

Food Frequency Intake and Lifestyle among Patients attending Out-Patient Clinics in Qatar: A Preliminary Study

Abdulrahman O.Musaiger, DrPH*
Ahmed A. Al-Mulla, DrPH**

The objective of this study was to find out some risk factors that may be related to occurrence of chronic diseases among patients attending out-patient clinics in Qatar. All adult patients (20 years and over) attending the out-patient clinics in Hamad General Hospital for one week between 8 am and 12 pm were included. The total sample was 243 men and 214 women. The findings revealed that the daily consumption of fresh vegetables and fruits was low among both Qataris and non-Qataris. The proportion of current smokers was 28% in Qatari and 45% in non-Qatari men, while none of Qatari women reported smoking compared to 7.9% of non-Qatari women. The practising of exercise was relatively high compared to other Gulf countries, ranged from 33.7% to 51.6%. This is because of two reasons; Firstly, the high proportion of chronic diseases among the patients and therefore they may be advised by the physicians to practise exercise to control these diseases. Secondly, the unclear definition of exercise which lead to obtaining misleading answers. Watching television for a long time (more than 3 hours/day) was observed among both Qataris and non-Qataris. However, the Qataris were more likely to watch television for a long duration than non-Qataris. Further comprehensive studies are urgently needed to explore the main risk factors associated with chronic non-communicable diseases in Qatar.

Bahrain Med Bull 1998;20(3): 111-3

In Qatar, as in other Arab Gulf countries, where a rapid change in food habits and living standards has occurred over the past 30 years, chronic non-communicable diseases have emerged as the main causes of morbidity and mortality. Trends in leading causes of deaths in Qatar at present resemble those reported for developed countries, as 34% of total deaths were due to circulatory system diseases, and 12% were due to neoplasms¹.

Risk factors for chronic non-communicable diseases in Qatar have not been well investigated. A study on risk factors for cardiovascular diseases among women attending health centers in Qatar showed that very few women were current smokers (3.2%), but 37.7% of married women have smoker husbands. Using Body Mass Index (BMI), 30% of women were overweight (BMI 25-29.9) and 33.6% were obese (BMI \geq 30). Only 16% of women reported practising exercise regularly².

The present preliminary study was carried out to explore the risk factors that may be associated with occurrence of chronic diseases and to find out the association of age, sex and nationality with these factors among patients attending out-patient clinics in Qatar.

METHODS

Data of this study were obtained from patients attending

out-patient clinics attached to Hamad General Hospital in Qatar. This hospital is the only governmental hospital in Doha, the capital of Qatar. All patients aged 20 years and over who attended the out-patient clinics between 8 am and 12 pm for the period of one week were interviewed and included in the study. The total sample was 457 (243 male and 214 female). Non-response was not reported.

The patients were interviewed by health workers using a pretested questionnaire. Information on socio-demographic background of the patients, frequency intake of specific foods and lifestyle patterns were collected.

Marital status was classified as currently un-married and currently married. Employment status was grouped into unemployed (include housewife), and employed. Any person who consumed one or more cigarettes a day was considered as current smoker, while non-smokers are those who do not smoke or former smokers.

Data were analysed using Epi-Info programme³. Chi-Square was used to test the statistical association between demographic variables and lifestyle patterns.

RESULTS AND DISCUSSION

The demographic characteristics of patients attending out-patient clinics are presented in Table 1. The majority of patients were married and the proportion was higher among

* Director
Environmental & Biological Programme
Bahrain Center for Studies and Research
State of Bahrain

** Hamad General Hospital
Doha, Qatar

men than women. The association between marital status and sex was statistically significant for both Qataris ($p<0.05$) and non-Qataris ($p<0.000$). Of patients, 74% and 94.6% of Qatari and non-Qatari men were employed, whereas the percentages among women were 20.8% and 31.5%, respectively. The high percentage of employment in non-Qataris is expected, as these represent the expatriates who came to Qatar for better paid jobs, and they are mostly Arabs and Asians.

Table 1. Demographic characteristics of adults attending out-patient clinics in Qatar by sex and nationality

Characteristics	Qatari		Non-Qatari	
	Male (150)	Female (125)	Male (93)	Female (89)
Marital Status				
Currently single	15.3	24.8*	3.2	24.7*
Currently married	84.7	75.2	96.8	75.3
Employment				
Unemployed	25.3	79.2**	5.4	68.5**
Employed	74.7	20.8	94.6	31.5
Education level				
Illiterate	28.7	30.4	29.1	18.4*
Primary	12.7	8.8	8.6	9.0
Intermediate	17.3	16.0	16.1	9.0
Secondary	31.3	25.6	14.0	32.6
University	10.0	19.2	32.2	30.0

* <0.05 **<0.000

Interestingly, the percentage of illiteracy among Qataris and non-Qataris was the same, but for women, the Qataris had a significantly higher proportion of illiteracy compared to non-Qataris (30.4% and 18.4%, respectively). The relatively high percentage of illiteracy among non-Qatari men may be due to low socio-economic status of non-Qataris, especially the labours who came from the Indian-sub continent, and working in low social occupations.

