Smoking Knowledge, Attitude, and Practice among Saudi Population

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Abstract: Despite the warning in the media and on each packet of cigarettes, the percentage of smokers in developing countries is increasing. The objective was to determine smoking prevalence and its related knowledge and attitude among Saudi males. Cross-sectional survey was conducted among Saudi adult males in the Western Region of Saudi Arabia during the period from June to September 2012. A structured pretested and self-administered questionnaire was used anonymously. A total of 392 participants were included. The prevalence of smoking was 23%, of these 37.5% smoke the first cigarette early in the morning on an empty stomach. The main cause for smoking was peer friends 62.2%. There was significant difference between the educational level regarding the causes of started smoking (P = 0.006). The knowledge about diseases caused by smoking was good among the smokers. The current study shows that, smoking is a real health problem among Saudi males. Massive intervention program about smoking control especially among younger people is needed.
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Introduction

Tobacco is the only important preventable cause of early deaths in some developed countries, and one of the most important public health problem in these days (Al Nasir 2004). According to WHO 2006; tobacco smoking is an epidemic overwhelming different countries which can lead to disability, many diseases and deaths. In 1998; WHO estimated that smoking was the cause of about annually three million deaths worldwide, and if the current smoking situation continued, it is expected to rise up to 10 million by the end of year 2020. The majority of these deaths are expected to be in the developing countries (WHO 1998).

According to Saudi Gazzette report 2013; Saudi health authorities said that, six million smokers in the Saudi Arabia spent about eleven billion Saudi Riyals annually. Although Saudi Arabia does not manufacture cigarettes, an average of 600 million SR is spent annually on tobacco (CDC 2005). Nowadays, Saudi Arabia ranked 8th in the world in terms of tobacco consumption (WHO 2006).

Based on the facts that only few studies are available on this subject in the West Region of Saudi Arabia, there was a need to find out the current prevalence of tobacco use and related behavior among residents in this area. Therefore this survey was conducted to determine the smoking prevalence and its related knowledge and attitude among Saudi males.

Materials and Methods

Study Design and Study Area:

A Cross sectional survey was conducted in The Western Region of Saudi Arabia during the period from June to September 2012.

Target Population:

All Saudi adults males (≥15 year old) residing in The Western Region of Saudi Arabia.

Sampling Technique and Sample Size:

Convenient method of sampling was adopted and a total of 500 adult males were invited to participate.

Data Collection:

Participants were met in public places. A verbal informed consent was obtained from each participant. A self- administered questionnaire was used to collect data. The variables included in the questionnaire were adapted from other studies with modifications. Questionnaire composed of three sections. The first part was to collect data on participants 'demographic characteristics for both current smokers and non-smokers. A second part was designed to collect data on smokers' knowledge, attitude and practice toward smoking, the main reasons for starting smoking and the person who convincing them to quit smoking. The last part was designed to assess non-smoker participants' on their opinion about smoking, their attitude and recommendations to smokers.

Data analysis and statistical tests:

Data was processed using Statistical Package for Social Sciences (SPSS) version 16. Mean, frequencies as percentages were used to describe variables. Chi-square analysis was used to test the association between the demographic characteristics and smokers' knowledge and attitude. P value <0.05 was considered as statistically significant.

The proposal of this study was revised and approved by the Committee of Pharmacy Practice Research Unit (PPRU), College of Pharmacy.

Results:

A total of 392 participants completed the questionnaires, with a response rate of 78.4 %. Participants' age range was 15-67 years with a mean age of (24.3 ± 10.8). Table (1) shows participants' demographic characteristics.

Table1: Demographic characteristics of the participants

Background Characteristic		Frequency	Percentage
Residence	City	371	94.6%
	Village	21	5.4%
Occupation	Government	88	22.4%
	Military	24	6.1%
	Student	256	65.3%
	Free Lancer	8	2.0%
	Health related job	5	1.3%
	Retired	4	1.0%
	Others	7	1.8%
Marital status	Married	107	27.3%
	Never Married	283	72.2%
	Widower or Divorced	2	.5%0
Education status	Primary	9	2.3%
	Secondary	266	67.9%
	University	116	29.6%
	Illiterate	1	.3%
Monthly income	< 3000 SAR	204	52.0%
	Between 3000-10000 SAR	92	23.5%
	> 10000 SAR	96	24.5%

Smokers were 90 (23%). They started smoking habit in the age of (17.0 ± 3.6). Majority of them 73 (81.1%) smoke cigarettes, while12 (3.1%) were water pipe smoker, and the rest 5 (1.3%) used shamma.

