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Qatari Women Living With Cardiovascular Diseases—Challenges and Opportunities to Engage in Healthy Lifestyles

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Qatari Women Living With Cardiovascular Diseases—Challenges and Opportunities to Engage in Healthy Lifestyles

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In Qatar, cardiovascular diseases are the leading causes of morbidity and mortality. Cardiovascular diseases can be prevented and controlled by modifying lifestyle risk behaviors. In this qualitative study, we investigate ways to increase participation in physical activity, and to promote a healthy diet, and nonsmoking behavior in Qatari women. Individual in-depth interviews were conducted with 50 Arabic women. Participation in physical activity, observing a healthy diet, and abstinence from smoking are desirable lifestyle practices among Qatari women. Social support networks, cultural values, religion, changing sociodemographic and economic conditions, heart disease, and a harsh climate affect the ability of these women to pursue a healthy lifestyle.

The Islamic Middle Eastern country state of Qatar is situated on the Gulf coast of the Arabian Peninsula. With a population of 1.7 million (Qatar Statistics Authority, 2010), Qatar has the world's fastest growing economy (16% in 2010) with the highest gross domestic product (GDP) per capita (Kamco Research, 2011) due to its abundant oil and natural gas revenues. Similar to illnesses in other countries in the world, cardiovascular diseases are the leading causes of morbidity and mortality in Qatar (Aboud & Rashed, 2004; Bener, Al-Suwaidi, El-Menyar, & Al-Binali, 2006; Chanpong, 2008; Hamad

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Medical Corporation, 2009). The incidence of acute myocardial infarction (AMI) has been rising rapidly in Qatar (Bener, Al-Suwaidi et al., 2004, 2006), and younger adult Qataris are more at risk of having ischemic strokes due to hypertension, diabetes mellitus, hypercholesterolemia, and smoking (Khan, 2007). According to the 2006 Qatar World Health Survey (Qatar WHS), 28% of individuals in the Qatari population were found to be hypertensive (Chanpong, 2008) and the incidence of hypertension was higher in females than in males (Bener, Al-Suwaidi et al., 2006). El-Menyar and colleagues' (2009) study of 8,169 patients with acute coronary syndrome in six Middle Eastern Countries revealed that women are more likely to have hypertension, diabetes, and dyslipidemia than men. Arab women also had increased in-hospital mortality and poorer treatment outcomes for acute coronary syndrome (Al Suwaidi, Bener, Behair, & Al-Binali, 2004; El-Menyar et al., 2009). Thus, there is an urgent need for the development of culturally appropriate and effective intervention programs to prevent and reduce CVD's incidence and mortality among the Qatari female population (Al-Suwaidi et al., 2004).

Studies have shown that many CVDs can be prevented, controlled, or both by modifying lifestyle behaviors such as physical inactivity, consumption of fast food, and smoking (Bener et al., 2004; Bener, Al-Suwaidi et al., 2006; Jorgensen, Borch-Johnsen, & Bjerregaard, 2006; Musaiger, Shahbeek, & Al-Mannal, 2004). Obesity and being overweight as a result of physical inactivity and an unhealthy diet can lead to metabolic changes and raise the risk of heart disease (Jorgensen et al., 2006). A study showed that 62.6% of Qatari women were overweight and that 80% of overweight Qatari women were 30 years of age and over (Musaiger, Al-Khalaf, & Shahbeek, 1998).

Sheesha (waterpipe) smoking is increasing across the Eastern Mediterranean region, especially among women (Hammal, Mock, Ward, Eissenberg, & Maziak, 2008; Maziak et al., 2004). It is estimated that in some populations in the Middle East region one-quarter of the inhabitants smoke sheesha (Maziak et al., 2004). There is an assumption that waterpipe smoking is not as harmful as cigarette smoking; however, studies have estimated that the nicotine content in waterpipe tobacco is 2%–4% and the nicotine content in cigarettes is 1%–3% (Gold, 1994; Kiter, Ucan, Ceylan, & Kilinc, 2000; Reis, 1996). Studies showed that both waterpipe and cigarette smokers are exposed to smoke toxicants and exhibit dependence symptoms (Ward et al., 2006). Both sheesha and cigarette smoke affect pulmonary function (Kiter et al., 2000), elevate blood pressure, and increase heart rate (Al-Safi, Ayoub, Albalas, Al-Doghim, & Aboul-Enein, 2009). A study conducted by Al Suwaidi and colleagues (2012) revealed that in six Middle Eastern countries, female waterpipe smokers had higher in-hospital complication rates than cigarette smokers, including death, recurrent myocardial ischemia, heart failure, and cardiogenic shock.

