

# ACCESS Health

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## INSIDE THIS ISSUE:

**Proceedings of  
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Conference on  
Health Issues in  
the Arab American  
Community**

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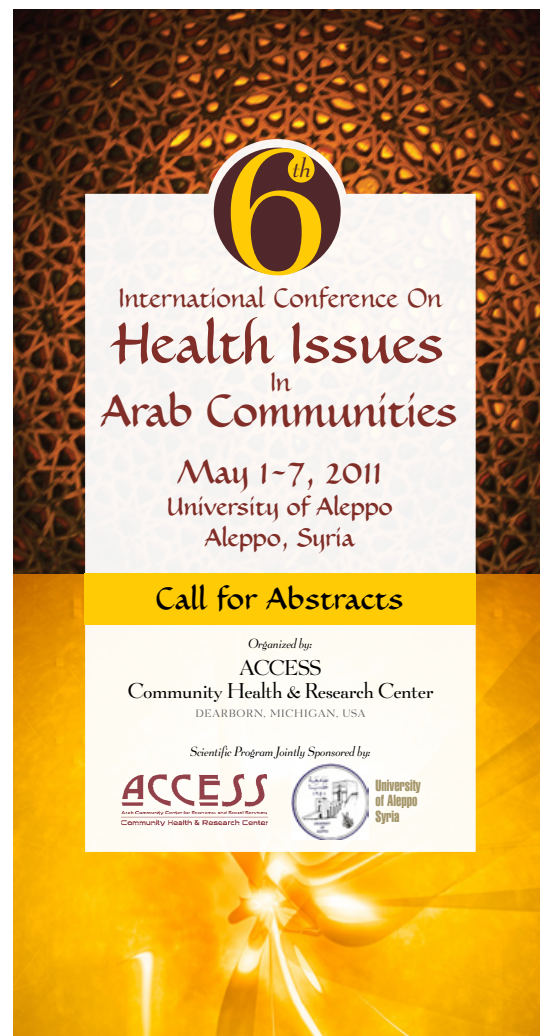
Since 1971, the Arab Community Center for Economic and Social Services (ACCESS) has served the community as one of the nation's premier Arab American organizations. Created to help the Arab immigrant population thrive in America, ACCESS' positive contributions now extend far beyond southeast Michigan.

One of our missions is to promote health through education and shared information. To reach that goal, we are proud to introduce ACCESS Health, a new online health journal. Several times each year, the Community Health & Research Center at ACCESS organizes conferences, seminars and forums that address important health and mental health issues.

The information from these events, as well as other educational material, will serve as a reference to anyone who is interested Arab American health.

This electronic publication will play a pivotal role in instantly providing important health information to people around the world.

Basim Dubaybo, MD  
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# Argileh Use among College Students

*Dinah Ayna*

## **Key Words:**

argileh, hookah pipe, water pipe, college students

## **Objective**

This study examined the prevalence and predictors of water pipe smoking (argileh, hookah pipe) use in a convenience sample of 602 college students. Twenty-four percent of the sample participants were male and 43% were Caucasian. The mean age was 22.06 years. They were attending a large, ethnically and culturally diverse urban university.

## **Method**

All participants volunteered to complete an online survey designed to assess the quantity and frequency of substance use (including tobacco), and risk-taking behavior. In addition, items from the Impulsive Sensation Seeking Scale (Zuckerman et al, 1993) were embedded in the survey.

## **Results**

More than 15% of the sample reported having used a water pipe at least once in their lifetime, exceeding the percentage of students who had tried stimulants, barbiturates, cocaine, ecstasy, heroin or psychedelics. Arab American ethnicity and cigarette smoking were the strongest predictors of argileh use. However, a substantial percentage of non-Arabs and non-smokers had also tried the water pipe. The results revealed a 3-way interaction between impulsivity, cigarette smoking, and ethnicity in predicting argileh use.

## **Conclusions**

Findings suggest that, in comparison to other substances, the prevalence of argileh use is high among college students in the urban Midwest. Physical health implications of these findings are discussed.



# Measuring Medical Mistrust: Possible Implications for Breast Cancer Screening

**Karen Patricia Williams<sup>1</sup>, Ph.D., Adnan Hammad<sup>2</sup>, Ph.D.,  
Thomas A. LaVeist<sup>1</sup>, Ph.D., Athur Mabiso<sup>3</sup>, M.S.**

## **Key words:**

Arab American Women, Medical Mistrust, Breast Cancer, Screening, Quality

## **Abstract**

**Objective:** This study assesses Arab American women's level of mistrust toward the healthcare system in the context of a breast cancer program. We hypothesize that Arab American women's perceptions about the medical system are overall negative, consequently lowering their access to cancer screening. **Methods:** Seven Arab American female community health workers (CHWs) each recruited 1-6 Arab American women from their public health program caseloads to become "kin keepers". Each kin keeper in turn recruited 2-4 of her female family members (mother, daughter(s), sister(s), grandmother(s) or aunt(s)) to assemble at her home and respond to a 7-item Medical Mistrust instrument measured on a 4-point rating scale. The previously validated instrument with reliability of 0.70-0.93 was orally administered by the CHWs and independently self-completed by each participant. Women also completed a socio-demographic questionnaire and each

participant had a choice of responding in English or Arabic. Bivariate correlations for medical mistrust, screening behaviors and demographic characteristics were assessed using cross-tabulations and Fisher exact tests. **Results:** Participants had high levels of medical mistrust; 47% of women agreed with the statement, "Patients have sometimes been deceived or misled by healthcare organizations" and 11% strongly agreed. Regarding the statement, "Health care organizations don't always keep your information totally private" 38% agreed and 9% strongly agreed. **Conclusion:** This study reveals another important barrier associated with early breast cancer screening practices among Arab American women—medical mistrust. Understanding medical mistrust is important for better design of tailored breast cancer screening educational programs targeting Arab American women.

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## Introduction

Medical mistrust has been cited as a major barrier to healthcare access among medically underserved populations, often resulting in poor health outcomes and continued health disparities. While previous scientific tragedies, such as the Tuskegee syphilis experiment, have contributed to medically underserved populations having higher levels of medical mistrust and ultimately less access to specific medical screening services than their white counterparts, there is growing evidence that a person's past experiences and interaction with the healthcare system have greatly influenced the level of mistrust in the healthcare system among medically underserved populations. In the case of Arab American women who often face language and cultural barriers to accessing health services, it is conceivable that the post-September 11 stigma surrounding Arabs and terrorism may have unfortunately contributed to an increase in medical mistrust. Other factors, such as profiling on the basis of ethnicity, culture and religion within the health institutional system and the interaction of these factors with unobserved perceptions of healthcare professionals, are also likely to have exacerbated the effects on health outcomes.


While it is clear that these are pertinent issues that need to be researched and uncovered in order to understand medical mistrust among Arab Americans so as to better serve them medically, little or no research has been conducted in this area. To the authors' knowledge, this study is the first to examine medical mistrust among Arab American women, in particular. We examine Arab American women's level of mistrust toward the healthcare system in the context of a federally funded breast cancer screening program and hypothesize that Arab American women's perceptions about the medical system are overall negative, consequently lowering their compliance to regular cancer screening.

## Methods

### Recruitment

Seven Arab American women employed as community health workers (CHWs) at our partner organization, Arab Community Center for Economic and Social Services (ACCESS), in Dearborn, MI were selected by their supervisors to assist us in recruiting participants for this study. Selection of CHWs was done on the basis of their experience and previous effectiveness in recruiting participants for various research and outreach programs. Each community health worker (CHW) recruited 1-6 Arab American women from her public health program caseload. Once the women were recruited and had signed research informed consent forms, they were called "kin keepers" because they took up the role of recruiting 2-4 of their female family members [i.e., mother, daughter(s), sister(s), aunt(s), grandmother(s)] to join them in the study and receive education with them on breast cancer screening, prevention and control. They also received other material and information on resources available to them for breast cancer screening. Each kin keeper and her 2-4 female family members assembled at the kin keeper's home for a home visit by the CHW. The CHW orally administered a 7-item Medical Mistrust instrument measured on a 4-point rating scale, which the women independently self-completed. The women also completed a socio-demographic questionnaire that included information about their past breast cancer screening practices and each participant had a choice of responding in English or Arabic. A total of 112 women (kin keepers and female family members) were recruited.

While this recruitment was done for a broader study that included delivery of a breast cancer prevention intervention, our report in this paper focuses on a specific choice of responding in English or Arabic. A total of 112 women (kin keepers and female family members) were recruited.



While this recruitment was done for a broader study that included delivery of a breast cancer prevention intervention, our report in this paper focuses on a specific component of the study dealing with the women's level of medical mistrust. The women were asked to complete a Medical Mistrust Index (MMI), an instrument previously developed and validated to measure mistrust in the healthcare system (LaVeist, et al. 2001).

### **Statistical Analysis**

We performed descriptive statistical analyses of the data collected, first by analyzing the frequency distributions for the socio-demographic variables and each item in the Medical Mistrust scale. Bivariate correlations between medical mistrust, screening behaviors and demographic characteristics were assessed using cross-tabulations and Fisher's exact tests, given that some category cells had observations fewer than 5.

### **Results**

Of the 112 Arab American women in the study, 30% were age 18-39 years, 34% age 40-49 years, 30% age 50-64 years and 6% were 65 years or older. Most women had less than a high school education (53%) and had low levels of income (43% earned less than \$20,000 a year). The majority were married women (67%) and 43% had no health insurance coverage.

With respect to medical mistrust, generally the women had high levels of medical mistrust; 47% agreed with the statement, "Patients have sometimes been deceived or misled by healthcare organizations" and 11% strongly agreed. Regarding the statement, "Health care organizations don't always keep your information totally private," 38% agreed and 9% strongly agreed.

Bivariate analyses showed few categorical differences on the basis of socio-demographics. There was a statistically significant association between medical mistrust and age of the women at the 5% alpha level. Approximately 44% of women aged 19-39 years agreed with the statement "You'd better be cautious when dealing with healthcare organizations" and 25% strongly agreed. In contrast, only 25% of women aged 40-49 years agreed with the same statement, and another 25% strongly agreed. This suggests that younger women have a higher level of mistrust. Similarly, statistically significant association by education level was found for the statement, "Patients have sometimes been deceived or misled by health care organizations. Fifty percent of women with some college education or more said they agreed with the statement, 52% of women with a high school diploma, whereas only 38% of women with less than a high school diploma agreed (p-value = 0.011). This implies that women with higher educational attainment tend not to trust the medical health system. Compared to those with lower education.

### **Conclusion**

This study reveals another important barrier associated with breast cancer screening practices among Arab American women—medical mistrust. Arab American women appear to have high levels of medical mistrust. Small differences in the levels of mistrust may exist on the basis of age and educational attainment. This is a cause for concern, as any existing mistrust will greatly hamper efforts to better serve Arab American women. Further investigation and understanding of medical mistrust issues is important for the design of tailored medical interventions targeting Arab American women for improved health behaviors and health outcomes.

# Cancer Control Priorities in the Arab American Community

**Elmer Huerta, M.D., M.P.H., President American Cancer Society**

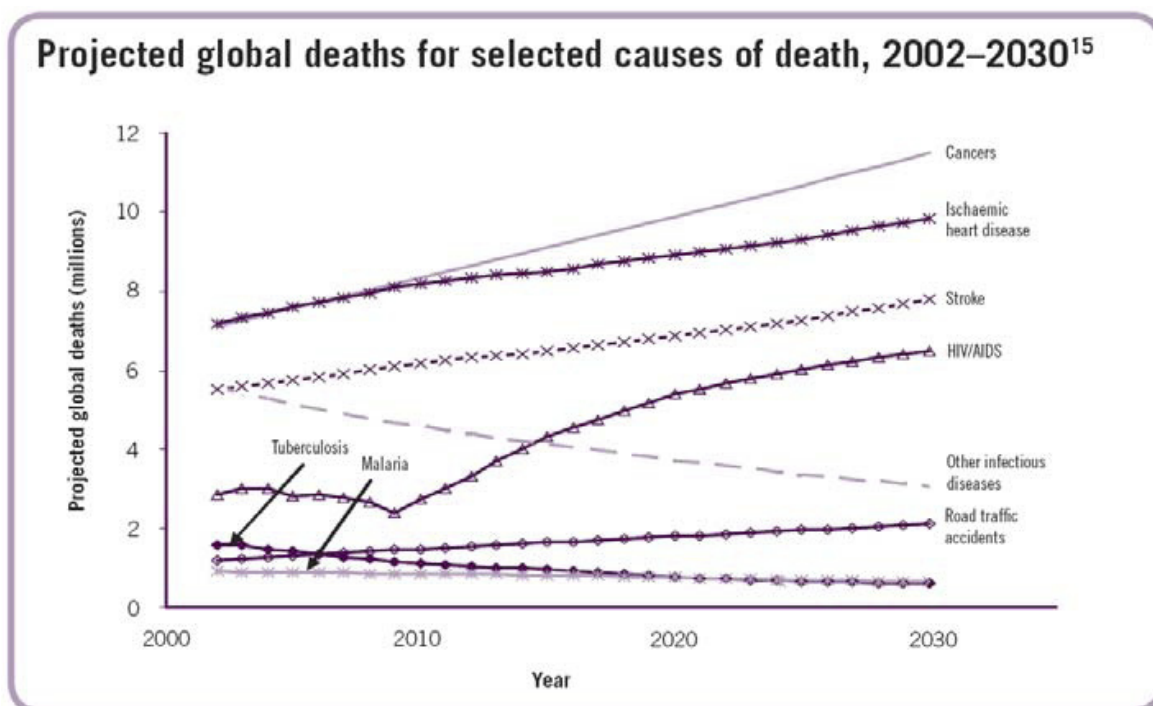
Around the globe, more than 12 million new cases of cancer and nearly 8 million deaths occur annually. Responsible for more than 12% of all deaths, cancer will become the single leading cause of death in the world after 2010. About two-thirds of cancer deaths occur in low- and middle-resource countries and this disparity can be expected to increase in coming decades.

The health and economic infrastructures of low- and middle-resource countries are facing double burdens of disease due to the emerging severity of chronic disease epidemics alongside the continuing problems posed by some infectious diseases. Many countries struggle to

address their most basic cancer control needs because health sector resources are already scarce. Major modifiable risk factors for cancer include tobacco consumption, obesity, specific infections, and sun exposure. Ethnicity, age, heredity, and gender, though not modifiable, may be important factors in determining risks for some cancers.

## **Cancer in the Arab World**

In the 21 Arab League countries for which data are available from WHO IARC (Globocan 2002; data are unavailable for Palestine), there were more than 200,000 cases and 150,000 deaths due to cancer in the Arab world.