Table 2. Food frequency intake by adult Qatari patients attending out-patient clinics in Qatar

Food	Sex	Rarely or				P. Value
		Daily %	4-6/wk %	1-3/wk %	None %	
Vegetables	M	11.3	64.7	22.7	1.3	0.000
	F	4.8	42.4	49.6	3.2	
Fruits	M	14.0	58.0	26.7	1.3	0.000
	F	10.4	34.4	44.8	10.4	
Red Meat	M	7.3	60.7	31.3	0.7	0.000
	F	0.0	45.6	43.2	11.2	
Chicken	M	4.7	60.0	33.3	2.0	N.S
	F	4.8	71.2	27.3	4.8	
Fish	M	12.0	36.0	47.3	4.7	0.000
	F	1.6	38.4	44.0	16.0	
Pulses	M	3.3	44.7	42.7	9.3	0.000
	F	1.6	10.4	39.2	48.8	
Brown Bread	M	2.0	33.3	44.0	20.7	0.000
	F	5.6	6.4	26.4	61.6	

The daily consumption of fresh vegetables and fruits was low among Qataris. About 11% of men and 5% of women consumed fresh vegetables daily. The corresponding figures for fresh fruits were 14% and 10%, respectively. Additionally, a relatively high percentage of Qataris rarely or never consumed fresh fruits (10%), as shown in Table 2. Similar

findings were reported for non-Qataris, but the proportion of men who consumed fresh vegetables and fruits was higher (24.7% and 16.1%, respectively), as presented in Table 3. These results are alarming as fresh vegetables and fruits are a good source of many vitamins and minerals, as well as dietary fiber. It is recommended that an adult should consume at least two to four servings of fruits and a similar number of servings of vegetables per day. In general, the consumption of foods rich in dietary fiber such as vegetables, fruits, legumes and brown bread is low in both nationalities. The association between the intake of high-fiber foods, and occurrence of some chronic non-communicable diseases is well documented⁴. A case-control study in Bahrain showed that patients with myocardial infarction tended to consume fresh fruits and vegetables less frequently per week than community control subjects⁵.

Table 3. Food frequency intake by adult non-Qatari patients attending out-patient clinics in Qatar

Food	Sex	Rarely or				P. Value
		Daily %	4-6/wk %	1-3/wk %	None %	
Vegetables	M	24.7	23.7	50.5	1.1	0.000
	F	3.4	50.6	38.1	7.9	
Fruits	M	16.1	21.5	58.1	4.3	0.000
	F	4.5	52.8	34.8	7.9	
Red Meat	M	8.6	41.9	46.2	3.3	0.000
	F	1.1	48.3	40.5	10.1	
Chicken	M	6.5	33.3	58.0	2.2	N.S
	F	1.0	15.9	64.1	1.0	
Fish	M	19.4	36.6	41.9	2.1	0.000
	F	1.1	50.6	28.1	20.2	
Pulses	M	16.1	26.9	41.9	15.1	0.000
	F	2.2	58.5	25.8	13.5	
Brown Bread	M	6.5	43.0	31.1	19.4	0.000
	F	2.2	39.4	14.6	43.8	

Women were less likely to consume red meat and fish than men, in both Qataris and non-Qataris. This finding is in contrast with that reported by Musaiger and Abuirmeleh⁶ in the United Arab Emirates, as the proportion of intake of meat and fish was almost equal among native men and women.

Smoking is one of the risk factors for several chronic diseases. The prevalence of smoking in the Gulf countries has increased more steeply but from a higher level in men than among women⁷. The proportion of current cigarette smokers was higher among non-Qatari (45%) than Qatari men (28%),

Table 4. Age specific and overall proportion (%) of smoking and practising exercise by sex and nationality in adults attending out-patient clinics in Qatar

Age (yrs)	Nationality	% smoking		% practising exercise	
		Male	Female	Male	Female
20-39	Qatari	32.1	0.0	42.3	46.3
	Non-Qatari	55.0	5.6	45.0	38.0
40+	Qatari	23.9	0.0	40.8	25.7
	Non-Qatari	37.0	12.9	55.5	29.0
Total	Qatari	28.0	0.0	41.3	36.8
	Non-Qatari	45.2	7.9	51.6	33.7

whereas none of the Qatari women reported smoking cigarette, compared to 7.9% of non-Qatari women who were current smokers (Table 4). It is important to mention that many Qatari women smoke water-pipes, as this practice is socially accepted in the Arab Gulf countries. However, those women do not consider such habits as smoking cigarettes, and therefore they did not report smoking water-pipes.

