Weight Loss Attempts among Kuwaiti Adults Attending the Central Medical Nutrition Clinic

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Key Words

Obesity • Weight loss attempts • Weight loss perception

Abstract

Objectives: To investigate the reasons for attempting to lose weight and identify weight loss perception and characteristics. **Methods:** A cross-sectional survey of a sample of 526 Kuwaiti adults was carried out at the Central Medical Nutrition Clinic, Kuwait, from August to December 2003. Heights and weights were measured and body mass index (BMI) was calculated and classified according to WHO grades of obesity. A structured questionnaire used for collecting data was analyzed using SPSS version 12.0. **Results:** Of the 526 subjects, the most commonly cited reasons for attempting to lose weight were to avoid health problems ($n = 248$, 47.1%) followed by improving personal appearance ($n = 141$, 26.8%). The weight loss perceptions of 263 (50%) of the subjects were within the accepted range (2–5 kg/month); 321 (61.0%) had previously attempted to lose weight, among them 147 (45.8%) followed the advice of doctors and dieticians. The major reason mentioned for stopping the previous dietary regime was inability to resist sweets and traditional foods ($n = 99$, 31.0%) followed by dissatisfaction with the dietary outcome ($n = 79$, 24.8%). **Conclusion:** The study confirms an awareness of the health risks of obesity, but an inability among the dieters to maintain a weight loss program. Hence,

behavioral management techniques may be necessary to develop nutritional education approaches and effective weight management strategies.

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Introduction

Obesity may be described as the ‘New World Syndrome’. Its prevalence is on continuous rise in all age groups in many developed and wealthy developing countries. Statistical data reveal that the problem of obesity has increased from 12 to 20 and 16 to 25% in men and women, respectively, over the last 10 years [1].

Obesity has been on the increase among people of the Arabian Gulf countries, reaching epidemic proportions, and remains a major nutritional public health problem [2, 3]. According to previous studies, obesity in Kuwait is increasing and is the highest among the Gulf countries, even higher than in some European countries [4–7]. It is known that obesity is a risk factor for a variety of diseases, including diabetes, hypertension, some forms of cancer, cardiovascular and kidney diseases and gall bladder disorders, which are also prevalent in Kuwait [8]. The widespread concern about being overweight has increased the prevalence of weight change attempts in populations [9]. Attempting weight loss is a common behavior regard-

less of age, gender or ethnicity [10]. For many overweight persons, achieving and maintaining a healthy weight is a lifelong challenge.

Studies have shown that there is a general consensus that the best treatment regimen is a combination of energy intake reduction and regular exercise [11]. The benefits of physical activity, diet and weight control, which can be influenced by many personal, psychosocial, and environmental factors that have been identified as barriers in following a healthy diet and exercise regimen, are well described in the literature [11].

Although weight control measures are in the public interest, little national data on weight loss practices and specific aspects of this behavior in the general population are available in Kuwait. Therefore, the present study was conducted to investigate the reasons and identify weight loss perceptions and characteristics of those attempting to lose weight.

Subjects and Methods

Subjects

A cross-sectional survey method was followed for the study. Kuwaiti adults formed the study population, and the study was conducted at the Central Medical Nutrition Clinic, a government clinic under the Ministry of Health. This clinic receives patients from the entire state of Kuwait, as it is the main Medical Nutrition Clinic. It provides services to the patients who require diet therapy or counseling for diet modification. Generally, anthropometric measurements and complete blood count are obtained for all registered patients. The study was explained to the patients and verbal consent to participate was obtained. Patients were selected from the outpatient clinic from August to December 2003, proportionate to the total number of overweight and obese served by the center during the entire year. Of the 616 patients recruited for the study, 90 were excluded because of age (<18 years old) and a BMI of <25. Thus, the analytical sample consisted of 526 adults (423 females and 103 males) who visited the outpatient clinic during the study period. The number of samples for females was greater than for males, as generally more females attend the clinic.

Survey Tool

The survey tool consisted of actual height and weight measurements and a questionnaire. Height and weight were measured without shoes; height to the nearest 0.1 cm and weight to the nearest 0.1 kg using an electronic SECA scale, model 220. All measurements were taken during working hours (8–12 noon) to avoid variation. Body mass index (BMI), weight in kg/(height in m)², was calculated and classified as per WHO classification, i.e. overweight ≥ 25 , obese ≥ 30 and morbidly obese ≥ 40 .

