NUTRITION AND FOOD SCIENCES

Factors Influencing the Nutritional Status of Obese Patients in Egypt and Oman: A Cross-Sectional Study

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ABSTRACT:

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have a negative effect on health. This study aimed to evaluate the nutritional status of obese patients in Egypt and Oman and identify the differential factors related to disease. A total of 200 male participants (100 Egyptian and 100 Omanis) were involved in this study, with a range of ages 17 to 40 years. Data about anthropometric measurements, food habits, socioeconomic status, and health history were collected. The mean value of nutrient intake was estimated through a 24-hour recall for three days and compared with daily requirement intake (DRI). The results revealed that there is no significant difference between the groups in height, weight, and body mass index. The highest percentage in both Egyptian and Omani groups had a university education and were married. The majority were second-class obese (BMI between 35 and 40), inactivity, eating three meals, and eating caloric snacks. Moderate amounts of salt, drinking soft drinks, and eating fast foods were consumed. They were suffering from diseases such as back pain and diabetes. Egyptian patients consumed plant iron and high amounts of sodium, and the other nutrients were significantly lower than those of Omanis patients. From that, it was concluded that food habits and lifestyle factors were the major factors that caused obesity in both groups. So, a healthy eating plan, changing food habits, and regular physical activity play a vital role in controlling obesity.

Keywords: Obesity; nutrients; anthropometric; food habits

INTRODUCTION

Obesity is major risk factors for a number of chronic diseases, including cardiovascular diseases such as heart disease and stroke, which are the leading causes of death worldwide. Annually, about 4.7 million premature deaths occur due to obesity. It was ranked fifth among the leading preventable causes of death, making up 8.4% of deaths worldwide in 2017[1]. According to the World Health Organization (WHO), Egypt ranks 18th with the highest prevalence of obesity worldwide (2). The situation in

80 Oman is similar to that in the Eastern Mediterranean Region as a whole, where approximately 49% of adults are overweight or obese, with higher rates among women (53%) compared to men (more than 45%), and more than two in five deaths (45%) attributed to cardiovascular diseases (3).

Obesity is the result of caloric imbalance and is affected by various genetic, behavioral, environmental factors and inadequate eating habits of modern life. The traditional Mediterranean healthy food habits are affected by the fast-food market and have been replaced by more westernized food habits, which are characterized by low intake of dietary fiber, vegetables, and fruit and high intake of foods rich in fat, sugar; and consequently, overweight and obesity are increased (4).

The increased incidence of obese in Oman and Egypt may be related to some factors, such as early weaning, eating disorders and impaired family relations, and life style which makes available a range of low cost, tasty products, with high energy content and low nutritional levels, served in huge portions, along with decreased practice of physical exercise fostered by technological advances, such as television, computers, video games, among others. It also affects in psychosocial aspects: Behavior disorders, depression, anguish, low self-esteem and feeling of guilty (4,5).

Therefore, the current study was conducted to assess the nutritional status and anthropometric characteristics of Egyptian and Omanis obese with ultimate goal of establishing and developing a data base for the anthropometric and nutritional parameters in Omanis and Egyptian obese population.

SUBJECTS AND METHODS
SUBJECTS
A retrospective design was performed to evaluate the influence of obesity on the patients of Egypt and the Sultanate of Oman on obese community. The total sample size was 200 male patients (samples100 for each) and their ages were ranged from 17 to 40 years. The present study was started in March 2022 to December 2022.

Instruments
The instrument of this study consisted of a structured interviewing questionnaire which consists of four parts: The first is to elicit the socioeconomic characteristics of both groups. The second is to collect data about the diet and health history of the studied groups. The third is anthropometric measurements of both groups.

METHODS
Demographic data
Information about socio-economic status including age, education level and money spend on food were collected by questionnaire through interview.

Dietary intake
A pre designed form was used to determine food intake by using 24-hour dietary recall sheet for seven days to

81

obtain accurate details of foods and beverages consumed by both groups and calculate the nutritive value of the intake using food composition tables. To compare the nutritional value of the food consumed with the per caput recommended dietary intake according to (6,7).

