

# THE ROLE OF SOCIAL FACTORS AND WEIGHT STATUS IN IDEAL BODY-SHAPE PREFERENCES AS PERCEIVED BY ARAB WOMEN

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**Summary.** This study investigated the social factors associated with body-shape preferences for females and males as perceived by Arab women living in Qatar, and correlated the current weight status of women studied with these preferences. The subjects were 535 non-pregnant Arab women aged 20–67 years, who attended health centres in Doha City, the capital of the State of Qatar. Illustrations of male and female body shapes ranging from very thin to very obese using the 9-figure Silhouettes scale were shown to women, and they were asked to select their preferred figure. Body mass index (BMI) was used to determine the weight status of women studied. Age, educational level and employment status were found to be significantly associated with ideal body-shape preference for both males and females, whereas marital status and current weight status had no significant association. In general, the Arab women studied selected a more mid-range of body fatness for males than for females. It is concluded that attention should be given to sociocultural factors, such as body-shape preferences, in any programmes to promote ideal body weight for the public.

## Introduction

Obesity has reached epidemic proportions in most Arab countries, particularly among women (Musaiger & Miladi, 2000). Several factors have been suggested to explain the occurrence of obesity, such as dietary habits, exercise and physical activity, sociocultural aspects and a genetic component. Another more recent alternative explanation is that differences in obesity may be related to differences in body image (Fitzgibbon *et al.*, 2000).

Studies in Western countries suggest that body-shape preference is an important factor to determine obesity. Among Dutch men and women, Blokstra *et al.* (1999) demonstrated that body mass index was the strongest determinant of weight perception. In the USA, black women preferred a middle-to-small body size but indicated that a middle-to-large body size was healthier (Liburd *et al.*, 1999). In another study, Becker *et al.* (1999) found that Americans showed a significant correlation between their body image size and ethnic and gender background. Ideal body image size preferences for members of the opposite sex were greater for black than white women. Cacheline *et al.* (1998) pointed out that realistic shape and weight ratings by both women and men were smaller than current shape and weight. In Latin America and Africa, investigators found that larger women are considered healthy and attractive (Messer, 1989; Cassidy, 1991).

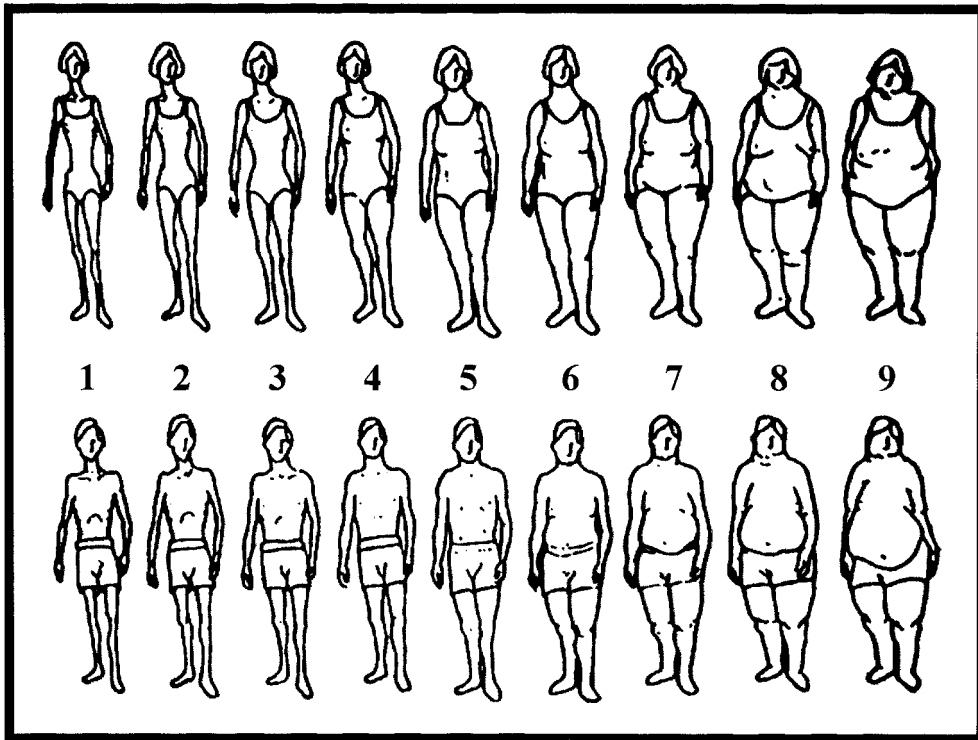
Studies in the Arab countries indicate that several social and lifestyle factors are associated with obesity (Khashoggi *et al.*, 1994; Al-Isa, 1997; Musaiger *et al.*, 2000). However, none of these studies has investigated body-shape preferences as one of the factors that may determine overweight and obesity in Arab communities. The purpose of this study, therefore, was to determine the relationship between social factors, as well as body mass index, with body-shape preferences for men and women among Arab women living in Qatar. It is hypothesized that body-shape preference is affected by several social factors, and that there is a tendency among Arab women to prefer slightly heavier women or men to thin or slim subjects.

