

Influence of Marital Status on Obesity in Greek Adults

*Data from the first National Epidemiological Study on the
Prevalence of Obesity in Greece*

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Introduction

Socioeconomic factors, such as occupation, educational status, smoking habits etc, have been related to obesity.

Marriage, through the many new parameters in a person's life, is a factor that has also been often related to obesity.

Most studies have shown that married persons are heavier than single ones. However, other studies explore further the factors behind marital status that influence body weight, such as age, change in dietary habits, change in exercise habits, marriage satisfaction or dissatisfaction, childbearing etc.

Aim

Aim of our study was to explore the influence of marital status on body weight and on body fat distribution as expressed by waist circumference, in Greek adults.

Data were drawn from the First National Epidemiological Study on the Prevalence of Obesity in Greece.

Subjects-Methods

From 17403 adults representing the Greek population, 7170 males and 8174 females were extracted and analyzed as having complete records.

They were:

a) subjected to anthropometric measurements:

weight } for calculation of body mass index
height }
waist circumference

b) grouped according to marital status:



single, married, divorced, widowed

c) grouped according to age

20-35, 36-50, >50

d) Alcohol consumption was estimated as g of alcohol/week

Subjects-Methods

	 Males (n=7170)	 Females (n=8174)
Age (ys) (Mean±SD)	44.7 ± 10.4	41.5 ± 10.8
BMI (Kg/m²) (Mean±SD)	27.3 ± 4.9	25.7 ± 5.2

MALES



	20-35 (n=792)	35-50 (n=4892)	>50 (n=1486)
Single N (%)	613 (77.4%)	75 (1.5%)	29 (1.9%)
Married N (%)	165 (20.8%)	4708 (96.2%)	1380(92.8%)
Divorced N (%)	11 (1.4%)	86 (1.8%)	12 (0.8%)
Widowed N (%)	3 (0.4%)	23 (0.5%)	65 (4.4%)

FEMALES

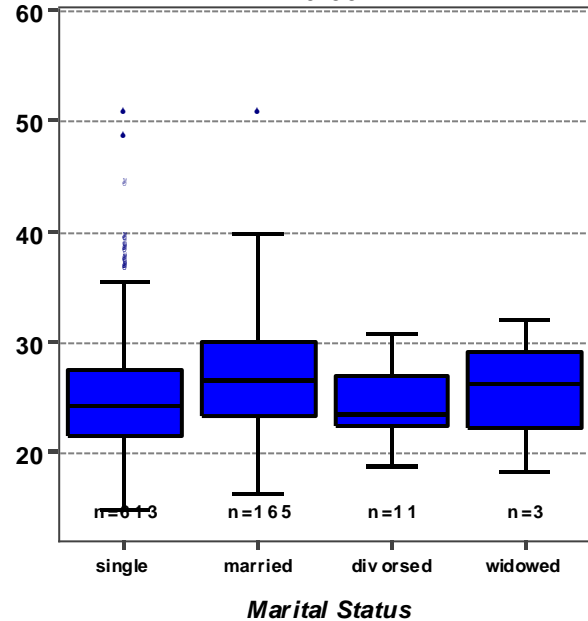


	20-35 (n=1825)	35-50 (n=5419)	>50 (n=930)
Single N (%)	456 (24.9%)	49 (0.9%)	20 (2.1%)
Married N (%)	1263 (69.2%)	5068 (93.5%)	569 (61.2%)
Divorced N (%)	90 (4.9%)	198 (3.6%)	19 (2.0%)
Widowed N (%)	16 (0.9%)	104 (1.9%)	322 (34.6%)