Anthropometric measurement

The anthropometric measurements included weight, height, triceps skin folds thickness, upper arm circumference and mid upper arm muscle circumference (8).. BMI was obtained by calculating weight / square height (kg / m2). The methods which used was according to Jelliffe (9).

Statistical analysis

Independent-sample t-test was used to compare the parameters between Egyptian and Omanis obese patients. A P-value less than 0.05 was considered statistically significant (10).

RESULTS AND DISCUSSION

Social status for the Egyptian and Omanis obese patients

The social status for the obese patients is summarized in Table (1), the majority of the obese patients was married which being 73vs. 93 % for the Egyptian and Omanis obese patients respectively. With regard to the educational level for the obese patients, the high percentage of the obese patients had university education and about 80% of the obese patients was working. The majority of the Omanis obese patients live in family homes while Egyptian patients live in Residential apartments. For the number of rooms for the home specifications. It was found that most of the Egyptian obese patients live in houses consisting of two rooms whereas Omanis obese patients live in houses consisting of five rooms. Social factors include factors such as education, employment, community safety and social support. The choices that are available in a community are impacted by social factors. These choices include our abilities to afford medical care and housing and to manage stress. Most studies reported an association between a lower education and total and central obesity Occupational factors that were related to obesity were identified as working hours, type of work, and being a shift worker. In particular, for the factor, type of work, the prevalence of obesity was higher in health care support, protective service, transportation, and material moving workers in the US, and the BMI was higher in male intermediate transport and production workers than in unemployed individuals in Australia (11,12).

Health status the Egyptian and Omanis obese patients

Concerning the health status for the obese patients are summarized in Table (2). It was found that the majority of the obese patients were suffering from some diseases, 85% and 69% for Egyptian and Omanis obese patients respectively. 52.94% from Egyptian patients who suffering diseases had back pain as the side effect of obesity while 68.11% for

82 Omanis patient were diabetes. the highest percentage felt upset, indigestion, hair loss, sagging and cellulite. About 43% from Egyptian patients usually smoke after eating whereas Omanis patient doesn't smoke after meal. The majority from both groups suffered from skin cracks. 40% from Egyptian patients got drowsy after eating while 53% from Omanis patient didn't get drowsy after eating. For Both of them, the majority didn't suffer from tooth decay, gingivitis and sometimes they suffer from fatigue and lethargy.

Table (1): Social status for the Egyptian and Omanis obese patients

Variables	Egyptian		Omanis	
	Frequency	%	Frequency	%
Social status				
Single	19	19	6	6
Married	73	73	93	93
Divorced	8	8	1	1
Educational level				
Reads and writes	9	9	13	13
General secondary	20	20	27	27
University qualification	71	71	60	60
Occupation				
Working	86	86	83	83
Not-working	14	14	17	17
Home specifications				
Familiar	39	39	67	67
Residential apartments	61	61	33	33
Number of rooms				
2	55	55	0	0
3	35	35	24	24
5	10	10	43	43
6	0	0	20	20
7	0	0	8	8
8	0	0	5	5

The highest percentage took medicine which matched with the private disease. For the sports, 73 and 60% from Egyptian and Omanis patients didn't practice any sports. Excess weight, especially obesity, is a major risk factor for cardiovascular disease, Type 2 diabetes, high blood pressure, sleep apnea, psychological issues, some musculoskeletal conditions and some cancers. As the level of excess weight increases, so does the risk of developing these conditions (13). Wannamethee et al. (14) found that 3051 elderly men with diabetes or CHD also found that obesity and physical inactivity as well as cigarette smoking and high

83 carbohydrate diet were significantly associated with a greater risk of heart diseases. Her(12)found that obesity can result in the depletion of hair follicle steam cells (HFSCs) through the creation of certain inflammatory signals. These block hair follicle regeneration and, consequently, can result in loss of hair follicles. Also, diet high in fat and calories, including large quantities of processed foods or sugar, and a lack of physical activity, leads to obesity. Those same foods can cause oral health problems including gum disease, premature tooth loss and bad breath. Being overweight increases risk of experiencing chronic fatigue, as well as excessive daytime sleepiness, a similar condition that makes it physically difficult to stay awake, despite a full night of rest the night before.

