; i = 1,2,3

N_i is the population size of ith college; i = 1,2,3

n = sample size

N = population size

Sample from each college is calculated by the above formula and is

Sample size from CAMS = 40

Sample size from Inaya = 53

Sample size from Marifa = 37

Total sample size = 130

RESULTS

140 questionnaires had been distributed between 76 seniors and 55 juniors of Respiratory therapy male students in KSAUHS and Almaarefa colleges. 131 students have responded to the questionnaires. The mean age of the junior participants was 19.88 year (SD 1.04). Meanwhile, the mean age of the senior participants was 22.37 year (SD 1.45) (Table 1). Table 2 shows that their friends influenced most of the smoker students. While, the first part of table 3 showed that, 56.60% of the senior students smoke. While, 43.4% of the junior students' whose smoke. The second part of table 3 showed that, the people around them effected 49.1% of the respiratory students. The third part of table 3 showed that, the 48% of students' smoke between 20-30 cigarettes per day. As table 4 showed that, 94.6% of the students whom smoke another type of tobacco prefer to smoke Hookah. Table 5, 71.4% of 3rd year students decrease their smoking rate even with the influence of education, while 28.6% of 4th year respiratory students smoking rate have decreased.

DISCUSSION

Our study shows that the prevalence of smoking among respiratory therapy students in Riyadh after majoring. The results of our study has shown that there is no significance difference between seniors and juniors students regarding their smoking habits. Which mean, these results show that the majoring has no effect on student smoking habits. To compare our finding to these studies in the literature, we found one study that have been done in King Saud University in which the authors examined the smoking habits of students in college of Applied Medical Science in Saudi Arabia and included both female and male students (Smoking habits of students in College of Applied Medical Science, 2000). They found out that 29% of the respondents were current smokers. These finding were conflicting with the results of our study, where we found that 59% of the respondents were smokers (Smoking habits of students in College of Applied Medical Science, 2000). Which indicates an increase in the smoking prevalence among the health field students.

Table 1. Age of the respondents

Characteristics	Educational status	
	UG 3 rd year (n= 55)	UG 4 th year (n= 76)
Age in years (mean ± SD)	19.88 ± 1.04	22.37 ± 1.45

Table 2. Influence of family and friends on smoking habit

Relationship	Particulars of respondents* (n= 30)	
	No.	%
Father	7	23.3
Brother	5	16.7
Uncle	1	3.3
Friends	29	96.7

*Respondents have chosen more than one option

Table 3. Details of smoking habits

Characteristics	Educational status			Test statistic	P value
	UG 3 rd year No. (%)	UG 4 th year No. (%)	Total		
Smokers	23 (43.4)	30 (56.60)	53 (100)	Chi square= 0.075	0.963
Non smokers	30 (41.1)	43 (58.9)	73 (100)		
Ex- smokers	2 (40)	3(60)	5 (100)		
Total	55 (42)	76 (58)	131 (100)		
Age (in years) at which the respondents start smoking (mean & SD)	16.90 [#] (2.23)	19.97 [#] (3.90)	-	T= -3.239	0.002*
Reasons of smoking					
Peer influence	8 (34.8)	18 (60)	26 (49.1)	Chi square= 4.873	0.301
Stress	5 (21.7)	3 (10)	8 (15.1)		
Imitate parents	4 (17.4)	2 (6.7)	6 (11.3)		
Others	3 (13)	5 (16.7)	8 (15.1)		
Both peer influence & Stress	3 (13)	2 (6.7)	5 (9.4)		
Total	23 (100)	30 (100)	53 (100)		
Number of cigarettes smoke per day.					
<10	3 (18.8)	4 (16)	7 (17.1)	Yates corrected Chi square= 0.220	0.994
10-20	4 (25)	7 (28)	11 (26.8)		
20-30	8 (50)	12(48)	20(48.8)		
30-40	1 (6.2)	-	1(2.4)		
≥40	-	2 (8)	2(4.9)		
Total	16 (100)	25(100)	41 ^a (100)		

^a12 missing

*Statistically significant at 5%

Mean age of 21 students (3rd year)

Mean age of 30 students (4th year)

Table 4. Type of tobacco used by the respondents

Type	Number of respondents (n=37)*
Pipe	2 (5.40)
Hookah	35 (94.6)
Cigar	3 (8.11)

Subjects have chosen more than one option.

