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Original Research Article

Cross Sectional Study for Obese 5th Year Students in Department of Dentistry in Al-Hikma University College for the Year 2025-2026

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Abstract: The research is among the serious health issues that can result in significant serious systemic illness like high blood pressure, diabetes mellitus type 2 and heart issues. Most of the obesity is attributed to a parson failing to acquire healthy life style i.e. eating unhealthy foods and failing to exercise periodically; this leads to highest levels of mortality among a parson. The objectives of the study are to determine a percentage of obesity among the students of the 5th year dentistry department in Al Hikma University College by selecting 30 cases of men and women in terms of systematic random table numbers based on the body mass index (BMI) as an indicator of obesity. This paper reveals five cases of males and four cases of female in each group of study which equate to 17 percent and13 percent respectively. Health education is therefore advisable to ensure that people acquire healthy life style to eliminate obesity and its complication.

Keywords: Obesity, Complication, Life Style, BMI.

INTRODUCTION

One of the biggest health issues is obesity where over the past decade have caused severe systemic conditions that medically should be intruded to decrease the mortality rate and diseases like diabetic type 2, cardiovascular diseases as high blood pressure, stress. Therefore, obese individuals need program of health education because they are considered to be on the leading health life style such as healthy food consumption, sports and exercise to minimize the effects of bad outcome like decreasing mortality rate [1-4].

Objectives

1. The research is conducted to determine the prevalence rate of obesity in male and female students who are the fifth-year students of the dentistry department in the Al Hikma University College in the year 2025 -2026.
2. Disseminate information about the oral cavity health issues within obese patients.

MATERIALS AND METHOD

1. The study group will be chosen randomly under the systematic random table digits that will form 30 cases of male and 30 cases of female after enumerating all the students.
2. The scale by which the measurements are carried is body mass index and by the weight, divided by the height m^2.

REVIEW OF LITERATURE

Obesity Has the Following Effects on Health

Cardiovascular Disease:

No known history of heart failure, angina, or ischaemia.<|human|>Metabolic Diseases: No known history of heart failure or angina or ischaemia.

- **Type 2 Diabetes:** Obesity is one of the biggest risk factors and could have an impact on the efficiency of the body to utilize insulin (insulin resistance) [5].
- **Heart Disease and Stroke:** This is riskier because of the greater chances of high blood pressure (hypertension), unhealthy cholesterol levels (dyslipidemia), and the heart being overworked [6].
- **Metabolic Syndrome:** A combination of diseases (high blood pressure, high blood sugar, excess body fat around the waist, and abnormal or high lipid profile such as cholesterol and triglycerides) that coexist and result in increasing the probability of heart related issues, stroke, and diabetes [7].
- **Fatty Liver Disease:** There is a build-up of excessive fat in the liver which may cause inflammation and in severe cases, liver damage (cirrhosis) [8].

Respiratory and Sleep Issues

- Sleep Apnea: A severe condition in which breathing is frequently interrupted in the course of sleep [9,10].
- Asthma and other Breathing Problems such patients are more likely to have respiratory infections in comparison to non-obese individuals [11].
- Pulmonary hypertension, obesity hypoventilation syndrome, pneumonia and acute respiratory distress syndrome [12].

Cancers

- Obesity has also been associated with increased risk of various kinds of cancer such as uterus, breast, colon, rectum, esophagus, liver, gallbladder and kidney cancers among others [13, 14].

Musculoskeletal Problems

- Osteoarthritis: Overload of weight bearing joints (such as knees, hips etc) as a result of excessive weight, which speeds the deterioration of cartilage [15, 16].
- Joint and Back Pain. The problems are positively related to obesity [17].

Other Conditions

- Gallbladder Disease and Gallstones [18,19]
- Gastro esophageal Reflux Disease (GERD) [20,21]
- Kidney Disease [22,23]
- Infertility and Pregnancy Complications (including gestational diabetes and pre-eclampsia) [25,26]

Mental and Quality of Life Issues

- Mental Health Problems: Depression and anxiety [27].
- Lower Self-Esteem and Social Stigma [28].
- Problems with Day to Day Activities (e.g. breathlessness, joint pains, fatigue) [29].