Food habits for the Egyptian and Omanis obese patients.

Results in table (3) represented food habits for the Egyptian and Omanis obese patients. With respect to gender, all of obese patients were males. Second class obesity and law activity were recorded the highest percentage. The majority of both samples ate three meals and there is no meal was deleted. Depending on the diet was the main reason to cancel breakfast. Sweets was the favorite food between meals in Egyptian patient while sandwiches were the favorite for Omanis patients. The majority of Egyptian sample drunk tea after eaten food while the Omanis recorded the highest percentage in sometimes.

All of them consumed moderate amount of salt. For drinking soft drinks and eaten fast foods, the highest precents were drunk soft drink during and after eating and ate fast foods in Egyptian patients while in Omanis patients, they sometimes consume the soft drink in these times and ate fast foods. The majority consumed processed and canned foods, didn't eat fruits and vegetables in appropriate quantities whereas in Egyptian patients didn't drinking water in appropriate quantities. Omanis' patients sometimes consume water in appropriate quantities and both of them sometimes ate fruits after food. The results of WHO (15) agreed with the obtained data which found that obesity develops within an individual and is dependent on a complex interaction of genetic, environmental and behavioral factors, all of which act on energy homeostasis (i.e., energy intake, energy expenditure or energy storage). Changes in dietary habits and physical activity have been implicated as potential causes of obesity. Previous research has shown that weight depends on energy balance defined as the relation between energy intake and energy expenditure.

Studies (15) have suggested that several characteristics of dietary behavior such as eating frequency, the temporal distribution of eating events across the day, breakfast skipping, and the frequency of meals eaten away from

84

Table (2): Health status for the obese patients .

Variables	Egyptian		Omanis	
	Frequency	%	Frequency	%
Do you suffer from some diseases?				
Yes	85	85	69	69
No	15	15	31	31
If yes, what is it?				
Diabetes	32	37.65	47	68.11
Back pain	45	52.94	28	40.58
Heart diseases	8	9.41	4	5.79
Do you feel upset and indigestion?				
Yes	65	65	54	54
No	2	2	34	34
Sometimes	33	33	12	12
Do you suffer from hair loss?				
Yes	77	77	89	89
No	20	20	11	11
Sometimes	3	3	0	0
Do you suffer from sagging or cellulite?				
Yes	76	76	66	66
No	24	24	34	34
You usually smoke after eating				
Yes	43	43	37	37
No	38	38	40	40
Sometimes	19	19	23	23
Do you suffer from skin cracks?				
Yes	17	17	13	13
No	83	83	87	87
Do you get drowsy after eating?				
Yes	23	23	22	22
No	37	37	53	53
Sometimes	40	40	25	25
Do you suffer from tooth decay?				
Yes	46	46	24	24
No	54	54	76	76
Do you suffer from gingivitis?				
Yes	43	43	15	15
No	57	57	85	85
Do you suffer from fatigue and lethargy?				
Yes	27	27	17	17
No	26	26	39	39
Sometimes	47	47	44	44
Are you taking any medicines?				
Yes	61	61	50	50

	Egyptian		Omanis	
	Frequency	%	Frequency	%
No	28	28	28	28
Sometimes	11	11	22	22
If yes, what is it?				
Vitamins	3	4.92	7	14
Analgesics	6	9.83	3	6
Antibiotics	19	31.15	8	16
Other	33	54.1	32	64
Do you do any sports?				
Yes	15	15	9	9
No	73	73	60	60
Sometimes	12	12	31	31

home, together referred to as "eating patterns," may influence body weight However, these earlier studies of the effect of eating patterns on body weight have not accounted for the effects of total energy intake and physical activity, which may confound results and introduce misclassification of dietary variables. Higher frequency of eating either breakfast or dinner away from home was associated with obesity. In agreement with these findings, a study by Alzahrani et al. (16) suggested that the frequency of consuming restaurant food was positively associated with increased body weight in adults. Food obtained away from home is generally higher in fat, saturated fat, and cholesterol than food prepared at home, and our findings are consistent with this Fruit and vegetable consumption has been consistently reported to be low among adolescents and young adults (17).

