Nutrition, Metabolism & Cardiovascular Diseases (2011) 21, 909–914

available at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/locate/nmcd

Nutrition, Metabolism & Cardiovascular Diseases

Comparison of physical and psychological status in younger and older overweight-obese women

A. Minniti*, L. Bissoli, V. Di Francesco, M. Olivieri, R. Mandragona, G. Mazzali, G. Fontana, F. Corzato, A. Costa, O. Bosello, M. Zamboni

Department of Medicine, Section of Geriatrics, University of Verona, Verona, Italy

Received 24 August 2009; received in revised form 25 January 2010; accepted 17 February 2010

KEYWORDS
Co-morbidities;
Elderly;
Obesity;
Overweight;
Psychological status

Abstract *Background and Aim:* Obesity prevalence is noticeably growing, even in the elderly. Most of the studies concerning the impact of obesity in the elderly evaluated physical co-morbidities, whilst very few data are available on psychological co-morbidities in people ≥60 years of age.

The present study aimed to compare anthropometrical measures, physical co-morbidities and psychosocial factors correlated with overweight and obesity in younger and elderly people.

Methods and Results: In 456 women in the age range of 18–59 years and 128 women in the age range of 60–80 years with body mass index (BMI) ≥ 25/kg m^2, body weight, height and waist and hip circumferences were measured. The presence of co-morbidities such as osteoarthritis, hypertension, type 2 diabetes and hypercholesterolaemia was assessed.

The Obesity Related Well Being 97 Questionnaire (ORWELL 97), Body Uneasiness Test (BUT), Symptom Check List 90 (SCL 90) and Binge Eating Scale (BES) tests were used to evaluate psychometric variables.

BMI was not significantly different between younger overweight-obese subjects and older overweight-obese subjects, whereas waist circumference and waist-to-hip ratio (WHR) were significantly higher in the elderly. Osteoarthritis, hypertension and hypercholesterolaemia were significantly more frequent in the elderly.

Older overweight-obese subjects had better scores in most of the psychometric questionnaires.

Conclusions: Our results show that older overweight-obese subjects have generally more physical co-morbidities but a better psychological status than younger adults, despite similar BMI. These data may contribute to a better understanding of obesity consequences in the elderly and may help clinicians to differentiate obesity treatments in relation to patients' age.

* Correspondence to: Alessia Minniti, Clinica Geriatrica – Segreteria, Ospedale Civile Maggiore, P.le Stefani 1, 37126 Verona, Italy. Tel.: +39 45 8122537; fax: +39 45 8122043.
E-mail address: alessia.minniti@univr.it (A. Minniti).

0939-4753/$ - see front matter © 2010 Elsevier B.V. All rights reserved.
doi:10.1016/j.numecd.2010.02.025

Obesity is a major health problem that causes premature death, morbidity, disability and psychosocial distress. Currently, at least 50% of the population is estimated to be overweight or obese in the USA [1] as well as in Europe [2].

Obesity is a chronic disorder described by the World Health Organisation (WHO) as a ''global epidemic'' [3] associated with cardiovascular morbidity and mortality; it is clearly related to diabetes mellitus as well as to hypertension, dyslipidaemia, coronary artery disease and congestive heart failure [4,5]. In addition, obese subjects will be at increased risk of adverse psychological and social consequences [6,7].

Obesity prevalence is growing progressively even in old age. Results from the 2003–04 National Health and Nutrition Examination Survey (NHANES) indicate that >70% of men and women in the age range of 55–74 were overweight or obese [1]. Debate persists about the clinical relevance and the need for treatment of obesity in the elderly [8–10]. The relationship between overweight and mortality in the elderly remains controversial: association between obesity and mortality in the elderly has been demonstrated in some but not all studies [8–10]. Despite this controversy, obesity has been recognised to be associated with several disorders and disability in older people [8–10]. Patterson and colleagues [11] examined the association of overweight and obesity with a wide range of health conditions in a large sample of adults in the age range of 50–76 years; of the conditions examined, 90% were associated with obesity in women and 71% in men. Studies on the effect of weight loss in the elderly are scarce, but they suggest that even small amounts of weight loss (between 5% and 10% of initial weight) may be beneficial. The therapeutic approaches should be prudent in order to avoid adverse effects of weight loss on bone and fat-free mass [8–10].

Obesity has been shown to be associated with mood disorders [12,13] and psychological distress [14] in adults. In a recent research, Tuthill et al. [15] highlighted the high prevalence of psychological co-morbidities in obese patient seeking treatment. Elevated scores for depression were found in 48% of patients and elevated scores for anxiety in 56% of patients. Twenty-two percent of patients had scores suggestive of personality traits that overlapped an eating disorder and an additional 11.5% of patients had an elevated score for binge eating. Significant impairment in quality of life was identified in one-third of patients.

Studies concerning the impact of obesity in the elderly evaluated physical co-morbidities, but no study has investigated psychological co-morbidities in people ≥60 years.

The present study aimed to explore the impact of obesity on the psychological status and subjective well-being, and their correlations with physical co-morbidities, in elderly people, as compared with younger adults.

Methods

Subjects

All participants were recruited consecutively from people who sought weight-loss treatment at our outpatient department. Eligibility criteria for inclusion in the study included being at least 18 years old, having a body mass index (BMI) ≥ 25, no established or subclinical eating disorder or other mental disorders. Considering that the anthropometrical and psychometrical evaluations of this study included the standard assessment for overweight people seeking treatment in our department, no patient refused to participate in the study. Four hundred and fifty-six Caucasian women in the age range of 18–59 years and 128 Caucasian women in the age range of 60–80 years were included in the study. Male patients, representing a small minority of those attending our department, were excluded.

The study was authorised by the ethical committee at our institution and a written informed consent was obtained for each patient.

Anthropometry and physical co-morbidities

All patients were visited by a physician who recorded on a database the presence of medical conditions. Co-morbidities assessed included osteoarthritis, hypertension, type 2 diabetes and hypercholesterolaemia. The presence of these pathologies was determined considering self-report, use of specific medications and clinical reports. A numeric count of pathologies was used as the simplest co-morbidity index.

Patients were weighted wearing indoor clothing without shoes. Body weight was measured to the nearest 0.1 kg on a digital computerised platform scale and height to the nearest 0.5 cm with a stadiometer. BMI was calculated as body weight adjusted for height (kg/m^2). Circumferences were measured to the nearest 0.5 cm using a 1-cm-wide measuring tape while subjects were standing. Waist circumference was measured as the minimum abdominal circumference between the xyphoid process and the umbilicus. Hip circumference was measured as the maximum circumference over the buttocks. The waist-to-hip ratio (WHR) was calculated as the ratio between these two circumferences.

Psychometric measures

Four self-reported questionnaires were used. These are:

1) The Obesity Related Well Being (ORWELL) 97 questionnaire [16] measures obesity-related quality of life (ORQL). It is a self-reported questionnaire taking into consideration the intensity and the subjective relevance of physical and psychological distress caused by obesity. ORWELL 97 consists of 18 items divided into two factors:
   A. ''Symptoms'' (five items) measures obesity-related somatic symptoms and physical functioning. The items on this scale evaluate the symptoms and the impairments of physical functioning, which are most common in obese patients without concurring physical illnesses.
   B. ''Psychosocial impact'' (13 items) evaluates the impact of obesity on the patients' emotional status, obesity-related worries and the effects of obesity on familial relationships, role functioning and social network.