

Tobacco Use among Arab American Adults in Southeastern Michigan Community

Hikmet Jamil* PhD, Virginia Hill Rice**PhD RN, Adnan Hammad***PhD, Laith Jamil****MD, Harvey Pass*****MD

ABSTRACT

Background: Tobacco use is a major public health risk in most of the developing countries of the world. Many immigrant populations carry this behavior to America.

Methods: In this screening study of 6164 Arab American adults, 1796 identified themselves as either current or former smokers; 946 agreed to complete a tobacco use survey (53% response rate).

Results: The majority were male (80%); married (77%); born in the Middle East (97%); had been in the USA more than five years (67%); had not finished high school (54%), had annual incomes of less than \$10,000.00 (66%), and carried no health insurance (54%). Significantly more men than women started smoking before 15 years and smoked more cigarettes per day; most women started after aged 20. Early age of initiation was the most powerful predictor of current smoking status (OR = 25.82). Former smokers were two times more likely to be males and 2.24 times more likely to have been in the United States less than 5 years. Of those currently smoking, 91% wanted to quit and 94% wanted smoking cessation programs.

Conclusion: Significant differences were found between current and former smokers and between men and women in this exploratory study. Current smokers were male, in the USA longer, and began smoking before age 15. Men smoked more years and more cigarettes. More rigorous research is needed. Intervention efforts must be focused on smoking prevention or cessation in this and other immigrant populations.

Key words: Tobacco, Arab Americans, Smoking.

Iraqi Medical Journal Vol. 52, No. 1, June 2006; p. 56-61

Article

Introduction

Tobacco use (primarily cigarette smoking) is a major preventable public health risk in most of the developing countries of the world.

The World Health Organization reported smoking as the second cause of death and disability worldwide; they found it responsible for the death of one in ten adults. If these use patterns continue, some 10 million lives will be lost each year by 2025. Half the people that smoke today - that is about 650 million people - will eventually die from it⁽¹⁾. Current smoking in the United States is approximately 22.5% for adults (25.2% men and 20% for women)⁽²⁾. More than 442,000 premature deaths occur each year in this country from smoking-related health problems such as coronary artery disease, chronic obstructive pulmonary disease, stroke, and neoplasms (including lung cancer). Factors related to chronic tobacco use include age, gender, education, socioeconomic status (SES), parental and sibling smoking, and

*Wayne State University Department of Family Medicine / Michigan USA.

**Wayne State University College of Nursing & Karmanos Cancer Institute.

***Arab Community Center for Economic & Social Services / Michigan.

****William Beaumont Hospital / Division of Gastroenterology / Michigan.

*****Wayne State University Department of Surgery / Michigan.

Corresponding Author & Request for Reprint Contact: Hikmet Jamil, MD, PhD, FFOMI

Dept. of Family Medicine / School of Medicine

Wayne State University

15400 W. McNichols, Detroit, MI 48235 USA

Voice: (313) 340-4341

Fax: (313) 493-9387

hijamil@med.wayne.edu

ethnicity/racial identify.^(3,4) Although there are smoking rates for many ethnic/racial groups in America (e.g., American Indians/Alaskan Natives (40.8%), African Americans (22.4%), Hispanics (16.7%) and Asian/Pacific Islanders (13.3%),⁽⁵⁾ little is known about smoking by a rapidly growing immigrant population, Arab American adults. Many Arab Americans come from Middle Eastern countries where tobacco use is a significant part of the culture and every day life and smoking rates are high. Nations with the highest smoking include Iraq (40%), Palestine (48%), Kuwait (52%), Saudi Arabia (53%), Lebanon (58%), Jordan (65%), and Tunisia (76%)⁽⁶⁾. On average, 44% of the men and 5% of the women in the Middle East smoke. Traditionally, tobacco use by women in that part of the world has been very low, but is now on the rise.⁽⁷⁾

No national tobacco use rates were found for Arab Americans and few data exist for the Michigan population. Michigan is home to some 490,000 Arab Americans, the majority living in the southeastern part of the state.⁽⁸⁾ This exploratory study sought information on tobacco use in a local Arab American community.

