

Prevalence and Determination of Obesity and Overweight among Employees Women in Iraq

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Abstract

Back ground

Obesity and overweight are one of the most important and prevalence disease. obesity is a complex disease with genetic, biological, social, behavioral ,cultural and environmental influences, income ,sedentary life style ,inadequate sleep , age, race-ethnicity, gender, and other socio-demographic factors.

Objective

To assess the prevalence of obesity and overweight and their risk factors and comparison between different risk factors among people in Al-Najaf city.

Patient , Material , and Methods

Patient-This is randomized prospective clinical trial study , it was carried out in Iraqi at schools and colleges of public city , the study was carried out between 2016 to 2017.

Methods -Sample of 115 case of employees women in Iraq. The women are direct interview in the place of work of them(Schools, Collages,Governmental and private institutions),or by internet ,using specific questionnaires .The following parameters were calculated including weight , height and body mass index .

Materials -Specific equipments were used for obtaining body mass index, electrical home apparatus for measuring heightand weight is one of them that is used in this study.

Results :-

The current study show the following results regarding to the prevalence of lifestyle risk factors :-Physically inactive (52.5%) , rheumatoid arthritis(35.5%) , single daily fruit(50%) , overweight(27.5%) , obese(43.1%) , TV watching during eating(48.2%) , over eating during pleasant (26.7%)

Conclusion :-

From the results of present study we found that the prevalence of overweight and obesity obesity are lying within the expected range for women in Iraq. There were a significant relation among some lifestyle risk factors, Early discovery of weight gain and provide the patients with information about lifestyle risk factors are very important for control of weight .

Keywords:- risk factors , overweight , women , lifestyle obesity

INTRODUCTION

Obesity and overweight terms are simply defined as accumulation of excessive amount of fat that lead to health problems. The index that is used to diagnose weathered the individual is obese or overweight or normal and obtained by dividing weight in kilograms over square height in meter called body mass index((kg/m²) . Body mass index gives the important measure of overweight and obesity and as it is the same for both males and females for all ages of adults. According to the (WHO) defines "overweight" as a body mass index more than or equal to 25, and "obesity" as a body mass index more than or equal to 30 . Despite of some facts said that chronic disease risk in individuals raises from a body mass index of 21, measuring overweight and obesity in children aged five years to fourteen years is difficult because of there is not a standard definition.[1]

and bone structure [4]e, hip circumference is negatively associated with health outcomes in women[5],The ratio of waist to-hip for this reason may be a very important measure, it also includes the accumulation of fat on the hips, such an accumulation may be useful for health[3]

Table(2):-Sex-specific waist circumferences of metabolic complications linked with obese patients in Caucasians.[6]

Gender	Risk of obesity-associated metabolic complications	
	Increased	Substantially increased
Men	≥ 94 cm	≥ 102 cm
Women	≥ 80 cm	≥ 88 cm

Table(1):- Classification of obesity and overweight in adults according to body mass index [2].

Classification	BMI(Kg/m ²)
Underweight value	18.5
Normal	18.5-24.9
Overweight	25
Pre-obese value	25.0-29.9
Obese class no. I range	30.0-34.9
Obese class no. II range	35-39.9
Obese class no.III	40

Other references, such as waist, hip and circumferences, determine different aspects were affect body composition and distribution which had been isolated and almost opposite effects on risk factors of cardiovascular disease [3], Waist circumference is a relatively simple and easy measure which can be used to estimate the amount of abdominal fat. Hip measurements provide further important information about gluteo femoral muscle mass

PATIENTS , METHODS AND MATERIALS

Patients:

It is randomized prospective clinical trial study , it was carried out in Iraq at schools and collages of public city , the study was carried out between 2016 to 2017.

Inclusion and Exclusion Criteria:

Inclusion criteria:Include employee adult women suffering from obesity or BMI greater than 25 , and have other disease condition such as (arthritis, diabetes, hypertension, migraine, heart disease , breast cancer, irregular menstrual cycle ,gastroenterology ,sleep problems ,asthma ,depression ,thyroid disease)

Exclusion Criteria:

1. patient have hormonal change lead to obesity.
2. Have other disease lead to obesity
3. Patient not present at follow –up phone call .
4. patient don't want to continue due to personal cause.