A modified version of a structured questionnaire, pretested for reliability and validity was used for demographic information: age, gender, education, occupation, marital status, reasons for attempting weight loss, weight loss perceptions and characteristics

Table 1. Demographic characteristics

	Patients (n = 526)	
	n	%
Age (mean age = 36.0 years)		
<30 years	174	33.0
30–39 years	165	31.4
≥ 40 years	187	35.6
Gender		
Male	103	19.6
Female	423	80.4
Marital status		
Unmarried	126	24.0
Married	400	76.0
Education		
Up to secondary	226	43.0
Diploma	146	27.8
Graduation and above	154	29.3
Occupation		
Employed	281	53.4
Unemployed	245	46.6
BMI (mean BMI = 34.2)		
≥ 25 (overweight)	145	27.6
≥ 30 (obese)	304	57.8
≥ 40 (morbidly obese)	77	14.6

of weight loss attempts. The subjects themselves completed the questionnaire with assistance by the principal investigator and other trained technicians to clarify doubts and difficulties.

Data Analysis

The collected data were grouped and analyzed using Statistical Package for Social Sciences, v12.0. In addition to descriptive statistics, the χ^2 test was used to assess the association between categorical variables and trend. Fisher's exact test, Kruskal-Wallis test and Mann-Whitney test were also used for analysis.

Results

The demographic attributes of the subjects are summarized in table 1. Of the 526 subjects, 423 (80.4%) were females; 400 (76.0%) were married and 77 (14.6%) morbidly obese. Almost equal percentages were from three age groups studied.

Reasons for Attempting to Lose Weight

The most commonly cited reasons for attempting to lose weight (table 2) were to avoid health problems (n = 248, 47.1%) and improve personal appearance (n = 141, 26.8%). No significant gender-specific differences were found in reasons to attempt to lose weight. Significant

Table 2. Association of reasons for attempting to lose weight and demographic variables

	Total		Reasons for attempting to lose weight								p value
	n	%	AHP		PA		DA		OR		
			n	%	n	%	n	%	n	%	
Subjects	526	100	248	47.1	141	26.8	56	10.6	81	15.5	<0.001
Age ^a											
<30 years	174	100	49	28.2	71	40.8	12	6.9	42	24.1	
30–39 years	165	100	79	47.9	42	25.5	23	13.9	21	12.7	
≥40 years	187	100	120	64.2	28	15.0	21	11.2	18	9.6	0.825
Gender											
Male	103	100	45	43.7	28	27.2	12	12.6	17	16.5	
Female	423	100	203	48.0	113	26.7	43	10.2	64	15.1	<0.001
Marital status ^b											
Unmarried	126	100	40	31.7	57	45.2	5	4.0	23	19.0	
Married	400	100	208	52.0	84	21.0	51	12.8	57	14.3	0.037
Education ^b											
Secondary	226	100	116	51.3	48	21.2	31	13.7	31	13.7	
Diploma	146	100	57	39.5	48	32.9	12	8.9	28	19.2	
Graduation+	154	100	75	48.7	45	29.2	12	7.8	22	14.3	0.459
Occupation											
Employed	281	100	25	44.5	79	28.8	33	11.7	40	14.9	
Unemployed	245	100	23	50.2	60	24.5	23	9.4	39	15.9	0.033
BMI ^b											
Overweight	145	100	69	47.6	47	32.4	5	4.1	23	15.9	
Obese	304	100	136	44.7	79	26.0	40	13.2	48	16.1	
Morbidly obese	77	100	43	55.8	15	19.5	10	13.0	9	11.7	

AHP = Avoid health problem; PA = personal appearance; DA = doctor's advice; OR = other reasons (family/social pressure; avoid insults; start a new job; about to marry; planning for pregnancy; a particular occasion; set an example of healthy weight for my family).

^a p value based on χ^2 for trend; ^b p value based on χ^2 test.

differences in reasons for attempting to lose weight were found between the different categories of marital status ($p < 0.001$), education ($p < 0.04$), and BMI ($p < 0.03$). Differences were found between subjects who attempted to lose weight to avoid health problems: 208 (52.0%) of married subjects compared to 40 (31.7%) of unmarried subjects, 116 (51.3%) of subjects with a secondary education compared to 75 (48.7%) of subjects with a university degree and above. Forty-seven (32.4%) of overweight subjects compared to 15 (19.5%) of morbidly obese subjects attempted to lose weight for personal appearance. Fewer participants, 5 (4.1%) of overweight subjects compared to 40 (13.2%) of obese subjects and 10 (13.0%) of morbidly obese subjects, attempted to lose weight according to doctor's advice.

