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Al-Quds University

Determinants of Obesity among Married Women  
Attended Mother and Child Health Clinics - Gaza

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**M.P.H Thesis**

Jerusalem- Palestine

2008م / 1429هـ

Determinants of Obesity among Married Women  
Attended Mother and Child Health Clinics - Gaza

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A thesis Submitted in Partial fulfillment of requirements  
for the Degree of Master of Public Health  
Al- Quds University

## *Dedication*

*To all Palestinians women who sacrifice every day for their children and family lives*

*I dedicate this study*

**To my parents.....,**

**To my sisters.....,**

**To my brothers.....,**

*Who taught me that education is power and woman's greatest protection. Without their support this work could not have been done*

**Jamalt Al-Majdalawi**

**Declaration**

*I certify that this thesis submitted for the degree of Master is the result of my own research, except where otherwise acknowledged, and that this thesis (or any part of the same) has not been submitted for a higher degree to any other university or institution.*

Signed: .....

*Jamalt Yousef Al-Majdalawi*

Date: April-2008

## **Acknowledgement**

I would like to express my deep gratitude to Dr Yehia Abed for his inspiration, guidance, and energetic commitment to my research. I would like to thank him for his unlimited support and encouragement.

I would like to thank all academic and administrative staff of the school of public health for their guidance and support. A special word of thank for Mr Saadi Abu Awad and Dr Bassam Abu Hamad for teaching us the concepts of research techniques.

I would appreciate Dr Riyad Awad and all Palestinian Health Information staff for their support and encouragement. Special thank for Mr Salah Abu Samaan, Mr Saleh Al deques, Mrs Leena El Saqqa, and Miss Rana Al Wali.

My thanks to all experts, who helped me in reviewing the questionnaire. In addition, I would like to thank Mr. Basheer Abuelaish, who helped me in GI analysis.

I would like to thank all the women for their willingness to participate in this study.

Finally but importantly, my appreciate and love go to my sister and friend Nissreen Al- Majdalawi who assisted me to collect and review the data.

*Jamalat Al- Majdalawi*

## Abstract

*Universally, obesity is a rapidly increasing concern among women and men particularly in the Middle East countries. It has serious effects on the development and evolution of the non-communicable diseases. This cross-sectional study was carried out to assess the prevalence of obesity and to identify its potential associated factors among women attending Mother Child Health Services in Gaza Strip in order to provide basis for future interventions. The widely recommended-World Health Organization Body Mass Index was used as a standard for defining obesity.*

*The largest clinics in each governorate were selected (total 10 clinics), and proportional systematic random sample from women attending the United Nations and Relief Agency and the Ministry of Health clinics was taken. A sum of 350 women were included with a response rate of 96.8%. Data collected through a self-constructed, face to face interviewed-questionnaire. Additionally, standardized measurements of women height and weight were taken.*

*The study illustrates that the prevalence of obesity is 31.9 % among women surveyed. The prevalence of obesity seems to be higher among refugee's women (33.6%) than their non-refugee counterparts (27.2%). The highest prevalence was reported in Middle Zone (46%) and the lowest in Gaza City (22.6%). This could be related to the demographic characteristics of the women surveyed. It is worth noting that about 33% of the obese women were not aware about the concerned problem.*

*The findings reveal no statistically significant associations between obesity and mothers' nutritional knowledge. On the other hand, women who eat more when they are stressed, are more at risk for developing obesity than others. Obesity was positively associated with the age of women, number of pregnancies, number of deliveries, the length of the interval period between pregnancies and being non-lactated women. Furthermore, strong positive relationships between the presence of family history of obesity and the development of obesity was revealed. In contrary, there is an inverse relationship between obesity and the level of mothers' education.*

*Additionally, the presence of chronic diseases and taking relevant medications are positively associated with obesity. Surprisingly, positive associations were found between obesity and physical activities. This finding necessitates further in-depth enquiry.*

*This study provides first-hand data on the prevalence of obesity in Gaza Strip among women and its associated factors. The researcher recommends further larger sample community-based studies.*