Results

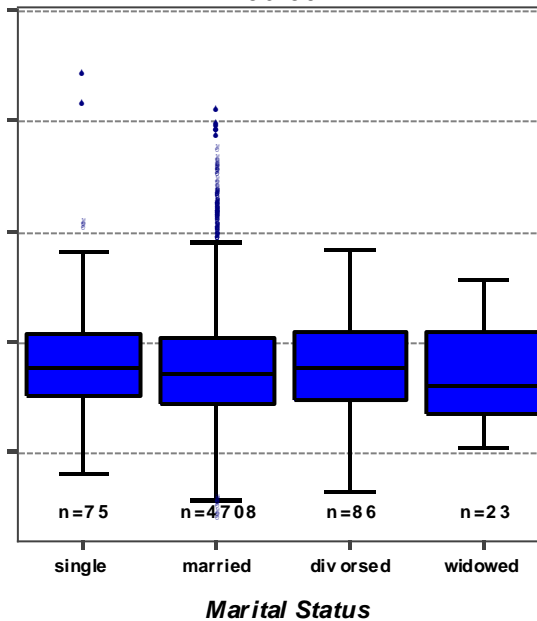


20-35



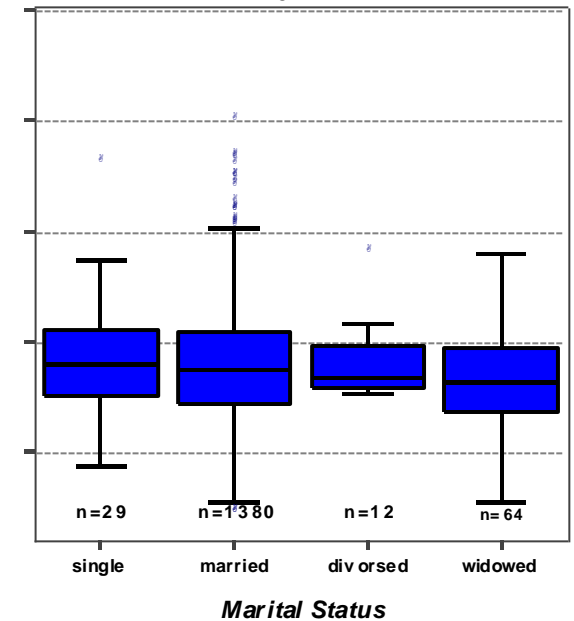
F=8.801, p=0.000
Single - Married: p=0.000