Methods

A community based convenience sample of 6164 Arab American adults were asked by researchers if they were *current* (smoked in the last 30 days) or *former* (had smoked earlier, but not in last 30 days) smokers; 1722 or 28% identified themselves as *current* smokers. Of the 946 who agreed to participate, 872 were *current* and 74 were *former* smokers. This was a 53% response rate. No incentives were used. Participants, after signing an approved informed consent, completed a 27-item Survey for Arab American Adult Tobacco Use. The first 13 items asked for demographic/descriptive data; the remaining ones sought information on tobacco use history including length and strength of smoking (i.e., number of years

of smoking and average number of cigarettes smoked per day), parent's smoking behavior, and age at initiation. Participants were asked to indicate if they agreed or disagreed with a list of eight (8) reasons for smoking and asked to list five health problems related to smoking. They also indicated if they were interested in quitting and whether they would attend a smoking cessation program at the local community health center. Questions on this measure were similar to those in earlier studies by the first author^(9,10) and those on the National Health Interview Survey.⁽¹¹⁾ Originally developed in Arabic, a translation-back translation procedure was used to establish the English version of this measure. The survey was pre-tested with 25 bilingual Arab American adults for content validity, understandability, and ease of use prior to this survey. Of the 946 participants in this study, 98% choose to complete the Arabic version of the survey. Statistical associations between smoking status and study variables were examined using Pearson chi-square and Kendall's tau-b tests. A logistic regression model was used to examine factors associated with *current* versus *former* tobacco use status. Level of significance for all tests was $p = <0.05$.

Results

The average age of the sample was 39.71 years (S.D.= 9.86); ages ranged from 25 to 55. The majority of the participants were male (80%), married (77%), born in the Middle East (97%), had not finished high school (54%), had annual incomes of less than \$10,000 (66%), and carried no health insurance (54%). Most identified Iraq (28%), Lebanon (34%), or Yemen (25%) as their country of origin.

Smoking Status

Table 1 presents the ages at smoking initiation, years of smoking, and cigarettes smoked each day for *current* smokers. Significantly more males (78%) than females (22%) [χ^2 (df3)= 21.01,

$p < .002$] reported smoking and more men (78%) than women (67%) [X^2 (df3) = 12.19, $p < .007$] initiated their habit before the age of 21. More women began smoking between 20 and 30 years of age. Women reported smoking more years of

smoking; this was related to the fact that there were more women (57%) than men (43%) over the age of 40 in the study. Men smoked significantly more cigarettes each day than women [X^2 (df3)=59.91, $p < .000$].

Table 1: Tobacco use patterns for current Arab American adult smokers, 684 males and 188 females (N=872).

Age at initiation	< 15 years	16-20 years	21-29 years	> 30 years
Males	21 %	57 %	13 %	9 %
Females	15 %	52 %	22 %	11 %
Years smoking	< 9 years	10-19 years	20-30 years	> 31 years
Males	13 %	42 %	27 %	18 %
Females	11 %	37 %	40 %	12 %
Cigarettes smoked per day	< 10	10-20	21-40	> 41
Males	6 %	25%	56%	13 %
Females	15.1%	40.2%	40%	5 %

Factors related to *current* tobacco use.

Eight percent (8%) of the study participants were *former* smokers. A forward stepwise procedure was used to identify factors that predicted *current* versus *former* smoking status. Variables entered into the equation included age, gender, education, marital status, number

of children, country of origin, time in the US, parental tobacco use, strength and length of smoking, and age at initiation. Output from the logistic regression revealed three significant predictors for *current* tobacco use. These were: (1) age at smoking initiation, (2) gender, and (3) years in the United States. See Table 2.

Table 2: Significant predictors of current smoking status in 872 Arab American adults.

Factors in the Equation	B	S.E.	Wald	d.f.	Sig.	Odds Ratio	Confidence Interval	
Gender	0.71	0.37	3.75	1.00	.050	2.03	4.15	0.98
Years in US (< 5 years)	0.81	0.28	8.42	1.00	.004	2.24	3.88	1.29
Age at initiation								
<15 vs. 30+	3.25	0.52	39.60	1.00	.001	25.82	71.08	9.19
<15 vs. 21-29	2.98	0.34	75.71	1.00	.001	19.74	38.65	9.95
<15 vs. 15-20	1.27	0.34	14.19	1.00	.001	3.57	6.91	1.82

* In this logistic analysis, *former* smokers were coded zero and *current* smokers were coded one.