Table 5. Influence of education on smoking rate

Educational status	Smoking rate (n=53)	
	Increased	Decreased
UG 3 rd year	-	5 (71.4)
UG 4 th year	-	2 (28.6)
Total	-	7 (100)

Also, in this study they examined the prevalence of smoking among all applied medical sciences collages, whereas, in our study we have selected a specific program, which is the respiratory therapy program.²¹ In contrast with our study, the previously mentioned study examined the prevalence among both male and female students (Smoking habits of students in College of Applied Medical Science, 2000). The strength of our research is that it is considered to be the first research measuring the smoking rate among respiratory therapy students

after majoring in Saudi Arabia. And we also had some limitations, we tried to collect data from Inayaa collage by many ways through emails and phone calls, but we still have no response from their collage. Their program director may have thought that the result of our research will affect their collage reputation. Additionally, this research could not be generalized between female students. And the reason is that most of the female students will not be honest in answering the survey of this research due to Saudi culture.

Conclusion

This study is aimed to investigate the effect of majoring in the respiratory therapy field on students' smoking habits and we found that there are no significant differences between the senior and junior students regarding their smoking rate. Also, as the increased number of female students who will graduate from the college of applied medical science, respiratory therapy program, Riyadh. Due to that, there is a need to understand the prevalence among female students. Moreover, we need more studies to evaluate the reasons.

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Appendix 1

 	
Kingdom of Saudi Arabia Ministry of National Guard - Health Affairs	
المملكة العربية السعودية وزارة الحرس الوطني - الشؤون الصحية	
Informed Consent for Cross Sectional Surveys	
إقرار موافقة للمشاركة بدراسة مقطعية	
Study Title:	Smoking Rate among Respiratory Therapy Students after Majoring
Study No.:	
Principal Investigator:	Ms.Prachi Tambur
<p>You are requested to participate in research that will be supervised by Ms.Prachi Tambur in KSAU-HS.</p> <p>This study is about the effect of majoring in respiratory therapy field on the smoking habits of the male students in Riyadh colleges.</p> <p>Your participation is voluntary and you have the right to not complete this survey without giving any reason and this will not affect your current or future medical care in MNG-HA.</p> <p>You do not have to sign this information sheet only you can choose to agree/disagree; your acceptance to complete the survey will be interpreted as your informed consent to participate.</p> <p>Your responses will be kept anonymous. However, whenever one works with email/the internet there is always the risk of compromising privacy, confidentiality, and/or anonymity. Despite this possibility, the risks to your physical, emotional, social, professional, or financial well-being are considered to be 'less than minimal'.</p> <p>If you have any questions about the research, please contact Ms.Prachi Tambur: Tamburp@ksau-hs.edu.sa</p> <p>In case you have any enquiries related to your rights as a research subject you can contact the Institutional Review Board on Tel 8011111 Ext. 14572.</p>	<p>أنت مدعو للانضمام طواعية لدراسة بحثية سوف تشرف عليها الأناسة براتشي تامبور في جامعة الملك سعود بن عبدالعزيز للعلوم الصحية.</p> <p>هذه الدراسة تهدف إلى قياس مدى تأثير دراسة تخصص العلاج التنفسي على عادة التدخين عند الطلاب الذكور في مدينة الرياض.</p> <p>إن مشاركتك في هذه الدراسة طوعية ولك الحق التام في عدم قبول تعبئة الاستمارة أو الانسحاب في أي وقت تشاء بدون ابداء الاسباب ولن يؤثر ذلك على العناية الطبية المقدمة لك حالياً أو في المستقبل في الشؤون الصحية بوزارة الحرس الوطني.</p> <p>لا يجب عليك التوقيع على ورقة المعلومات هذه ، فقط عليك الاختيار موافق / غير موافق فمجرد قبولك تعبئة هذا الاستبيان يعتبر بمثابة إقرارك بالموافقة على المشاركة في هذا البحث .</p> <p>ستبقى الردود على الأسئلة سرية ومع ذلك ، فإن العمل عن طريق البريد الإلكتروني والانترنت يبقى هناك احتمال الاختراق خصوصية البيانات وسرية المعلومات ولكن بالرغم من هذه الاحتمالية تبقى الاخطار البدنية والعاطفية والاجتماعية والمهنية والمالية المترتبة عليك ضمن الحد الأدنى من الخطورة.</p> <p>إذا كان لديك أي اسئلة حول هذا البحث ، يرجى التواصل على: Tamburp@ksau-hs.edu.sa</p> <p>في حال كان لديك الاستفسارات المتعلقة بحقوقك كموضوع بحث يمكنك الاتصال بمجلس المراجعة المؤسسية على هاتف 8011111 تحويلة 14572</p>
<input type="checkbox"/> Agree to participate <input type="checkbox"/> Disagree to participate	<input type="checkbox"/> موافق على المشاركة <input type="checkbox"/> غير موافق على المشاركة
This information shall not be used, disclosed, or published without written approval from King Abdullah International Medical Research Center	
Version No. :	Version Date:
(Please change according to your study)	(Please change as appropriate)