Nutrients intakes compared with DRI for Egyptian and Omani patients

The results of Table (5) represent the means and standard deviations of nutrients intakes compared with RDI for Egyptian and Omani patients with obesity. It could be noticed that there is no significant differences between both of groups in Plant Protein, fiber, total iron, Vit.B6 and folate intake. In case of plant iron and sodium were significantly higher in Egyptian patient than Omanis patient while the other contents of diet intake were significantly lower as compared with the dietary intake of Omanis patients. From the obtained results , it could be noticed that high caloric intake led to high protein and fat , the high iron intake in Egyptian led to high intake from plant source while in Oman led to increase the consumption animal foods as a source of iron .Lack of fiber and vitamin C was caused by the deficiency of vegetables and fruits intake. The above results were matched with the results according to Alzahrani et al. (16); Niyaz (17) and Sabbour et al. (18) who found that

Table (3): Food habits for the Egyptian and Omanis obese patients.

Variables	Egyptian		Omanis	
	Frequency	%	Frequency	%
Degree of obesity				
First-class obesity	25	25	31	31
Second class obesity	45	45	40	40
Third degree obesity (excessive)	30	30	29	29
Activity type				
Light	75	75	60	60
Medium	25	25	40	40
How many meals are eaten per day				
Two meals	30	30	9	9
Three meals	50	50	68	68
More than that	20	20	23	23
What is the deleted meal?				
Lunch	56	56	38	38
Breakfast	33	33	26	26
Dinner	11	11	36	36
What is the reason for not eating breakfast?				
lack of appetite	27	27	45	45
Depending on the diet	40	40	55	55
No time available	33	33	0	0
What is the amount of salt that you prefer to add to food?				
Few	16	16	14	14
Moderate	45	45	77	77
High	39	39	9	9
Do you like to have tea after meals?				
Yes	82	82	39	39
No	10	10	24	24
Sometimes	8	8	37	37

Table (4): Frequency and percentage of snakes for the Egyptian and Omanis obese patients .

Variables	Egyptian		Omanis	
	Frequency	%	Frequency	%
What type of food is eaten between meals?				
Juices	10	10	23	23
sweets	32	32	12	12
sandwiches	24	24	34	34
Chips Fries	21	21	11	11
Other	13	13	20	20
Do you like to have soft drinks during and after eating?				
Yes	46	46	12	12

	Egyptian		Omanis	
	Frequency	%	Frequency	%
No	10	10	56	56
Sometimes	44	44	32	32
Do you eat fast food?				
Yes	45	45	22	22
No	15	15	33	33
Sometimes	40	40	45	45
Do you eat processed and canned foods				
Yes	23	23	4	4.3
No	18	18	7	6.4
Sometimes	59	59	89	89.3
Do you eat fruits and vegetables in appropriate quantities?				
Yes	3	3	5	5
No	71	71	55	55
Sometimes	26	26	40	40
Are you drinking water in appropriate quantities				
Yes	16	16	16	16
No	73	73	29	29
Sometimes	11	11	55	55
Do you eat fruits after food?				
Yes	4	4	0	0
No	20	20	17	17
Sometimes	76	76	83	83

consumption high amounts of energy, particularly found in high fat and high sugar foods, and do not use all of the energy through physical activity, much of the extra energy will be stored in the body as fat (22,23). The most common vitamin deficiencies among people with obesity are vitamins D, C, and B1. Vitamin D deficiency is by far the most prevalent, affecting at least 80 percent of people with obesity. obesity is increasingly involved with nutritional derangements associated with micronutrient deficiencies, including zinc, calcium and magnesium. Yousif et al. (19) found that the obese children had overconsumption of carbohydrates, the consumption of calcium, vitamin C, vitamin B1 and vitamin A were at the unsafe level and this matched with the obtained results except vitamin B1 which recorded high level.