Arab League-Both Sexes	Cases	Deaths
All sites but skin.....	206,355	151,888
Breast .....	27,411	16,698
Bladder .....	18,392	15,128
Lung .....	13,759	13,120
Cervix .....	11,270	8,644
Colorectal.....	11,096	8,849
NHL .....	10,564	7,784
Leukemia .....	9,771	8,308
Stomach.....	7,391	6,718
Liver.....	7,050	6,855
Brain .....	5,730	4,624
Prostate .....	5,409	4,122
Thyroid.....	5,290	2,387
Larynx.....	4,873	3,475
Oral cavity .....	4,857	2,804
Hodgkin lymphoma .....	4,291	1,957
Esophagus .....	4,066	3,873
Nasopharynx.....	4,039	2,957
Kidney .....	3,722	2,514
Ovary.....	3,349	2,214
Pancreas .....	2,736	2,583
Uterus.....	2,715	1,113
Multiple myeloma .....	1,706	1,402
Melanoma of skin.....	1,373	831
Other pharynx .....	1,130	867
Testis .....	950	399

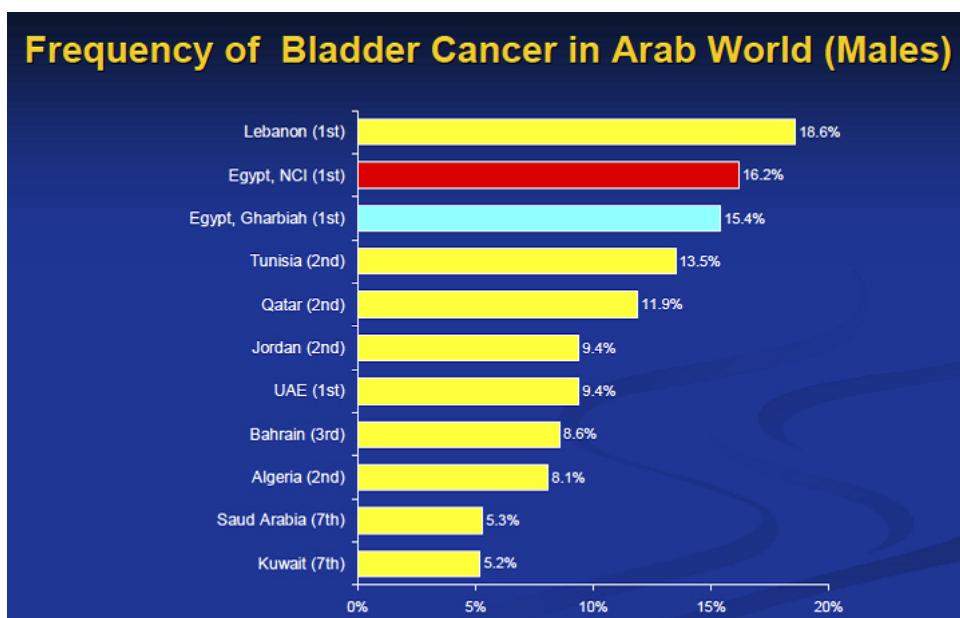
Both the number of cancer cases and the number of deaths due to cancer in the Arab world can be expected to increase due to the aging and growing populations and due to the relative reduction in deaths due to other causes, especially infectious diseases.

Age-adjusted cancer rates also are increasing in the Arab world. The major factors responsible for increases in cancer incidence and mortality include:

- Increased prevalence of smoking
- Increasingly “Westernized” social and dietary habits, leading to greater obesity
- Increased incidence of hepatitis B and C

Some unusual features of cancer in the Arab world are the high incidence and mortality due to bladder cancer; the relatively low incidence but high mortality due to cervical cancer; and the relatively low incidence of malignant melanoma of the skin.

Bladder cancer rates are unusually high in Egypt, the largest Arab country by population. Squamous cell carcinoma of the bladder is associated with schistosomiasis (bilharzia), infection by *Schistosoma mansoni* or *haematobium* parasite. Transitional cell carcinoma of the bladder is associated with tobacco consumption.





In several Arab countries, lung cancer is the most common cancer among men, reflecting the impact of the tobacco smoking epidemic. Prostate, colorectal,

lymphoma, liver, and stomach cancers rank as the next most common cancer sites among men in the Arab world.

Arab League-Female	Incidence rate	Cases	Mortality rate	Deaths
All sites but skin	99.3	102,859	70.8	71,525
Breast	26.1	27,411	16.1	16,698
Cervix	11.2	11,270	8.7	8,644
Colorectal	5.2	5,084	4.1	4,059
Leukemia	3.3	4,019	2.9	3,420
Bladder	3.5	3,299	2.8	2,661
Stomach	3.1	2,911	2.8	2,647
Non-Hodgkins lymphoma	3.7	4,146	2.7	3,034
Lung	2.8	2,540	2.6	2,415
Liver	2.4	2,295	2.4	2,237

Arab League-Male	Incidence rate	Cases	Mortality rate	Deaths
All sites but skin	110.6	103,496	88.6	80,363
Bladder	17.1	15,093	14.3	12,467
Lung	13.5	11,219	12.9	10,705
Prostate	7.1	5,409	5.5	4,122
Colorectal	6.5	6,012	5.1	4,790
Non-Hodgkins lymphoma	5.9	6,418	4.4	4,750
Liver	5.5	4,755	5.4	4,618
Stomach	5.1	4,480	4.6	4,071

## Cancer in the Arab American Community

Cancer is a major cause of illness and death among Arab Americans, just as it is in the general population (Darwish-Yassine, et al). The population of Middle East immigrants and people with descent from the Middle East now living in California have significantly higher incidence rates of stomach, liver, thyroid, and male breast cancers, and significantly lower rates of colon, lung, skin melanoma, brain, female breast, and prostate cancers (Nasseri, et al).

The overall cancer incidence rate among the Middle Eastern population living in California was lower than that of the non-Hispanic white population but the overall cancer incidence rate was higher than those of

other immigrant groups such as Hispanic and Asian populations (Nasseri, et al., 2007).

Among Arab American men living in Detroit, men have higher proportional incidence ratios of leukemia, multiple myeloma, liver, kidney, and urinary bladder cancer compared to non-Hispanic white men. Arab American women exhibit a higher incidence ratio of leukemia, thyroid, and brain cancer (Swartz, et al).

Lung cancer is the leading cause of cancer death among Arab American men in Michigan. Breast cancer is the leading cause of death among Arab American women, just as it is among women in the Arab world (Darwish-Yassine, et al).

## Ten leading causes of cancer death among men and women of Arab ancestry; MI 1985-2001

Cancer Site	Observed Mortalities
Lung and bronchus.....	386
Colorectal .....	161
Breast .....	158
All other .....	125
Pancreas .....	85
Other-gastrointestinal .....	83
Non-Hodgkin's lymphomas .....	82
Leukemia.....	82
Prostate gland.....	74
Brain and other CNS.....	56

Source: Darwish-Yassine, et al.

Compared to the general U.S. population, cancer rates among Arab Americans reflect lower rates of tobacco-related cancers, despite generally higher tobacco use but probably due to relatively low smoking rates among women; higher incidence of cancers of the stomach and liver associated with chronic bacterial and viral infections more prevalent in the Middle East; lower incidence of female breast cancer, probably due to persisting cultural preferences for earlier age at first pregnancy and higher parity; and lower rates of melanoma of the skin, probably due to higher prevalence of melanin skin pigmentation among Arabs and Arab Americans which offers some protection against the sun's ultraviolet rays (Nassari, et al).


Compared to men in the general U.S. population, Arab American men have significantly higher incidence of breast cancer. Arab American women have significantly higher incidence of Kaposi's sarcoma, and both men and women have higher rates of thyroid cancer. Some hypotheses attribute these disparities to genetic predisposition for male breast cancer,

higher incidence of classic Kaposi in the Middle East (Iscoovich, et al., 1998), and widespread use of radiation therapy for fungal diseases of the scalp early in the last century in the Middle East (associated with thyroid cancer in later life) (Schafer, et al., 2001; Schneider and Sarne, 2005) (Nassari, et al).

## Cancer Control within the Arab American Community

Cancer control priorities in the Arab American community parallel the basic principles of cancer control in the general U.S. and world population. The most critical cause of preventable death and risk of cancer in the world is tobacco consumption. Obesity is the second most important preventable risk factor for cancer and early death. Therefore, cancer prevention programs designed for Arab Americans must promote healthy diets and tobacco-free, physically active lifestyle choices.

Some genetic, behavioral, and environmental factors may affect cancer risk among Arabs and Arab Americans. Arab Americans may have lower risk of melanoma skin cancer due to genetics of skin pigmentation and cultural preference, especially for women, to cover the skin and avoid prolonged sun exposure. Sexual mores against female promiscuity may afford some protection against infection with human papilloma virus (HPV), the virus that causes cervical cancer. Unfortunately, lack of access to breast and cervical cancer screening services leads to high mortality rates for these cancers that could otherwise be prevented or detected early. Tobacco use prevention is the primary control measure to prevent lung cancer, the leading cancer risk for Arab American men. Early detection of breast, cervical and colorectal cancers can reduce mortality due to those cancer types. Mass screening programs are essential to community health. The Arab American Community Center for Economic and Social Services (ACCESS) and the American Cancer Society have collaborated on the



development of culturally relevant and appropriate tobacco prevention and cancer screening programs for the Arab American community. ACCESS tobacco control programs prevent youth initiation and assist with adult smoking cessation. By teaching youth about the hazards of tobacco, including hookahs, ACCESS helps to reduce smoking initiation by Arab American youth. ACCESS health programs offer counseling and other support to smokers trying to quit. ACCESS breast and cervical cancer screening programs extend home visits to thousands of under-served and immigrant households. ACCESS also extends cultural competence training to major healthcare institutions in Michigan, enabling them to deliver cancer screening and other medical services in a culturally acceptable manner (Fintor). The American Cancer Society's partnership with ACCESS exemplifies successful cooperation between non-governmental organizations with parallel public health goals. The American Cancer Society strives to eliminate cancer and reduce suffering due to cancer through research, education, advocacy, and service. ACCESS excels at creating culturally sensitive community health programs and sharing these practices with others. Together, the American Cancer Society and ACCESS are achieving their goals by reducing disparities in access to health care and delivering cancer control resources and services to the Arab American community.

## Acknowledgements

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# Development of a Domestic Violence Risk Assessment Tool for Arab American Clients

**Anahid Kulwicki<sup>1</sup>, Robert Hymes<sup>2</sup>, Adnan Hammad<sup>3</sup>, Amal Killawi<sup>3</sup>, Muhammad Farrag<sup>4</sup>**

## **Abstract**

**Background:** Among women of Arab descent, in the United States, domestic violence is a problem that remains virtually unnoticed. Despite having their own culture, norms, and values, that place this population at risk, there is a paucity of literature on domestic violence among Arab immigrant. As a result, the need for culturally specific measure of domestic violence risk for Arab American women is urgently needed.

**Aims:** The purpose of this research was to develop and standardize an evidence-based, culturally-sensitive bi-lingual (Arabic/English) measure of risk assessment for domestic violence for use in health, mental health and social service settings for Arab American clients.

**Methods:** Five focus groups discussions were conducted with Arab American community leaders, who had experience with victims of violence in the Arab American population

and issues related to domestic violence, to determine culturally specific domestic violence risk factors among Arab women. Focus group discussions explored the role of personal resources, family, religion, culture and social support system in the utilization of domestic violence services by Arab immigrants experiencing domestic violence. In addition, issues related to personal, socio-cultural and institutional barriers in domestic violence service utilization were addressed along with identifying culturally competent policy strategies in reducing barriers for service utilization by Arab immigrants experiencing domestic violence.

**Findings:** Major variables considered to be critical in the assessment of risk factors by the focus group participants were: religious beliefs, family support, economic, social, immigration status, legal rights and English language skills.

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Domestic violence is a worldwide problem, with no racial, ethnic, or class boundaries (Bachman, 2000; Robinson, 2003). In a review of the incidence of domestic violence, the National Institute of Justice and Centers Disease Control and Prevention (2000) reports that each year, more than one million women suffer nonfatal violence and four million women experience serious assault by an intimate partner. The most common cause of injury to women ages 15 to 44, more than 80% of domestic violence victims are female (Catalano, 2004). More devastating, the abuser is a member of her own family (Banks, 2007; Bureau of Justice Statistics, 2005).

The impact domestic violence has upon the victim comes with consequences. It is a major social, mental and public health problem that crosses ethnic, racial, cultural, age, religious, national origin, sexual orientation, and socioeconomic lines. Victims of domestic violence suffer not only serious physical injuries but also emotional scars that precipitate in lowered self-esteem, severe fears, isolation from society, depression, suicide ideation, increased alcohol and drug use and death (Russell, 2002; Wright, 2005). Moreover, domestic violence greatly impacts the health care system. Lost productivity and work days create a serious economic burden to the U.S. health system, costing society some \$5.8 billion each year, and \$4.1 billion in direct health care and medical costs (Center for Disease Control and Prevention National Center for Injury Prevention and Control, [CDC], 2003).

The new face of domestic violence is steadily increasing among immigrant women. However, the lack of empirical research and its consequences of domestic violence among immigrant populations in the U.S. are not very well-known. This is especially true for Arab American populations. Some studies (Abraham, 2000; Coley & Beckett, 1988; Knudsen & Miller, 1991) attribute this difference to social

service agencies' inability to respond in culturally appropriate ways to immigrants' unique stressful life experiences related to political, economical and cultural conditions. According to the New York City Department of Health and Mental Hygiene (2004), (51%) of foreign-born women living in New York were victims of intimate partner homicide, while 45 percent were born in the United States.

As such, the issue of domestic violence among Arab Americans is becoming an important concern in the United States. In one of the studies conducted by Kulwicki (1996), who surveyed a convenience sample of ( $n = 277$ ) low income Arab Americans from community center clients, findings revealed 25% of the women were beaten by their spouses, 18.4% were kicked by them, 7% of their husbands used a gun or knife on them, and approximately 20% were sexually abused. More disturbing, cultural predispositions place this population at high risk, as abusers of immigrant women use cultural values and norms as powerful weapons in controlling their victims' behavior.

In order to study the problem of domestic violence in the Arab American community, a culturally sensitive instrument is required. The purpose of this research was to develop and standardize an evidence-based, culturally-sensitive bi-lingual (Arabic/English) measure of risk for domestic violence for use in health, mental health and social service settings for Arab American clients. The aim of this study is to (1) prevent the problem before it occurs; (2) assess the risk of re-occurrence of spousal abuse in the judicial and protective service systems; (3) make sound predictions of the degree of risk of violence recidivism and; (4) make sound decisions of placement, supervision, or other measures.



## **Background**


The earliest immigration of Arab Americans to the United States can be traced back to 1885. Diversity of the Arab World spans from the economy, having the wealthiest to the poorest populations in the world, to diverse religion, including Muslims, Christians and Jews, to a variety of lifestyles, consisting of Bedouins, farmers and urban professionals. A wide ethnic background including diverse customs, appearances, beliefs, and politics exists. Arabs live in all 50 states, with more than two-thirds of Arab Americans residing in ten of the states; with one-third living in Michigan, California and New York, and 94% in urban areas. Since 1991, 25,000 Iraqi refugees were documented in Southeast Michigan as economic, political, and professional immigrants. Of this number, 66% of adults are in the labor force, 77% of which were in the private sector, 12.4% were government employees, and 5.9% are unemployed; the median age for this group is 27 years (U.S. Bureau of the Census).

Primarily, Arabs are those who speak Arabic as their native tongue and who identify themselves as Arabs. More than 250 million people live in 22 independent countries that make up the Arab world. The Arab world does not correspond to the Muslim world; there are a significant number of non-Muslim Arabs. Most Muslims (1.2 billion) are from large non-Arab countries, including Turkey, Pakistan, Indonesia, and sub-Saharan Africa, which consist of approximately 12% of all Muslims. There are also large Arab and non-Arab Muslim communities in North America. More importantly, western civilization is based on the Judeo-Christian tradition and the Orient are thus distinguished. Westerners, including Americans, often assume there is a deep division between Arabic/Islamic culture and European and Christian culture; however, Arab societies have much more in common with Europe and the West than is often assumed. Further, Islam recognizes the Judaic and Christian traditions and Arab Christians and Jews have always been integral members of the Arab world.

## **Barriers in domestic abuse**

Women who try to escape domestic violence are confronted with many obstacles and only some draw from cultural norms. Domestic violence has become a universal problem, crossing ethnic, racial, cultural, age, religious, national origin, sexual orientation, and socioeconomic lines and, as such, domestic violence among immigrants remains a health care issue worldwide. The World Health Organization (WHO, 2002) report on Domestic Violence indicated grave lifetime incidence in some countries: Ethiopia (45%), Kenya (42%), Mexico (27%), USA (22%), India (40%), and Managua, Nicaragua (69%). Similarly, one woman in every three in the United States is abused, beaten, coerced into sex, or otherwise abused in her lifetime (Heise, Ellsberg, Gottemoeller, 1999). Consequences of domestic violence include physical injuries, brain injuries, murder, abortion, posttraumatic stress disorder, depression, and psychosomatic problems (Russell, 2002; Wright, 2005).