The goal of this exploratory qualitative study was to find ways to effectively promote cardiovascular health and cardiovascular disease prevention

activities among Qatari women (national and non-national Arabic women living in Qatar) by investigating how social, cultural, and economic factors influence Qatari women's dietary practices, smoking behavior, and participation in physical activities. The research took place in Doha, the capital of Qatar; participants were Arabic women with cardiovascular disease. We report the opportunities these women have and the challenges they face in their quest for a healthy lifestyle. We recommend culturally appropriate and effective intervention strategies to promote physical activity, a healthy diet, and nonsmoking among the adult Qatari female population. The term "healthy lifestyle" encompasses engagement in physical exercise and activities; a diet low in oil, fat, and sugar, and high in fruits and vegetables; and nonsmoking behavior. Ethical approval was obtained from the institutions where the study was conducted. Consent forms were obtained from all participants. Participants were informed that they could withdraw from the study at any time without negative repercussions.

CONCEPTUAL FRAMEWORK

The Qatari population consists of Arabs from different Middle Eastern ethnocultural backgrounds. The development of effective and culturally appropriate health promotion programs and services that will be accepted by the people of Qatar will depend on our understanding of the influence of social, cultural, and economic factors on their attitudes toward health care and their health care practices. We combine an ecological conceptual framework with Kleinman's Explanatory Model of health and illness to perform our exploratory qualitative study. The ecological conceptual framework refers to the interaction between individuals and their specific physical and sociocultural environments (Glanz, Lewis, & Rimer, 2002). The ecological perspective is a theoretical foundation of the Canadian health promotion framework as stated in the Ottawa Charter for Health Promotion (World Health Organization [WHO], 1986) and other documents such as the Lalonde report (1974) and Epp's framework (1986). The ecological model emphasizes the influence of social determinants of health on individuals' health care behavior (Green & Kreuter, 1991; Green, Richard, & Potvin, 1996; Hamilton & Bhatti, 1996; Vollman, Anderson, & McFarlane, 2008). Based on this perspective, health care interventions should address individual and population needs at social, cultural, and environmental levels in order to achieve the most healthful outcomes and behaviors (Hamilton & Bhatti, 1996; Poland, Green, & Rootman, 2000). The ecological perspective advocates that to promote and maintain health, we must (a) identify and provide health information and life skills necessary for individuals to make health care decisions, (b) identify and offer economic and social conditions conducive to health and healthy lifestyles, and (c) increase individuals' accessibility to social goods and services (Green

et al., 1995). Guided by this perspective, we investigated how contextual environmental factors and other social determinants of health influence Arabic women's health care practices and the lifestyle choices they make.

Kleinman's Explanatory Model states, "[People's] beliefs about sickness . . . including their treatment expectations . . . affect the way individuals think about and react to sickness and choose among and evaluate the effectiveness of the health care practices available to them" (Kleinman, 1980, p. 38). Kleinman suggests that individuals' health care behavior and practices are derived from their knowledge and values, which are informed by their specific sociocultural backgrounds. The model states that beliefs about sickness and treatment provide individuals with explanations for sickness etiology, symptoms, pathology, course of illness, and treatment (Kleinman, 1980). One of the major deterrents of client compliance, satisfaction, and appropriate use of health care services, Kleinman insists, is the difference between the explanatory models of health care recipients and the explanatory models of health care providers (Kleinman, 1978, 1980). Thus, providing effective health care requires that health care providers be able to elicit, recognize, and understand clients' beliefs and values with respect to their understandings of health, disease, illnesses, and treatments, and, more importantly, to be able to negotiate with clients holding these differing perspectives (Kleinman, 1980).

METHODS

A maximum variation purposive sampling procedure, which is "the process of deliberately selecting a heterogeneous sample and observing commonalties in their experiences" (Morse, 1994, p. 229), was used to recruit participants. Potential participants who met the selection criteria were invited to participate in the study and interviewed for an average of 30 to 45 minutes by a bilingual (Arabic and English) female research assistant from Qatar. Research assistants in this study were nurses who had experience working in cardiovascular units and emergency departments as staff nurses, and they were also in their final year of obtaining a bachelor of science degree in nursing. These students were trained extensively prior to and throughout the research process by TD, who is an experienced qualitative researcher from Canada. Individual in-depth interviews with open-ended questions were conducted in Arabic with 50 Arabic women 30 years of age and over who had been diagnosed with CVD/coronary artery diseases. Questions were asked to gain information about (a) how participants make decisions to engage or not engage in physical activity, a healthy diet, and smoking; (b) what prevents and what motivates participants to engage in physical activities, maintain a healthy diet, and refrain from smoking; and (c) what participants perceive as culturally appropriate and effective intervention strategies to

promote physical activity, a healthy diet, and nonsmoking among adult Qatari females.

