Effect of Obesity on Mental Health among Females Attending National Nutrition Institute (Cairo)

Thesis submitted for fulfillment of Master Degree in Public Health

BY

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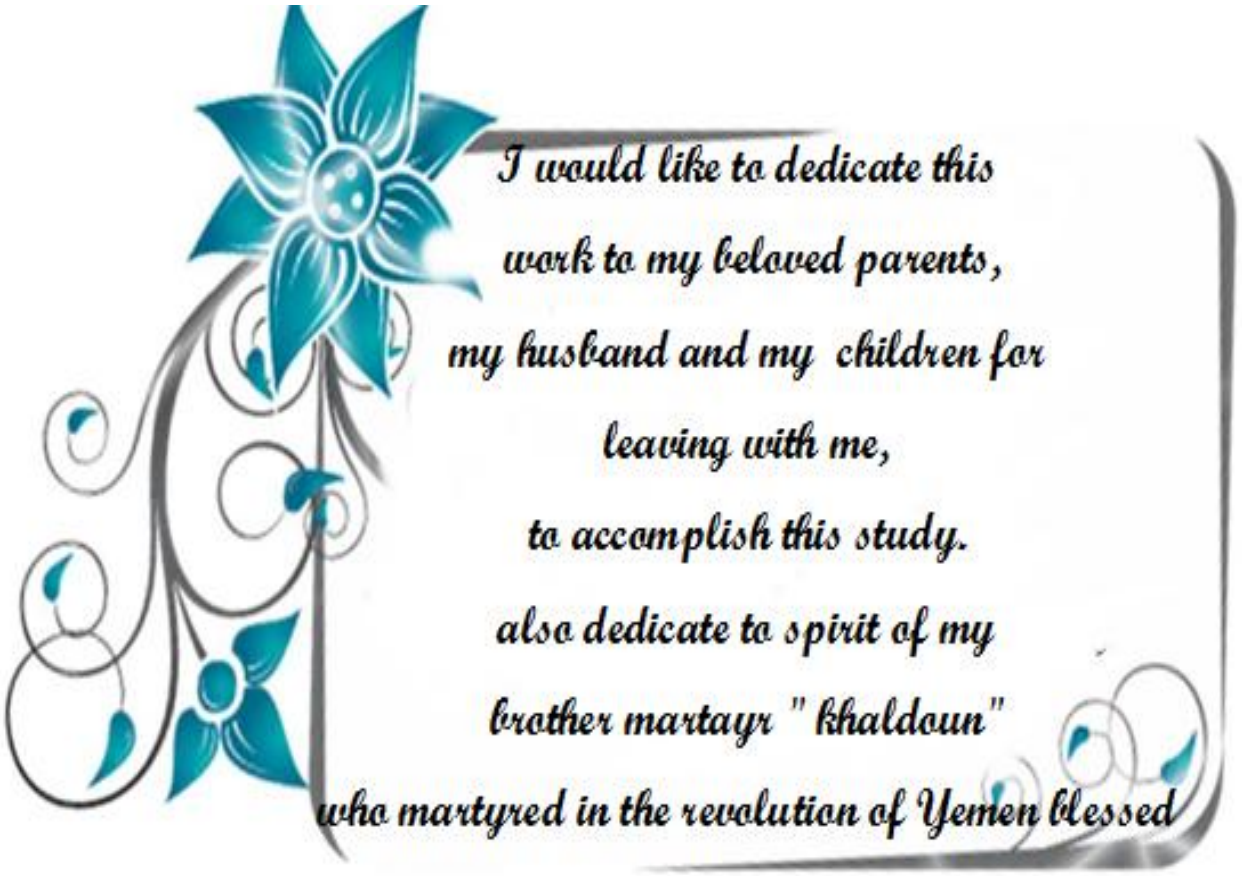
Dedication


I would like to dedicate this
work to my beloved parents,
my husband and my children for
leaving with me,
to accomplish this study.
also dedicate to spirit of my
brother martayr " khaldoun"
who martyred in the revolution of Yemen blessed

Abstract

Introduction: Obesity is an increasingly prevalent health problem with significant costs in the form of chronic diseases and premature death. The connection between obesity and common mental health disorders is an important public health issue. Women appear to be at most risk of obesity and common mental health disorders (depression, anxiety and stress) than men.

Aim of work: revealing the effect of obesity on mental health profile among females attending National Nutritional Institute (NNI), Cairo.

Objectives: Assess the mental health profile among overweight and obese (cases) and non obese (controls) women attending NNI and assess of risk factors related to development of mental health problems among them.

Subjects and Methods: The present work is an analytical retrospective, case control study. A final sample of 100 cases (obese and overweight) and 100 controls (normal weight) females attending NNI were included in the study. All cases and controls were subjected to interviewing questionnaire and weight and height were measured to calculate the body mass index.