Sampling:

The sample of study include 115 obese woman with BMI>25 ,Have other disease condition that related direct or indirect to this overweight and study the relationship between obesity and this disease condition.

Apparatus and Equipment used in study:

Apparatus: Electrical home device for measuring weight and height.

Equipment: Not used.

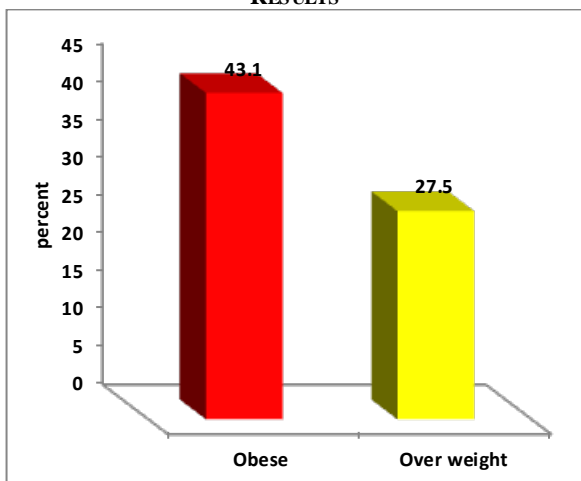
Approval and Ethical aspects:

Arrangement were done to take approvals from different colleges in University of Kufa in addition to many schools in government to seek agreement for data collection , the procedure and the purpose of the studywere explained to all the patients and advice on specific precautions to prevent obesity .

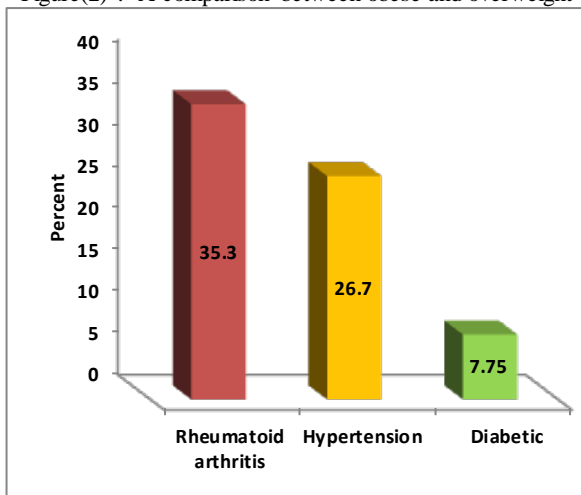
DATA COLLECTION:

The method of collecting information depend up on directinterview in room of different School andfaculties of University of Kufa ,the data were collected through well-developed questionnaire and the structured ,interview technique patients data were collected from the patient in organized fashion and individually with all the patients, the interview lasted for about (15minite), the data collection occur in must days of the week, and throughout any time during day if collected through social media , but at morning (8-12) if collected from school and colleges.