Screening for domestic violence in primary care and emergency settings has become a major barrier in the service-delivery system. The most common barriers related to the service-delivery system include the failure of emergency services to identify domestic violence cases; and the failure of specialized services, such as shelters, to respond in a culturally appropriate way to diverse, immigrant populations. Of greatest concern are the language barriers that limit non-English speakers to reach legal and social services. This can be especially problematic in cases of police assistance and interventions, where the inability of the police officer involved in communicating may result in inappropriate arrest of the victim or release of the perpetrator. Racism also plays an inhibiting factor for victims to seek domestic violence services. Attitudes and stereotypes toward immigrant men as being violent and immigrant women as being submissive may cause hesitation in ethnic minorities to utilize services for fear of racial and anti-immigrant



discrimination. Inefficiencies in the support system that mostly affect Arab American women are the lack of culturally appropriate shelters and the lack of transportation in accessing the existing local shelters.


Barriers related to personal resources mostly include lack of financial and legal resources. Financial dependency constitutes the most serious obstacle that prevents battered women from leaving their abusers. Immigration status also enhances these problems. Immigrant women cannot achieve financial independence because often their husbands are their legal sponsors. If they are undocumented or illegal immigrants, they lack the eligibility to utilize services and are controlled by their husbands with the fear of deportation if they report domestic violence. Individuals particularly at risk are whose immigration status is derived from their spouse and or are undocumented. Risk factors are things that increase the likelihood of a person becoming a victim or a perpetrator of violence, such as the abuser using status to threaten, terminate victim's status, and/or withhold papers (visas, passports, etc.), whereas protective factors are anything that decreases the likelihood of a person becoming a victim or a perpetrator of violence (CDC, 2004). Results from studies reveal that migration status is an important determinant factor for women remaining in abusive situations (Abraham 2000; Ho, 1990). In addition to ethnicity, this factor has also been associated with higher rates of spousal violence (Chow, 1993; Orloff, & Dave 1997; Sorenson & Telles, 1991).

Many Arab American women who have recently migrated in the U.S. are extremely dependent on their husbands who may have been in the U.S. for years. Their limited knowledge of English and education affects their ability to provide independent income and puts them on a great disadvantage towards their partners who are already familiar with the system. Interestingly, males born abroad married to American-

born Arab women also complain about their wives holding knowledge and language over them and "bossing" them. This leads them to prefer women from the Middle East.

English proficiency is one of the most difficult barriers Dearborn-area immigrants have to face. About 66% of them speak very limited English, 30% speak no English, 20% have limited knowledge of reading Arabic, and many are illiterate (Abraham, Abraham, & Aswad, 1983). Abu-Ras (2000) and Kulwicki (1996a, b) found that language barriers and lack of knowledge and awareness about existing services were the most important factors hindering these immigrants from accessing services. As is the case with all batterers, abusers of immigrant women use cultural values and norms as powerful weapons in controlling their victims' behavior. Parental kidnapping of children constitutes a real threat, especially in patrilineal families where children are considered to belong to the husband's line of the family (Aswad, 1997).

Religious beliefs that predicate family unity and impose strict sanctions against divorce also pose a difficult barrier. Cultural barriers are among the most difficult barriers for Arab American women to overcome. Immigrants from Arab countries, regardless of their national, religious and ethnic background share the same language, cultural beliefs and attitudes, among which is the reluctance to access social and health services. Abuse problems are considered a private matter not to be disclosed to the outside world and a tremendous stigma is attached to divorce. Therefore, women experience tremendous pressure to remain in abusive relationships. Intervention by formal authorities, such as police and social welfare departments, is often considered inappropriate and relatives and religious leaders are the first to be consulted. A study conducted by Abu-Ras (2000) among 67 Arab immigrant battered women in Dearborn revealed that 70.1% reported lack



of encouragement by their social networks to seek outside help, while 74.6% reported barriers related to stigma in terms of having a sense of shame of what relative and friends might think of them.

Based on Kulwicki's 1996 survey in Dearborn, Michigan, several programs were initiated to address the unique needs of Arab American victims utilizing domestic violence services. The Domestic Violence Prevention Project, the Arab Domestic Violence Coalition and the Muslim Women's Empowerment Program address the needs of the Arab American community in preventing and intervening in cases of domestic violence. These programs employ members of Arab American Christian and Muslim leadership, police departments, community leadership, local schools and universities, as well as health and human services including shelter. The local police department has responded by employing several Arab American police officers who are trained in the issues of domestic violence in the Arab community to attend to Arab domestic violence calls.

In addition, local shelters have developed strong working relationships with community organizations to assist Arab American victims. More recently the Arab Batterers Intervention Program was developed by The Arab Community Center for Economic and Social Services (ACCESS) and is currently serving Arab American batterers who are referred to the program by the local court system. ACCESS is a health and human service organization that provides services to immigrant Arab population.

Abu-Ras (2000) studied the barriers to and utilization of services among battered immigrant women. The primary focus of the present study was on factors associated with barriers to the use of services among Arab immigrant battered women in the Dearborn area in Michigan.

## **Method**

### ***Design***

The design included focus group methodology to address the major questions of the study. This method was selected because it was the best method that addressed the areas of inquiry from the participants' point of view. Morgan and Kreuger's (1988) steps for data collection and analysis were followed rigorously to insure the accuracy and the credibility of the study findings. An inquiry guide was developed by the principal investigator and was critiqued by a consultant with expertise in the field. A select group of professionals and community leaders with expertise in domestic violence were identified and recruited for this study.


### ***Participants***

The study took place in a community setting and spanned over a period of six months. Participants were selected based on their expertise and willingness to participate in the study. Each focus group consisted of 5 to 10 participants and was organized based on the expertise of individuals for which most information was needed. The selected participants were: religious leaders, service providers (2 groups), health professionals, and law enforcement or legal services providers.

### ***Procedure***

Five focus group meetings were conducted. The length of each focus group meeting was one to one and half hour in duration. A facilitator guide was developed by the principle investigator and a consultant and was used to direct discussion topics with the ten focus groups. Each potential participant was contacted by phone to confirm expertise in the areas of inquiry and willingness to participate in the study. A letter of invitation was sent to all willing participants that explained the purpose of the study, their voluntary participation in the study, permission to audio-taping of the focus group discussions and a consent





form for their review and signature. The principle investigator conducted all focus group interviews at a site convenient to the participants. Lunch or dinner was provided prior to each meeting. The focus groups discussions were audio-taped and transcribed verbatim, and then reviewed by a second research member to improve accuracy. Participants agreed to participate through verbal and written consent. Permission for the study was obtained through a local university Institutional Review Board. The project collected data on the risk factors for domestic violence and other variables in order to develop the risk assessment scale.

### **Data Analysis**

Full text transcripts were analyzed using Kreuger's (1998) focus group analysis. Each focus group was audio-taped and transcribed. Both manual and computer data analysis was conducted by the principal investigator and reviewed by the study consultant. In addition, five focus group participants were asked to comment on the findings of the research study. Kreuger's Focus Group Criteria (1998) were used to assure accuracy, reliability and validity of results.

### **Results**

Most focus groups offered common themes with regard to the barriers critical in the assessment of risk factors. Common themes emerged as risk factors associated with domestic violence. These factors included: (1) barriers to service; (2) difficulty accessing the system by women; (3) lack of availability of access to appropriate community services; (4) limitation of resources; and (5) lack of awareness about the laws, especially for women who are unfamiliar with the legal system. Religious beliefs, family support, economic, social, immigration status, legal rights and English language skills were all cited as factors in increasing the risk for domestic violence for Arab American clients.

### **Theme 1: Barriers to Service**

Participants acknowledged the lack of culturally and linguistically sensitive shelters available for battered women. *Similarly, the participants found it difficult in proving quantifying emotional abuse and lack of trust in the legal system.* When discussing service-delivery related barriers, participants agreed that the quality of services was less than suitable for the target population. Social workers were primarily concerned with the inability of emergency room settings to identify and treat domestic violence cases.

According to them, part of the problem is based on the physician not being adequately trained to assess physical abuse in Arab women and hence discharge responsibility through referrals. An excerpt from the data reveals how "The research shows that even when people come with obvious signs of domestic violence, the doctors 'don't ask.'" Moreover, physicians and nurses believe that continuity of care was compromised not by the lack of expertise, but by the absence of a hospital-based system in which to rely on when caring for abuse victims. Therefore, they strongly argued for implementation of entities that allowed greater coordination of services.

Participants argued that providers take a passive approach towards the cultural gap that separates them from their clients. Participants admitted that given the cultural restrictions of Arab American women, especially, when asking about interpersonal relationships with their spouses, they were reluctant to ask questions about abuse for fear of cultural impositions. They argued that the hospital environment was not a safe place in which to ask women these difficult questions. The inability to provide services in the Arabic language to those who cannot speak English increases this gap.



## **Theme 2: Language Barriers**

Language barriers were a view held by the participants regarding the link to domestic violence. The participants noted that their inability to not speak English made it difficult to communicate with the police. More disturbingly, the victim's language barrier made it more likely that the perpetrator translated wrong information. According to the participants, illiteracy or under-education of females results in dependency of the victim on the perpetrator.

## **Theme 3: Transportation**

An important concern was raised regarding the lack of public transportation. Participants were concerned that some women do not have a car or driver's license, which hinders battered women from seeking help outside the home.

## **Theme 4: Immigration Status and Economic Factors**

When discussing immigration status, the participants agreed that if a husband does not file immigration papers as required, the immigration status is held over the wife's head.

No documentation of status meant that the women were threatened to be sent back to their home countries. When discussing barriers related to personal resources, participants declared that victims' economic level could adversely affect the quality of services received. It was observed that the lack of free or low-cost services impacted especially the quality of help that poor victims received, "There are competent lawyers, but the major thing which comes between the lawyer and client or the victim is the economic reason. Most of the clients...cannot afford the fees for that lawyer and for this reason they don't go..." Also, a victim's economic level could confine her into the abusive relationship by denying her access to transportation and ability to pay for


childcare. Participants stated that, "The first question they will ask: Is this service for free? [.....] the problem is economic; if they got the money they will go." Immigration laws also worked against male and female victims who did not report abusive behavior for fear of loss of immigration status. Participants discussed how "Perhaps their partner is controlling on the money, so they don't have any resources to.... I hear cases where the husband has the green card and passport and tells her he got total control over it."

## **Theme 5: Isolation and Stigma**

Participants emphasized that isolation and stigma were forms of domestic violence risk. Discussions revealed that husbands isolate wives from support and from all things empowering. Additionally, the participants voiced concern that stigma was attached to seeking help in the Arab community, and because of this, women who sought help were embarrassed about having domestic violence in the house. Stigma and shame, patriarchal attitudes, strong family unit, culture pressure on women to tolerate abuse for the sake of the family and children are linked to domestic violence in the Arab American community

## **Theme 6: Cost of Legal Services and Women's Fear of Losing Children**

When discussing legal services, the participants agreed that women in the Arab community feared losing custody of children and most of all, feared the cost of legal services and cost of divorce. Participants emphasized that cultural norms determined the major barriers in the help-seeking behavior of Arab American women. Discussions revealed the ambiguous role of the family in domestic violence situations. Despite the reality that Arab norms favor males over females, participants agreed that families constitute the only natural support network for women. This is especially evident in the case of women who immigrate in the U.S. alone in order to unite with their husbands. Deprived from family's support, especially



father and brother or mother, these women encounter more difficulties while coping with the abuse, as they find themselves isolated while navigating a system they do not understand. Lack of education and economic resources, and fear of loss of custody of children become insurmountable obstacles to their independence.

Participants generally believed that “when the victim is not educated, there will be more bias.....not to seek advice.” Some participants stated that sometimes families would involve themselves in stopping the abuse by confronting the abuser; supporting the victims’ decision to leave the family; and even possibly prosecuting her abuser. Other participants stated that families did nothing to support the victim, but encouraged her to return to an abusive situation, which sometimes would result in her death. “I know that the problems that we’ve had with the community is the culture, the situation back in Iraq such that if a woman was in a domestic violence situation, tried to go to her family, her family would say, you belong to your husband, you go back.”

The patriarchal and patrilineal upbringing fosters a mindset that keeps women in abusive relationships and creates one of the major barriers for Arab American women to overcome. The ideal of the protection of the patriline for a woman can be challenged, and a woman does not want to embarrass her patriline if they cannot or will not protect her. “You know, we have a problem; it is very shameful to come and speak about this kind of violence at home. It’s not easy at all for a woman to come and talk about it. Not only violence, we see it across the border for health issues, or any other issue, but mainly violence.” Because abuse is not considered as shameful as bringing public exposure on private problems, abusers are rarely blamed for familial breakdown. Instead, a woman is blamed for the family’s demise if she escapes an abusive relationship with her children

### ***Theme 7: Community Attitude and Religious Factors***

Participants expressed concern about the community and religious attitudes toward domestic violence. The community and religion have a great influence in the Arab community. However, the participants agreed that both community and religious leaders have a careless attitude toward domestic violence. Despite the reality of domestic violence, neighbors do not interfere in domestic conflict and there is very little support from religious leaders. This is especially true towards divorced or separated women. Participants also expressed concerns on the meager role exercised by religious leaders. Participants believed that “They need to be registered and certified so that they know how to work with people.”

These authorities have a great influence in the Arab community and with the right training and education they could offer meaningful support to victims and shift the perceptions on domestic violence. However, many times both Christian and Muslim leaders do not help but exacerbate a victim’s difficulties through ignorance and/or fear. Some religious leaders exercise a facilitating role in the divorce process by making divorce contracts applicable to both Muslim and state marriages. Those who refuse to provide this service deprive victims of financial support and properties they are entitled to, and ultimately jeopardize their ability to break free from the abuse.

### ***Theme 8: In-laws and Family Support***

Participants argued that in-laws and family provide interference. Of great concern was that the family “cover-up,” especially by the husband’s side, makes it difficult for the Arab immigrant woman to seek help. Moreover, absence of extended family for the abused woman pressures the woman to remain at her husband’s home.



## Discussion

This study was designed to closely examine the risk factors for domestic violence that service providers, community leaders, and health and legal professionals feel operate in the case of Arab immigrant women who are in partner abuse relationships. To better account for all the complex factors that lead to this decision, we assembled representatives from all the entities that are involved in the response towards domestic violence in the Arab American community, whether being formal or informal. Participants ranged from social workers, health and legal professionals to religious and community leaders. The information elicited from their discussions was analyzed through qualitative focus group methodology and, as a result, several important themes regarding cultural, personal and service-delivery variables that increased risk for domestic violence were constructed.


For the immigrant women, many critical risk factors exist that require healthcare workers to focus on culturally appropriate risk assessment tools that assess risk factors among the immigrant population. Some are related to service-delivery systems; others are related to personal resources and cultural norms. Risk factors for immigrant women include language and cultural factors, lack of knowledge, fears, lack of financial resources and lack of legal resources. Providing a valid and reliable tool for measuring the risk for domestic violence in Arab American clients will reduce these barriers and enable healthcare providers to intervene early in clients at risk. Basing domestic violence risk assessment on the evidence provided in this study will assist healthcare professionals in becoming more confident in recognizing the necessity for early interventions and decreased risk in Arab American clients. From this study, a culturally appropriate risk assessment tool was developed, based on the findings from this study and the inclusion of these factors were incorporated in the risk assessment tool which is currently being pilot-tested in the community.

From the results of this study, healthcare professionals will be able to evaluate Arab American clients at risk for domestic violence when using the risk assessment tool. Early assessment and recognition of domestic violence risk, initiation of appropriate prevention measures, as well as understanding the barriers to seeking help outside of the Arab community, can prevent domestic violence. Healthcare professionals' approach to violence prevention includes defining the problem; identifying risk and protective factors; developing prevention strategies; testing prevention strategies; and evaluating outcomes.

Several themes were identified in this study. Major variables considered to be critical in the assessment of risk factors by the focus group participants were: religious beliefs, family support, economic, social, immigration status, legal rights and English language skills. The themes identified suggest that the problem of domestic violence in the Arab American community should be addressed from many perspectives. Service outcomes will be maximized significantly if these problems are addressed in their cultural context and if they are formally included in the mainstream service-delivery system. Major findings clearly suggest that the factors associated with low utilization of services by abused Arab American immigrant women do not operate in isolation and only a committed multidisciplinary involvement can address them properly. Past literature (Abu-Ras, 2000; Kulwicki, 1996a) has already addressed the restrictive role that personal resources and cultural norms play on women's decision to endure spousal abuse in silence. However, personal and family related barriers tend to be nested within each other and are deeply connected to the social structural barriers.