It should be noted that with a small loss in weight, a huge percentage of risk development of most of these obesity related complications would be greatly lowered.

Effects of the Health of the Oral Cavity Including Dental Caries

It is discovered that obese individuals are highly associated with Poor oral hygiene which will in turn impact adversely on the oral hygiene, the peridontium, the gingiva and the dental health [30]. Dental caries is attributed to obesity that is greatly correlated with the excessive intake of sugar, consuming and drinking inappropriate life style and the physical exercise exercising of the body influenced adversely on the oral health [31]. Research that was conducted by Marro, F *et al*., in 2021 to evaluate a sample of individuals calculating the indices (BMI, DMFT, gingival, plaque and BEWE). As a means of comparing between these variables. The authors discovered that dental caries is a level that is increased by the obesity. Also a wide range of studies are observed to be consistent where the dental health issue related highly between poor oral health and obesity [33-36], as compared to other studies that did not find any significant association [37, 38].

The Risks of Obesity Such As

1. Unhealthy Eating Patterns:

Most of the energy rich foods which are mostly high in added sugars, saturated fats, refined carbohydrates, and salt. Excessive intake of liquids containing calories that are sweet (such as alcohol) and beverages. Poor consumption of fruits, vegetables, whole grains and fiber.

Physical Inactivity and Sedentary Behavior:

- The absence of physical activity: Sedentary lifestyle with long sitting time, too much time in front of the screen (TV, computer, video games) [40].

- Poor Sleep: Insufficient sleep or inadequate sleep quality may have an impact on hormones that control appetite and that make people more likely to eat high-calorie foods [41].
- Stress: Chronic stress may also cause the release of hormones such as cortisol that may stimulate appetite and fat storage particularly in the abdominal region [42].

2. Genetics:

Genes may determine the ability of the body to store fat, burn the calories faster, and the hormones controlling appetite. Extremely, single-gene disorders are directly related to obesity (e.g., Prader-Willi syndrome) [43].

Age:

Old age is characterized by a slowing metabolism [44]. Hormones and Metabolism: Metabolism and hormones (such as leptin and ghrelin, which control appetite) can be the cause of the difference.

3. Health Conditions:

Some of the health conditions which may lead to weight gain are Cushing syndrome, Polycystic Ovary Syndrome (PCOS) and an underactive thyroid (hypothyroidism) [46].

Medications:

There are certain medications that lead to weight gain as a side effect e.g. antipsychotics and antidepressants, steroids, and certain medications used to treat diabetes or blood pressure [47].

Pregnancy:

In pregnancy, weight gain, which could not be lost later on, could contribute to obesity among women [48].

Quitting Smoking:

The gain of weight is a popular off-side effect of quitting smoking, but quitting is a significantly larger supply to overall health [49].

4. Obese genic Environment:

This is the environment that encourages intake of high-calorie food and lack of physical activity. Examples include: Availability of processed foods that are high in calorie content and are cheap. Poor access to healthy, affordable nutritious food (food deserts). Absence of physical activity facilities or infrastructure (e.g. parks, sidewalks).

Socioeconomic Status:

Income and education level have been identified to be lower among some groups of the population which increases their risk of obesity.

Social and Cultural Norms: Food customs, social events, and ways of culture regarding body weight [50-52].

RESULTS

The results are presented in tables and graphs by percentage.