36-50



No significant difference

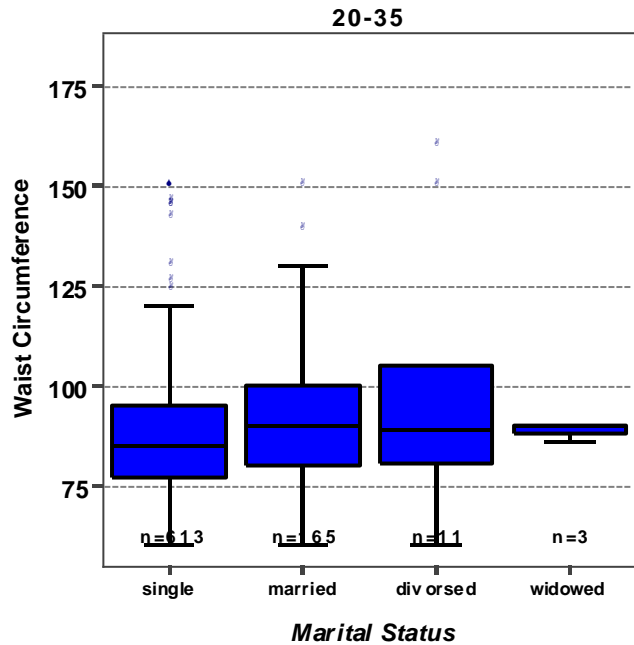
51+



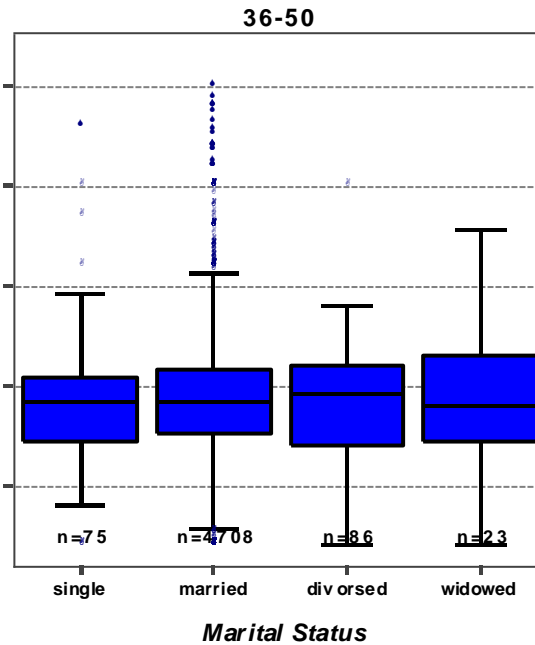
No significant difference

BMI according to marital status groups in the different age groups

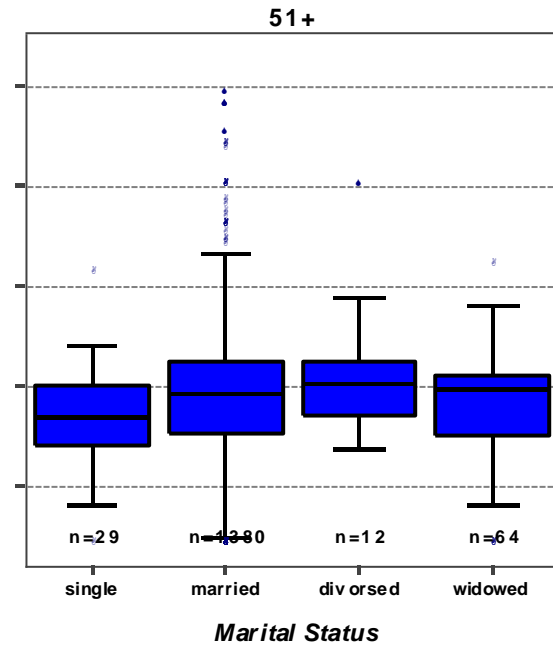
Results



F=7.694, p=0.000
Single - Married: p=0.000
Single - Divorced: p=0.008



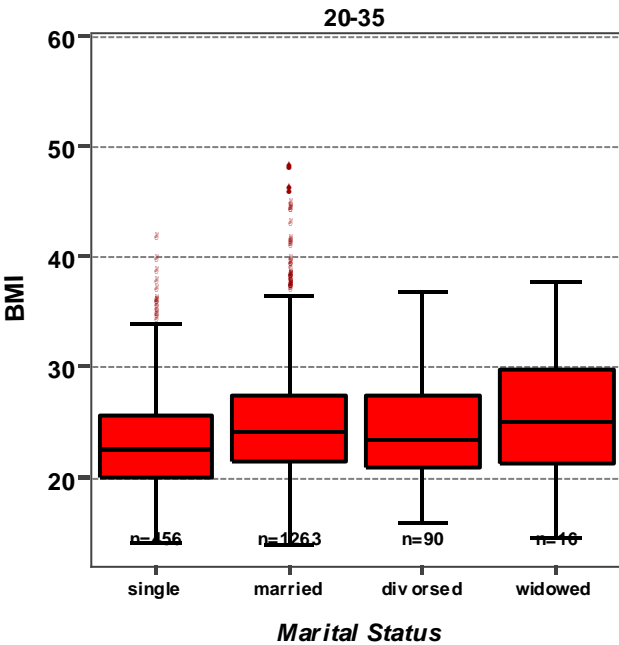
No significant difference