Age at initiation of smoking was the most powerful predictor of *current* smoking. Respondents who started at an age younger than 15 years were 25.82 times more likely to be *current* smokers than those who started after the age of 30 ($p = .001$). Only 2.7% of those who started smoking before the age of 15 were *former* smokers compared to 36% of those who

started after the age of 30.

The odds of being a *current* smokers were 19.74 for beginning smoking before age 15 versus between 21 and 29 years ($p = .001$) and 3.57 for initiation before age 15 verses between 15 and 20 years ($p = .001$). In addition, males were almost two times more likely to be *former* smokers than were females (8% versus

5.5%, $p=.05$). Respondents were 2.24 times more likely to be *former* smokers if they had been in the United States less than 5 years ($p=.004$). Expressed in percentages, this ratio indicates that 10.4% of those in US five years or less were more likely to be *former* smokers compared to 6.7% of those who were in the US six years or longer.

Reported reasons for smoking

Participants agreed with the following reasons for *current* smoking: 'I can't stop' (74%), social pressure (36%), psychological reasons (17%), sharing with friends (11%), stress (10%), 'I enjoy it' (8%), loneliness and boredom (6%), and 'I don't know' (12%). Participants' knowledge of the relationship between smoking and health problems varied. Two thirds (61%) of the sample identified smoking being related to heart disease, 55% for cancer, 34% for chronic lung disease, 30% for lung cancer, 19% for atherosclerosis, and 7% for asthma. Other problems identified were colds (5%), mouth diseases (2%) and ulcers (1%). At least two of the above diseases were identified by one third of the participants. Of those who were *currently* smoking, 91% said that they wanted to quit and 94% indicated that they would participate in a smoking cessation program if it were offered by the community health clinic.

Discussion

In this study we examined tobacco use in a community-based convenience sample of 6164 adults who identified themselves as Arab Americans; 1796 or 29% reported being either *current* or *former* cigarette smokers. Those who agreed to participate tended to be middle aged, male, married, had low annual incomes, had not finished high school, and had lived in the US fewer than five years. The observed tobacco use rate of 28% in this convenience sample was higher than the US national average of 22.5% and that reported for other racial/ethnic groups in the US, including

African Americans, Hispanics, and Asian/Pacific Islanders.⁽⁵⁾ However, it was lower than that of American Indians/Alaskan Natives⁽⁵⁾ and smoking rates reported in many Middle Eastern countries.⁽⁶⁾ Gender differences were noted; 78% of the *current* smokers in this sample were male. This is consistent with the higher smoking rates for men in the Middle East.⁽⁷⁾ Smoking among women was 22%, a higher rate than that reported for most women's studies in the Middle East.^(6,7) Among the predictors of *current* tobacco use was 'years in the US'; those in America less than five years reported a higher *former* smoking rate than those here longer than five years. Several factors may have contributed to this including the higher cost of cigarettes for new immigrants to America; this might have discouraged their smoking. Greater exposure to non-smoking messages and venues in the new dominant culture also may have contributed. A major predictor for *current* tobacco use in this sample was 'age at initiation of smoking'. Consistent with the literature,^(2,4) males in this study started smoking significantly earlier (before the age of 15) than the females. Women tended to initiate their habit much later, usually between 20 and 30 years, and they smoked fewer cigarettes each day than their male counterparts who had begun smoking before the age of 15. In this study women appeared to have smoked more years than the men, but the women were significantly older than the men. Arab women in America may enjoy more freedom to smoke.