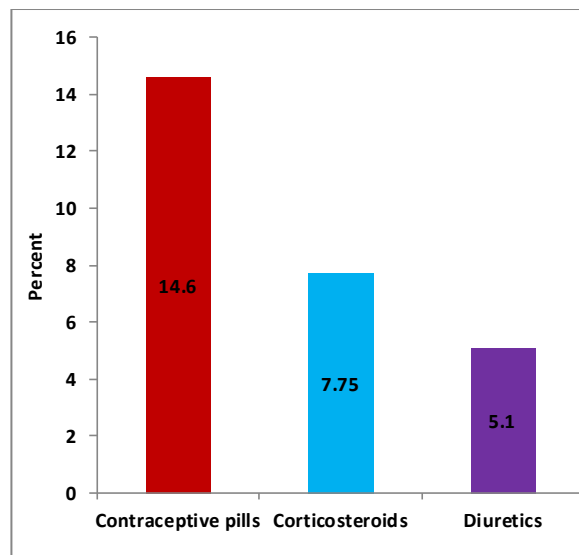
RESULTS



Figure(2) :- A comparison between obese and overweight



Figure(3) :- A comparison between different diseases among obese patients



Figure(3) :- A comparison between different medication among obese patients

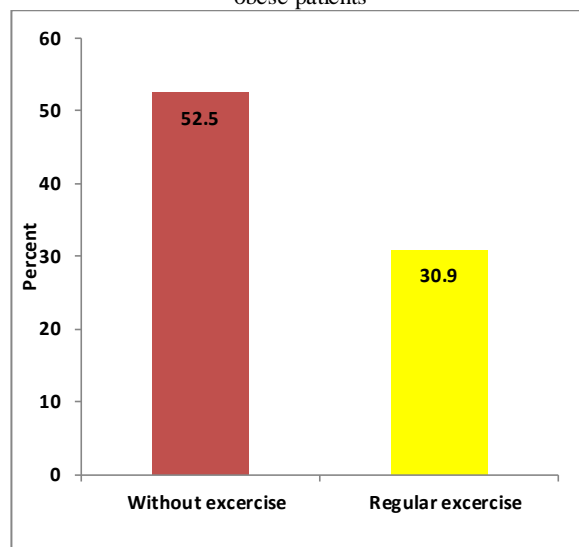
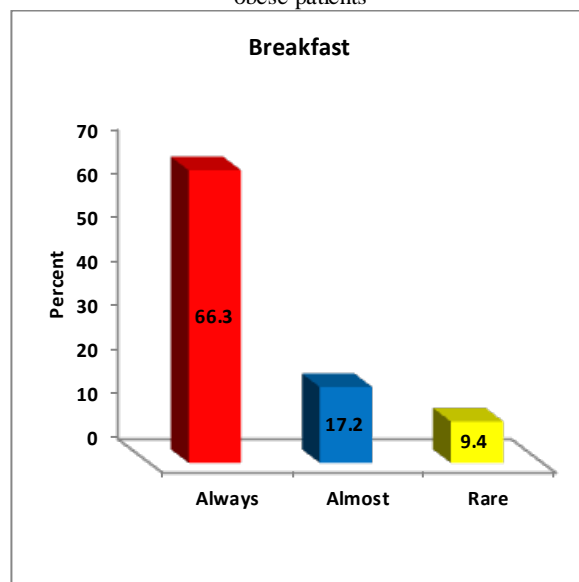
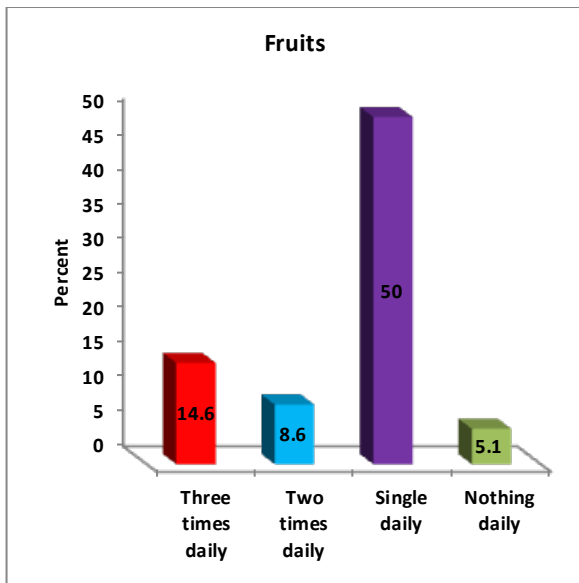


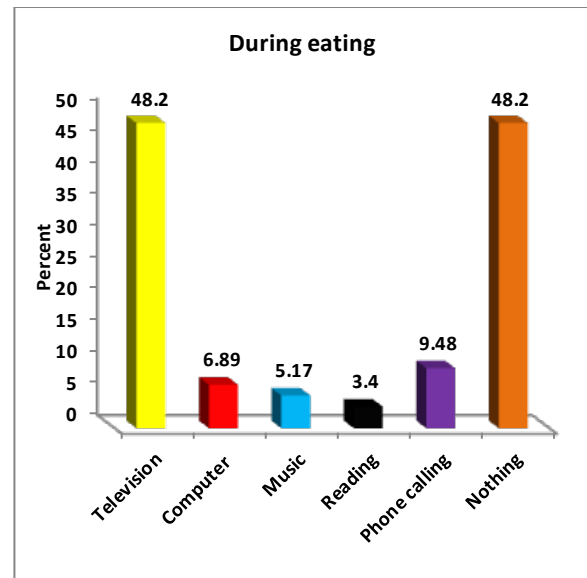
Figure (5):- A comparison between exercise and non-exercise obese patients