A major theme of our study addressed the problems that stem from the structure of the formal services. Traditional facilities such as hospital settings, shelters and even police interventions fail to dictate change





in a victim's situation partly because they are not designed around the specific problem of domestic abuse and partly because they are not designed around their client's cultural perspective. The inadequacy to cope with domestic abuse is evident in the case of law enforcement institutions and especially hospital settings where brief contact is the norm. Participants declared that these institutions lack not only the infrastructure but also the expertise to identify and, more importantly, follow-up with domestic abuse cases. Their cultural incompetence is manifested in their indifference to provide language assistance and account for Arabic behavioral norms as well as in the bias that anti-Arab sentiments cause in diagnosis or treatment of Arab victims of domestic abuse. These inefficiencies reflect the fact that these traditional services are resistant to a collaborative approach towards domestic violence and are not synchronized with local community agencies.

Study findings also revealed disparagement towards community agencies because they do not adopt an aggressive treatment towards batterers and often neglect their commitment to confidentiality. At the personal level it was identified that Arab women are deprived of many personal resources, including language skills, awareness of existing services in the community and independent income. Immigration status often enhanced their dependence on their husbands and their ability to survive financially outside the marital relationship. Cultural norms also impose a strong bond between battered women and their abusers, which, if broken down, bring shame upon the family. The stigma of divorce along with culturally approved male dominance prevents victims from escaping this bond. The authoritative role of religious leaders creates another important inhibiting cultural barrier. Many religious leaders assume an empathetic rather than treatment approach toward the problem of domestic violence, considering it a phenomenon that should be tolerated rather than

eliminated. Most importantly, their position can affect women in very direct ways by denying the right to a Muslim divorce and, as a consequence, the right to valuable assets that can help with financial independence. From this study, a culturally appropriate risk assessment tool was developed based on the findings from this study, and the inclusion of these factors were incorporated in the risk assessment tool which is currently, being pilot-tested in the community.

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# Fasting the Month of Ramadan in Diabetic Patients in the Muslim Countries

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Recent epidemiological surveys indicate that amongst the estimated 1.5 billion Muslims around the world, the prevalence of Type 2 diabetes is quite high (10-20 %) and has been on the rise as a result of changing lifestyle due to urbanization and socioeconomic development. The health consequences and burden of this new epidemic will be reflected in a 2- to 4-fold increase in cardiovascular mortality, end stage renal disease, blindness and non-traumatic lower extremity amputations.

The objectives of this presentation are to summarize the findings of a recent survey conducted in 13 Muslim countries on the behavior of diabetic patients who observe fasting in the holy month of Ramadan and provide recommendation (1,2).

The religious and medical considerations clearly exempt the sick from observing fasting in Ramadan. However, despite these considerations, many diabetics insist on fasting ignoring medical advice. The potential health risks of fasting include increased risks of hypoglycemia, hyperglycemia, and diabetic ketoacidosis due to loss of glycemic control. Additional problems include electrolyte imbalance, dehydration, and vascular thrombosis resulting from increased blood viscosity due to dehydration and over-, under- or wrong nutrition.

A total of 12,914 diabetic patients were recruited from 13 Muslim countries (~ 1000 from each country). The majority (~ 85%) had Type 2 diabetes with a mean age of 54 years and duration of diabetes of 7.6 years, and 49% were males. The 1,070 patients who had Type 1 diabetes had a mean age of 31 years, and duration of diabetes of 10 years, and 50% were males. Co-morbidities, such as hypertension and dyslipidemia, were common especially in patients with Type 2 diabetes.

## **Results**

The percent of patients who actually fasted (54% of those with Type 1 diabetes and 86% of those with Type 2 diabetes) was much higher than initially anticipated. In both groups, fasting was associated with a higher risk for hypoglycemia and hyperglycemia requiring medical attention. About 50% of the participants did not change their lifestyle during Ramadan. However, when patients did change, the tendency was to decrease their physical activity, sleep duration and food, sugar and fluid intakes.

## Recommendations

In principle, patients with Type 1 should not fast. However, if a patient insists on fasting against medical advice, the following recommendations are offered:

### **Absolute contraindications:**

Brittle diabetes (as defined by the American Diabetes Association)  
Patients on insulin pump  
Patients on multiple insulin injections per day  
Ketoacidosis or severe hypoglycemia in the last 3 months before Ramadan  
People living alone  
Advanced micro- or macro-vascular complications  
Pregnancy and lactation

### **Relative contraindications (fast with risk):**

Well controlled patients with type 1 diabetes  
No diabetic ketoacidosis (DKA)  
No recent hypoglycemia  
Not more than 2 insulin injections per day

### **Patients with one or more of the following are advised not to fast:**

Conditions related to diabetes:  
Nephropathy with serum creatinine  $> 1.5$  mg/dL  
Severe retinopathy  
Autonomic neuropathy: gastroparesis, postural hypotension  
Hypoglycemia unawareness  
Major macrovascular complications: coronary and cerebrovascular  
Recent hyperosmolar state or DKA  
Poorly controlled diabetes (mean random blood glucose  $> 300$  mg/dl)  
Multiple insulin injections per day

### **Patients with one or more of the following conditions not related to diabetes are advised not to fast:**

- 1) Physiological conditions:  
Pregnancy  
Lactation
- 2) Co-existing major medical conditions such as:  
Acute peptic ulcer  
Pulmonary Tuberculosis and uncontrolled infections  
Severe bronchial asthma  
People prone to urinary stones formation with frequent urinary tract infections  
Cancer  
Overt cardiovascular diseases (recent MI, unstable angina)  
Severe psychiatric conditions  
Hepatic dysfunction (liver enzymes  $> 2 \times$  ULN)

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# Identifying Vulnerable Populations: Women's Health and Mental Health among Yemeni Women in San Francisco

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## **Abstract**

In the context of a large health survey conducted by the Arab Cultural and Community Center of San Francisco, 395 respondents answered 79 questions about perceptions of their health, access to health care, and health behaviors. The data was collected, analyzed and reported by the summer of 2008. Subsequently, the responses of Yemeni women (n=34) were analyzed and their answers were compared to the answers given by all other female respondents (n=170). The data show that in the areas of perceived general health, women's health and mental health, Yemeni women report worse health conditions than non-Yemeni women. Yemeni immigrants in San Francisco are thus deemed a particularly "vulnerable population" that needs more targeted attention by healthcare and social services providers.

## **Introduction**

In 2006, the Arab Cultural and Community Center (ACCC) in San Francisco undertook an extensive health survey among Arab American immigrants in the larger Bay Area (Ah-Daher, Volk, & Rogers, 2008). The goal of the study was to identify the most pressing health concerns amongst the members of a very diverse and growing population, so that the ACCC could offer social and health services that target specific populations or issue areas more effectively. As one of the ACCC's priorities is to provide needed services to women in the community, the data for all female respondents (n = 204) were examined. In a simple comparison analysis, significant differences emerged between Yemeni women and all other respondents.

The Yemeni community is an Arab immigrant group from one of the poorest countries in the world. Over 70% of the current population of 19 million Yemenis live in rural areas, and their Gross Domestic Product (GDP) per capita was \$465 in 2000 (Kabbani & Wehelie, 2004). Due to political instability and lack of economic opportunity in Yemen, a significant percentage of Yemen's adult population migrated abroad. While the earlier migrants to the United States were predominantly men who returned to their country of origin once they had earned enough money, after 1970, Yemeni migrants began to settle more permanently, and they brought their families to live with them abroad (Hassoun, 2005). Most Yemeni immigrants in San Francisco come from the two poorest regions of Yemen, Ibb and Taiz, with poverty rates over 50%, according to a



1998 Household Budget Survey (Kabbani, et al). In the ACCC health survey, Yemeni immigrant women in San Francisco reported significantly lower levels of education: 59% of Yemeni women had not obtained a high school degree and 9% had obtained a college degree compared to 11% and 34% of all other women in the same two educational categories.

## Methods

Between 2006 and 2007, a 79-question questionnaire was administered to 400 Arabs and Arab Americans in the Bay Area. The survey included the areas of health access and health insurance; physical health; women's health/domestic violence; family planning; tobacco, non-prescription drug, and alcohol use; and mental health. Questions varied from simple yes/no questions to multiple-choice questions. Respondents for the survey were recruited by a snowball sampling technique by a team of 14 survey collectors. Survey responses were initially entered into a spreadsheet by ACCC staff members, and later transferred to the Public Research Institute (PRI) at San Francisco State University, where data was cross-checked and imported into SPSS for analysis.

## Results

Whereas 20% of non-Yemeni women reported their health to be poor or fair, 30% of Yemeni women did. In the category of general women's health, 193 valid answers were collected. Out of those 193, 53 reported never to have had a breast exam by a healthcare professional (27.5%); 55 reported never to have had a pap smear (29%); 143 reported that they do not do regular breast self-exams (73%). Thirty-nine of 92 women over 40 had never had a mammogram. When we look at the same figures comparing Yemeni women to the remaining Arab women, we see that 31.3% of Yemenis never had a breast exam by a healthcare professional versus 26.7% for all other women; 31.2% of Yemeni women had never had a pap smear versus 28.8% for all other women; 50% of Yemeni women over


40 never had a mammogram versus 40% for all other women. More Yemeni women do regular breast self-exams (34%) than all other women (24.2%), but both figures are alarmingly low.

When asked if they had suffered different forms of abuse (economic, emotional, physical, sexual, verbal), 35% of all women said that they had. The most dominant form of abuse was verbal abuse. Thirty-two point four percent of Yemeni women responded that they had experience any one of the five kinds of abuse against 36% of all women. In all but the verbal category, Yemeni women responded lower incidences of abuse; yet slightly more Yemeni women (33.3%) than all other women (31.7%) said they experienced verbal abuse (name-calling or swearing). The next more frequent type of abuse listed by all women was emotional abuse (24%), followed by physical (12%) economic (10%) and sexual abuse (6%).

It is in the category of mental health that the most significant differences appear. Yemeni women report higher incidences of negative emotions across the board. Asked to indicate if they felt overwhelmingly sad, nervous, hopeless, or worthless, Yemeni women answered always or sometimes 42%, 45.5%, 31.3% and 18.7% in the respective categories. In comparison, 23.4%, 34.4%, 18.7%, and 13.7% of all other women felt the same way.

## Discussion

Yemeni immigrant women in the United States have significantly less education than other Arab women, and they are less content with their general health compared to other Arab women. While the categories of women's health and domestic violence show Yemeni women somewhat more affected than other women, it is not by a statistically significant margin. Statistical significance is found in the category of mental health, where Yemeni women report more negative states across the given categories, and in particular in the category of feeling "so sad that nothing could cheer



you up.” In response to the findings, it is argued that Yemeni women should be considered a vulnerable population that needs special attention by healthcare providers.

### **Acknowledgments**

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# History and Implementation of Palliative Care in Lebanon

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In the past few decades, palliative care has witnessed an explosion in knowledge and in the provision of services in many countries. An overwhelming number of models and care services have been developed and introduced into practice with the aim of improving how the needs of terminally ill patients and their families are met.

Palliative care is a fairly new development in Lebanon. In 1995, the need for pain relief and palliative care was identified as a priority, and affordable solutions were recommended and submitted to the Ministry of Health, and the WHO.

A Pain Relief and Palliative Care Group (PR & PCG) was created in 1998 under the auspices of the Lebanese Cancer Society (LCS) to promote palliative care in Lebanon and to act as a focus for all those who work or have an interest in the field of pain and palliative care. Aims and objectives are:

- Increase the awareness and promote the development and dissemination of palliative care at scientific, clinical and social levels;
- Train those who at any level are involved with the care of patients with incurable and advanced disease and promote study and research;
- Bring together those who study and practice the disciplines involved in the care of patients with advanced

disease (doctors, nurses, social workers, psychologists, volunteers and others); and


- Address the ethical problems associated with the care of terminally ill patients.

Several workshops and symposia were organized under the auspices of the Lebanese Cancer Society, and several recommendations were published in order to meet these objectives:

- **Policy.** Freedom from cancer pain should be a human right.
- **Drug availability.** An essential drug list, not only for chemotherapy, but also for pain relief and palliative care should be established.
- **Education and training in palliative care.** Undergraduate training of nurses and physicians on pain relief and palliative care should be emphasized.
- **Reimbursement of doctors for palliative care services** would lead to better compliance and improve pain relief and palliative care.
- **Multidisciplinary clinic**
- **Home care** respects the patient's wishes in most societies and saves on expensive hospital beds.

Palliative care in Lebanon has made some important strides in the last decade but it is still in its infancy. More attention needs to be given in the near future to the actual implementation of the objectives listed above.





Education and training of health professionals in palliative care should be provided by medical and nursing schools throughout the country. Postgraduate education in medicine and nursing and ensuing certification should be made available. A close collaboration between medical and nursing associations to achieve this end will be needed and is highly recommended. It is as important and essential to involve policymakers in the development of pain

relief and palliative care services and clinics which meet the needs of the population in Lebanon.

The time will come for Lebanon to form the National Council for Pain Relief and Palliative Care as an advocacy and coordination body for pain relief and palliative care in the near future. To that effect, we believe the future is near.

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## Overweight and its Related Risks Factors among Adults in Algeria – TAHINA Project

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### ***Introduction***

Epidemiological transition characterized by a decrease in the incidence of contagious diseases and an increase in non-communicable diseases in Algeria has been confirmed by our recent studies ('Tahina' EU IncoMed project). Non-communicable diseases accounted to 58.6% of deaths in 2002, with 26.1% of cardiovascular diseases, 4.4% of diabetes and 9.4% of cancers (1). A national survey conducted in 2005 showed a high prevalence of hypertension (24.9%) and diabetes (12.2%) (2). In addition, changes in lifestyles, food consumption behaviours and physical activity have occurred mainly in the North region of Algeria and the urban environments.

### ***Objective***

To describe the prevalence of overweight in men and women and its related risks factors among adults in various regions and areas of Algeria.

### ***Material and design***

First, a stratification of the 48 wilayas (departments) according to the Sanitary and Economic situation Synthetic Index (IDSS) produced 6 levels of development in Algeria. A national stratified clustered sample design was used. A total of 4,818 households from 126 districts were surveyed in 2005 of which 63.9% were urban and 36.1% were rural; according to region, 63.9% in the Tell (northern coastal


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region), 29.5% in the central High Plateaus and 7.24% in the South. In each household, one adult (35-70 years) was randomly selected (ratio M/F=0.71). Body height and weight were measured. A socioeconomic questionnaire and a weekly food frequency questionnaire were completed.

## Results

The mean BMI was significantly higher in women (27.4 kg/m<sup>2</sup> vs. 24.3 kg/m<sup>2</sup> in men) and in urban areas (26.4 kg/m<sup>2</sup> vs. 25.5 kg/m<sup>2</sup> in rural area) and there was no difference between regions. In men, the mean BMI was stable in all age groups. However, it increased with age among women with an inflexion at the 55-59 age group.

The overall prevalence of overweight was 55.9% (men 41.3%, women 66.5%), and of obesity 21.2% (men 9.1%, women 30.1%). Overweight was more prevalent in cities (58.8%) than in rural areas (50.9%). It was also higher in the Tell than in the Plateaus (57.8% and 53.9%, respectively). While the prevalence of overweight (including obesity) was significantly higher in cities than in rural areas for both sexes (44.1% vs. 36.9% for men and 68.7% vs. 62.4% for women), regional differences existed only for males, overweight being higher in the Tell (44.5%) than in the Plateaus (36.8%) among them.

After accounting for potential confounding factors, overweight was significantly linked to age (older), occupation (non-working women), education level (none), and to a higher consumption frequency of starchy foods among rural women. In rural men, overweight was associated with the matrimonial status (married), the education level (primary or secondary levels vs. none) and a higher consumption frequency of lipids and of animal proteins. In urban women, overweight was associated with their matrimonial status (married), age (older) and education level (primary or secondary), and with a

higher consumption frequency of lipids, but with a lower frequency of starchy products consumption. In urban men, overweight was linked to age (older), education level (primary or secondary) and economic situation (high), but not with any food item consumption frequency.