The percentage of smoking among Qatari men in this study was close to that reported among adult men in Bahrain, 32%⁸, the United Arab Emirates, 28%⁹, and Oman, 27%¹⁰.

There is some evidence that regular physical activity protects against coronary heart diseases, hypertension, stroke, osteoporosis and possibly non-insulin-dependent diabetes¹¹. Practising exercise was relatively high in this study, compared to other studies in the Arab Gulf countries⁸. This is because most of the patients had chronic diseases such as a diabetes, hypertension and heart diseases (not shown in table), and were probably advised to practise exercise to control these chronic diseases. However, many people are confused by the word exercise, as they consider that any physical activity is a kind of exercise. It is highly recommended that the question of exercise should be examined in detail to get precise information on exercise habits in the Arab Gulf communities.

The link between watching television and occurrence of over-weight has become more evident². This is due to the long duration for watching television per day and the types of food consumed during watching. The majority of Qatari and non-Qatari adults watched television more than three hours per day. However, Qataris were more likely to watch television for a longer duration than non-Qataris. About 19% of Qatari men watched television more than four hours a day, compared to 40% in women; the corresponding figure

for non-Qataris were 27% and 32%, respectively. The difference in watching television between Qatari men and women was statistically significant (Table 5).

CONCLUSION

In conclusion, this preliminary study revealed that risk factors for chronic non-communicable diseases such as low intake of high fiber foods, smoking and sedentary lifestyle are prevalent among patients attending out-patients clinics in Qatar. It is highly recommended, therefore, to carry-out in depth studies on the prevalence of diet-related non communicable diseases and the risk factors associated with these diseases. At the same time, programmes to prevent and control such diseases should be established as soon as possible.

REFERENCES

- Hassan AS, Musaiger AO. Nutrition-related chronic diseases in Qatar. In: Musaiger AO, Miladi S, eds. Diet-related Non-communicable diseases in the Arab countries of the Gulf. FAO regional office for Near East, Egypt: Cairo, 58-72.
- Musaiger AO. Risk factors for cardiovascular diseases among women attending health centres in Qatar. *Emir J Agric Sci* 1994;6:36-8.
- WHO/CDC. Epi-Info Software Programme. World Health Organization, Geneva:1990.
- WHO. Diet, Nutrition and the prevention of chronic diseases. Technical Report series No. 797. World Health Organization, Geneva:1990.
- Al-Roomi K, Musaiger AO, Al-Awadi A. Lifestyle patterns and the risk of acute myocardial infarction in a Gulf Arab population. *Int J Epid* 1994;23:931-9.
- Musaiger AO, Abuirmeleh N. Food consumption patterns of adult population in the United Arab Emirates. *J Royal Soc Hlth* 1998;118:146-50.
- Hamadeh RR, McPherson K, Doll R. Prevalence of smoking in Bahrain. *Tobacco Control* 1992;1:102-6.
- Musaiger AO, Al-Roomi K. Prevalence of risk factors for cardiovascular diseases among men and women in an Arab Gulf community. *Nutrition and Health* 1996;11:149-57.
- Musaiger AO. Food consumption patterns and chronic diseases in adult Emirati population. Bahrain Centre for Studies and Research, Bahrain:1998.
- Musaiger AO. Health and Nutrition status of Omani families. UNICEF, Oman: Muscat:1992.
- International Life Sciences Institute. Healthy lifestyle, nutrition and physical activity. ILSIEurope, Belgium:1998.

Table 5. Hours of watching the television by adults attending out-patient clinics in Qatar

Nationality & sex	None or rarely		Hours of watching television/day						P value
	No.	%	1-2		3-4		5+		
			No	%	No	%	No	%	
Qatari									
Male	5	3.4	41	27.1	76	50.6	28	18.9	
Female	12	9.9	27	21.5	35	28.1	51	40.5	0.000
Non-Qatari									
Male	7	7.3	32	34.4	29	31.2	25	27.1	
Female	8	9.0	33	37.1	19	21.4	29	32.5	NS