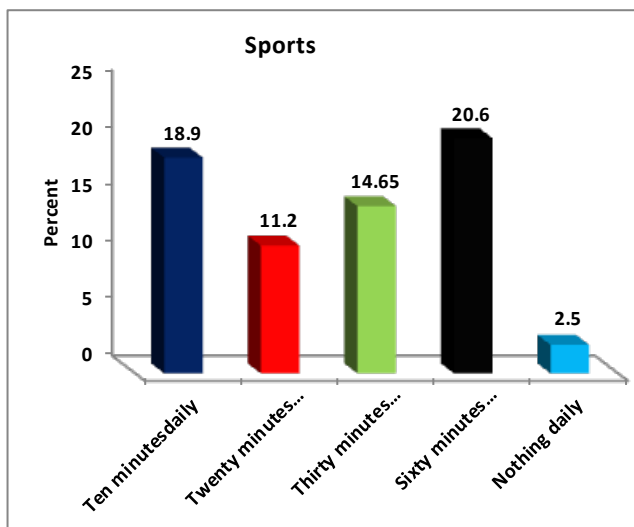
Figure(6) :- A comparison between eating and non eating breakfast among obese patients patients



Figure(7) :-A comparison between time interval of eating fruits among obese patients



Figure(10):- A comparison between different factors that done during eating among obese patients



Figure(8) :-A comparison between time interval of sports among obese patients

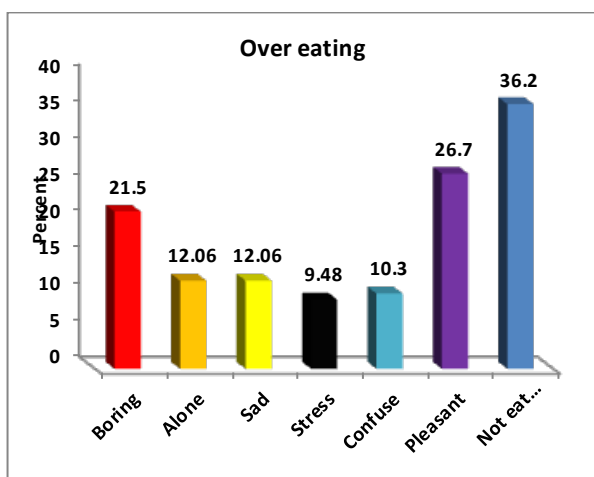


Figure (9):-A comparison between different psychological factors that lead to over eating among obese patients.

DISCUSSION

A comparison between different diseases among obese patients:

The results of the current study show significant association between rheumatoid arthritis and obesity, there was a significant increase of this disease in obese patient, this result was in similar with the result of study[7] which were stated that obese rheumatoid arthritis patients seem to have higher disease activity and worse quality of life but not further joint damage: the precise mechanisms in charge of this apparent dissociation require to be elucidated , Possible pathways that leading to obesity and healthy .Aspects obesity might affect in rheumatoid arthritis. During the time of high disease activity, inflammation leads to enhanced muscle breakdown, decrease levels of physical activity and suboptimal energy intake increasing muscle wasting. During times of low disease activity, if patients enhance levels of physical activity and optimize their diet, muscle wasting can be antagonized and fat storage decline to minimum. Otherwise, if physical activity stay at low levels, obesity might develop.

In present study find a half of our sample suffer from hypertension, this results was in a line with results of study [8] which were stated that Several peripheral and central abnormalities that can clarify the development or keeping of high arterial pressure in obesity have been established. Obesity is one of this factors that correlated with renal functional abnormalities and endothelial dysfunction that may play important role in the development of hypertension.