In the Tell region, once adjusted for urban or rural residency, overweight was associated in males with age and matrimonial status only, and in females with age, matrimonial status and lipids (high) and starchy products (low) frequency consumption. In the Plateaus, overweight was associated with matrimonial status and education level (primary vs. none) in females and with the economic level (high) and the education level (secondary level).

## Conclusion

Obviously, Algeria is undergoing an epidemiological and nutritional transition and overweight has become a real public health concern particularly among women. Although there are some variations according to regions or environment (urban/rural), the country as a whole is affected. It is necessary to develop public health policies that take into account the various factors related to the way of life which potentially contribute to the development of overweight in Algeria. Such policies should include the promotion of regular physical activity and higher consumption of fruits and vegetables in order to control the rapid shift towards nutrition related chronic diseases.

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# Gender and Self-Disclosure: Methodological Issues of Mixed Sex Focus Groups in Arab Americans

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## **Introduction**

The focus group, or group interview, is a common methodology that has been used in a wide variety of research settings. It is through the collaborative and interactive atmosphere of the focus group that participants express many ideas that may have been more difficult to express individually (Morgan, 1988). Yet, the focus group is a social interaction in which social customs and normative behaviors of society may be reenacted, limiting voice of some within the group. There are many advantages to using focus groups in health-related research as they provide an effective method for assessing needs, identifying barriers, framing appropriate health messages, and designing relevant strategies for outreach (Garfield, et al., 2003). Health-related focus group studies in the Arab American community have included studies of tobacco use (Rice, et al., 2003), elders' views about health and social support (Ajrouch 2005), cultural considerations for mental health counseling (Nassar-McMillan and Hakim-Larson 2003), and ways in which to enhance health services (Kulwicki, Miller, and Schim 2000). During the pilot phase of the *Feasibility of Diabetes Prevention in Arab Americans* project (Linda Jaber PI), a series of

tests were conducted to determine the degree of “silencing,” or lack of self-disclosure that may occur in mixed-gender, Arab American focus groups. As Morgan notes, “group interaction requires mutual self-disclosure, it is undeniable that some topics will be unacceptable for discussion among some categories of research participants” (1996:140). Based on our understanding of gendered roles in the Arab American community, we felt that in some instances women would be less likely to disclose health information, health beliefs, or provide candid feedback when men were present.

## **Methods**

Three pilot focus groups were conducted ranging from 8 to 12 participants and from 40 minutes to 115 minutes in duration. Groups were facilitated by the Arabic-speaking principal investigator. Participants were assigned to a male-only, female-only, or mixed group. A short survey was conducted after the group session to collect additional demographic information and to assess issues with silencing and disclosure, comfort, and willingness to participate in the future. The sessions were digitally recorded, transcribed, and translated into English. Qualitative

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*Table 1 - Analysis of Text Units by Condition*

Condition	N	Time (min)	Words	Char	Para	Lines	Words. per min	Words per person	Words per person per min
Men	8	90	6869	31902	320	712	76	859	10
Women	12	115	8952	41620	351	767	78	746	6
Mixed									
Men	3	100	3992	18269	92	290	40	1331	13
Women	6	100	3478	15428	128	271	35	580	6

analysis was performed using MAXqda2 software. The analysis included the generation of thematic codes and subcodes grounded in the participant's discourse. Character, word, line, and paragraph counts were made as well as the number of turns per individual. Averages were computed per person, per minute. Simple descriptive and bivariate analysis was conducted with the post-focus group survey data.

### **Silencing By Sex**

Two separate approaches to analysis were performed to compare males and females and the amount of text produced by each: one looking at turn-taking, the other at the amount of text (utterances) produced. By all measures, men were found to speak more than women in all conditions. On average, men took 30 turns in the male-only group compared to 23 turns for women in the female-only group. Men in the mixed group took 41 turns, while women took only 20. Thus, in the mixed group, where men were the minority, they spoke more than twice as often as women. Individual analysis showed that several male participants dominated the conversations. Women's turn-taking was more equitably distributed, though a few women clearly took fewer turns than others. Utterances were measured by the number of words, characters, paragraphs, and lines produced by a speaker. This quantified the amount of content an individual contributed to the group. A rate can also be computed based on the average number

of words generated per individual per minute. Using this approach, we saw that men in both the men-only as well as the mixed-sex group produced more utterances. In fact, men in the mixed group contributed twice as women. Women's utterances were consistent in both the mixed group and the women-only group.

It is difficult for a focus group moderator to tell if someone is holding back information. A brief, post-focus group survey was helpful in determining if information was not disclosed during the focus group. Analysis of the post-test survey shows that women were more likely to keep things to themselves (47.0% compared to 37.5% of men), to feel they could have said more (55.6% compared to 50.0% of men), to feel awkward (27.8% compared to 10.0% of men), and feel more comfortable in same-sex groups (64.7% compared to 45.5% of men). Yet males were more likely to agree with the statement that "I felt others dominated the discussion" (36.4% compared to 31.1 percent of women). Clear sex disparities were found in the mixed group. All three men disagreed with the statement "I had things to say which I kept to myself," while 3 of the 6 women agreed. Similarly, all of the men disagreed with the statement "I felt awkward sharing in front of the group" while the same three women agreed. Four of the 6 women agreed that "there were uncomfortable moments during the focus group," while none of the men agreed. Finally, all 3 men in



**Table 2 - Select Post-FG Survey Measures**

Question	Percent Agree or Strongly Agree	
	F	M
I had things to say which I kept to myself	47.0	37.5
I could have said more than I did	55.6	50.0
I felt awkward sharing in front of the group	27.8	10.0
I felt others dominated the discussion	31.3	36.4
I feel more comfortable in same-sex groups	64.7	45.5

the mixed group were neutral on the issue of feeling more comfortable in same-sex groups; however, 3 of the 6 women strongly agreed that they would be more comfortable in same-sex groups.

## Conclusions

These findings have direct implications for future studies with Arab American populations using focus group methods. By all measures, Arab American men were found to speak more times and with more verbosity than Arab American women. Speech in groups with men tended to be dominated by fewer speakers, while the women-only group was more equitable in the amount of discourse per participant. Women were more reluctant to share in general (keeping things to self, feeling awkward, feeling they could have said more), the male domination of the mixed-sex group made the discussion even more awkward for women and limited their responses. Thus, the reluctance to self-disclose may result in loss of important information, optimal group composition should be taken into account, depending on topic of study, for achieving a more productive dialogue.

## Keywords

Arab, Gender, Sex, Focus Group, Social Interaction, Qualitative Analysis

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# Practices of Arab American Patients with Type 2 Diabetes Mellitus Observing Fasting during Ramadan

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## **Introduction**


Type 2 diabetes mellitus (T2DM) is an emerging clinical and public health problem in Arab Americans (AA). We have previously shown that the age- and sex- standardized prevalence rates of diabetes, impaired fasting glucose (IFG) and/or impaired glucose tolerance (IGT) are 18% and 23%, respectively (1). Recent studies have demonstrated that diabetes can be delayed or prevented with lifestyle intervention, regardless of age, sex, and ethnic background (2-4). However, the translation of these interventions into clinical and public health practice remains a huge challenge. The relationship of culture to health beliefs and health behaviors is important in any diabetes prevention strategies, which involve changing patterns of eating, physical activity, and other culturally-embedded behaviors.

The AA community is best described as culturally-unique, immigrant, youthful, understudied, and medically-underserved. The health disparities and barriers to preventive health practices in this population remain under-explored. Lack of accurate assessment of knowledge and health beliefs of AA relevant to diabetes will impede successful translation of culturally-specific approaches to diabetes prevention that will have sustainability in this community. The objective of this study was to

assess AA understanding of diabetes and their perception of risk. The central hypothesis for the proposed research is that poor knowledge about diabetes, misperceptions of personal risk, and lack of awareness of its severity are the root causes for lack of participation in diabetes prevention programs.

## **Methods**

Overweight (BMI  $\geq 27$  kg/m<sup>2</sup>) AA at least 30 years of age or older were invited to participate in this study. Subjects were recruited from a randomized list of 542 individuals participating in our previous study (1). Identified individuals were contacted by a trained bilingual study coordinator. All participants provided written informed consent. The survey and consent procedures were approved by the Institutional Review Board at Wayne State University. Three pilot focus groups consisting of 8 to 12 participants were conducted at the Arab Community Center for Economic and Social Services in Dearborn, Michigan. The sessions ranged from 40 to 115 minutes in duration. Focus groups were facilitated by the same bilingual AA moderator. Participants were assigned to a male-only, female-only, or mixed-gender focus group session. Group interviews discussed the definition, symptomology, causes/risk factors, and perception of the prevalence and personal



risk of diabetes. Prevention of diabetes and barriers to health care were also assessed. A short survey was conducted after the sessions to collect demographic characteristics of the participants.

The sessions were digitally recorded, transcribed, and translated into English. Surveys responses were coded and entered into a spreadsheet. Simple descriptive and bivariate analysis was conducted with the survey data using the statistical software package SPSS, version 17.0 (SPSS Inc, Chicago, Illinois). Transcripts of the focus groups were coded and analyzed with MAXQDA2, version 2 (VERBI Software, Consult, Sozialforschung, Germany) using a Phenomenological approach. Simple content analysis was also performed using MAXDictio, version 2 (VERBI Software, Consult, Sozialforschung, Germany).

## Results

### *Demographic Characteristics*

A total of 29 AA participated in the study. Demographic characteristics are presented in Table 1. The average age for the participants was  $42 \pm 10$  years. Males accounted for 38% of the study population. Most participants were from Lebanon (35%) followed by Palestine (14%), Syria (14%), and Yemen (4%). Participants ranged from recently arrived immigrants to those who had been in the United States for nearly forty years.

### *Definition of Diabetes*

In general, focus group participants recognized that diabetes was related to the pancreas and that it results in difficulty regulating blood glucose levels. However, there were still those respondents that indicated they knew little about diabetes. Additionally, apparent confusion was present as participants had difficulty in identifying diabetes symptoms versus the task of defining diabetes.

### *Symptomology*

Participants were better at listing symptoms associated with diabetes than defining or explaining the disease. The most commonly identified symptoms included: frequent urination, excessive thirst, dizziness, fatigue, weakness, and male impotence. Other symptoms identified were excessive vaginal secretions, nervousness, mood swings with hyper- or hypoglycemia, shivering, sensation of tiredness in the legs, burning, weakness in vision, hypotension, loss of consciousness, prolonged bleeding, and dry skin.

### *Causes/Risk Factors*

Myths and misunderstandings about diabetes were most evident when participants were asked what causes diabetes. Participants related causation of diabetes to acculturative stress, obesity, genetics, hypertension, diet, alcohol utilization, physical inactivity, and age. However, some participants also believed that diabetes is linked to being suddenly startled or shocked, hypertensive or lipid-lowering medications, food intake at bedtime, utilization of sugar substitutes, and sudden anger or sadness. The majority of participants believed acculturative stress ( $n=27$ ) and being overweight/obese ( $n=19$ ) were risk factors for the development of diabetes.

### *Perception of Prevalence and Personal Risk of Diabetes*

The perception of disease frequency was high, with most respondents estimating prevalence between 60 to 70%. Two-thirds of the respondents felt that they were personally at risk for developing the disease. Six and 4 participants reported that they were either not personally at risk for developing diabetes or provided no comments, respectively.

### *Diabetes Prevention*

Participants were well-versed in ways in which to prevent diabetes including: modifying diet ( $n=13$ ), receiving support and/or information ( $n=8$ ), increasing physical activity ( $n=5$ ), and reducing

stress (n=4). Participants recognized age and genetic factors as barriers to diabetes prevention that cannot be controlled. Many participants noted that while they understood that prevention was possible, major barriers to lifestyle modification were laziness, time, and/or lack of will power.

### Barriers to Health Care

Many barriers to health care were identified. The most commonly reported were lack of health insurance and/or cost of care (n=20), language barriers (n=12), negligence, laziness, or stubbornness (n=12), lack of awareness (n=6), dislike of physicians and/or medications (n=5), and transportation issues (n=5). Interestingly, five participants reported there were no barriers to health care. Additionally, language barriers, while a concern, were not seen as a true barrier to care due to the large number of AA providers both in the inpatient and ambulatory care settings.

**Table 1: Demographic Characteristics of Participants**

<b>Age (Years <math>\pm</math> SD)</b>	41.9 $\pm$ 10.1
<b>Sex, n (%)</b>	
Male	11 (37.9)
Female	18 (62.1)
<b>Country of Birth, n (%)</b>	
Lebanon	10 (34.6)
Palestine	4 (13.8)
Syria	4 (13.8)
Yemen	4 (13.8)
Other Countries	7 (24.0)
<b>Length of Stay in the US, n (%)</b>	
Short Duration ( $\leq$ 5 years)	8 (27.6)
Mid Duration (6 - 9 years)	10 (34.6)
Long Duration ( $\geq$ 10 years)	5 (17.2)
Born in USA/No Response	6 (20.6)

### Conclusions

These results extend our knowledge about AA understanding of diabetes and perception of risk. We have demonstrated that poor diabetes knowledge and negative health beliefs may be potential barriers to acceptance of diabetes prevention despite high perceived risk of disease in this community. Future educational programs should target knowledge deficiencies, common health myths, and misconceptions regarding diabetes among AA. The development of these educational programs may help to further facilitate the willingness of AA to participate in diabetes prevention efforts.

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# Tobacco Use: Global Perspective, Arab World, and Arab Americans

**Omar Shafey, PhD<sup>1</sup>, MPH, Dena Musa Elimam<sup>2</sup>**

## ***The Tobacco Problem***

Tobacco is the single greatest cause of preventable death in the world (WHO, 2008a), currently killing 6 million people every year, 72% of whom live in low- and middle-income countries. About one-third to one-half of all long-term smokers will die of tobacco-related diseases and they will die an average of 15 years younger than nonsmokers.

If current trends continue, tobacco will kill 7 million people annually by 2020 and more than 8 million people annually by 2030 (Shafey, Eriksen, Ross, & Mackay, in press). Tobacco's grim history has produced a staggering amount of death and suffering. Having killed 100 million people during the 20th Century, tobacco is set to kill 1 billion people in the 21st Century unless effective tobacco control measures are put in place to stop the carnage (WHO, 2008a).

## ***Patterns and Prevalence***

Manufactured cigarettes are the most common mode of tobacco consumption across the globe but pipes, water pipes, hand-rolled cigarettes, bidis, and keteks are among the diverse modes of smoking prevalent in some regions. Modes of oral tobacco consumption, such as chewing tobacco, snuff, pan masala, and gutkha are

also major tobacco control problems, especially in South Asia.


Approximately 1.3 billion people (more than 1 billion men and 250 million women) use tobacco and more than 1 billion smokers live in countries with developing or transitional economies (Guindon & Boisclair, 2003). Although male smoking rates are higher than female smoking rates, male smoking prevalence has peaked in most countries and is slowly trending downward in many. Female smoking prevalence is greater (22%) in high-resource countries than in low- or middle-resource countries (9%). Female smoking prevalence appears to be peaking in most high-resource countries but the trends appear steady or rising in many low- and middle-resource countries (Shafey, et al., in press).

In about 60% of countries surveyed, no significant differences were found between adolescent male and female smoking prevalence rates. Targeted tobacco marketing to youth; easy access to tobacco products; low prices; social pressure; tobacco use and approval by peers, parents and siblings; and the misperception that smoking enhances social popularity are all risk factors that contribute to adolescent smoking. The

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<sup>1</sup> American Cancer Society,

<sup>2</sup> Georgia State University



majority of boys and girls who start smoking become addicted to tobacco before they reach adulthood.

### **Tobacco Control Measures**

In response to the tobacco pandemic, 160 countries to date have ratified the World Health Organization's (WHO) Framework Convention on Tobacco Control (FCTC). The FCTC aims to protect individuals from the devastating health, social, environmental, and economic consequences of tobacco consumption and exposure by outlining effective measures to control tobacco. Countries that ratify the treaty are required to take specific steps to regarding control tobacco consumption, production, and advertising (WHO, 2003a).