Differences in trend were significantly associated with different age groups ($p < 0.001$), where 120 (64.2%) of the ≥40-year-olds compared with 49 (28.2%) of the <30-

year-olds were attempting to lose weight to avoid health problems.

Weight Loss Perceptions

The perception of 263/526 (50%) subjects was within the accepted range of weight reduction of 2–5 kg/month (table 3). Highly significant differences ($p = 0.004$) in weight loss perceptions were noted among different age groups; while 26 (13.9%) of ≥40-year-olds perceived <2 kg/month as normal weight reduction, the same perception was shared by only 10 (5.7%) of <30-year-olds and 7 (3.6%) of 30- to 39-year-olds. There was no association between the other demographic variables and perception of weight loss.

Characteristics of Weight Loss Attempts

The characteristics of weight loss attempts and association of demographic variables are given in table 4. Of

Table 3. Association of perception of weight loss per month and demographic variables

	Total		Perception of weight loss per month						p value
			<2 kg		2–5 kg		≥5 kg		
	n	%	n	%	n	%	n	%	
Subjects	526	100	42	8.0	263	50.0	221	42.0	0.004
Age ^a									
<30 years	174	100	10	5.7	90	51.7	74	42.5	
30–39 years	165	100	7	3.6	82	49.7	77	46.7	
≥40 years	187	100	26	13.9	91	48.7	70	37.4	0.071
Gender									
Male	103	100	11	11.7	41	40.8	50	47.6	
Female	423	100	30	7.1	221	52.2	172	40.7	0.706
Marital status									
Unmarried	126	100	9	7.1	67	53.2	51	39.7	
Married	400	100	32	8.3	196	49.0	171	42.8	0.343
Education									
Secondary	226	100	17	10.6	108	47.8	94	41.6	
Diploma	146	100	22	6.2	72	49.3	65	44.5	
Graduation+	154	100	2	5.8	83	53.9	62	40.3	0.734
Occupation									
Employed	281	100	20	7.1	142	50.5	119	42.3	
Unemployed	245	100	22	9.0	121	9.4	102	41.6	0.088
BMI									
Overweight	145	100	17	11.7	73	49.7	56	38.6	
Obese	304	100	22	7.6	156	51.3	125	41.1	
Morbidly obese	77	100	2	2.6	35	45.5	40	51.9	

^a p value based on χ^2 test.

the 526 subjects, 321 (61.0%) had made previous attempts to lose weight. Significant differences in trends were noted for gender ($p < 0.001$) and marital status ($p < 0.05$), where 275 (65.0%) of females compared to 46 (44.7%) of males, 254 (63.5%) of married compared to 67 (53.2%) of unmarried subjects had made previous weight loss attempts.

The source of information for previous attempts at weight loss is given in table 5. Of the 321 subjects that had attempted weight loss previously, 147 (45.8%) followed the advice of doctors and dieticians. Significant differences ($p = 0.003$) were noted among the different age groups, where 67 (56.3%) of ≥40-year-olds followed diets prescribed by doctors and dietitians. On the other hand, the majority ($n = 61$, 63.5%) of <30-year-olds followed diets by other means such as magazines, internet, friends, etc. No significant association was found for gender, marital status, education and BMI. But significant differences in trend ($p = 0.043$) were noted between the person who prescribed the diet and the occupation of the participants: 77 (52.0%) of the unemployed patients followed

the diet prescribed by the doctors and dieticians compared to 70 (40.5%) of the employed patients.

The association between demographic variables and reasons for stopping a previous diet is given in table 6. Of the 321 subjects who had attempted to lose weight previously, the major reasons for quitting included inability to resist sweets and traditional food ($n = 99$, 31%) and dissatisfaction with the dietary outcome ($n = 79$; 24.8%). Table 6 shows the significant differences ($p < 0.05$) in the association of reasons for stopping the previous diet regime with age and marital status, where 44 (37.6%) of ≥40-year-olds compared to 24 (25.0%) of <30-year-olds were unable to resist sweets and traditional foods; 34 (35.4%) of <30-year-olds compared to 18 (15.4%) of ≥40-year-olds were not satisfied with the dietary outcome. The differences in reasons among subjects with regard to marital status show that 83 (32.9%) of married compared to 16 (23.9%) of unmarried were unable to resist sweets and traditional foods; 58 (23.0%) of married compared to 21 (31.3%) of unmarried were not satisfied with the dietary outcome; 29 (11.5%) of married compared to 15