The results of current study show that obese patient have diabetic mellitus which is show another suspected complication of weight gain due to insulin resistance as fatty acid elevated, one of mechanisms that clarify this correlation is adipose tissue is known to express and secrete a wide variety of products known as 'adipokines' including leptin, resistin, adiponectin, and visfatin, as well as chemokines and cytokines and such as, interleukin-6 and monocyte chemo attractant protein-1, tumor necrosis factor-alpha. Adipokines release by either adipose tissue-infiltrated macrophages or adipocytes leads to a chronic sub inflammatory condition that could play a major role in the development of insulin resistance and type 2 diabetes mellitus ,this results was with a line with article [9].

A comparison between different medication among obese patients:

The current study show very high percent in obese patients whose used oral contraceptive pill ,various mechanisms explain weight gain one of them enhanced appetite could result from an inhibition of serum cholecystokinin, also it is suggested that estrogen lead to fluid-retention weight gain by directly cause stimulation of the renin–angiotensin system, which can cause water retention, which in turn may leads to sodium retention, as have been written by study[10].

Our data show more than half of sample have been used corticosteroid . Increase the weight is main adverse effect of long term use steroid medications, by several mechanisms these medications affect on body(proposed that glucocorticoids mainly exert effect on the balance of energy via a induction effect on food intake so that experimental studies have shown that glucocorticoids when injected centrally may inhibit the hypothalamic effect of leptin and increase neuropeptide Y activity)[11] . Diuretic medications are very important for obese patient because is a drug of choice in treatment (sodium retention and volume expansion in obese hypertensive patients give a rationale for the use of diuretics (loop ,thiazides, and potassium sparing diuretics), They are generally well tolerated inexpensive, and effective[12].

A comparison between exercise and none exercise obese patients:

The present study show that high percent of obese patient not attempt to do any exercise and this absolutely true ,as body activity reduce ,low energy expenditure, as written by study [13], which stated that when there is no movement, from either choice or because of injury, only burn or overcome fewer calories daily. An increment of only 500 calories each day interpretive into an increase weight of 1 pound each week or 4 pounds each month. When weight gain, so there was increased risk for high blood pressure, type 2 diabetes mellitus and heart disease .Overweight individuals need to do heavy exercise .

A comparison between time interval of eating fruits among obese patients:

All we know how fruit important to our body but we don't know how much we need ,in current study we obtained that half of obese patient eat single daily meal ,according to American Society for Clinical Nutrition [14] which said that dietary protein increase from fifteen to thirty percent of energy at a fixed rate of carbohydrate intake produces a sustained reduction in caloric intake that may be elicit by increased CNS leptin sensitivity and this result in significant reduction of weight, anorexic influence of protein may contribute to the loss of weight produced by low-carbohydrate diets.

A comparison between time interval of sports among obese patients

This differ from individual to individual based on current study asking obese patient how much time need to play various type of sports, the answer was about 1h daily .

A comparison between eating and none eating breakfast among obese patients:

Breakfast is important part of lifestyle and healthy diet can positively effect well-being and body's health ,but the quality of consumed breakfast generally in our country are rich of fat, less of fiber ,this lead to enhance body weight.

A comparison between different factors that done during eating among obese patients:

The results of current study show a significant increase in obesity by watching TV ,these results were similar to the findings obtained by study[15], as they were showed that time spent in watching of TV was significantly associated with increase risk of obesity and there are 3 potential mechanisms for the significant linked between obesity risk and TV watching ,First mechanism TV watching decrease physical activity and for this reason lead to reduced energy use, In present study, women who remain more time in watching of TV make exercise less, but the influences of exercise and TV watching on the occurrence of obesity were largely separately.

second mechanism, TV watching may increased food intake and total energy because of individuals feel pleasure to eat while see TV despite of their levels of physical activity are low, Also, populations who spent more time see TV in most cases follow an unhealthy eating program, such an program is directly attributed to commercial advertisements and food cues appearing on TV and has been associated with increased risk of obesity, Another important mechanism is that TV see results in reduce energy use as compared with other sedentary activities such as reading ,writing ,sewing, and driving a car, all these factors collectively may explain our results that TV watching is more strongly correlated with obesity than other sedentary behaviors.

CONCLUSION :-

From the results of present study we found that the prevalence of overweight and obesity are lying within the expected range for women in Iraq. There were a significant relation among some lifestyle risk factors, Early discovery of weight gain and provide the patients with information about lifestyle risk factors are very important for control of weight .

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