## ملخص الدراسة

السمنة هي من أهم أمراض العصر الحالي والمنتشرة حالياً بشكل واضح والتي قد تكون سبباً واضح لحدوث كثير من الأمراض الغير معدية والوفاة منها. تهدف هذه الدراسة إلى معرفة العوامل المصاحبة للسمنة ووضع التوصيات اللازمة

### أهداف الدراسة الخاصة:

- معرفة معدل انتشار السمنة بين السيدات المتزوجات
- فحص العلاقة بين حدوث السمنة والظروف الاقتصادية والاجتماعية
- فحص العلاقة بين تاريخ الصحة الإنجابية وعلاقتها بحدوث السمنة
- فحص العلاقة بين النشاط الجسماني وعلاقته بحدوث السمنة
- فحص المعرفة والتوجهات والممارسات التغذوية ودورها في حدوث السمنة
- استخلاص التوصيات المناسبة للحد من انتشار السمنة

### عينة الدراسة:

تم اختيار عينة نسبية لتحديد عدد السيدات من كل محافظة، واختار الباحث العيادات المركزية في مراكز الرعاية الأولية التابعة لوزارة الصحة ووكالة غوث وتشغيل اللاجئين في كل محافظة، وتم استخدام عينة عشوائية منظمة لاختيار السيدات من كل عيادة. شملت الدراسة 350 سيدة وكانت نسبة الاستجابة حوالي 96.8%.

### جمع المعلومات:

جمعت الاستبانة بطريقتين، الأولى من خلال تعبئة الاستبانة المخصصة لهذا الغرض، والثانية هي قياس الوزن والطول لكل سيدة في الدراسة. استخدم الباحث كتلة الجسم لتعريف السمنة بين السيدات

### تحليل البيانات:

تم استخدام البرنامج الإحصائي "SPSS" لمعالجة البيانات إحصائياً وتم اختبار النتائج باستخدام Chi-quare واختبار T- test واختبار معامل تحليل التباين أحادي الجانب "ANOVA" لفحص العلاقة بين المتغيرات.

### نتائج الدراسة:

بينت نتائج هذه الدراسة وجود معدل انتشار واسع للسمنة بين السيدات في قطاع غزة يصل إلى 31,9% ، وكانت نسبة السمنة أعلى بين السيدات اللاجئات، وكذلك أوضحت النتائج أن أعلى معدل للسمنة كان في المحافظة الوسطى (46%)، وأقل معدل كان في مدينة غزة (22,6%). في هذه الدراسة تم التعرف على العديد من العوامل التي تساعد على حدوث السمنة والتي كان لها دلالة إحصائية عالية:

- أظهرت الدراسة أن زيادة عمر السيدة له علاقة إيجابية ومباشرة بحدوث السمنة فكلما زاد العمر كلما زادت نسبة السمنة.
- كما أظهرت أن زيادة عدد مرات الحمل والولادة له علاقة إيجابية بحدوث السمنة وكذلك طول الفترة الزمنية بين الحملات.
- أظهرت الدراسة أن معدل انتشار السمنة كان أعلى بين السيدات الغير مرضعات.
- كما أظهرت الدراسة أن وجود أقرباء يعانون من السمنة من العوامل التي لها علاقة مباشرة وذات دلالة إحصائية بحدوث السمنة، كما أن السيدات اللواتي يعانين من الأمراض المزمنة عرضة أكثر لزيادة الوزن و السمنة.
- تبين من خلال الدراسة أن 33% من السيدات اللواتي يعانين من السمنة غير مدركات لهذه المشكلة ، وتبين أيضاً أنه لا توجد علاقة ذات دلالة إحصائية بين المعرفة التغذوية وحدث السمنة. ومن بين الممارسات التغذوية تبين أن السيدات اللواتي يأكلن في حالة التوتر النفسي أكثر عرضة للسمنة.
- أظهرت الدراسة أيضاً أن النشاط الجسماني له علاقة إيجابية ومباشرة بحدوث السمنة، وهذا قد يعود إلى أن غالبية السيدات يمارسن الرياضة بعد حدوث السمنة.