Appendix II

King Saud Bin Abdulaziz University for Health Science
 College of Applied Medical Science
 Reserch Unit
 CAMS 411&412 Research Methodology I& II

Smoking Rate among Respiratory Therapy Male Students after Majoring

Questionnaire to assess the effect of majoring in the respiratory therapy field on students' smoking habits.

Are you from : CAMS KSAUHS <input type="checkbox"/> Inaya <input type="checkbox"/> Almaarefa <input type="checkbox"/>	
1. Are you a:	Junior <input type="checkbox"/> Senior <input type="checkbox"/>
2. Do you smoke?	Yes <input type="checkbox"/> No <input type="checkbox"/> Ex-smoker <input type="checkbox"/>
3. How old are you?	_____
4. If you are an ex-smoker what is the reason for quitting?	Knowledge of health <input type="checkbox"/> Hazard <input type="checkbox"/> Relations and friends <input type="checkbox"/> After counselling a professional <input type="checkbox"/>
5. At what age did you start smoking?	_____
6. How many cigarettes do you smoke per day?	_____
7. Do you smoke any other type of tobacco?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, what type? Pipe <input type="checkbox"/> Hookah <input type="checkbox"/> cigar <input type="checkbox"/> other: _____ <input type="checkbox"/>
8. Why do you smoke?	Friends with bad influence <input type="checkbox"/> collage pressure <input type="checkbox"/> to imitate parents <input type="checkbox"/> other: _____ <input type="checkbox"/>
9. Does any member of your family smoke?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, who? _____
10. Do any of your friends smoke?	Yes <input type="checkbox"/> No <input type="checkbox"/>
11. Does your smoking rate increase when you are with a group?	Yes <input type="checkbox"/> No <input type="checkbox"/>
12. Does your smoking rate increase during exams?	Yes <input type="checkbox"/> No <input type="checkbox"/>
13. "smoking makes me less depressed", do you agree?	Yes <input type="checkbox"/> No <input type="checkbox"/>
14. After gaining more knowledge about the respiratory diseases have your smoking rate been affected?	Yes <input type="checkbox"/> No <input type="checkbox"/> if yes: Increased <input type="checkbox"/> Decreased <input type="checkbox"/>
15. Do health professionals serve as a role-model for their patients and the public?	Yes <input type="checkbox"/> No <input type="checkbox"/>
16. Do you regret smoking after majoring in respiratory therapy?	Yes <input type="checkbox"/> No <input type="checkbox"/>
17. 12 months from now, do you think you will be still smoking?	Yes <input type="checkbox"/> No <input type="checkbox"/>
18. Have you ever considered stop smoking?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, when? _____