Less than half of smokers 34 (44.7%) consumed 10 cigarettes or less daily, while 29 (38.2%) used 11-20 cigarettes and 6 (7.9%) smoked more than 30 cigarettes a day. Regarding the number of cigarettes consumed daily, there was no significant association observed neither between participants' occupation ($P = 0.91$), nor their incomes ($P = 0.25$) and marital status ($P = 0.699$).

A higher proportion of participants 33 (37.5%) smoke their first cigarette early in the morning on an empty stomach. Out of them (25.6%) were started to smoke after 5 minutes, while 26.9% within 1 hour after waking up. The majority of the respondents 56 (62.2%) declared that their family do not attending their smoking and more than half 50 (55.6%) of them one of their family members was smoker.

Regarding the prevalence of diseases among smoker participants; 8 (9%) had asthma, 7 (8%), 4 (4.6%), 2 (2.3%), 1(0.3%) and 2 (2.3%) said that they were suffering from hypertension, chronic pneumonia, heart problems, cancer and impotence, respectively. There was no significant association when correlating the number of cigarettes and with the occurrence of these diseases.

Table 2 illustrates the attitude of smokers' participants towards smoking and its relation to their education and occupation. The majority of smokers had the desire to stop smoking. There was a significant association when correlating this desire with education; the university graduates scored the higher percentage ($P = 0.032$). About two third of the smoker participants confirmed the availability of anti-smoking committees services in the country, but there was high significant association regarding this knowledge and their occupation ($P = 0.001$). Those who work in governmental institutes were more knowledgeable (89.7%) about these services, while the students were the least (38.9%).

Table 2: attitude of smokers' participants towards smoking

Attitude toward smoking	Yes	No	Don't know	Education *P* value	Job *P* value
Did you tried stop smoking?	64 (71%)	19 (21.1%)	7 (7.8%)	0.227	0.151
Did you desire stop smoking?	70 (77.8%)	13 (14.4%)	7 (7.8%)	**0.032**	0.650
Did you join any smoking services program?	6 (6.7%)	80 (89.9%)	3 (3.4%)	0.456	0.146
Are anti-Smoking Committees services available in your country?	54 (61.4%)	18 (20.3%)	18 (20.3%)	0.129	**0.001**
Do you think that, schools, universities or governmental offices planning to be smoke free areas?	73 (82%)	11 (12.4%)	6 (6.7%)	0.089	0.409
Have you recommend smoking to any friend or relative and he/she become smokers?	15 (16.7%)	66 (73.3%)	9 (10.0%)	0.308	0.487

Table 3: Knowledge, attitude and practice about smoking (Likert scale application)

No.		Strongly agree F / %	Agree F / %	Unsure F / %	Disagree F / %	Strongly disagree F / %	Occupation P value	Education P value
1	The main causes for smoking: a) Friends	45 (50.0%)	11 (12.2%)	14 (15.5%)	10 (11.1%)	10 (11.1%)	0.43	0.486
	b) Imitating popular figures	14 (15.7%)	16 (18.0%)	10 (11.2%)	27 (30.3%)	22 (24.7%)	0.71	**0.006**
	c) Relatives	6 (6.8%)	2 (2.3%)	6 (6.8%)	25 (28.4%)	49 (55.7%)	0.494	0.132
2	the most influential person who convincing me to quit smoking: a) Religion man	10 (11.6%)	18 (20.9%)	21 (24.4%)	19 (22.1%)	18 (20.9%)	0.969	0.303
	b) Family	40 (44.9%)	27 (30.3%)	8 (9.0%)	11 (12.4%)	3 (3.4%)	0.577	0.313
	c) Teacher	11 (12.4%)	22 (24.7%)	23 (25.8%)	15 (16.9 %)	18 (20.2%)	0.323	0.738
3	I accept if one of my family members was smoker	2 (2.3%)	4 (4.5%)	3 (3.4%)	25 (28.4%)	54 (61.4%)	0.15	0.257
4	Smoker is an outcast person in the community	17 (19.8%)	12 (14.0%)	23 (26.7%)	23 (26.7%)	11 (12.8%)	0.286	0.903
5	It is difficult to me not to smoke in smoke free areas such as planes	37 (42.5%)	22 (25.3%)	7 (8.0%)	10 (11.5%)	11 (12.6%)	0.826	0.306
6	I have enough information about the risks of smoking	43 (48.9%)	35 (39.8%)	3 (3.4%)	6 (6.8%)	1 (1.1%)	0.758	0.390
7	I avoid reading or listening about risks of smoking	15 (17.6%)	23 (27.1%)	15 (17.6%)	21 (24.7%)	11 (12.9%)	0.511	0.483
8	Smoking increases the risk of: a) heart diseases	50 (56.8%)	30 (34.1%)	2 (2.3%)	3 (3.4%)	3 (3.4%)	0.857	0.707
	b) Peptic ulcer	47 (53.4%)	34 (38.6%)	4 (4.5%)	1 (1.1%)	2 (2.3%)	0.328	0.314
	c) Lung cancer	54 (60.7%)	28 (31.5%)	4 (4.5%)	1 (1.1%)	2 (2.2%)	0.944	0.742
	d) Bladder cancer	37 (41.6%)	34 (38.2%)	10 (11.2%)	7 (7.9%)	1 (1.1 %)	0.347	0.740
	e) Impotence	39 (43.8%)	30 (33.7%)	10 (11.2%)	6 (6.7%)	4 (4.5%)	**0.041**	0.684