In support of the goals of the WHO FCTC, the Bill and Melinda Gates Foundation and the Bloomberg Philanthropies have provided significant funding to achieve tobacco control goals in low- and middle-resource countries. The aim of these projects is to reverse the effects of the tobacco epidemic in countries with a high health burden from tobacco (WHO, 2008b, 2008c).

Effective tobacco control requires a comprehensive approach to reduce demand through taxation, education (health warnings on tobacco products), advertising restrictions, and implementation of smoking bans and smoke free areas (Shafey, et al., in press). Much work remains to be done in all of these areas. For example, only 5% of the world's population is protected by comprehensive smoke-free laws (WHO, 2008a).

### **Tobacco and the Arab World**

After the European discovery of the New World in 1492, tobacco use became widespread in Western Europe. Tobacco was introduced to the Arab world during the rule of the Ottoman Empire in the mid-1500s. Although introduced nearly 500 years ago,

tobacco consumption accelerated dramatically in the 20th Century due mainly to the expanded trade and newfound convenience afforded by mass-produced cigarettes.


The high prevalence of tobacco consumption among men in the Arab world is the single most important factor responsible for the increasing cancer incidence in the eastern Mediterranean region (Omar, Alieldin, & Khatib, 2007). Tobacco causes about 90% of all lung cancers (MPOWER, 2008), and lung cancer is the most common cancer among men in Egypt, Kuwait, Libya, Oman, Saudi Arabia, Syria, and the United Arab Emirates.

Other tobacco-related cancers, such as cancers of the bladder, oral cavity, larynx, esophagus, and colon, are among the five most common cancers among Arab males (Omar, Alieldin, & Khatib, 2007; WHO, 2003b).

Breast cancer is the most common cancer among women in at least 16 Arab countries (Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia UAE, and Yemen), and it is one of the leading cancers in all other Arab countries. Other common neoplasms among Arab women are esophagus, bladder, colorectal, cervical, and oral cavity cancers (Omar, Alieldin, & Khatib, 2007).

Male smoking rates are very high throughout the region (WHO, 2008a). Some of the highest smoking prevalence rates in the world are found among men in Yemen (77%), Djibouti (75%) and Jordan (69.1%). Female smoking rates are significantly lower than those of males but the highest female smoking rates in the Arab world are also found in Yemen (29%), Djibouti (10%), and Jordan (9.8%) (WHO, 2008a).

Cigarette-smoking trends among adolescents (age 13-15) vary by gender but not as significantly as the variance



in rates between adult men and women. Boys tend to have much higher smoking rates than girls across all 22 Arab countries for which data are available, with the exception of Mauritania where the girls' smoking rate (18.3%) is close to that of boys (20.3%) (Warren, et al., 2008). The highest smoking rates among male Arab youth are found in the Palestinian territories (West Bank and Gaza, 28.9% and 21.7% respectively), followed by Iraq (Kurdistan) at 21%. More girls than women smoke cigarettes in 16 of the 22 Arab countries (all countries except Yemen, Djibouti, Jordan, Lebanon, Comoros, and Saudi Arabia). In some countries, the variance between youth and adult female smoking prevalence is dramatic. In Mauritania, only 0.8% of adult women smoke but 18.3% of girls smoke. In Palestine, only 0.3% of women smoke while the smoking prevalence among girls is 9.5% of girls in the West Bank and 7% of girls in Gaza (Warren, et al., 2008).

Other modes of tobacco consumption, such as water pipes (aka shisha or argileh), create additional public health hazards in the Arab world. The use of tobacco other than cigarettes is highest in Lebanon where 60.9% of adolescents between ages 13-15 (66.9% of boys and 55.3% of girls) report using some form of tobacco. Use of tobacco products other than cigarettes is almost 8 times more prevalent than cigarette smoking in Oman and Lebanon, 5 times higher in Eritrea, and 4 times higher in Morocco, Yemen, and Somalia. The smallest difference is found in the West Bank where tobacco use is 1.5 times higher than cigarette smoking, suggesting that perhaps the majority of tobacco use is in fact cigarette-smoking. The difference between all tobacco use and cigarette-smoking rates is presumably attributable to hookah (shisha) use, which is widely used throughout the Arab world and spreading rapidly among young men and women (WHO 2006; Maziak, et al., 2004; Knishkowsky, et al., 2005).


## ***Tobacco and Arab Americans***

Arab Americans appear to have some of the highest smoking rates among U.S. racial/ethnic groups. In 1992, 38.9% of Arab American adults in Detroit were current smokers. The respondents had higher smoking rates, lower quitting rates, and a lower quitting ratio in comparison to the national and the state of Michigan's average rates (Rice and Kulwicki, 1992). In 1994, a Detroit survey found that the smoking prevalence among Arab American men was 40.6% and 38.2% among women (Rice & Kulwicki as cited in Rice, 2005). In a 1996 Wayne County, Michigan survey, 35% of Arab American men and 31.5% of Arab American women were smokers (Arab Community in Wayne County, Michigan: Behavioral Risk Factor Survey as cited in Rice, 2005).

A 2003 Arab Health Survey conducted in Genesee County, Michigan found that 38.1% of participants smoked at least 100 cigarettes in their lifetime; however, only 13.8% were current smokers. The desire for quitting was relatively high among participants, with 71.1% indicating that they wanted to quit smoking (Arab American Health Survey, Genesee County, 2003). Among Arab Americans in San Francisco, California, only 17% of respondents indicated smoking within the last 30 days, and about 18% smoked hookah. (June, 2008) The 17% smoking rate among Arab Americans in California is higher than the 14% smoking rate found among all California adults (Al Daher, et al., 2008).

In a Michigan study of Arab American adults, cigarette-smoking rates were lower than the general population but hookah-smoking rates were higher than among non-Middle Eastern adults. Arab Americans were found to be more likely smokers of both cigarettes and hookah (Jamil, et al., 2008).

A study examining smoking behaviors among pregnant women attending a Women, Infant and Children (WIC) program in Dearborn, Michigan found



that 6.3% of Arab women smoked during pregnancy; similar to the prevalence of smoking during pregnancy among other ethnic groups (Kulwicki, Smiley, and Devine, 2007).

Among adolescent Arab Americans, results from a 1997 unpublished survey conducted in Dearborn, Michigan indicated that about 15% of Arab American middle and high school students used tobacco within the last 30 days, and the highest rate (23.3%) was among 16 – 18 year olds (Abdulrahim, S. as cited in Rice, 2005). Higher percentages were found the following year (1998) in a Health Needs Assessment Survey conducted in Wayne County, Michigan that while 28% of all youth use tobacco, 34.3% of Arab American youth were smokers (Hammad, et al., as cited in Rice, 2005).

While American-born Arab adolescents report higher cigarette and hookah smoking rates than their Middle-Eastern-born counterparts (Abou-Medienne, et al., 2005; Weglicki, et al., 2008), Arab American youth appear to smoke less than their non-Arab peers. One study conducted among Arab and non-Arab 9th graders and another conducted among 9 – 12 graders found that the Arab students had lower experimental, last 30 days, and regular or current cigarette use (Rice, et al., 2007; Weglicki, et al., 2007, 2008).

Similar results were found in a study among 1872 high school students in the Midwest in which Arab American youth reported lower percentages of ever cigarette smoking (20% vs. 39%); current cigarette smoking (7% vs. 22%); and regular cigarette smoking (3% vs. 15%) than their non-Arab counterparts (Weglicki, et al., 2008). In Southeast Michigan, only 16% of Arab American students reported smoking in the previous 30 days compared to 37% of non-Arab students (Templin, et al., 2005).

Several studies find that hookah use is a predictive factor for cigarette smoking (Rice, et al., 2005;

Templin, et al., 2005; Weglicki, et al., 2008). A study among 14-18 year-old Americans of Lebanese, Iraqi, and Yemeni descent residing in Michigan revealed that hookah smokers were 16.5 times more likely than non-hookah smokers to also be cigarette smokers (Rice, et al., 2005). Students who experimentally used hookah, used hookah within the last 30 days, or regularly used hookah, were about 4-times, 2-times, and 3-times more likely to be smokers, respectively (Templin, et al., 2005).

Other predictive factors associated with smoking among Arab American adolescents were parental or sibling smoking; peer influence; easy access to tobacco; being offered a tobacco product by a friend or family member; being anxious or depressed; being male; and having lower academic performance (Rice, et al., 2005; Baker, 2005; Rice, et al., 2007). These factors are shared by youth worldwide and are recognized influences for adolescent and teen smoking behaviors (Shafey, et al., in press).

## **Conclusion**

Although information about the size of the Arab American population and health behaviors among Arab Americans are under-studied and under-reported, available data suggest that Arab American adult men are more likely than men in the general population to smoke. Arab women and youth tend to smoke less than their non-Arab peers but hookah smoking, especially among Arab American adolescents, poses a serious problem. High smoking rates among adults and the overlap between hookah and cigarette smoking indicate that tobacco control is an urgent priority for this community, especially among youth.

The Arab American Tobacco Use Intervention (AATU-I) initiative exemplifies a culturally relevant cancer control program for Arab Americans. The AATU-I project tailors “comprehensive, classroom-based




curriculum, Project Toward No Tobacco (Project TNT)" (SAMHSA, 2007), to produce a culturally appropriate and ethnically sensitive intervention for Arab American youth (Al-Faouri, 2005). This effort combines evidence-based approaches and culturally competent elements to address cancer risk factors within the community. Effective and culturally appropriate tobacco control interventions like AATU-I should be developed and implemented to protect the health of Arab American youth and the broader community.

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# Exposure to War and Mental Health: Scientific and Personal Reflections

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Mental health effects associated with exposure to war in low- and middle-income countries often go undocumented, unquantified, undiagnosed, and untreated.<sup>1</sup> Stigma, cultural factors, resilience, public awareness, self-care, over-the-counter medications, and mental health infrastructure affect recognition, management, and treatment of mental health effects associated with exposure to war.<sup>2, 3</sup>

A recent survey (September 2002 - September 2003), supported by the World Health Organization (WHO), was conducted in Lebanon with 2,857 adults (aged > 18 years), residing in 2,187 households and 342 geographic areas.<sup>4</sup> The survey assessed exposure to traumatic events in the Lebanon wars and prevalence and treatment of mental disorders, using the Arabic version of the WHO composite international diagnostic interview. Overall prevalence of mental disorders was 26%.<sup>5</sup> Prevalence of anxiety disorders, reflecting social anxiety disorder, post-traumatic stress disorder, and generalized anxiety disorder was 17%. Prevalence of mood disorders, reflecting dysthymia and major depressive disorder was 13%. Anxiety and mood disorders were more common than impulse control disorders (4%) and substance use disorders (2%).

Living through war affects one's sense of personal safety and peace, as reflected in my experience of growing up during the Lebanese

Civil war (1975-1990). War in Lebanon started when I was in high school, and it ended the year I earned my doctoral degree in public health, four years after I had left Lebanon for the United States. When I was in my teenage years and soon after the war broke out in 1975, fighting erupted in and around the city where we lived by the Mediterranean Sea. My parents decided that my mother would take us six children to our house in the mountains where it was still safe and peaceful. My father would remain behind in the city to guard our house and his factory for custom-made furniture. If he left with us, his departure would appear like an affiliation with the opposing militias residing in the mountains, and would legitimize the theft of our house and his factory by the opposing militias residing in the city. I dearly loved my father and did not wish to leave him alone in a dangerous city. I wanted to tell my parents to let me stay with him, but I did not know how to express my desire or defend it logically. During mid-summer, word reached us that my father had been kidnapped and released. I blamed myself for my father's kidnapping. I thought that if I had been at home when the kidnappers broke in, I might have protected my father. I understood my feelings 15 years later when I became aware of the psychology of divorced children who tend to blame themselves for the divorce of their parents.





In addition to feelings of blame, four colors were imprinted on my mind from living through the war. The orange of fire that engulfed buildings hit by grenades, the red of blood of people who died from bullets and shrapnel, the black of soot from extinguished fires, and the grey void of gaping buildings and empty houses. I craved to live in peace and moved to the United States in early 1986. Soon thereafter, I experienced post-traumatic stress when I attended a Fourth of July fireworks celebration at the Inner Harbor in Baltimore. The sounds of the magnificent fireworks exploding reminded me of the war during my earlier years in Lebanon. I cried deeply.

The WHO survey in Lebanon showed that only 11% with 12-month disorders obtained treatment.<sup>4</sup> The majority (85%) of these people were treated in the general medical sector and in the mental health care system, and the rest were treated by religious or spiritual advisors, counselors, herbalists, or fortune tellers.<sup>4</sup> The overall prevalence of 26% for mental disorders associated with exposure to war in Lebanon is not different from rates reported in other surveys supported by WHO and conducted in other countries exposed to war (e.g., 12% for Nigeria).<sup>6</sup> However, the lower rates of mental disorders reported for civilian populations exposed to war in some low- and middle-income countries contrasts with the higher rates reported in WHO-supported surveys for civilian populations who were not exposed to war who resided in higher-income countries (e.g., 48% for the United States).<sup>6</sup> The differential rates between countries raise questions about stigma and cultural factors surrounding mental health and about resilience and treatment needs and strategies. Exposure to war also affects the mental health of the military populations engaged in these wars.

Psychological and mental health effects of war can be high. No one can be completely cleansed from the ill effects of war. Mental health care services and providers can offer effective strategies to process the mental distress generated as a result of surviving a war.<sup>7</sup> There is a need to address appropriately the mental health needs of civilians exposed to war in low- and middle-income countries.<sup>8</sup>

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# Improving Health Care Safety and Quality through Information Transparency

## *The Leapfrog Hospital Survey: 2008 Results for Michigan Hospitals*

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### **Abstract**

**Objective:** How can healthcare consumers objectively assess the safety and quality of care in hospitals? The Leapfrog Hospital Survey is the only national publicly-reported source for the National Quality Forum's (NQF) set of safe practices. The findings of the 2008 survey in Michigan hospitals are described.

**Design:** A longitudinal panel survey of hospitals.

**Setting and Participants:** 138 short-term acute care hospitals in Michigan are eligible to participate.

**Measures:** Computer Physician Order Entry measuring use of computerized prescription systems, Evidence-Based Hospital Referral identifies hospitals with the best results or extensive experience with high-risk procedures, Intensive Care Unit Physician Staffing measuring use of trained specialists; and NQF Safe Practices Score measuring 13 of the other 27 safe practices.

**Results:** 88 (64%) of hospitals participated which is higher than the national average of 40%. Michigan hospitals compare favorably to the national results on several measures, yet there is room for improvement. Achievement of some EBHR procedures and acute conditions is low because "efficiency"—a composite of quality and resource utilization components—is the overall score reported. Michigan hospitals tended to score highly on quality of care components, yet received lower overall scores due to lower performance on resource utilization.

**Conclusions:** Transparency of quality and safety information is important to hospital improvement and lowering costs. Consumers undergoing any medical or surgical procedures would be well-advised to consult the individual hospital results on Leapfrog's Web site in addition to their medical advisors. Hospitals can benefit by comparing their performance to their peers.



## Introduction

How can healthcare consumers objectively assess the safety and quality of care in hospitals?

In 1999, the Institute of Medicine raised awareness that 98,000 lives are lost annually to avoidable medical errors in hospitals and are associated with \$17 to \$29 billion in additional costs.<sup>1</sup> Since then, numerous studies have further detailed the extent and costs of poor care in the U.S.<sup>2, 3</sup>

Fortunately, hospitals can take steps to prevent mistakes and protect patients from unnecessary injury, and this information is increasingly becoming available to help consumers determine the quality of their local hospitals. The summary findings of one such source for Michigan, the 2008 Leapfrog Hospital Survey, is presented here.