Table 1: Indicates the frequency of obese females of 30 cases

BMI	gender	serial
22.89	F	1
23.44	F	2
24.84	F	3
24.46	F	4
23.53	F	5
28.52	F	6
16.46	F	7
24.98	F	8
18.97	F	9
33.09	F	10
23.56	F	11
20.32	F	12
20.7	F	13
28.62	F	14
29.3	F	15

BMI	gender	serial
25.59	F	16
27.34	F	17
27.41	F	18
30.73	F	19
20.7	F	20
24	F	21
29.05	F	22
30.09	F	23
26.81	F	24
22.6	F	25
25	F	26
18.99	F	27
22.58	F	28
16.94	F	29
31.98	F	30
4	obese	

Table 2: Indicates the frequency of obese males of 30 cases

BMI	gender	serial
27.47	M	1
24.69	M	2
31.83	M	3
27.74	M	4
24.41	M	5
22.49	M	6
24.69	M	7
21.62	M	8
20.37	M	9
25.9	M	10
24.82	M	11
28.09	M	12
22.16	M	13
24.16	M	14
24.97	M	15
18.9	M	16
18.17	M	17
34.6	M	18
24.15	M	19
23.08	M	20
33.31	M	21
32.93	M	22
28.29	M	23
28.41	M	24
27.68	M	25
24.72	M	26
25.15	M	27
29.32	M	28
24.1	M	29
30.47	M	30
5	obese	

Table 3: Indicates that the prevalence of obese females and males among the 5th year dental students (study groups) is high

	No. of students	Obeis student	prevalence
Female	30	4	% 17
Male	30	5	% 13

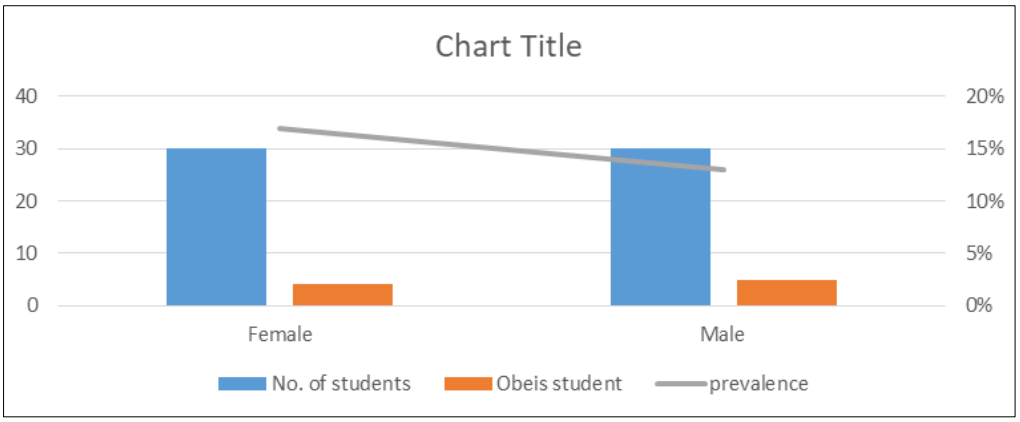

Figure 1: Displays the prevalence of the obese among the entire students

DISCUSSION, CONCLUSION AND FUTURE PERSPECTIVES

The research reveals that obese individuals are susceptible to major medical issues that are systemic like heart diseases and elevate blood pressure [7], and diabetes mellitus type 2, stress, respiratory illnesses and others prone to oral health issues like gingivitis, periodontitis and dental caries due to excessive eating of sugar diets and sweets [5].

Recommendations

Health is crucial in minimizing cases of obesity including:

1. Acquisition of healthy life style should entail:
    - Encourage sport exercise.
    - Promote the intake of healthy food.
    - Encourage enough sleep.
    - Regular checkup of blood pressure and sugar levels in the blood.
2. Eat less starchy food
3. Growth checking hormonal assay.
4. Attempt to weigh the weight on a daily basis.
5. Assessment of oral cavity to identify and cure Caries at an early stage.

Future Research Agenda

The Future Scopus-index research in Iraq must change to:

- **Longitudinal Studies:** Measure the alteration in BMI and health parameters over the five years of dental school to determine in which the periods are the highest risks of weight gain.
- **Interventional Trials:** Evaluate the effectiveness of certain health promotion programs in dental colleges.
- **Qualitative Research:** Aim to understand the exact academic, psychological, and sociocultural preventive factors to healthy eating and physical activity within the context of the Iraqi university.

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