

Prevalence of Obesity and Perceptions of Body Weight among University Students: Evidence from Jordan

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Abstract

This study was conducted to investigate the effect of measure the prevalence of obesity among university population in Jordan University of Science and Technology (JUST) University, Northern Jordan. A cross-sectional survey of (370) university male students were recruited from different majors and academic years. They were asked to answer questions concerning ; perception of their body weight and weight changes after leaving home; Participants' desire to reduce their body weight; the reasons that drive this desire and means used for weight reduction. Weights, heights and body mass index (BMI) were measured. The prevalence of the BMI categories in the sample were: 50% of the study sample is overweight making up the majority, participants with a normal BMI are 28%, 11.1% are underweight and 11% of participants suffer from obesity. Regarding to the participants' perception of their body weight and weight changes, the study results showed that 74.8% of the students in the study sample are in the normal or overweight categories, 22% are underweight and 3% are obese. The extent of weight change due to living away from home was also reported, where 50% confirmed a slight loss in their weight, 5% had a significant increase and 12% experienced no changes in their body weight. 67% of the total participants had a desire to lose weight where the rest of the 33% had no desire to lose weight. In conclusion, overweight and obesity do exist in the university students and this maybe a reflection of the lifestyle; dietary habits and pattern of living in university. Further research is needed to investigate the dietary habits and lifestyle behaviors of the university students.

Keywords: Obesity, Overweight, Perceptions of body weight, University students, JUST University, Jordan

1. Introduction

Obesity can be defined simply as a disease in which excess body fat has accumulated to an extent that health may be adversely affected (WHO, 1997). The emergence of obesity as a worldwide phenomenon, now affecting both the poor and the rich countries alike, and both the low and high socioeconomic groups within many countries, is creating a new paradigm for public health interventions. As a result of the nutrition transition and changes in lifestyle, many low-, and middle-income countries are now faced with the coexistence of diseases of poverty, food insecurity and under-nutrition along with diseases of affluence such as obesity and chronic diseases (Ruel et al., 1999). This nutrition transition is accompanied by demographic changes in life expectancy and fertility rates as well as an epidemiological transition, whereby patterns of diseases shift away from infectious diseases to higher prevalence of obesity and chronic diseases. (Ruel et al., 1999).

In Jordan, specifically In 2007, the Jordanian Ministry of Health (MoH) conducted a national study on behavior and risk factors of non-communicable diseases in adults aged 18 years and above (MoH/WHO/CDC, 2007). The study showed a prevalence rate of overweight of 30.5 % (BMI=25-29 kg/m²) and of obesity of 35.9 % (BMI=>30 kg/m²). The distribution of overweight was 35.9 % in males and 27.5 % in females and obesity in males was 27.8% and in females 42.9 %. The prevalence rate of non-communicable diseases were: hypertension of 25.6 % (males, 30.9 %; females, 21.5 %); diabetes, 16.0 % (males, 15.0 %; females, 16.8 %); impaired fasting glucose, 23.8 % (males, 24.5%; females, 23.4%). In addition, a prevalence rate of 36.0 % of hypercholesterolemia (males, 35.6%; females,36.5%). Recently, in 2015, Alarjan et al examine the prevalence of obesity and behaviors associated with the development of metabolic disease among medical practitioners in Jordan. Descriptive analysis of this study revealed that 47.9% were either overweight or obese.

In another study conducted by Khader et al in 2008, regarding adult obesity, they found that the age – standardized prevalence rate of obesity in a random sample of northern adult Jordanians aged 25 years and over was 28.1 % in men and 53.1% in women. Ajlouni et al in 1998 studied the prevalence of obesity in four semi-urban Jordanian towns in adults aged ≥ 25 years. They observed an alarming high prevalence rate of obesity of 49.8% in females and 32.7% in males. Despite of all these studies conducted among adults , studies concerned with evaluating and assessing the nutritional status of among university students are scarce in Jordan. Hence, the current study was designed in order to assess the nutritional status among university students, specifically the prevalence of obesity among them and student's perception about body weight and weight changes after leaving home.

2. Methodology

2.1 Study design and Study population

The current study was conducted in the Jordan University of Science and Technology (JUST), Northern of Jordan. The study targeted male students known to live away from their parents, where a convenient sample of 370 male students chosen randomly from different majors and academic years and with different socio-economic backgrounds. The sample number was calculated proportionally to the total number of university students.

2.2 Data collection

Data collection was done by using a questionnaire that comprised of Students' perception of their body weight and weight changes after leaving home; Participants' desire to reduce their body weight; the reasons that drive this desire and means used for weight reduction. Weights and heights of the study sample were measured and recorded to 0.1 gm. and 0.01 m, respectively. Body mass index (BMI) was calculated, as kg/m².