## Methods

The Leapfrog Group is a voluntary program of 65 employers and agencies that together purchase care for more than 34 million people. It is aimed at mobilizing employer purchasing power to encourage hospitals to take giant “leaps” in safety and quality to save lives and costs. Leapfrog’s annual Hospital Survey is one of most prominent of national initiatives to publicly report on quality, using the National Quality Forum’s (NQF) set of Safe Practices. The survey covers a range of hospital practices (complete description and research are found on Leapfrog’s Web site: <http://leapfroggroup.org/>):

**Computer Physician Order Entry** measuring use of computerized prescription systems. CPOE has been shown to reduce serious prescribing errors in hospitals by more than 50%.

**Evidence-Based Hospital Referral (EBHR)** identifies organizations with the best results or most extensive experience with selected high-risk procedures.

**Intensive Care Unit Physician Staffing** measures use of trained specialists, which has been shown to reduce the risk of patients dying in the ICU by 40%.


**NQF Safe Practices Score (SPS)** measures 13 of the 27 other Safe Practices.

The Leapfrog Hospital Survey is voluntary and completed online. Individual hospitals are scored according to the percentage of criteria met and publicly-reported on Leapfrog’s web site. Due to space limitations, contact the author for detailed summaries by hospital region and type.

## Results

Of 138 eligible Michigan hospitals, 88 (64%) participated in the survey as of 9/30/2008, comparing favorably with the national average of 40%. Responding hospitals were more likely to be in urban than rural areas (68% vs. 60%) and larger hospitals with teaching programs were more likely to participate than smaller hospitals (80% vs. 56%). Less than 50% of hospitals in the northern regions and the Upper Peninsula participated; this is lower than hospitals in other geographic regions.

As a group, Michigan hospitals compare favorably to the national results on several leaps, yet there is room for improvement. Achievement of some EBHR procedures and acute conditions is low because “efficiency”—a composite of quality and resource utilization components—is the overall score reported. Michigan hospitals tended to score highly on quality of care components, yet received lower overall scores due to lower performance on resource utilization. Reducing resource utilization while keeping quality high is the challenge facing all hospitals.



Larger hospitals tended to fully meet the CPOE and IPS leaps; however, several smaller and rural hospitals are on their way toward CPOE implementation. Many hospitals of all types met at least half the criteria for the NQF SPS. Critical access and other small hospitals were less likely to complete this section than larger hospitals, though these standards certainly apply to them.

As expected, large and urban hospitals perform most of the complex surgical EBHR procedures. Less complex, but common acute conditions are treated in a wider array of hospitals. Quality of care for treatment of acute myocardial infarction and pneumonia were scored highly, however, poor performance on resource utilization brought down the overall efficiency score.

Finally, the number of hospitals that have adopted Leapfrog's Never Events Policy is similar across all types of hospitals.

Using these findings, Leapfrog publishes an annual list of Top Hospitals. Nationally, 33 hospitals received this designation; seven (21%) are in Michigan.

## Discussion

Michigan hospitals' performance on Leapfrog's quality and safety measures compare favorably with hospitals nationally in terms of participation rates and on many of the leaps; however, there is still work to be done. Awareness is growing, but use of this information is still low among consumers and providers. Going forward, it will be important to encourage participation among smaller and rural hospitals for consumers in those markets.

Transparency of quality and safety information is important. A recent study has shown that patients who select hospitals identified by Leapfrog as having begun to implement patient safety practices will likely

find hospitals with better process quality and lower mortality rates.<sup>4</sup>

It has been estimated that full implementation of CPOE, IPS and EBHR leaps in all U.S. urban hospitals could eliminate 560,000 to 907,000 serious medication errors, 61,700 deaths and over 300,000 disabilities for a potential system-wide savings of over \$41.5 billion / year.<sup>5</sup>

Consumers undergoing any medical or surgical procedures would be well-advised to consult the individual hospital results on Leapfrog's web site in addition to their medical advisors. Hospitals can benefit by comparing their performance to their peers.

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# **The Phenomenon of Violence as Perceived by Palestinian School Pupils Aged (14-17 Years); (8-11 Grade), at the Schools of the Public and Private Sectors in the West Bank, Palestine**

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West Bank, Palestine

The Treatment and Rehabilitation Center for Victims of Torture and Organized Violence (TRC), is the only one of its kind in the West Bank. It was established in 1997.

TRC has several objectives; its main objective is treating and rehabilitating victims of torture and other types of human rights abuses.


TRC's rehabilitation program particularly focuses on reintegration of victims into their communities in order to resume their role productively and as efficiently as possible. TRC's Multi-disciplinary team provides several services and holds a huge and well-integrated program, including treatment and rehabilitation, prevention, training and community awareness, in addition to an active advocacy and public awareness program, and last but not least a research and documentation unit.

As the phenomenon of violence, and other forms of social problems, became more noticeable in many countries of the world, many studies were conducted in western countries relating to the subject such as domestic violence, school violence, vandalism,

organized crime, genocide and other forms of violence. For the Palestinian community, however, few local comprehensive studies, on this issue were done to the best of our knowledge, despite the hypothetical existence of a steadily increasing rate of violence in the Palestinian community.

Based on this, the researchers decided to carry out this large scale research, in order to verify this assumption. The researchers selected Palestinian school children aged 14-17 as a study sample with the conviction that this group is the by-product of the continuing political crises in the area and, of course, is the future players of Palestine. A total of 2,331 students participated in the study sample; and data was collected over a period of 2 weeks.

Final results of the study illustrated outstanding differences and correlations among the many demographic variables such as place of residence, age, sex, etc, as well as other psychosocial variables and /or indicators in the multi-faceted questionnaire.



The following tools were utilized in the research:  
The McMaster Family Assessment Device (FAD), a 60-item device was developed by Epstein, et al., 1983 and Miller, et al., 1985, that reflects family style in conflict resolution and problem-solving. The Brief Symptom Checklist (BSI) is a 53-item screening instrument used to detect common psychiatric symptomatology/ Derogatis & Melisaravados, 1983; Derogatis & Spencer, 1982) and a shortened version of the well known Hopkins Symptoms Checklist (H-SCL-90); the Dissociative Experience Scale (DES) (Bernstein & Putnam, 1986), a 28-item self-report instrument that measures the state of dissociation in normal and clinical population in order to better understand the interrelated variables of the study. We also used in parallel a specially developed questionnaire to account for other variables of concern.

**Key terms:**

Nuclear family, extended family, anxiety, somatization, OCD, hostility, psychosis, paranoia, phobia, depression and sensitivity.



# Trends in Hookah Smoking among Arab Americans in Metro Detroit Michigan and Implications for All Young Adults

*Farid Shamo, MD, Msc, MPH; Mikelle Robinson, MA; Janet Kiley, MS; Kathie Boynton, BS\**

## ABSTRACT

### *Background:*

Smoking hookah has been a practice for many centuries in Southeast Asia, North Africa, and the Middle East. In the USA, hookah is becoming a popular new trend in tobacco use, especially among young adults. Young people, who tend to be open to new experiences, may be more attracted to it for its attractive shape, smell, and flavor. The myth about hookah is that because the tobacco passes through water before being inhaled, the toxic substances found in the regular tobacco smoke will be filtered out, so it is less harmful. The scientific fact is that the water only cools the tobacco smoke; it does not filter it. Analyses have shown that hookah smoke contains an abundance of several chemicals that can cause Cancer, Cardiovascular diseases, and addiction.

### *Objective:*

To study behaviors and attitudes of hookah tobacco use among a sample of hookah smokers in Metro Detroit Area with emphasis on implications for all youth in Michigan

### *Methods:*

A cross-sectional survey was conducted in 2005 by two community-based organizations in the Metro Detroit area. Demographic, socioeconomic, and behavioral information, as well as attitudes and beliefs related to hookah use, was collected from the participants. There were 313 completed surveys. We used (SPSS-15) to analyze the data; graphs were prepared using Microsoft Excel.

### *Results:*

Fifty-eight percent (58%) of the participants from both genders reported current hookah smoking. Hookah-smoking rates are high in all age categories; higher education shows fewer hookah users. Almost half of the current hookah smokers (49%) have a family member who smokes hookah inside the home; and most of them (79%) believe that hookah is safer than cigarettes. The salient feature about the reason for using hookah among both genders (88% among males and 76% among females) is to socialize with others; while the second reason is because of its attractive taste.

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\*Michigan Department of Community Health- Division of Chronic Disease and Injury Prevention-Tobacco Prevention Program

### **Conclusion:**

Although hookah use is a widely accepted social practice among the Arab American population in Metropolitan Detroit Michigan, it is now being eagerly embraced by college students and has exploded into at least 40 states and most large cities in the U.S. There is a hazardous misconception among hookah users that smoking hookah is less harmful and safer than cigarettes.

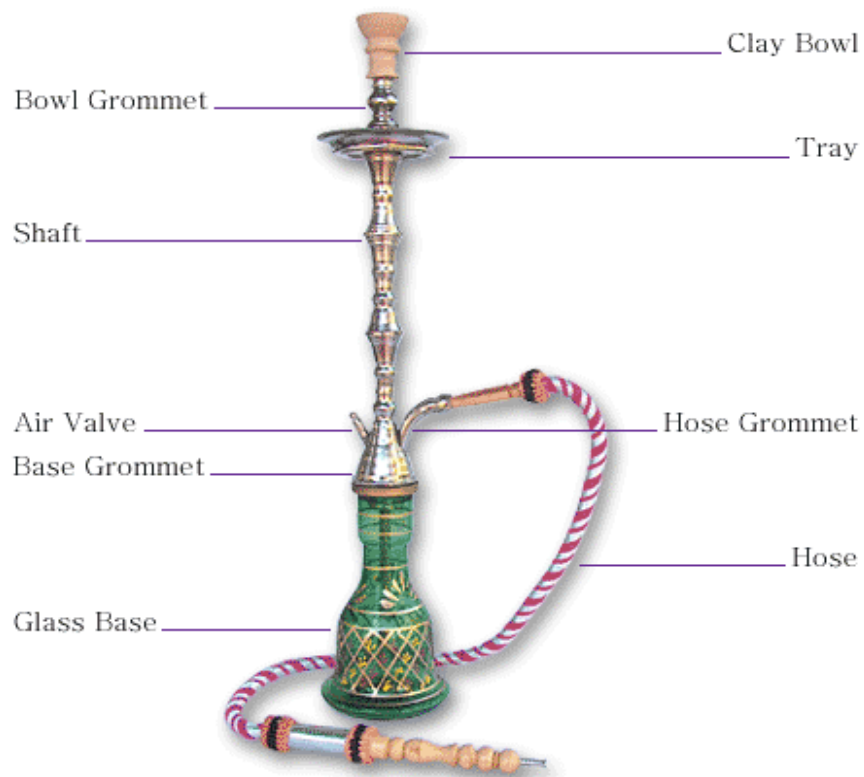
### **Recommendations:**

Since hookah brings with it the same serious health risks associated with all tobacco use, including exposure to secondhand smoke plus an added concern with infectious disease from using unclean or shared mouthpieces, there is a need for the public health community to support education interventions to raise public awareness regarding the health dangers of hookah and to promote public policies that protect the public from hookah exposure and use.


## **Introduction and Background:**

### **I. Hookah (Arghile):**

Arghile is the Arabic name; in U.S. it is more commonly named as hookah. Other names are Sheesha, Goza, or Hubble Bubble. Smoking hookah has been a practice for many centuries in Southeast Asia, North Africa, and the Middle East. It uses a specially made tobacco of about 10-20 gm, called either MUSSEL which contains honey and is flavored with fruits like apple, mango, strawberry, banana, orange, mint, etc. or AJAMI which is a dark paste of tobacco.<sup>(1, 2, 3)</sup>







The composition of tobacco used in hookah is variable and not well standardized; the nicotine content has been reported as 2 - 4% in composition with 1 - 3 % for cigarettes. <sup>(4)</sup>

The hookah is rented in restaurants and cafés for a session in which the smoker consumes a pack of tobacco which lasts an average for 45-60 minutes. It is then rented to one group after another. Smoking hookah is practiced in groups as a social activity. The smokers often share the same mouthpiece, and the hose is passed from person to person, a practice which carries the risk of exposure to infectious diseases, like tuberculosis, Hepatitis C and *Helicobacter pylori*. <sup>(5)</sup>

### ***Basic parts of the hookah***

Hookah consists of a bowl that contains the tobacco connected to a glass base, partially filled with water, connected to a pipe (tube) that dips into the water. A hose (another long flexible tube) that does not dip into the water, connected to a mouthpiece through which smoke is drawn.

When a smoker inhales through the hose, the smoke passes from the heated tobacco in the clay bowl through the water (where it is cooled) generating a bubbling sound, and finally passes into the smoker's mouth and lungs. <sup>(1)</sup>

The myth about hookah is that because the tobacco passes through water before inhaled, the toxic substances found in the regular tobacco smoke will be filtered out, so it is less harmful.

While the scientific fact is that the water only cools the tobacco smoke, it does not filter it; analyses have shown that hookah smoke contains an abundance of several chemicals that can cause cancer, cardiovascular diseases, and addiction. <sup>(6,7,8,9,10)</sup>

In the USA, hookah is considered a new tobacco use trend. Young people, who tend to be open to new experiences, may be more attracted to it, for its nice shape, smell, and flavor. <sup>(11)</sup>

## ***2. Arab Americans in Michigan:***

Arab Americans consist of immigrants and their descendants from the Arabic-speaking world who reside in the U.S.

According to 2000 census, the Arab ancestries in the U.S. were 1.2 million, one-third of them living in 3 states: New York, California, and Michigan.

The great majority of Michigan's Arab Americans live in the southeast region of the state in densely populated Wayne, Oakland, and Macomb Counties, known as the Metropolitan area of Detroit. <sup>(12)</sup>

Studies on smoking in the Arab American community found a higher smoking rates and a lower quitting rate when compared with National and Michigan data for other population groups. <sup>(13, 14)</sup>

Smoking is part of the social culture where cigarettes and arghileh are offered like tea and coffee as a matter of hospitality and generosity. <sup>(15)</sup>

### ***Methods:***

A cross-sectional survey was conducted in 2005 by the two larger Arab American organizations: ACC (the Arab American and Chaldean Council) and ACCESS (Arab Community Center for Economic and Social Services).

The survey questionnaires were developed by Michigan Department of Community Health, Tobacco prevention program and both organizations. They have demographic,

socioeconomic, and behavioral information, as well as attitudes and beliefs related to hookah use.

The survey was conducted in Metro Detroit wherever the Arab American community gathers, such as restaurants, cafés, homes, and outreach offices of ACC and ACCESS.

There were 313 completed surveys. The data was collected, entered and analyzed in (SPSS-15); graphs were prepared using Microsoft Excel.

### Results:

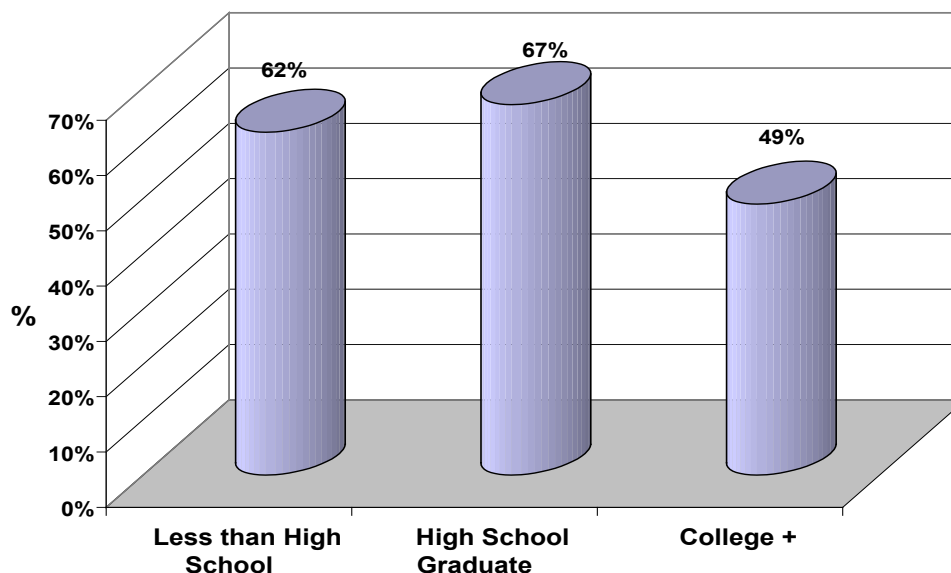
The demographical properties and socioeconomic status of the participants by gender are shown in details in Table 1.