Interviews were recorded on a digital voice recorder, translated into English, and transcribed verbatim. The qualitative data analysis software Nvivo 8 was used to examine the narrative data. Data analysis involved a systematic, rigorous development of code categories and subcategories that were flexible, evolving, and used for the coding of subsequent transcripts. Themes and concepts were developed to compare within and across transcripts. From this, a higher level of data conceptualization and broader theoretical formulations were generated. To ensure rigor, research team members analyzed every transcript in pairs then performed peer debriefing with all six team members and the lead principal investigator. The data gathering process was stopped when data saturation was reached (when no more new information was identified in the interview). Fifty in-depth interviews were conducted. Simple sociodemographic information about participants was also collected, as shown in Table 1.

FINDINGS

The narrative data conveyed that opportunities and challenges for Arabic women with cardiac disease to engage in physical activities, healthy dietary practices, and nonsmoking behavior could be found in the following: social support networks; cultural knowledge, values, practices, and religion; changing environmental and social conditions; and rapid economic growth.

Opportunities to Engage in Healthy Lifestyles

Having an informal social support system. Several participants emphasized that support and encouragement from informal social support networks such as family members and friends helped them to attain and maintain a healthier lifestyle. Support from family members, especially grown-up children, was important. Daughters were often noted to be the most effective supporter of a healthy lifestyle. In some cases daughters were reported to play a more active role than simple encouragment:

> My daughters ask me to accompany them to the gym. My family encourages me to walk. . . . They restrict the use of oil and fat at home. . . . My children are supervising my diet and encouraging me always to maintain on that.

Some participants revealed that their husbands encouraged them to engage in healthy lifestyle activities. One participant said that she loves going for

TABLE 1 Sociodemographic Profiles of Study Participants (Donnelly et al., 2011)

Variable	Range	*f*	%
Age	30–39	2	4
	40–49	7	14
	50–59	18	36
	60–69	14	28
	70+	9	18
Country of birth	Qatar	21	42
	KSA	1	2
	Yemen	1	2
	UAE	1	2
	Jordan	3	6
	Palestine	8	16
	Egypt	5	10
	Iraq	2	4
	Bahrain	3	6
	Iran	2	4
	Kuwait	1	2
	Syria	1	2
	Lebanon	1	2
Current citizenship status	Qatari citizen	35	70
	Qatari resident	15	30
Marital status	Single/never married	3	6
	Currently married	29	58
	Divorced	3	6
	Widowed	15	30
Women's education level	Never went to school	13	26
	Primary/junior	18	36
	High school	9	18
	University	7	14
	Other degrees	3	6
Employment status	Full time	4	8
	Self-employed	1	2
	Full-time homemaker	43	86
	Unemployed	2	4
Husband's education level	Never went to school	9	18
	Primary/junior	11	22
	High school	6	12
	University	15	30
	Other degrees	2	4
	No husband	5	10
	Do not know	2	4
Annual household income	Less than $10,000	2	4
	$11,000–$30,000	3	6
	$31,000–$50,000	3	6
	$51,000–$70,000	2	4
	$71,000–80,000	1	2
	More than $80,000	2	4
	Don't know/chose not to answer	37	74

walks with her husband. She also stated, "Now when [he] wants to smoke, he goes outside; he also puts air purifier for me at home."

Qatari culture practices and encourages collectivism (Nagy, 2006); thus, many Qatari women's lifestyles are influenced by other woman who live in the community. Cultural values and social practices that encourage community members to connect and build strong social relationships can help to promote a healthy lifestyle among women. One woman participant observed that women in her community supported each other to attain a healthier lifestyle:

> My family and friends are always encouraging me . . . guides me on foods that can decrease or increase my weight. My friends in their gathering discussed these issues all the time. We have an awareness about the healthy lifestyle and we are working together to maintain this way of life.

Having a formal social support system. In the present study, formal social support was conceptualized as support from health care providers such as physicians, nurses, health educators, and government officials. Many participants were grateful that they lived in Qatar, one of the wealthiest countries in the world. They were very appreciative of Qatari government efforts to provide good health care programs and services and to facilitate healthy lifestyles. On February 14, 2012, the people of Qatar celebrated their first National Sports Day, a national holiday declared by the head of the state of Qatar—His Highness the Emir Sheik Hamad Bin Khalifa Al-Thani. For the past several decades, the Qatari government has encouraged healthy lifestyles by building recreational facilities and sports clubs. These facilities are available to all women and charge affordable fees, as a participant explained:

> In Doha, everything is accessible. . . . Aspire Sport Club is close to my home. . . . The government provides facilities for people to exercise; therefore, women should use these facilities. Fee for these facilities is affordable for Qatari and non-Qatari.