### التوصيات:

#### توصيات عامة:



تعزير التنقيف الصحي ونشر الوعي التغذوي بين السيدات - التعريف بالسمنة وأثرها على الوضع الصحي، بالإضافة إلى تدريب السيدات على طرق قياس السمنة وتحديدها ومتابعة ذلك باستمرار، وأوصى الباحث على أهمية تشجيع النشاط الجسماني ومحاولة التجهيز و توفير الأماكن اللازمة لذلك

### توصيات بحثية:

اجراء دراسة أخرى بعينة أكبر وأشمل ( Community based study ) لتوثيق نتائج هذه الدراسة، بالإضافة إلى إجراء دراسات مستقلة تهدف لدراسة تأثير بعض المتغيرات في السمنة خاصة النشاط الجسماني و علاقة المعرفة والتوجهات والممارسات التغذوية بالسمنة.

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## **Abbreviations**

<b>ANOVA</b>	Analysis of Variance
<b>BMI</b>	Body Mass Index
<b>CDC</b>	Center of Disease Control and Prevention
<b>CHD</b>	Cardiac Heart Diseases
<b>CI</b>	Confidence Interval
<b>CM</b>	Centimeters
<b>DALY</b>	Disability adjusted life years
<b>DM</b>	Diabetes Mellitus
<b>EMRO</b>	Eastern Mediterranean Region Office
<b>Epi-info</b>	Epidemiological Information program
<b>GDP</b>	Gross Domestic Product
<b>GNP</b>	Gross National Product
<b>ICN</b>	International Center of Nursing
<b>IMR</b>	Infant Mortality Rate
<b>IUD</b>	Intra Uterine Device
<b>KG</b>	kilogram
<b>LBW</b>	Low Birth Weight
<b>MCH</b>	Mother and Child Health
<b>MOH</b>	Ministry Of Health
<b>NGOs</b>	Non Governmental Organizations
<b>NIS</b>	New Israeli Sheqalim
<b>OA</b>	Osteoarthritis
<b>OR</b>	Odds Ratio
<b>PCBS</b>	Palestinian Center Bureau Of Statistics
<b>PHC</b>	Primary Health Center
<b>SD</b>	Standard Deviation
<b>SES</b>	Socio-economic status
<b>SPSS</b>	Statistical Package for Social Science
<b>TV</b>	Television
<b>UNRWA</b>	United Nation Relief And Work Agency
<b>WHO</b>	World Health Organization



**Definition of terms:****Women**

Women in this study referees to the married lady who are not pregnant, utilize MOH and UNRWA mother and child health clinics and filled questionnaire.

**Poverty line:**

Palestinian Central Bureau of Statistics (PCBS) estimated the poverty line for the year 2006 to be 2,143 New Israeli Sheqalim (NIS) for a household composed of two adults and four children (PCBS, 2006).

**Socioeconomic status:**

A term referring to prestige-based measures of socioeconomic position, as determined by rankings in a social hierarchy, Measures of SES are typically a composite of occupation, education, income, location of residence

**Body mass index**

Define as A measurement of the relative percentages of fat and muscle mass in the human body, in which mass in kilograms is divided by height in meters squared and the result used as an index of obesity (WHO, 2002)

**Classification of BMI According to World Health Organization (WHO):**

**Underweight:** <18.5 BMI (kg/m<sup>2</sup>)

**Normal weight:** 18.5 - 24.9 BMI (kg/m<sup>2</sup>)

**Overweight:** 25 - 29.9 BMI (kg/m<sup>2</sup>)

**Obesity:** ≥ 30 BMI (kg/m<sup>2</sup>)

**Morbid obesity:** > 40.0 BMI (kg/m<sup>2</sup>)

**Disability adjusted life years:**

According to World Health Organization, D ALYs for disease are the sum of the years of life lost due to premature mortality in the population and the years lost due to disability for incident cases of the health conditions.

**Level of education**

The researcher classified the educational level into three categories

**Low educational level:**

This level includes any women not complete more than 9 years of education

**Medium education level:**

This level includes any women completed between 9-12 years of education

**High educational level:**

This level includes any women completed more than 12 years of education

**Level of nutritional knowledge**

The researcher classified nutritional knowledge into two categories

**Low nutritional level:**

This level includes any women have correct answer for less than 70% of question related to nutritional knowledge.

**High nutritional level:**

This level includes any women have correct answer for more than 70% of question related to nutritional knowledge.