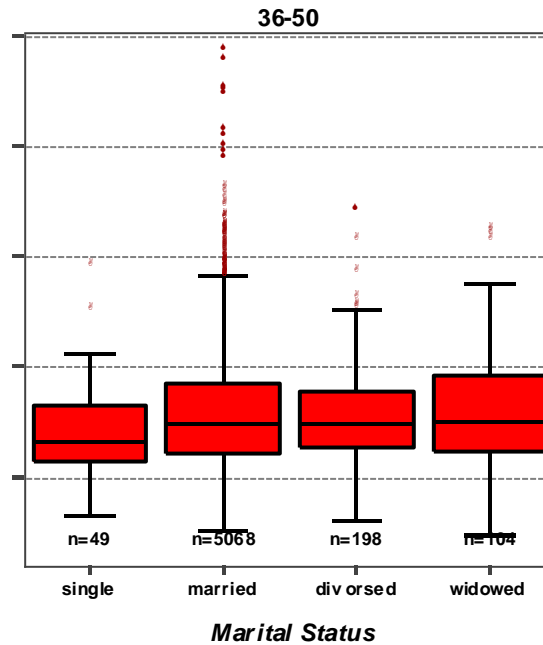
No significant difference

**Waist circumference according to marital status groups
in the different age groups**

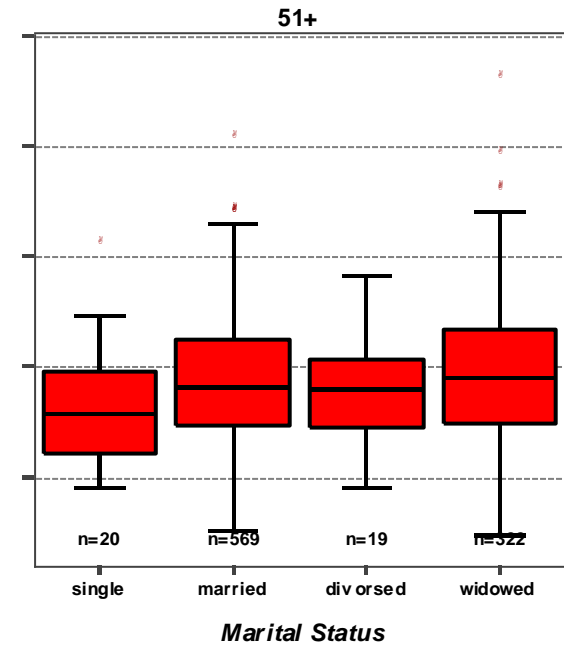
Results



F=13.667, p=0.000
Single - Married: p=0.000



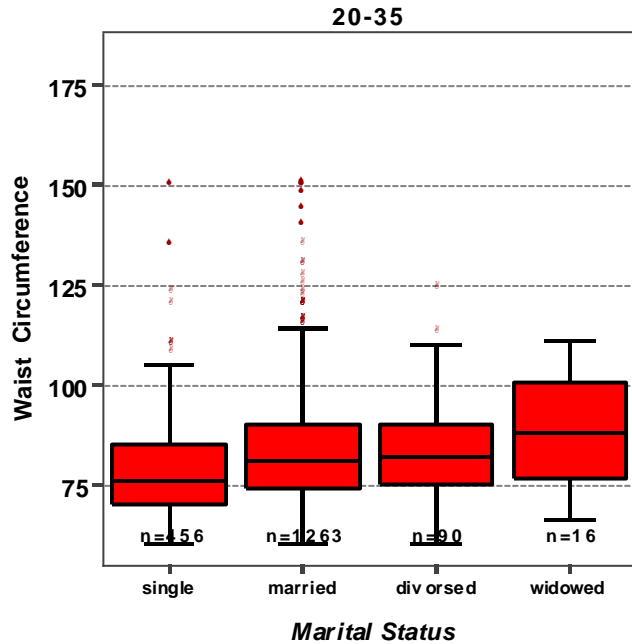
No significant difference



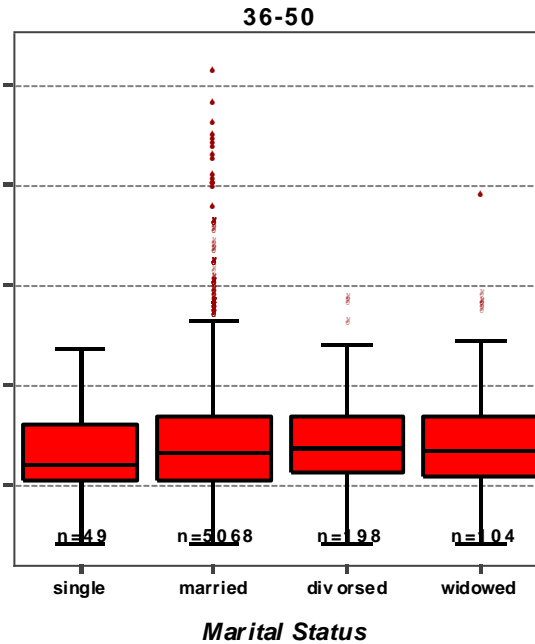
F=3.065, p=0.027
Single - Widowed: p=0.018
Married - Widowed: p=0.035