Participants often talked about the support they received from their physicians. Several women found that after experiencing cardiac events and treatment, with the support of their physicians they began to live a healthier lifestyle and noticed positive changes in their health:

> Before, I was not doing exercise, but after [my surgery], the physician instruction, I have started walking for 1 hour daily. . . . The physician gave instruction and time table for doing exercise. . . . Before the surgery my weight was 60 kg. . . . With exercise and following instructions, now I have [a more] stable weight.

Although the majority of participants acknowledged their physicians' role in the management and promotion of cardiac health, they did not mention other health care professionals such as nurses or health educators.

Valuing individual responsibility. Many of the participants valued individual responsibility. Several participants felt that women should be responsible for their own health, and that women should live a healthier lifestyle. Decisions about whether to engage in a healthy lifestyle were considered to depend on a personal perspective of one's health:

> Participating in physical activities, eating healthy diet, and not to smoke is a personal decision. . . . If she believes and knows the benefits of exercise, healthy diet, and not to smoke . . . it depends on individual awareness and carefulness about his or her health.

There was a hint of resistance to some traditional beliefs about what Arab women should and should not do and determination in these women's voices. Women in this study demonstrated a strong sense of autonomy. A participant insisted that the decision to lead a healthy lifestyle was her decision: "If I want to eat a healthy diet, I will. . . . It is a personal decision in my community. . . . Women can eat a healthy diet if they want." Another participant asserted, "social support can affect some people. . . . However, I do what I think is right and suitable for me." Another woman declared, "I do not care about what others and my neighbors think; exercise is good for me."

Valuing looking good and feeling healthy. Contrary to an earlier study by Musaiger and colleagues (2004) that found that in some Middle Eastern countries there is a preference for woman to be heavyset because a fuller body indicates that she is a good wife and also represents fertility, all participants of the present study expressed a desire to lose weight and to have a slimmer body. Feeling healthy and looking youthful were important motivators for these women to engage in exercising and eating healthy foods. One woman expressed: "I love to exercise because it has positive effects on health and women['s] appearance. It makes women feel active. People who exercise look younger."

Another participant narrated:

> The thing which motivates me to eat more fruit and vegetable and less oil and fat is the environment around me. For example, for those who are obese, if she goes to a party and there she sees a lot of slim ladies, she will try to be like them and follow [a] healthy dietary habit to lose weight.

To the majority of participants, looking good and having a healthy lifestyle meant many things, from living a life without illness or tension to doing

exercise, eating healthy food, and avoiding smoking. Suggestions for obtaining a "healthy lifestyle," however, could also be quite socially and culturally specific to the context of Qatar: "Women should not depend on housemaid to do all house tasks, she should work with her [maid]. This will help her to burn extra fat."

Having some knowledge of the causes of heart disease. All participants described symptoms related to their cardiovascular problems. Several women talked about the causes of cardiovascular diseases: "The causes of the heart diseases are family history of heart disease, tiredness, smoking, unhealthy environment"; "Heart diseases can result from . . . obesity that might result from fatty food and inactivity"; "I don't encourage smoking; it is the first leading cause of heart disease and lung cancer." Other participants related cardiac problems to high cholesterol, severe anemia, high stress level, diabetes, and hypertension. Knowledge of the cause of cardiovascular diseases appeared to have a positive influence on participants' attitudes toward physical activities, diet, and smoking, as participants advocated a healthier lifestyle.

The positive influence of religion. All participants perceived that being a Muslim and following Islamic religious teachings and principles had positive effects on women's health: "We are Muslims and we like our lives. . . . We are praying and fasting on time and thank Allah for everything. . . . Smoking is forbidden in our religion. . . . Exercise is good and our prophet encourages us to do exercise." Islam discourages any kind of smoking (The Holy Quran: Surah Al-'Araf, 7:157; Surah Al Ma'idah, 5:93). Furthermore, smoking is viewed as culturally taboo and unacceptable behavior for Qatari women, as one woman stated:

> All Qatari women that I met refuse to smoke and view smoking as a shameful behavior. Smoking is totally discouraged religiously and culturally. . . . No one smokes in my neighborhood; if the people saw a woman smoking, they will say that she is a bad woman.

