

letters

Overweight and obesity among attendees of primary care clinics in a university hospital

To the Editor: Obesity is a rapidly escalating problem in modern society. It has a complex genetic, environmental and behavioral etiology for which there is no simple, or single solution.¹ The WHO estimated that by 2020 noncommunicable diseases will become the principal global causes of morbidity and mortality.² Obesity is a risk factor for several chronic diseases, including hypertension, dyslipidemia, diabetes, cardiovascular diseases, sleep apnea, and osteoarthritis.³ Obesity levels have risen sharply in Australia, the USA, Canada and Europe.^{1,2} In Australia over 65% of men and 53% of women are overweight or obese.¹ In 2000, 64.5% of American men and women were overweight, of which 30.5% were obese.⁴ However, recent reviews have reported significant increases in the prevalence of overweight and obese individuals in developing countries.^{2,5} Obesity is an epidemic all around the world, including Saudi Arabia.⁶⁻¹¹

The National Epidemiological

Household survey was conducted more than 10 years ago for the purpose of studying the prevalence of overweight and obesity among Saudi subjects over the age of 15 years in different regions of Saudi Arabia.¹² The survey showed a high prevalence of overweight and obesity among Saudi subjects. The prevalence of overweight among male subjects was significantly higher than for female subjects (29% vs. 27%), and the prevalence of obesity among female subjects was significantly higher than for male subjects (24% vs. 16%). Another National Epidemiological Health survey was conducted between 1995 and 2000.¹³ This community-based survey showed an alarmingly high prevalence of metabolic syndrome in Saudi Arabia. Metabolic syndrome increases the burden of coronary artery diseases and other disorders.¹³

Saudi Arabia has gone through significant changes in nutritional and lifestyle habits over the last four decades. Such changes are expected to have an impact on the magnitude of chronic diseases in the society, among them, obesity.^{10,12}

The present cross-sectional

study was designed to estimate the prevalence of overweight and obesity among males and females attending primary care clinics at King Khalid University Hospital in Riyadh, Saudi Arabia over a one-month period from 22 April to 22 May 2006. All males and females patients attending the primary care clinics were included in the study. Any patient who could not stand on the scale because of a handicap was excluded. Weight and height for both males and females patients were taken by 11 nurses working under the supervision of the 2 head nurses. The average number of clinics was 6 in the female section and 5 in the male section. The data recorded by the nurses included hospital number, sex, age, weight, and height. Body mass index (weight in kilograms divided by height in meters squared) was defined as shown in Table 1. Data were analyzed using the Statistical Package for Social Science (SPSS) version 11.5 and a *P* value less than 0.05 was considered statistically significant. Of the 3205 adult patients, 40% were male and 60% were female. Table 1 shows BMI by age group and sex, indicat-

Table 1. Age, sex and body mass index in 3205 adult patients attending primary care clinics.

Body mass index	Normal (< 25)	Overweight (25 to <30)	Obesity class 1 (30 to <35)	Obesity class 2 (35 to <40)	Morbid obesity (≥40)	Total	<i>P</i> value
	N (%)*	N (%)*	N (%)*	N (%)*	N (%)*		
Age (years)							.0001
12 to <20	161 (60.3)	50 (18.7)	31 (11.6)	16 (6)	9 (3.4)	267	
20 to <40	254 (26)	298 (30.5)	234 (24)	102 (10.4)	89 (9.1)	977	
40 to <60	142 (9.5)	453 (30.4)	463 (31.1)	274 (18.4)	159 (10.7)	1491	
≥60	79 (17)	167 (36)	127 (27.4)	65 (14)	26 (5.6)	464	
Sex							.0001
Male	297 (23.2)	511 (40)	303 (23.7)	110 (8.6)	58 (4.5)	1279	
Female	341 (17.7)	459 (23.8)	553 (28.7)	347 (18)	226 (11.7)	1926	
Total	638 (19.9)	970 (30.3)	856 (26.7)	457 (14.3)	284 (8.9)	3205	

* Percentage by BMI category.

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ing statistically significant differences between groups.

Variance prevalence rates between the National Community Survey and the present study might be explained because the current study was done in hospital based primary care setting, which might limit generalization of the result to the community, or because the prevalence of overweight and obesity has increased during the last decade as the national survey was done more than 10 years ago. The rapid socio-economic development during the past four decades in Saudi Arabia has been accompanied by lifestyle changes where high calorie diet and diminished physical activity are the fundamental components of lifestyle contributing to an increased prevalence of obesity and associated diseases.^{10,12} Other studies done at primary care centers to determine the prevalence of obesity among Saudi males in the Riyadh region during May and June 1994 showed that only 36.6% of Saudi males were their ideal weight (BMI <25), while 34.8% were overweight (BMI=25-29.9), 26.9% were moderately obese (BMI=30-40), and 1.7% were morbidly obese (BMI >40).⁶ A cross-sectional study of 1385 Saudi females attending 15 health centers in urban and rural areas in the Riyadh region conducted during September and October 1992 showed that only 26.1% of subjects were their ideal weight (BMI <25), while 26.8% were overweight (BMI 25-29.9), 41.9% were moderately obese (BMI 30- 40), and 5.1% were morbidly obese (BMI >40).⁷ Bad dietary habits, such as eating high fat/high energy food can contribute to obesity in adolescence, which tends to persist into adulthood. A cross-sectional study to determine the level and sources of knowledge about foods and healthy diets among male and female adolescents in the Al-Khober

Area, eastern province of Saudi Arabia, showed that knowledge of healthy diets among school students was inadequate, and that the main sources of knowledge about health and disease reported by the male and female respondents were television (58% and 61%, respectively), magazines (31% and 39%) and the daily news paper (33% and 34%). Primary health care center staff were the least source of knowledge (17% and 16%). The study recommended that health education and information about healthy eating habits and lifestyle be included in school curricula.¹⁴

Successful management of overweight and obesity depends on a systematic approach. Consistent use of such a system identifies patients who would benefit from nutritional counseling, because the behaviors that increase a patient's risk for related morbidity and mortality are rarely what bring a patient to the clinic. That is, patients rarely present with the complaint that they have trouble eating a healthy diet. They are more likely to present with the sequelae of poor nutrition, such as weight gain, or even with symptoms of diabetes mellitus, or a routine evaluation may detect increased blood pressure or an elevated low density lipoprotein (LDL) cholesterol level. An approach that includes a system for assessing behavioral risk factors, especially when such conditions are present, is essential. In addition, the use of such an approach conveys to the patient that his or her physician takes proper nutrition and adequate physical activity seriously as components of a health- promoting lifestyle. The process of care (including the patient-physician relationship) and the systems that support it can improve the quality of care.⁴

In conclusion, family physicians have a key role and responsibility in preventing overweight in the com-

munity, and helping obese patients to loss weight and improve their health.

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