In conclusion, tobacco use in this convenience sample of Arab American adults appeared higher than the US national average. Males smoked significantly more cigarettes each day than females and began smoking at an earlier age. Women in this study had been smoking more years (although they started about 15 years later than the men) because they were significantly older. Tobacco use among the women

was similar to the US national data;⁽⁴⁾ this may reflect acculturation effects for the older women. Three factors discriminated between *current* and *former* smokers. More men than women were *current* smokers, those that began smoking at a younger age were more likely to still be smoking, and those in America for a longer period of time were more likely to be *current* versus *former* smokers. Knowing the nature of tobacco use and significant factors that contribute to it in the Arab American community will help to identify the extent of this problem and the need for effective intervention. Arab Americans are a recent and rapidly growing immigrant group in America due to hardships and wars in the Middle East and the seeking of opportunities for employment and better education that are offered in the west. Tobacco use, a significant part of the Middle Eastern heritage and culture, must be studied in depth in this population and appropriate interventions designed and tested by those who provide their health care. Physicians and nurses must always assess for tobacco use in clients who come from countries in the world where smoking is high.

Limitations of the study

Findings in this study contribute to beginning knowledge of tobacco use in Arab Americans adults. However, there are a number of methodological limitations that must be considered. The first is that a convenience rather than a randomly selected sample was surveyed. *Current* smokers could have 'over'- or 'under-volunteered' to participate. As noted, only 53% of those who self identified as either a *current* or *former* smoker actually completed the tobacco use survey and there were very few *former* smokers proportionally. As no incentives were used, it is not likely a special population was drawn to the study and the demographic characteristics of those who participated were similar to those living in the community. Another major limitation was the acceptance of

self-reports versus obtaining biochemical validation of smoking behaviors. Since there were no 'consequences' for reporting either being a *current* or *former* smoker (except for having to complete an anonymous survey), it seems likely that those who did fill out the survey were reporting honestly. There was no way to connect participants with the information that they provided. Another methodological concern was the reliability and validity of the study measure, itself. This tool had been used with at least two other Arabic populations in Arabic^(8,9) and tested well in those studies. Internal consistency for the 14 non-demographic items was .78 in this study. The issue of 'generalizability' is a concern. The study sample was not representative and participants self selected to report on a behavior that is becoming increasingly negative as policies and the health care industry speak out. Members in the Arab American community may have been sensitive to this as immigrants. The findings of this study suggest a strong need for more rigorous research.

References

1. World Health Organization Tobacco Free Initiative. (2005) Why is tobacco a public health priority? Available at <http://www.who.int/tobacco/en/> Accessed 1-10-05.
2. Centers for Disease Control Cigarette Smoking Among Adults - U.S., 2002. Morbidity and Mortality Weekly Report 2004; 53(19): 427-431.
3. Center for Disease Control and Prevention. Annual smoking-Attributable mortality, years of potential life lost, and economic costs--United States 1995-1999. MMWR. 2002; 51:300-303.
4. The Health Consequences of Smoking: A Report of the Surgeon General 2004. Washington, DC. Government Printing Office Stock Number 0-16-051576-2
5. Tobacco use among U.S. racial/ethnic minority groups: A report of the Surgeon General. Washington D.C.: United States Department of Health and Human Services, 2001.
6. World Health Organization Tobacco Free Initiative (2005) Regional Databases (Eastern Mediterranean Region). Available at <http://www.emro.who.int/TFI/CountryProfile-Part6.htm#table5>. Accessed 1-10-05.
7. Word Bank Report. Curbing the epidemic: Governments and the economics of tobacco control. World Health Organization: Geneva. 1999

8. Michigan: State rank by Arab American Population. Arab American Institute. Available at <http://www.aaiusa.org/demographics.htm>. Accessed 1-13-05.
9. Jamil H, Haboubi G, Ghaib M, Saadon K. Epidemiological aspects of smoking habit among first and fourth grade male students at eight colleges, University of Baghdad. J Comm Med. Iraq, 1989;2 (2):125-130.
10. Jamil H, Ghaib M, Jamil L. Epidemiological study of smoking habit among females in Baghdad City-1991. J Comm Med. Iraq, 1992;5 (1): 3-10.
11. National Health Interview Survey. National Center for Health Statistics, USDHHS, 2002. Available at [http:// www.cdc.gov/nchs/nhis.htm](http://www.cdc.gov/nchs/nhis.htm) Accessed 11-07-03

IMJ 2006; 52 (1): 56-61