According to the smokers' perception, the main causes for smoking are friends 56 (62.2%), followed by imitating popular figures 30 (33.7%). There was high significant difference between the educational level and causes of smoking (P = 0.006). In this regards all illiterate smokers and 50% of primary school level students thought that the major cause is imitating popular persons, while about one fourth of secondary school level smokers considered friends as a major cause. Smokers' participants thought that most influential person who convincing them to quit smoking was their family 67 (75.2%). The knowledge about diseases accompanied by smoking was good (Table 3).

Regarding the non smokers participants most of them were neither smoking 237 (78%), nor trying to smoke 210 (69.5%). The majority of them 295 (97%) did not accept that one of their family members to be a smoker as shown in Table 4.

Table 4: Attitude and practice of non-smokers participants toward smoking

	Attitude and practice toward smoking	Yes		No	
		Frequency	Percentage	Frequency	Percentage
1	Have you ever been smoking?	65	(21.2%)	237	(78%)
2	Have you ever tried to smoke?	92	(30.5%)	210	(69.5%)
3	Have you ever helped someone quit smoking?	211	(69.9%)	91	(30.1%)
4	Does your father or relatives smoke?	192	(63.6%)	110	(36.4%)
5	Have you ever hearted by any one smoke in your presence?	126	(41.9%)	175	(58%)
6	Do you try to prevent smoking around you?	217	(72.1%)	84	(27.9%)
7	Does violence represent a suitable mean to quit smoking?	24	(8%)	276	(92%)
8	Do you accept that one of your family members to be smoker?	7	(2.3%)	295	(97%)

Discussion:

The study was conducted to determine the smoking prevalence and its related knowledge and attitude among Saudi males in the Western Region of Saudi Arabia. The prevalence of smoking in the current study was found to be 23%. This was higher than the prevalence reported by Jarallah et al. 1999 in 3 regions in Saudi Arabia, which was (21.1%), but lower than other study by Hashim 2000; among Saudi students which was (29%). The prevalence rate in this study was slightly higher compared to the median prevalence rate of 17.5% reported by Medhat 2009; in a review article, Saudi Arabia.

The current study revealed that, the main cause for smoking was the influence of friends (62.2%). This finding coincides with the results of different studies conducted in Saudi Arabia and other studies from different countries, which document the effect of peer friends on the decision to start smoking (Hashim 2000, Samia 2001, Ashan et al. 1998, Bewley et al. 1974 and Charlton and Blair 1998).

The dominant smokers in this study knew the hazardous effect of smoking and well educated about its complications. The majority of them attempted or desired to quit smoking. Previous studies confirmed this finding (Hashim 2000, Yousef 2006 and Saeed et al. 1997).

In addition, this knowledge confirmed by our results that only 6.8% out of the smokers' participants accepted the smoking habit to any of their families, which means most of smokers not comfort with smoking.

Religion was not the main reason 32.5% to quit smoking, while family represents 75.2%. This finding was disagreed with another study conducted in Riyadh among secondary school students, which revealed that the free time was the major cause for smoking (Sultan 2011).

However, there were some limitations in our study. The questionnaires were completed only among by adult males due to socio-cultural restrictions limited our ability to meet females.

Conclusion

The obtained results show that smoking is a real health problem among Saudi males. Smokers started this habitat at an early age. The author recommends the development and implementation of massive intervention program to educate smokers about the complications and help them to quit smoking.

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