The majority of study participants believed that adopting a healthier lifestyle would not only help them reduce weight and prevent cardiovascular disease, but it would also mean that they have followed Islamic teachings. As one participant pointed out, "Nothing in our culture and religion prevents us from doing exercise." Another woman insisted, "Prophet Mohamed said eat seven dates a day, he didn't say eat all dates because dates contain a lot of sugar which could be harmful"; "Our prophet said that exercise is good and he encourages us to do exercise." Another participant suggested that praying five times daily would help women increase physical activity.

Positive influence of changing sociodemographic and economic conditions. Demographic and social conditions in Qatar have changed rapidly in the past several decades due to tremendous economic growth. Influxes of foreign (expatriate) workers from Asia, North America, and European

countries have made Qatari society even more multicultural. Furthermore, aiming to develop the State of Qatar as a knowledge-based economy and the knowledge hub of the Middle East region, the government of Qatar puts great emphasis on the country's advancement in scientific knowledge and education. Thus, many Western and European institutions and universities are now an important part of Qatar's economic, educational, and social fabric. These changes have led to the adoption of different values, beliefs, and practices and were viewed as positive influences for a healthier lifestyle by study participants:

> Before, women were not allowed to go outside without her husband, also they were not aware about their health. But now women can go everywhere. She can drive a car and go to work. . . . Now women are more independent.

> Nowadays, a lot of Qatari women walk at Corniche and Aspire in order to maintain their health and wellness. Female(s) becomes more oriented about their health and [more aware] of diseases associated with not exercising. Society starts to accept. . . . We can do exercise by walking on the Corniche. Before, it was not okay, but now we can do that.

Challenges to Engage in Healthy Lifestyles

Despite the many opportunities for Arabic women to engage in healthy lifestyles, data analysis revealed the following limitations and challenges: traditional cultural values and practices, women's roles and responsibilities, negative influences due to changing sociodemographic and economic conditions, living in a harsh climate, and women's current health conditions.

Traditional cultural values and practices. Social courtesy and hospitality are central to Qatari women's beliefs and values. These obligations might challenge a woman's resolve to maintain a healthy diet. Qatari are encouraged to show their generosity. The offering of food to others is viewed as a desirable social behavior. It is a common practice for Qatari women to invite each other to meals and to gather daily in each other's homes to communicate, celebrate, and share ideas. On these occasions, women often feel pressured to eat because the visitor's refusal to accept food and drink might offend the host: "It is our hospitality to force guests to eat(s). Not eating is not a respectful behavior. . . . If you are invited to a party and you don't eat, . . . it is undesirable behavior. Qatari families usually force their guests to eat even if they are not hungry" (Donnelly et al., 2011).

The traditional cultural dietary habits were identified by participants as a factor that influenced their diet. Culturally specific foods communicate a people's way of life and thus are an important part of daily life in all cultures (Helman, 1990). Participants' narratives indicated that Arabic women place

strong emphasis on "good food." Flavor, color, and appearance of food were of great importance, and participants pointed out that salt and oil play a large role in the flavor, color, and appearance of their foods, as one woman stated:

> We prefer eating traditional dishes without reducing oil intake as it will affect the taste of main dishes, because of that it is hard to change the way of cooking. . . . I do not like the taste of the vegetables. I may eat it for one week, but I always go back to my previous habits because the taste is not that much delicious.

Analysis of the data revealed that some traditional cultural values, beliefs, and practices challenge women's ability to engage in physical activity. Although Qatar's social and cultural ideologies and values have changed in recent years, traditional values and practices that restrict women's mobility remain in existence, especially among the older generations:

> Culture has huge impact on women's decision to do physical activities. For example, women can't walk alone in the street, or in [public] gardens. She should be accompanied by one of the family members.

> Previously it was taboo for women to go out without their husbands or brothers. Now some families are still not allowing their daughters to go out and to exercise. . . . They are still holding on to the old beliefs.

Some participants pointed out that engaging in a healthier lifestyle could be a challenge if one did not have a supportive spouse. One woman observed, "For other women, their husbands are not allowing them to go out alone." Another participant revealed the following:

> In this country it is taboo to see a female walking. Whenever I invite my neighbors to go for a walk, they refused. They said that their husbands would not like that. . . . Also, families are not accepting the idea [of women] to go outside daily; they said better to spend time with children.

Women's roles and responsibilities. Although participants were aware of their health needs, performing family duties and taking care of others took priority over physical activity and dietary concerns:

> Home responsibilities prevent women from exercising. Women have reasons that prevent them from living a healthier lifestyle. . . . They are busy with home and children responsibilities. What prevents me is the situation at home. I can't leave my children alone at home; also I can't leave my parents alone.

Other participants also attributed their inability to engage in regular exercise to their busy schedules and to home responsibilities such as taking care of extended family members and grandchildren:

> Before my retirement, I cannot [participate in routine] physical activity because I had no time. Now I am older, but I have many other responsibilities. I take care of my grandchildren, so I still do not have time to go for a walk or exercise.