### Methods

Non-pregnant Arab women aged 20 years and above who attended four main health centres in Doha City, the capital of Qatar, were the target group. All Arab women who attended these health centres for a period of 2 weeks were included in this study. Pregnant and non-Arab women were excluded. Data were obtained between 8 a.m. and 12 p.m. daily, except for Friday (the official holiday). The aim was to collect no fewer than 500 women, to allow for proper statistical analysis. The total collected sample was 535 women aged between 20 and 67 years. The women were interviewed in the clinic by female medical students.

Illustrations of male and female body shapes ranging from very thin to grossly obese were shown to the women, using the Silhouettes scale developed by Stunkard *et al.* (1983) (Fig. 1), and they were asked to select the ideal body shape they perceived for women and for men. The nine Silhouettes were validated on a sample of 1000 adults and the validity was good (Stunkard *et al.*, 1983). The figure rating scale was also tested and showed good reliability (Thompson & Altabe, 1991).

Information on the social background of the women was obtained. For the purpose of this study, the following social data were used: age, educational level, marital status and employment. Educational level was grouped into three categories: low, middle and high. Low education included women who were illiterate or had little ability to read or write; middle education included women who had intermediate and/or primary education; high education included women who had university and/or secondary education. The Arab women studied included women from Qatar, Bahrain, United Arab Emirates, Egypt, Jordan, Syria and Sudan.



**Fig. 1.** The 9-figure Silhouettes scale of male and female body shapes (Stunkard *et al.*, 1983).

The weight and height of the women were measured to correlate the current weight status of the women with their perception of ideal body shape for women and men. Weight was measured using a Deteco scale to the nearest 0.05 kg with women wearing minimum clothing and no shoes. Height was measured without shoes to the nearest 0.1 cm by using the stadiometer attached to the scale. Obesity was determined by calculating body mass index ( $wt/ht^2$ ), using the following categories as suggested by WHO (2000): non-obese ( $BMI \leq 24.9$ ), overweight ( $BMI 25-29.9$ ) and obese ( $BMI \geq 30$ ).

The chi-squared test was used to test the association between body-shape preferences and social factors, while the *t* test was calculated to test the difference between means of Silhouette figures preferred by women for male and female body shapes. The test was considered significant when *p* was  $<0.05$ .

## Results

Factors associated with the selection of ideal body shape for females and males as perceived by Arab women in Qatar are presented in Tables 1 and 2, respectively.

**Table 1.** Social factors associated with ideal body shape for females, as perceived by Arab women in Qatar

Factors	<i>n</i>	Ideal figure number (%)						<i>p</i> value
		1	2	3	4	5	6	
Age (years)								
20–39	257	0.8	6.6	51.0	32.3	7.7	1.6	0.0001
30–39	171	2.3	6.4	45.6	35.1	9.4	1.2	
40+	107	7.5	11.2	43.9	17.8	15.9	3.7	
Educational level								
Low	118	8.5	12.7	39.8	19.5	15.3	4.2	0.0001
Middle	148	2.0	8.1	44.6	29.7	13.6	2.0	
High	269	0.4	4.7	53.2	35.5	5.6	0.6	
Marital status								
Currently married	417	2.4	7.9	47.2	30.0	10.6	1.9	0.9090
Currently unmarried	118	3.4	5.9	50.0	31.4	7.6	1.7	
Employment status								
Non-employed	386	3.6	8.0	46.1	28.6	11.9	1.8	0.0247
Employed	149	0.0	6.0	52.4	34.9	4.7	2.0	
Weight status								
Non-obese	179	1.1	6.7	49.7	31.9	9.5	1.1	0.9277
Overweight	161	3.7	8.1	47.8	26.7	11.2	2.5	
Obese	195	3.1	7.7	46.2	31.8	9.2	2.0	
Total	535	2.6	7.4	47.9	30.1	9.9	2.0	

Almost half of the women (47.9%) preferred the figure 3 body shape for females and about one-third (30.1%) preferred figure 4. As for preferences for the ideal body shape of males, the main figures selected by the women studied were figures 3, 4 and 5 (21.7%, 41.3% and 24.5%, respectively), indicating a trend to prefer a more mid-range of body fatness for males than females.