2.3 Data analysis

Descriptive statistics of frequencies and percentages of the collected data were analyzed using SPSS version 19. Inferential statistics were not used since the study does not target finding the correlations between the different obtained variables.

3. Results and discussion

A representation of the participants' *perception of their body weight and weight changes* is shown in Table (1), 74.8% of the students in the study sample are in the normal or overweight categories, 22% are underweight and 3% are obese. The extent of weight change due to living away from home was also shown in Table (1), where 50% confirmed a slight loss in their weight, 5% had a significant increase and 12% experienced no changes in their body weight.

Table (1): *Students' perception of their body weight and weight changes after leaving home.*

Research topic	No.*	%**	No.	%	No.	%	No.	%
Students' perception of their weight	Underweight		Normal		Overweight		Obese	
	81	21.9%	127	34.3%	150	40.5%	12	3.2%
Weight changes due to living away from home	Significant gain		Slight gain		Slight loss		No changes	
	18	4.9%	122	33%	185	50%	45	12.9%

* No. = Number ; ** % = percentage

Percentage of participants that had a desire to lose weight is represented in Table (2), being 67% of the total and the rest of the 33% had no desire to lose weight. Participants that wanted to lose weight resorted to one of the two methods, 70% preferred exercise out of the total, with only 30% opted to follow a diet regimen. Table (2) further addresses the reasons behind wanting to lose weight whether they were for aesthetic reasons where in 61.1% seek this outcome or to prevent obesity and related diseases sought by 38.9%.

Table (2): *Participants' desire to reduce their body weight, the reasons that drive this desire and means used for weight reduction.*

Research topic	No.	%	No.	%
Desire to lose weight	Yes		No	
	248	67%	122	33%
Means of losing weight	Diet		Exercise	
	111	30%	259	70%
Reasons for losing weight	Aesthetic		Disease prevention	
	226	61.1%	144	38.9%

Participants were distributed among WHO classifications of BMI that take into account both weight in kg and height in m², divided to get an index representative of the nutritional status ranging from underweight to obesity. Table (3) indicates that 50% of the study sample is overweight making up the majority, participants with a normal BMI are 28%, 11.1% are underweight and 11% of participants suffer from obesity. It can be concluded from Table (3) that the sample shows to be mostly overweight; these findings are almost in conjunction with the participants' perception of their body weight in Table (1) where 67% of the sample perceived themselves as either normal or overweight.

Table (3): *Distribution of the study sample among BMI classification using WHO standards*

Nutritional status	BMI	Number	Percentage
Underweight	< 18.5	41	11.1%
Normal	18.5-24.9	104	28.1%
Overweight	25-29.9	185	50%
Obese*	≥30	40	10.8%

* include morbidly obesity

Obesity is a serious problem but its insidious nature perhaps hides its current and future impact on human health. Obesity is not only a primary risk factor for serious chronic disease in its own right, but also acts indirectly by adversely affecting other primary risk factors such as lipid profile, glycaemic control and blood pressure, among others (Johnson, 2007). The present finding seem to be consistent with other research conducted by the Jordanian Ministry of Health (MoH) in 2007, where the study showed a prevalence rate of overweight of 30.5 % (BMI=25-29 kg/m²) and those results obtained from Ajlouni et al in 2008 where the tendency to have abnormal weight above 25 category of BMI.

Body Mass Index (BMI), an index of weight for height, is the standard measure for classifying overweight and obesity in adults. WHO classification of BMI is the most commonly used method for determining nutritional status by relating two variables weight and height. The WHO classification is based primarily on the association between BMI and mortality. A BMI of 30 or more is now widely accepted as denoting the classification of obesity (Burns, 2004). However it has its own limitations, BMIs should be used with caution as an indicator of obesity because it does not take into account the body fat percentage which is a more important measure for obesity, it is the enlargement and increase in number of adipocytes in the body. This is concisely determined using anthropometric measurements such as skinfold thickness, which could not be done, as it requires specific equipment and amount of time not feasible by this study.

4. Conclusions

From the results obtained from this study, the following can be concluded; (1) Respondents' perception of their weight ranges mostly between normal and overweight; (2) Majority of the study sample fall in to the overweight classification for BMI between 25-29.9; overweight and obesity do exist in the university students and this maybe a reflection of the lifestyle; dietary habits and pattern of living in university.

5. Recommendations

Based on the obtained findings, the following recommendations are suggested; (1) It is recommended to maintain a healthy body weight through exercise and healthy nutritious diet, which in turn would maintain a good health status; (2) Further research is needed to investigate the dietary habits and eating and lifestyle behaviors of the university students; (3) further research is needed to assess the dietary intake through several nutritional status' instruments (e.g.; 24 hour diet recall, FFQ ...).

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7. References

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