Farahani and colleagues (2008) also found that family priorities often took precedence over women's health needs. Perry and Bennett (2006) found that women are not compliant with exercise routines because of their many roles and family responsibilities.

In the Qatari culture, meals with all family members present are valuable times for them to be together and socialize. Traditional food is often shared and enjoyed among family members. This is viewed as a necessary practice to preserve their cultural way of life. Many family members like and expect traditional "good" foods, often contain substantial quantities of salt, oil, and fat. As women often assume the responsibility of preparing food for the entire family, many felt that it was hard for them to eat foods that were different from those consumed by the rest of the family. One participant admitted: "In our home we all eat at the same time, so I can't be different than the rest of the family." Another participant observed: "My family eat unhealthy food, but I can't be different than them. Our foods consist of rice and meat which is cooked with lots of oil. We eat less fruit and vegetable. This food habit has been for generations." Farahani and colleagues (2008) found that some patients were not interested in following a revised diet owing to the unpleasant taste of dietary foods and the feeling of being isolated from family and community members.

Negative influences of changing sociodemographic and economic conditions. Although Qatar's recent economic growth has had many positive aspects, several participants observed that wealth in some ways might have created negative influences on women's health, such as a decrease in physical activity. These negative influences are unique and specific to Qatar's socioeconomic context:

> I think that most homes have more servants than they need. . . . [Before], I was not depending on anybody to help me with the housework. I was doing everything such as washing, and cleaning. . . . Previously people were healthier because they were working at home. There was no housemaid. Women were doing all household tasks. This was exercise for them. I used to have a slim body because of that.

Recent lifestyle changes might have also negatively influenced the dietary choices of Qatari women. Social activities such as eating out have become popular aspects of life in Qatar. It was clear from participants' comments that people, especially the younger generation, have acquired a habit of eating out during the weekend. These women testified that restaurant foods were often unhealthy and full of fat and oil. Some participants were convinced that Qatar's changing sociodemographic pattern, with an influx of newcomers to Qatar, influenced the eating habits of Qatari people. Examples cited were Indian foods high in oil, salt, and fat, and Western-style fast foods that have become popular in Qatar (Donnelly et al., 2011).

Other participants observed that recent changes in the environment and social context of Qatar have had negative influences on women's smoking behaviors:

> Previously it was not acceptable to see women smoking in Qatar. Women were hiding if they want to smoke; however, now everything changed. Some Qatari women are smoking in popular [public] places.

It was particularly worrisome to some participants that the incidence of smoking sheesha was not only increasing, but was also now considered a fashionable behavior among young Qatari girls. Participants assumed that young girls thought that smoking sheesha was not as harmful as smoking cigarettes. Participants suggested that smoking gave a young girl a sense of high social status and of being modern: "New generation start to smoke because they think that this is part of modernization and to show off to others."

Living in a harsh climate. Qatar has a hot desert climate; temperatures in summer months (June to September) can reach 40°C or higher. Winter, spring, and autumn are warm, however, with temperatures between 25°C and 35°C, cooling at night to 15°C to 22°C. Berger and Pearson (2009) found the region's high temperature to be an obstacle to women's ability to be physically active. Several participants indicated that the weather in Qatar plays a significant role in how they participate in physical activities. Some women found it very difficult to be physically active, even to go out for walk during hot summer months:

> People are not exercising because the climate is too warm to walk. . . . People walk only for 2 months for the whole year because of the weather. The remaining months people stayed at home eating. . . . That's why sedentary lifestyle leads to illness.

Women's current health conditions. Although participants recognized the importance of exercise, many were not physically active because of their health conditions. Living with cardiovascular problems, many of the

participants suffered shortness of breath and fatigue. Thus they were discouraged from engaging in any type of physical activity. One woman admitted, "I am not motivated because of my disease. I get tired easily whenever I use stairs or walk even for a short distance." Another participant pointed out, "If you are sick, you can't practice exercise. . . . I was walking before, but since I developed illness I stopped that." Some women were quite frustrated with their condition: "My friends encouraged each other to exercise, but how can an old woman [like me] exercise? What to do if I'm not able to do it or cannot tolerated that type of life because of my health condition?"

Despite unfavorable health conditions, some participants were as active as possible. One woman indicated, "If God gives me health, I will exercise and walk outside the house, but if I'm sick, I will exercise in my home by walking in my yard." Another woman insisted, "If I have pain in my legs, I will exercise in my bed, by doing some movements. The important thing is to do exercise. I want to exercise."