Older women (40+ years) were more likely to select a thin body shape for females and males than younger women (20–29 and 30–39 years). The difference was statistically significant ( $p < 0.0001$ ) for both male and female body shapes. Education has a significant association with ideal body-shape selection. As educational level increased the trend to select figure 4 increased for both females and males. Education positively affected the selection of figure 3 for females. Of the low education women, 39.8% selected figure 3, compared with 44.6% and 53.2% in women with middle and high educational level, respectively. These preferences were not noticed for ideal body shape for males. There was no significant difference between married and unmarried women in respect of selection of ideal body shape for women and men. However, employment status showed a significant impact on body-shape selection ( $p = 0.0247$

**Table 2.** Social factors associated with ideal body shape for males, as perceived by Arab women in Qatar

Factors	n	Ideal figure number (%)						p value
		1	2	3	4	5	6	
Age (years)								
20–39	257	1.6	4.3	20.6	45.9	24.9	2.7	
30–39	171	1.2	6.4	21.1	40.9	28.1	2.3	
40+	107	8.4	15.9	25.2	30.8	17.8	1.9	0.0001
Educational level								
Low	118	9.3	12.8	21.2	32.2	22.9	1.7	
Middle	148	0.7	8.8	20.9	41.2	24.3	4.1	
High	269	1.1	4.1	22.3	45.4	25.3	1.8	0.0001
Marital status								
Currently married	417	2.9	6.5	22.0	41.2	24.5	2.9	
Currently unmarried	118	2.5	10.2	20.3	41.5	24.7	0.8	0.6313
Employment status								
Non-employed	386	3.6	8.5	21.8	39.9	22.8	3.4	
Employed	149	0.7	4.0	21.5	44.9	28.9	0.0	0.0178
Weight status								
Non-obese	179	0.0	4.5	21.8	42.4	28.5	2.8	0.0550
Overweight	161	5.0	9.9	21.7	42.9	17.4	3.1	
Obese	195	3.6	7.7	21.5	39.0	26.7	1.5	
Total	535	2.8	7.3	21.7	41.3	24.5	2.4	

and  $p=0.0178$  for females and males, respectively). Employed women were more prone to select figures 3 and 4 for female body shape and figures 4 and 5 for male body shape.

Examining the current status of obesity of women studied by ideal body-shape preferences demonstrates that there was no significant association between body weight of women and their preferences for body shape for both males and females. However, overweight and obese women were more likely to select figures 1 and 2, compared with non-obese women, for both males and females.

The means and standard deviations of preferences for body shape that were measured using the 9-figure Silhouettes of Stunkard *et al.* (1983) are given in Table 3, according to male and female body-shape preferences. The difference between preferences for male and female body shape for each social factor was tested for statistical significance calculated using Student's paired test and presented with their  $p$  values. In general, Arab women chose a significantly heavier body figure for males than females. Also, non-obese women were more likely to select a heavier body figure for males than for females, compared with overweight and obese women. The difference in the means of preferences for body shape between males and females was

**Table 3.** Means and standard deviations of preferences for body shape measured using the 9-figure Silhouettes scale for male and females, according to social factors

Factors	n	Male		Female		p value
		Mean	SD	Mean	SD	
Age (years)						
20–29	257	3.96	0.937	3.44	0.823	<0.000
30–39	171	3.95	0.975	3.47	0.903	<0.000
40+	107	3.39	1.242	3.35	1.206	0.0600
Educational level						
Low	118	3.52	1.279	3.34	1.269	0.2789
Middle	148	3.92	1.014	3.51	0.965	<0.0004
High	269	3.95	0.903	3.43	0.723	<0.000
Marital status						
Currently married	417	3.87	1.041	3.44	0.944	0.002
Currently unmarried	118	3.78	1.039	3.39	0.906	<0.000
Employment status						
Non-employed	386	3.80	1.100	3.43	0.994	<0.000
Employed	149	3.97	0.884	3.44	0.766	<0.000
Weight status						
Non-obese	179	4.03	0.893	3.46	0.832	<0.000
Overweight	161	3.67	1.122	3.42	1.022	0.0374
Obese	195	3.67	1.122	3.42	0.964	0.0002

found to be highly statistically significant in each social factor, except in low education women.

