

# **PREVALENCE AND CORRELATES OF MAJOR CHRONIC ILLNESSES AMONG OLDER KUWAITI NATIONALS**

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## **Background and Objectives**

Lifestyles have been changing rapidly in Kuwait as the country has developed over a period of 50-60 years from a simple desert tribal community to a wealthy, modern society founded on an oil-based economy, with rapid advancements in the educational and health sectors. Major socio-demographic changes are taking place in the country. Among nationals aged less than 40 almost all are now literate with almost no gap between the sexes. In the past 35 years, fertility has declined from a total fertility rate of about 7 to 4.1, and about half of all women in reproductive ages are current contraceptive users. Life expectancy has increased to about 77 years while infant mortality is now 8.1 per 1000 live births. With the increase in life expectancy, the salience of chronic illnesses as contributors to morbidity and mortality is increasing. The objective of this paper is to provide community based information on the prevalence of major chronic illnesses, namely diabetes, hypertension and heart disease, and draw an epidemiological picture of the significant socio-demographic and behavioral patterns associated with such illnesses. A better understanding of such correlates is necessary for identifying the relatively higher risk groups who may be approached for the requisite health education and intervention programs.

## **Data and Preliminary Results**

A national health survey conducted in 1996 indicated the self-reported prevalence of diabetes, hypertension, and heart disease among persons aged 50 and over to be 34%, 27% and 12%, respectively (Al-Nisf and Farid, 1996). Ten years later, information on the above diseases was collected in a household survey conducted by the authors in two (out of the 6) subdivisions of the country of Kuwait. These two governorates were selected to represent the urban vs. rural characteristics of the population which may be considered to sufficiently represent the country. The survey included 2487 individuals aged 50 and older who were assessed by a face-to-face interview. The respondents were interviewed in their household and asked about whether they had been diagnosed by a doctor with

specific illnesses. Anthropometric data were collected and several lifestyle related questions were asked.

The prevalence of the three diseases in our survey was found to be 51% for diabetes, 53% for hypertension and 18% for heart disease, respectively, indicating a remarkable increase in the prevalence of the chronic diseases since 1996. Table 1 shows the age and sex breakdown of the prevalence of the three diseases. There was a linear increase in the prevalence of each of the three diseases by age in males and females. Among males aged 70+, almost two-thirds suffered from diabetes or hypertension while one-third had heart disease. Among women aged 70+, the prevalence of hypertension and diabetes was higher than among men while the percentage who had heart disease was lower among women than men (26% and 34%, respectively).

The three chronic illnesses addressed in this paper were significantly correlated with each other. The combined prevalence of the three diseases is shown in Table 2. With increasing age, co-morbidity of the three diseases increased markedly. For example, among those aged 50-59, about 11-12 % had either diabetes or hypertension while 15% had both hypertension and diabetes. Among those aged 70+, on the other hand, 8-10% had either diabetes or hypertension while 37% had both the diseases. The percentage of those with all three diseases increased from 4% among those aged 50-59 to 9% among those aged 60-69 and 21% among those aged 70+.

We are in the process of analyzing the following correlates of the three chronic illnesses by using logistic regression. The analysis will be done for each of the three diseases separately and also for those persons reporting all three diseases.

#### Socio-demographic factors

- Educational background
- Ethnic background (Bedouin/non-Bedouin)
- Occupational activity
- Per capita income
- Marital status
- Consanguinity

#### Behavioral factors

- Smoking
- Exercise during a week
- Obesity (measured by BMI)

Table 1. Self-reported, doctor-diagnosed prevalence of major chronic illnesses among men and women by age

Age	Men		Women		Total	
	%	(n)	%	(n)	%	(n)
<u>Diabetes</u>						
50-59	30.7	241	32.0	628	31.6	869
60-69	50.8	333	55.1	477	53.3	810
70+	67.0	391	69.3	417	68.2	808
All ages 50+	52.3	965	49.5	1522	50.6	2487
<u>Hypertension</u>						
50-59	27.0	241	34.1	628	32.1	869
60-69	51.7	333	63.7	477	58.8	810
70+	64.5	391	77.0	417	70.9	808
All ages 50+	50.7	965	55.1	1522	53.4	2487
<u>Heart Diseases</u>						
50-59	9.1	241	6.8	628	7.5	869
60-69	15.9	333	16.1	477	16.0	810
70+	33.5	391	25.9	417	29.6	808
All ages 50+	21.3	965	15.0	1522	17.5	2487

Table 2. Combined prevalence of diabetes, hypertension and heart disease by age and sex (percentages)

<u>Co-morbidities</u>	<u>Age 50-59</u>		
	Males (n=241)	Females (n=628)	Total (n=869)
Have:			
Diabetes only	11.6	11.3	11.4
Hypertension only	9.5	13.2	12.2
Heart disease only	1.2	1.6	1.5
Diabetes + hypertension	11.6	16.7	15.3
Diabetes + heart disease	2.1	1.1	1.4
Hypertension + heart disease	0.4	1.3	1.0
All three diseases	5.4	2.9	3.6
	<u>Age 60-69</u>		
	Male (n=333)	Female (n=477)	Total (n=810)
Have:			
Diabetes only	12.0	11.3	11.6
Hypertension only	12.6	17.4	15.4
Heart disease only	3.0	1.9	2.3
Diabetes + hypertension	28.2	32.9	31.0
Diabetes + heart disease	2.1	0.8	1.4
Hypertension + heart disease	2.4	3.4	3.0
All three diseases	8.4	10.1	9.4
	<u>Age 70+</u>		
	Male (n=391)	Female (n=417)	Total (n=808)
Have:			
Diabetes only	11.3	4.8	7.9
Hypertension only	9.5	11.3	10.4
Heart disease only	4.3	3.1	3.7
Diabetes + hypertension	29.4	44.1	37.0
Diabetes + heart disease	3.6	1.2	2.4
Hypertension + heart disease	2.8	2.4	2.6
All three diseases	22.8	19.2	20.9