DISCUSSION AND RECOMMENDATIONS

Drawing on the present study's findings, we describe opportunities for Arabic women in Qatar with cardiovascular diseases to engage in healthy lifestyles. Health care providers and decisionmakers need to capitalize on and foster these identified opportunities, and at the same time they need to strive to reduce or eliminate challenges that prevent women from attaining and maintaining a healthy lifestyle.

Consistent with the findings of Kleinman (1980), this study found that the majority of participants perceived that social support networks that consist of informal support (family and friends) and formal support (government and health care professionals) play an important role in women's decisions to engage in healthy lifestyles. These findings were supported in a study by Yu and colleagues (2008). As patients often perceive health care providers, especially physicians, as their primary source of medical information, counseling and guidance for patients regarding smoking cessation, weight loss, and exercise should be incorporated in routine practice to modify lifestyle behaviors among cardiac patients (Donnelly et al., 2011; Jackson and colleagues, 2010).

Women are motivated by seeing other women being active and healthy. Social acceptance and beauty are motivations to lose weight and stay fit. Thus, encouraging women to exercise with a group of friends, to be role models for each other in the adoption of healthy lifestyles, might be an effective strategy to encourage women to exercise. If exercising, running, and walking were a more visible part of daily life, social acceptance of women being physically active would increase. Sidewalks with pedestrian under- or over-paths, running and bicycle paths, shops within walking distance, and

more low cost recreational facilities should be incorporated in city planning and development (Sallis et al., 2009). Construction of recreational facilities should be culturally sensitive and should include adequate cover for women, open green areas that maintain privacy and suitable for both women and children, and areas for men and women separately so that both men and women do not feel a loss of their traditional way of life. Feeling of losing one's way of life and tradition can lead to fear and resistance to change. This is supported by a study recommending that the design and implementation of physical exercise regimens should be sensitive to cultural differences in modesty, assertiveness, and expected social roles (Gordon et al., 2004). This is a particularly significant consideration in Qatar, where principles of Islamic morality and ethics are paramount (Donnelly et al., 2011).

Climate has significant influences on people's ways of life whether it is extremely hot or cold. Qatar's hot weather is a barrier for women to engage in exercise and participate in outdoor activities. Participants suggested that the state increase the number of affordable air-conditioning recreational facilities throughout all regions of Qatar. Public air-conditioned shopping malls could include walking tracks and health centers for exercising.

Both positive and negative perceptions of Western influences were evident among participants. Discourses about the negative effects of Western lifestyles, however, are audible both in Arabic populations and in the literature (Bener, Kamal, & Tewfik, 2006; Martorell et al., 2000; Yahia et al., 2008). The impact of these discourses on the adoption of healthy lifestyles needs to be further explored for its implications on public education and media campaigns. Because Western lifestyle and practices are embedded and part of daily lived experience of people in Qatar, to effectively promote healthy lifestyles, congruent with Kleinman's perspectives, promotional messages should be sensitive to the negotiation of the difference not merely between the East and the West, but more importantly how the process of negation between different and often competing ideologies and discourses influences people's everyday life and health care behaviors.

Participants acknowledged the significant influence of family and society on their decision making, but also emphasized an individual responsibility for one's own health and health care. Here, we see the process of negotiation between individualism and collectivism. Arab countries are collectivist societies, however, in which social relationships with others are central and thus interact with health behavior. Subjective norms, social support, and role modeling are ways in which health behavior can be influenced by significant others (Pasick & Burke, 2008). Therefore, a recommendation from a friend or family member to participate in healthy lifestyle activities is a major enabler (Lamyian, Hydarnia, Ahmadi, Faghihzadeh, & Aguilar-Vafaie, 2007; Petro-Nustas, 2001; Soskolne, Marie, & Manor, 2006). As suggested by the ecological perspective, if promotional and intervention strategies are to be

effective, they must pay attention to the other social determinants of health, they must address the issues at individual, family, and societal levels.

Health care providers and policymakers need to acknowledge women's strength and motivation, and empower them to attain and maintain a healthy lifestyle. Our participants recognized that Qatari women have become more educated, more aware of their health, and more orientated toward living a healthier lifestyle. Contrary to other studies' findings (Berger & Pearson, 2009; Shuval et al., 2008) that some Arab families do not value physical activity, all our participants indicated that they valued physical exercise and wanted to be healthy and fit despite their cardiac conditions and cultural restrictions. Thus, advice and counseling from health care providers should be contextual, realistic, and practical in relation to women's cultural, social, economic, and health status. While regular participation in exercise programs would be a preferred mode for all women, increased physical activity by any means should be acknowledged and strongly encouraged. Promotional messages should be encouraging without making women feel guilty. Women are quite creative in their ways of staying healthy (praying, doing housework, not being dependent on housemaids, and so on), thus, advice from health care providers should capitalize on this aspect.