### Discussion

These findings have revealed a significant difference among Arab women's preferences for body shape between adult males and females. There was a tendency for Arab women to prefer a heavier body figure for men than for women, but the mid-range of fatness (body size 4 and 5) was the most socially acceptable and the very thin or obese body sizes were least accepted. These results are consistent with those reported by Rand & Wright (2000), who found that American women reported a higher mean for body size for men than for women, using the same figure rating scale.

Very few studies have focused on the link between social factors and preferences for body size. Gittelsohn *et al.* (1996) found that older people chose a significantly more healthy body shape than did younger people. In contrast, the current study showed that older women (40+ years) had a tendency to select slimmer women or men than younger women (20–39 years). This may be attributed to other factors such as education, income, body mass index and cultural background of these women.

Investigations in the Arab Gulf countries (Musaiger & Al-Ansari, 1992; Khashoggi *et al.*, 1994) demonstrated that obesity was more prevalent among unemployed than employed women. This may be due to the fact that employed

women are more exposed to society and are therefore more interested in maintaining their weight and taking care of their figures to become acceptable and to avoid any criticism from their friends and colleagues (Musaiger & Al-Ansari, 1992). This may also explain in part the preferences of employed women in this study for a more ideal body size than unemployed women.

Against expectations, low education women had more preference for slim figures than middle and high education women. Data from Arab Gulf countries suggest that the association between obesity and level of education is controversial (Khashoggi *et al.*, 1994, Musaiger *et al.*, 2000). Several confounding factors may interfere with these findings, e.g. age, weight status and cultural and ethnic background.

WHO/EMRO (1989) reported that the current cultural preference in the Eastern Mediterranean countries is for heavier women than is the case in the Western region. Cassidy (1991) believes that most people worldwide want to be big – both tall and fat – and that those who achieve this ideal are disproportionately represented in the most powerful in society. Musaiger (1987) concluded that the preference for plumpness among women in Arab Gulf countries is mainly for sexual attraction, rather than any other factors. However, for men, the argument of Cassidy (1991) may be applied, as both tall and little fat men may be considered as having strong personalities and powerful. Nasser (1988) indicated that in Arab culture, thinness is regarded as socially undesirable, whereas plumpness is regarded as a symbol of fertility and womanhood. However, this attitude has begun to change during the past decade in many Arab countries. The trend to reduce weight more than the average BMI is increasing in the teenagers and young women in this region, which may be due to the influence of Western culture and the mass media, as well as due to the change in attitudes in the community to obesity.

In a comparative study of two matched samples of Arab female students attending London and Cairo universities, Nasser (1986) found that the incidence of an abnormal eating attitude was higher among the London group (22%) than the Cairo group (12%). In addition, he showed that 12% of the London group satisfied diagnostic criteria for bulimia nervosa, and 10% were thought to have a partial syndrome of anorexia nervosa, whereas no cases of anorexia or bulimia nervosa were reported in the Cairo students. One interpretation of this finding is that the females who lived in London were more exposed to Western culture and its attitudes towards slimness, and this may influence their attitudes to overweight. Nonetheless, a recent study in the United Arab Emirates (Abou Saleh *et al.*, 1998) showed the occurrence of several cases of anorexia nervosa among Arab females and males aged 18–23 years. The current study indicates that Arab women prefer mid-range figures but not heavy figures, which suggests a change in the preferences for ideal body size, when compared with that reported in the 1980s (Musaiger, 1987).

Some limitations of this study need to be considered when interpreting the findings. First, given that the study was carried out in Qatar, the sample will be more biased towards Qatari women (representing 64% of the total sample). However, it is worth mentioning that many of the Qatari women originated from other Arab countries. Second, the sample was obtained from women who attended health centres, which may not be representative of the Arab women living in Qatar. Third, only one aspect of body image was measured, and body image is a multidimensional aspect

that includes perceptual, attitudinal and behavioural components (Fitzgibbon *et al.*, 2000). Despite these limitations, the present study indicates that body image should be considered in any study of the causes of obesity in Arab communities. It is hoped that this study will stimulate other investigators to carry out in-depth investigation on this topic.

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