Results: There were statistically significant differences between cases and controls as regards stress and depression severity in which ($p=0.018$) for stress and ($p<0.001$) for depression. Regarding anxiety there was no statistically significant differences between cases and controls ($p=0.197$).

Recommendations: These finding reveal that future action is needed and broad strategy is required to increase the awareness about mental health profile of obese people.

Key Words

Obesity
Mental health
Depression
Anxiety
Stress

LIST OF ABBREVIATIONS

ACTH	Adenocorticotropic hormone
BED	Binge eating disorder
BMI	Body mass index
CDC	Centers for disease control
CRF	Corticotrophin-releasing factor
DASS	Depression, Anxiety and Stress Scales
DGA	Dietary Guidelines for Americans
FDA	Food and Drug Administration
GCs	Glucocorticoids
HPA	Hypothalamic-pituitary-adrenal
JAMA	Journal of the American Medical Association
LBM	Lean Body Mass
NC	Neck circumference
NES	Night eating syndrome
NIH	National Institutes of Health
NHANES	National Health and Nutrition Examination Survey
NIDDK	National Institute of Diabetes and Digestive and Kidney Diseases
SES	socioeconomic status
SSRIs	Selective serotonin reuptake inhibitors
TCAs	Tricyclic antidepressants
USDA	United States department of Agriculture
USDHHS	US Department of Health and Human Services
USPSTF	United State Preventive Services Task Force
WHO	World Health Organization
WHR	Waist – Hip ratio

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Introduction

Obesity is an increasingly prevalent public-health problem with significant costs in the form of disease and premature death, increased health-care costs and social stigmatization. In addition, obesity causes or exacerbates many health conditions, both independently and in association with other diseases ***(Patterson et al., 2004)***.

Obesity is known to be associated with increased mortality mainly due to deaths from cardiovascular disease and diabetes ***(Bender et al., 2006).***There has, however, been some debate regarding the relationship between obesity and psychiatric disorders. Early studies suggested that obesity was associated with lower levels of anxiety in middle-aged men and women and lower levels of depression in men ***(Crisp and McGuiness., 1976).***

These findings lead to the formation of a "jolly fat" hypothesis, which implied that obesity may be protective against common mental disorders. While some subsequent studies were able to replicate these findings ***(Jasienska et al., 2005)*** others failed to find any association between obesity and mental illness ***(Ross, 1994).***

More recent studies with larger sample sizes have tended to find associations in the opposite direction to that predicted by the jolly fat hypothesis. A number of studies have demonstrated increased rates of depression in obese individuals ***(Dong et al., 2004)****;* although some have suggested that this positive association may only be present among females ***(Carpenter et al., 2000).***

There have been relatively few recent studies that examined the relationship between obesity and anxiety. Those that did examine such a relationship have tended to either find no association or demonstrate increased rates of anxiety in obese individuals, which were mediated by co-morbid physical illness ***(John et al., 2005)***.

Simon et al., 2006 published an analysis using the U.S. National Co-morbidity Survey, which demonstrated a 25% increase in the odds of mood and anxiety disorders in both males and females who were obese.

A number of theories have been proposed to explain any association between obesity and mental illness ***(McElroye et al., 2004)***. These tend to focus on the potential overlap in symptoms (disordered eating, physical inactivity, social isolation, etc), shared genetic risk factors, or similarities in the disruption of biological systems. One biological mechanism that has attracted considerable interest is dysregulation of the hypothalamic–pituitary–adrenocortical (HPA) axis ***(Marniemi et al., 2002).***

Aim of the work

Reduce the mental health disorders by prevention of obesity.

Specific objectives

1-Assess the mental health profile among overweight and obese (cases) and non obese (controls) women attending NNI.

2-Assess the risk factors related to development of mental health problems among overweight and obese women attending NNI.

Obesity

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health, leading to reduced life expectancy and/or increased health problems ***(WHO, 2000).***

Classification

Table (A): Classification of body weights according to body mass index:

Classification	BMI
• Underweight	• < 18.5 kg/m²
• Normal weight	• 18.5–24.99 kg/m²
• Overweight	• ≥ 25.00 kg/m²
• Pre – obese	• 25.00 – 29.99 kg/m²
• Mild obesity	• 30.00–34.99 kg/m²
• Moderate obesity	• 34.99 -39.99 kg/m²
• Sever obesity	• ≥ 40.00 kg/m²

(Park, 2009)

BMI is used differently for children than it was in adults according to the **(CDC)**. Children body fatness changes over the years as they grow. In addition, girls and boys differ in their body fatness as they mature. ***(Health in schools, 2006).***