Table 4. Association of demographic variables and previous weight loss attempts

	Total		Previous attempts				p value
			yes		no		
	n	%	n	%	n	%	
Subjects	526	100	321	61.0	205	39.0	0.153
Age							
<30 years	174	100	96	55.2	78	44.8	
30–39 years	165	100	106	64.2	59	35.8	
≥40 years	187	100	119	63.6	68	36.4	<0.001
Gender ^a							
Male	103	100	46	44.7	57	55.3	
Female	423	100	275	65.0	148	35.0	0.046
Marital status ^a							
Unmarried	126	100	67	53.2	59	46.8	
Married	400	100	254	63.5	146	36.5	0.732
Education							
Secondary	226	100	135	59.7	91	40.3	
Diploma	146	100	93	63.7	53	36.3	
Graduation+	154	100	93	60.4	61	39.6	0.789
Occupation							
Employed	281	100	173	61.6	108	38.4	
Unemployed	245	100	148	60.4	97	39.6	0.819
BMI							
Overweight	145	100	86	59.3	59	40.7	
Obese	304	100	189	62.2	115	37.8	
Morbidly obese	77	100	46	59.7	31	40.3	

^a p value based on χ^2 for trend.

(22.4%) of unmarried stopped the diet because it lacked variety; 29 (11.5%) of married compared to 4 (6.0%) of unmarried stopped the diet because of cost.

The significant association of reasons for stopping the diet with regard to trend ($p = 0.015$) among subjects with different levels of education shows that 28 (30.4%) of subjects with a university degree and above compared to 25 (18.7%) of those with a secondary education were not satisfied with the dietary outcome, while 20 (14.9%) of subjects with a secondary education compared to 5 (5.4%) of those with a university degree were not satisfied with the cost of the diet.

Discussion

The study reflects gender differences among the Kuwaiti population, where the prevalence rates of obesity and weight loss attempts are higher among females. More Kuwaiti women than men showed a greater awareness, desire, and willingness to lose weight, as they outnumbered

men in visiting the obesity clinic. This result is similar to previous reports [12, 13]. In addition, the study confirms that overweight and obese Kuwaiti adults are concerned about their weight; therefore, weight modification efforts are also common among them. Moreover, they are aware of the facilities provided by the Central Medical Nutrition Clinic and consider it in their weight loss attempts.

Our study also confirms that weight loss attempts are found to be strongly associated with BMI status. Fortunately, the most commonly mentioned reason to attempt weight loss was to avoid health problems related to obesity, followed by increasing attractiveness, which is in accordance with the findings of Green and Cameron [13].

In our study, there was no gender difference in reasons for attempting to lose weight. As individuals get older, they are at more risk of developing chronic diseases, and the risk increases when predisposing factors such as heredity coexist. Hence, it is natural for older individuals with a higher BMI to be more conscious of health and attempt to lose weight to avoid health problems.

Table 5. Association of demographic variables and source of diet information for weight loss attempts

	Total		Source of diet information				p value
			DOC		OR		
	n	%	n	%	n	%	
Subjects	321	100	147	45.8	174	54.2	0.003
Age ^a							
<30 years	96	100	35	36.5	61	63.5	
30–39 years	106	100	45	42.5	61	57.5	
≥40 years	119	100	67	56.3	52	43.7	0.527
Gender							
Male	46	100	19	41.3	27	58.7	
Female	275	100	128	46.5	147	53.5	0.074
Marital status							
Unmarried	67	100	24	35.8	43	64.2	
Married	254	100	123	48.4	131	51.6	0.064
Education							
Secondary	135	100	68	50.4	67	49.6	
Diploma	93	100	44	47.3	49	52.7	
Graduation+	93	100	35	37.6	58	62.4	0.043
Occupation ^b							
Employed	173	100	70	40.5	103	59.5	
Unemployed	148	100	77	52.0	71	48.0	0.077
BMI							
Overweight	86	100	39	45.3	47	54.7	
Obese	189	100	80	42.3	109	57.7	
Morbidly obese	46	100	28	60.9	18	39.1	

DOC = Dietitians and doctors; OR = other.

^a p value based on χ^2 test; ^b p value based on χ^2 for trend.