BMI according to marital status groups in the different age groups

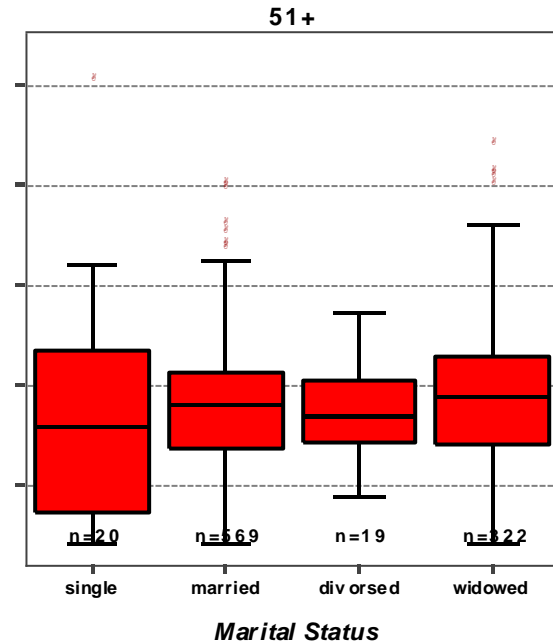
Results



F=17.209, p=0.000
Single-Married: p=0.000
Single-Divorced: p=0.001
Single-Widowed: p=0.005



No significant difference



No significant difference

**Waist circumference according to marital status groups
in the different age groups**

MALES



MULTIPLE REGRESSION ANALYSIS WITH MARITAL STATUS AS DUMMY VARIABLE AND CATEGORY "SINGLE" AS CATEGORY OF REFERENCE

Dependent variable: **Waist** (cm)
Independent variables: age (ys)
alcohol consumption (g/week)
marital status

	Beta	p
Age	0.009	0.469
Alcohol	0.038	0.001
Divorced	0.072	0.000
Widowed	0.055	0.000
Married	0.187	0.000

F= 44.502, p= 0.000

FEMALES



MULTIPLE REGRESSION ANALYSIS WITH MARITAL STATUS AS DUMMY VARIABLE AND CATEGORY "SINGLE" AS CATEGORY OF REFERENCE

Dependent variable: **Waist** (cm)
Independent variables: age (ys)
alcohol consumption (g/week)
marital status

	Beta	p
Age	<i>0.250</i>	<i>0.000</i>
Alcohol	-0.011	0.304
Divorced	0.020	0.146
Widowed	0.026	0.137
Married	<i>0.036</i>	<i>0.038</i>

F=119.211, p=0.000

MALES



MULTIPLE REGRESSION ANALYSIS WITH MARITAL STATUS AS DUMMY VARIABLE AND CATEGORY "SINGLE" AS CATEGORY OF REFERENCE

Dependent variable: **BMI** (Kg/m²)
Independent variables: age (yrs)
alcohol consumption (g/week)
marital status

	Beta	p
Age	0.006	0.642
Alcohol	0.011	0.343
Divorced	0.059	0.000
Widowed	0.031	0.013
Married	0.155	0.000

F=29.142, p=0.000



FEMALES

MULTIPLE REGRESSION ANALYSIS WITH MARITAL STATUS AS DUMMY VARIABLE AND CATEGORY "SINGLE" AS CATEGORY OF REFERENCE

Dependent variable: **BMI** (Kg/m²)

Independent variables: age (ys)

alcohol consumption (g/week)

marital status

	Beta	p
Age	0.244	<i>0.000</i>
Alcohol	-0.030	<i>0.005</i>
Divorced	0.015	0.277
Widowed	0.030	0.095
Married	0.047	<i>0.006</i>

F=118.329, p=0.000

Conclusions

- In males there was a significant difference both in waist circumference and in BMI between the marital status groups only in age group 20-35.
- In females, waist circumference differed significantly between the marital status groups only in age group 20-35 while BMI differed significantly both in age group 20-35 and >50.
- Multiple regression analysis revealed that in males, alcohol consumption and marital status were important in the prediction of waist circumference with single men having smaller waist circumference than all the other marital status groups and alcohol being a cause of central obesity.

Conclusions

- In females, age was important in the prediction of waist circumference, while only married women had greater waist circumference than single ones, irrespectively of age.
- In males, only marital status was important in the prediction of BMI: divorced, widowed and married men had greater BMI than single men.
- In females, age and alcohol positively and negatively respectively affected BMI, while, regarding marital status, only married women had greater BMI than single ones.

Suggested Bibliography

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4. HS Kahn, D Williamson. "The contribution of income, education and changing marital status to weight change among US men"
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