Beliefs about nutrition and eating habits are rooted in cultural tradition and practices (Musaiger, 1993). Thus, multisectorial educational campaigns through the mass media should aim at modifying existing eating habits and beliefs about food (Musaiger et al., 1998). The Bener and Tewfik (2006) and Musaiger (1983) studies showed that food advertisements on television greatly influenced the dietary habits of Arab children, adolescents, and housewives. Public media campaigns through advertisements in TV programs, newspapers, magazines, and the Internet would be effective strategies to educate the public about healthy lifestyles (Jackson et al., 2010).

Studies have shown that healthy eating habits and a lower risk of obesity in an individual are often associated with a higher educational level of the individual's mother, the mother's awareness of the severity of health problems, and the mother's exposure to society (Bener & Tewfik, 2006, Musaiger, 1993). Women often plan the family meals, and their education concerning healthy cooking might be a long-term strategy to address obesity and its related diseases. Musaiger (1993) suggests that increased education and awareness alone, however, might not lead to healthy lifestyles.

The availability of health care programs and services is an important priority to ensure participation in healthy lifestyles by women of all social strata. Because Qatar is a multicultural society, health information will need to reach people in all of the different communities. Participants in this study strongly suggested that health care information should be available in hospital settings, community health clinics, and in private homes. It should be presented in a practical, concrete, culturally sensitive manner

and in a language understood by the people of Qatar. Harmful practices should be communicated to families, individuals, and especially to children. Participants recommended that promotion of physical activity, regular exercise, and abstinence from smoking should start early in life. They suggested that school-age children should be taught how to live a healthy lifestyle; they should be educated about the benefits and harmful consequences of lifestyle choices.

As religious principles and practices are very important in Middle Eastern societies, it is fortunate that the Islamic religion and culture promote physical health by encouraging nonsmoking behavior, a healthy diet, careful hygiene, and regular exercise (Hatefnia et al., 2010; Yosef, 2008). A previous study found that cultural and religious factors had a significant influence on adolescents' smoking behavior, especially among females (Islam & Johnson, 2003). It was obvious in the present study that following the rules of Islam, which discourage smoking, all participants perceived smoking as unacceptable behavior. As Kleinman (1978, 1980) pointed out, clients tend to reject services that are incongruous with their health care values and beliefs. Providers should learn to recognize and negotiate between different ways of viewing health and delivering health care. Thus, information and educational materials should relate health advice to Islamic teachings and Arabic women's health beliefs and values.

Participants in this study felt strongly that the best way to reduce smoking among Arab women was to increase awareness regarding the harmful effects of this habit for individuals who smoke, for family members, and for bystanders who inhale second-hand smoke. Participants wanted the state to take measures to prevent smoking in Qatar. Some participants recommended that the state should call for a strict control of smoking—that the state should develop a law that fines people for smoking because they are harming people's health. Although participants were emphatic about the need for a state regulation and strict law on banning smoking, at this time, considering taxation on cigarette and sheesha might be a more effective message/strategy on the seriousness of smoking as there is no tax for anything else in Qatar (Donnelly et al., 2011).

Limitations

The results of this qualitative study of 50 women cannot be generalized to all Arabic women living with cardiovascular disease in Qatar. Promotion of healthy lifestyles, however, can lead to a higher quality of life and the prevention and better management of cardiovascular diseases. We anticipate that the results of this research might impact health care policy as well as health care provision to women in Qatar. Our study's findings may also be applicable to other female populations in the Middle East and benefit women of similar ethnic and cultural backgrounds worldwide.

CONCLUSION

In this study of Arabic women in Qatar, we found that social, cultural, religious, environmental, and economic factors influence women's decisions to engage in activities that foster a healthy lifestyle. Our analysis determined that, from a woman's perspective, some aspects of these factors act as barriers and some act as facilitators or motivators. In the present study, the Arabic women's conceptualization of healthy lifestyle, disease, and illness was, to some extent, culturally specific (for example, the notion that diseases are predetermined by a higher power). Their ways of preserving their health, however, also reflect the discourse and practices of Western biomedicine.

Based on this analysis, we recommend intervention strategies to promote healthy behaviors among Arab women living in the State of Qatar. Information about desirable health practices can be disseminated through women's informal and formal social support networks, public educational programs and services, and the media. Health professionals should be educated to encourage patients to exercise in recreational facilities or at home, considering the women's health condition and socioeconomic status. Every effort should be made to support and to encourage women to take charge of their health.

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