Gradual losses of 0.500–1 kg/week are the limit for individuals who want to lose weight. Rapid weight loss may involve the risk of excessive loss of lean body mass, nutrient deficiencies, metabolic abnormalities, fatigue, and other adverse effects. Moreover, weight loss exceeding 0.500–1 kg/week is rarely sustainable in outpatient treatment settings [10]. The perception of 50% of Kuwaiti adults regarding the range of weight reduction per month is in accordance with recommended weight loss. This reflects a high degree of awareness of health hazards associated with rapid weight loss methods among Kuwaitis.

Individual approaches to weight loss attempts may be characterized by their duration and recurrent nature. The characteristics of Kuwaiti adults identified by this study are consistent with other studies [13, 14, 15], indicating that weight loss attempts are more common among females and married people. Another important characteristic noted among Kuwaiti adults is that they consult dietitians and doctors in their weight loss attempts. How-

ever, Cade and Connell [16] found doctors to be less effective than the media or the family in persuading the overweight patient to lose weight. A trend noticed among Kuwaiti adults in the present study was that married people followed the diet for a longer period and lost more weight in their attempts, which indicates the social and familial support.

The major reasons for stopping the previous dietary regime were inability to resist sweets and traditional foods, as previously reported by Jasem and Al Hamad [14] and Musaiger [17]. Education was also a significant predictor of weight loss attempts: the more educated were more dissatisfied with weight loss outcomes, a finding similar to the one of Alan et al. [18] but not of Levy et al. [15], who suggested that additional knowledge of nutrition would not help the obese in controlling their obesity. The factors felt to be important were exercise and self-motivation [19].

This study indicates that Kuwaitis are health conscious and may be able to obtain nutrition information

Table 6. Association of demographic variables and reasons for stopping previous diet

	Total		Reasons for stopping previous diet												p value
			1		2		3		4		5		6		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Subjects	321	100	99	31.0	79	24.8	44	13.8	33	10.3	24	7.5	40	12.5	0.042
Age ^a															
<30 years	96	100	24	25.0	34	35.4	16	16.7	5	5.2	5	5.2	12	12.5	
30–39 years	106	100	31	29.2	27	25.5	14	13.2	15	14.2	9	8.5	10	9.4	
≥40 years	119	100	44	37.6	18	15.4	14	12.0	13	11.1	10	8.5	18	15.4	0.267
Gender															
Male	46	100	9	19.6	14	30.4	8	17.4	3	6.5	6	13.0	6	13.0	
Female	275	100	90	33.0	65	23.8	36	13.2	30	11.0	18	6.6	34	12.5	0.045
Marital status ^a															
Unmarried	67	100	16	23.9	21	31.3	15	22.4	4	6.0	2	3.0	9	13.4	
Married	254	100	83	32.9	58	23.0	29	11.5	29	11.5	22	8.7	31	12.3	0.015
Education ^b															
Secondary	135	100	38	28.4	25	18.7	19	14.2	20	14.9	9	6.7	23	17.2	
Diploma	93	100	29	31.2	26	28.0	14	15.1	8	8.6	8	8.6	8	8.6	
Graduation+	93	100	32	34.8	28	30.4	11	12.0	5	5.4	7	7.6	9	9.8	0.444
Occupation															
Employed	173	100	57	32.9	45	26.0	23	13.3	17	9.8	15	8.7	16	9.2	
Unemployed	148	100	42	28.8	34	23.3	21	14.4	16	11.0	9	6.2	24	16.4	0.250
BMI															
Overweight	86	100	29	33.7	18	20.9	10	11.6	8	9.3	11	12.8	10	11.6	
Obese	189	100	54	28.9	55	29.4	26	13.9	21	11.2	9	4.8	22	11.8	
Morbidly obese	46	100	16	34.8	6	13.0	8	17.4	4	8.7	4	8.7	8	17.4	

1 = Unable to resist sweets and traditional foods; 2 = not satisfied with the dietary outcome; 3 = no variety; 4 = costly; 5 = attained weight goal; 6 = other reasons.

^a p value based on χ^2 test; ^b p value based on χ^2 for trend.

through the media and technology. However, many researchers in behavioral psychology and sociology have demonstrated that knowledge alone is not enough to change behavior [14]. Hence behavioral management techniques may also be considered for nutrition educational approaches and the development of effective weight management strategies. The challenge is therefore to develop culturally appropriate interventions aimed at promoting healthy weight control behaviors.

Conclusion

The study confirms the existence of awareness, health consciousness and social support to lose weight, but found a lack of self-control, commitment and focus among the dieters. Hence, behavioral management techniques may also be considered for nutritional education approaches and the development of effective weight management strategies.

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