Seventy-four percent (74%) of the participants in the survey reported having ever tried hookah use in the past, while (58%) reported current hookah smoking.

Sixty-eight percent (68%) of the males and (45%) of the females were current hookah smokers.

We estimated test of significance (Chi-square) between some groups among the current hookah smokers. Figure 1 shows level of education among current hookah smoker; the differences were highly significant ( $P < .001$ ) among the group. Figure 2 shows the annual household income groups among the current hookah smokers; the differences among the groups were highly significant ( $P = .001$ ).

**Figure-1 Current hookah user by level of education.**



*Table 1 - Demography and socioeconomic status of the participants by gender*

Characteristics	Male		Female	
	N	%	N	%
<b>Age</b>				
12 – 18 yr	4	2.4%	4	3.1%
19 – 24	36	21.8%	27	21.3%
25 – 34	50	30.3%	45	35.4%
35 – 44	48	29.1%	33	26%
45 +	27	16.4%	18	14.2%
<b>Education</b>				
Less than High School	36	21%	27	20.3%
High School	71	42%	51	38.3%
College & above	64	37%	55	41.4%
<b>Household Income</b>				
Less than \$10,000	22	14%	27	22%
\$10,000-19,000	25	15%	18	15%
\$20,000- 29,000	45	28%	40	33%
\$ 30,000 +	71	43%	37	30 %
<b>Place of birth</b>				
USA born	27	16%	34	25%
Outside the USA	149	84%	104	75%
<b>Marital status</b>				
Single	57	33%	43	31%
Married	105	61%	70	50%
Divorced	6	3%	17	12%
Widowed	2	1%	5	4%
Separated	3	2%	4	3%

**Figure-2 Current hookah user by household income.**

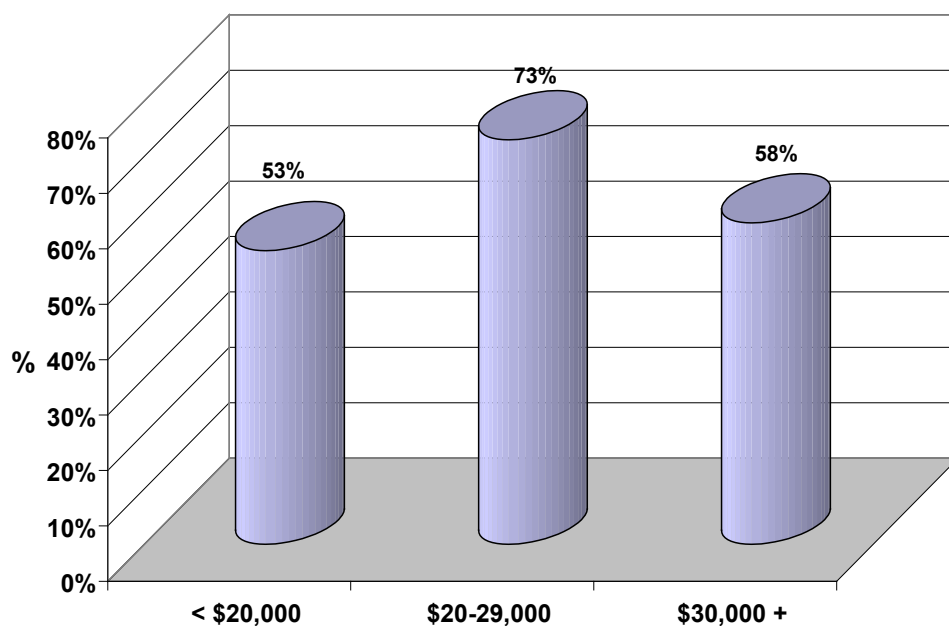
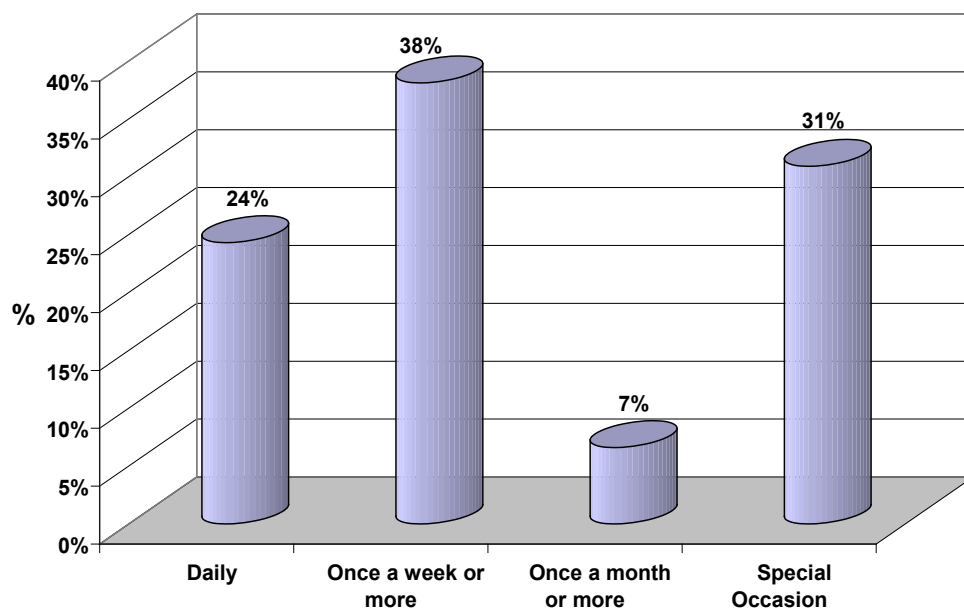


Table 2 shows that daily hookah smoking is higher (29.7%) among males than females (14.3%), while the percent of those who use hookah once a week is higher among females (44.4%) than among males (34.7%). Figure 3 shows the total (both genders) of hookah users by frequency of use.

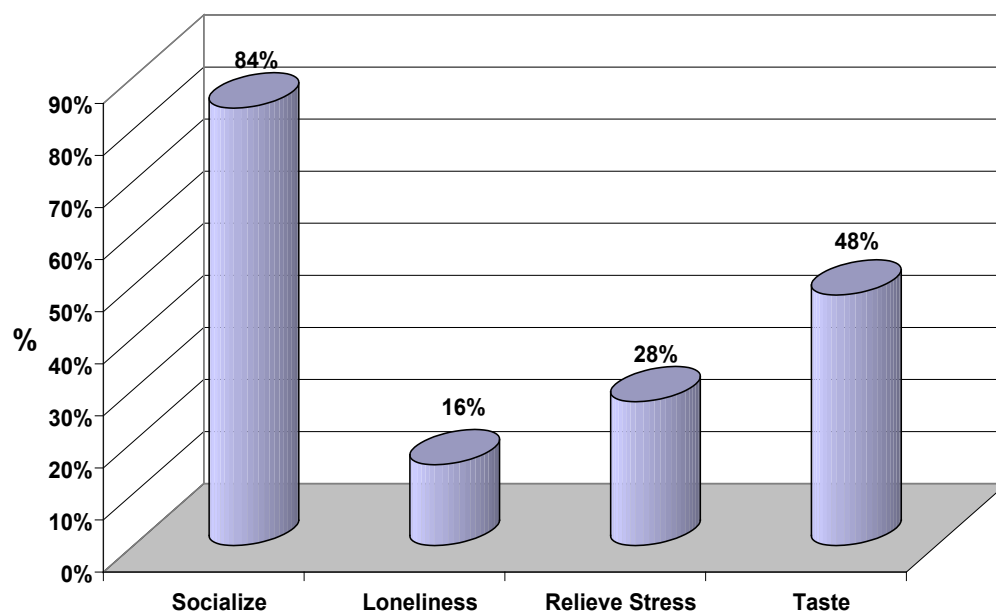
**Figure-3 Current hookah users by frequency of use.**



Other behavioral aspects were almost the same between both groups of gender. Most of the hookah smokers smoke at home whether they are males (72%) or females (73%). The same gender rate is found among those who smoke hookah at cafés (55%) among males and (54%) among females.



**Figure-4 Current hookah users according to reasons why they smoke hookah?**



The salient feature about the reason for using hookah among both genders is to socialize with others; 88% among males and 76% among females, while the second reason is because of its attractive taste (males 52% and females 41%). Figure 4 shows the percent of hookah users (both genders) by the reason they smoke hookah. The differences among all the groups by gender were statistically significant.

**Table 2 - Behavioral properties among current hookah users by gender**

Property	Male		Female		Significant value
	N	%	N	%	
<b>1. Frequency</b>					P = .001
a. Daily	35	29.7%	9	14.3%	
b. Once a week	41	34.7%	28	44.4%	
c. Once a month	9	7.6%	3	4.8%	
d. Occasionally	50	42.4%	23	36.5%	
<b>2. Location</b>					P = .01
e. Home	85	72%	46	73%	
f. Restaurant	49	41.5%	23	36.5%	
g. Café shop	65	55.1%	34	54%	
h. Other places	29	24.6%	12	19%	
<b>3. Reasons to smoke</b>					P = .001
i. Socialize w/other	104	88%	48	76.2%	
j. Loneliness	18	15.3%	10	15.9%	
k. Relieve stress	32	27%	18	28.6%	
l. Taste	61	51.7%	26	41.3%	
m. Others	7	5.9%	2	3.2%	

Behavioral comparison among hookah smokers groups is shown in Table -3. Almost half of the current hookah smokers (49%) have family member who smokes hookah inside the home while only 16.3% of those that never smoked have a family member who smokes. The difference was highly significant (P= .001). Hookah users were little less than twice as likely as never hookah smokers to be smoking cigarettes as well; the difference was highly significant (P= .001). We found also that hookah smokers exercise less than those never smoked.

**Table 3 - Behavioral properties around hookah use**

Property	Current hookah smokers		Ever hookah smoker		Never hookah smoker		Sig. value
	N	%	N	%	N	%	
1. Family member smoke hookah inside the home.	89	49.2%	101	43.7%	13	16.3%	P = .001
2. Smoking cigarettes	55	30.4%	65	28.1%	15	18.8%	P = .001
3. Exercise regularly	56	30.4%	70	30%	35	43.8%	P = .05

Other findings were the beliefs among the participants about health issues and the harmfulness of the hookah and tobacco. We found that despite of more than half (55.3%) of the current hookah smokers know that hookah is a health risk but they are still using it. And most of them and this important finding that should direct the attention to, believe (79%) that hookah is safer than cigarette.

Also about two-thirds of the current hookah smokers believe that secondhand smoke from the hookah is not harmful. The differences among these groups were significant as shown in Table 4.

**Table 4 - Beliefs among hookah users**

Beliefs	Current hookah smokers		Ever hookah smoker		Never hookah smoker		Sig. value
	N	%	N	%	N	%	
1. Think hookah is harmful to their health.	100	55.3%	143	61.9%	58	72.5%	P = .001
2. Think smoking hookah is safer than cigarettes.	143	79%	167	72.3%	21	25.6%	P = .001
3. Think second hand smoke from hookah is harmful.	62	34.3%	95	41%	50	62.2%	P = .001


## Discussion

This is one of a few studies of hookah among Arab Americans in Metro Detroit area, so possible comparison will be with other studies in Middle Eastern countries other than inside USA.

Compared to prevalence study in Syria among students,<sup>(19)</sup> ever hookah smokers were (62.6%) among males and (29.8%) among females which is similar to our findings among males (68%) while lower from our finding among females (45%). Both studies have

higher rates than what another study (Heyam, et al.) has found in Kuwait<sup>(20)</sup> (24.6% among males, and 5.5% among females).

Smoking hookah in home was very high in Kuwaiti study (96.4%) of all smokers use hookah in their home while in our study its (72%) and the reason may be it is not a norm to smoke hookah outside their home and also availability of hookah in cafés and restaurants in Kuwait. Forty-three percent (42.8%) of the males



and (74.1%) of the females hookah users have a family member who smokes in their homes in the Kuwaiti study, while in our study it is (49.2%) of all hookah smokers who have a family member who smokes hookah inside the home.

Daily hookah smoking was seen among (23.3%) of males and (12.3%) of females in a study conducted in Syria,<sup>(21)</sup> while in other study,<sup>(19)</sup> only 7% of males used hookah daily. In our study daily hookah smoking was (30%) among males and (14.3%) among females.

Of the current male hookah smokers, (71.4%) were also cigarette smokers, and (63%) of the females hookah users were also cigarette smokers.<sup>(20)</sup> In our study we found (30.4%) of all hookah smokers smoke cigarette.

### ***Why should we care about “Hookah”?***

- a) Hookah smoking brings with it the same serious health risks associated with all tobacco use, including exposure to secondhand smoke. In addition, there is an added concern with infectious disease from using unclean or shared mouthpieces.<sup>(5)</sup>
- b) Hookah use is a very common practice among Middle Eastern Americans but its use has exploded to Americans in 40 states and most large cities.<sup>(16,17)</sup>
- c) Hookah bars are increasingly found near college campuses and are spreading to schools where they attract teens and young adults.<sup>(11,16,17)</sup>
- d) Hookah is considered a new smoking fad, and so attracts the youth who typically seek new and unique experiences, because of its pleasing shape and sweet smell and taste of its fruit-flavored tobacco.

- e) Hookah smokers believe that it is non-addictive; studies have found the same amount of nicotine coming from its smoke, and that teens who have ever used hookah are 8 times more likely to smoke cigarettes than others.<sup>(7)</sup>
- f) There is a misconception that hookah smoking is safer than cigarettes and is non-addictive because the water filters out all the toxins associated with tobacco burning. Studies have found that it carries the same health risks as cigarettes and may be worse.<sup>(6)</sup>
- g) Because legislation often exempts or ignores the hookah-tobacco connection, bars are not mentioned in their Regulations or Ordinances.
- h) Hookah tobacco has not been regulated, monitored or labeled with warning words similar to other tobacco products, which may lead to contamination with some other addicted substances with its tobacco.

### ***Conclusions:***

Some survey conclusions:

- a) Hookah (arghileh) use is a widely accepted social practice among the Arab American population in Metropolitan Detroit, Michigan.
- b) Hookah smoking rates are high in all age categories. Higher education and income levels show fewer hookah users.
- c) Hookah users know that the hookah is a health risk but most of them also believe that it is less harmful than cigarettes.

- d) They also think secondhand smoke (SHS) from the hookah is less harmful than cigarette SHS.
- e) About three-quarters of the hookah users surveyed, smoke at home, and more than half of them of both sexes smoke hookah at cafés.
- f) A third of the males and less than half of the females smoke on weekly bases. Very few of them smoke on a monthly basis.

### **Recommendations, based on the literature and research<sup>(18)</sup>**

- a. Hookah tobacco contents should be regulated and monitored by the FDA.
- b. Hookah smoking should be included in all smoke-free regulations and/or ordinances.
- c. Hookah tobacco packages should have warning labels about its health hazards.
- d. Hookah should not be sold to minors similar to cigarettes.
- e. Increase awareness about risk of hookah smoking among healthcare providers and lawmakers.
- f. Research needed to:
  - I. Find trends and epidemiology of hookah among college students
  - II. Evaluate the chemicals constituents of the hookah tobacco in the U.S.
  - III. Analyze the toxicology of the “smoke” from hookah use

### **Limitations**

Since the survey was conducted in Metro Detroit wherever the Arab American community gathers, such as restaurants, cafés, and others, the respondents most likely were current hookah users leading to the potential of selection bias.


### **Acknowledgement**

Our research work for this survey study at the Michigan Department of Community Health was made possible by the hard work of the two Arab American organizations; the Arab American and Chaldean Council (ACC) and the Arab Community Center for Economic and Social Services (ACCESS). We would like to express our sincere gratitude to the following people who made it possible: Sophia Hines from MDCH, Dr. Adnan Hammad and Dr. Wisam Salman from ACCESS, and Wali Altahif from ACC.

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