The results of table (6) represent some anthropometric measurements and money spend on money for the Egyptian and Omanis obese patients. With respect to height, and weight were higher for the Egyptian obese patients than that of the Omanis obese patients but the differences are nonsignificant. With regard to skin layer thickness, arm circumference and circumference of the

Table (5): Nutrients intakes compared with RDI for Egyptian and Omani patients

Variables	Egyptian		Omani	
	Mean±SD	Percentage of DRI	Mean±SD	Percentage of DRI
Water Intake (ml)	1360.51±20.20 b		1745.93±29.35 a	
Caloric Intake(kcal.)	2018.69±45.03 b	84.49	2500.55±58.89 a	105.42
Animal Protein (g)	59.99±18.14b		83.65±23.74 a	
Protein Plant (g)	35.59±8.27 a		35.23±4.45 a	
Total Protein(g)	95.56±8.93 b	185	118.83±32.22 a	221.51
Animal Fat(g)	56.96±21.42 b		68.89±29.02 a	
Plant Fat(g)	32.59±10.31 b		48.36±8.69 a	
Total Fat(g)	89.56±23.54 b	127.94	115.72±35.78 a	165.31
Carbohydrate(g)	203.39±16.87 b	92.45	248.84±18.98 a	131.11
Fiber(g)	9.47±2.39 a	63.13	8.01±3.39 a	53.4
Calcium (mg)	695.41±59.99 b	95.69	874.19±18.13 a	83.26
Phosphorus (mg)	1488.36±58.29 b	159.27	1790.18±93.86 a	220.32
Animal Iron (mg)	9.32±2.45 b		14.91±7.85 a	
Plant Iron(mg)	16.24±6.87 a		11.85±4.29 b	
Total Iron(mg)	25.56±9.33 a	168.29	26.74±9.49 a	173.29
Sodium (mg)	4640.28±43.27 a	129.39	4221.37±57.56 b	144.38
Potassium (mg)	3264.12±98.58 b	272.77	3954.83±75.47 a	268.22
Zinc (mg)	10.89±2.54 b	85.07	13.38±4.62 a	94.27
Magnesium (mg)	366.37±59.36 b	45.75	398.27±23.23 a	54.99
Vitamin A(mcg)	784.59±43.58 b	92.92	981.91±93.68 a	114.21
Vitamin C(mg)	44.75±20.43 b	74.58	79.23±19.46 a	131.30
Vitamin D (mcg)	1.43±0.64 b	22.96	2.27±0.38 a	44.72
Vitamin E(mg)	33.93±16.19 b	126.32	37.04±12.57 a	135.85
Vitamin B1(mg)	1.24±0.42 b	101.92	1.42±0.83 a	115.91
Vitamin B2(mg)	1.98±0.81 b	140.66	2.97±1.11 a	207.04
Niacin(mg)	23.64±6.33 b	146.58	28.65±11.11 a	176.32
Vitamin B6(mg)	1.58±0.69 a	92.55	1.89±0.54 a	109.62
Vitamin B12(mg)	3.19±2.28 b	159.67	5.95±2.89 a	297.85
Folate(mg)	399.59±84.11 a	214.89	395.49±19.36 a	212.56
Cholesterol(mg)	471.73±19.04 b	234.56	671.24±24.29 a	378.45

Values are means ± SD(n = 100 for each group).Values superscripts at the same row are significantly different at p ≤ 0.05.

arm muscle were significantly lower in the Omanis obese patients (24.92, 46.04 and 24.76 respectively) than that those of the Egyptian obese patients (27.34, 49.02 and 27.81 respectively). The level of money spend on food was significantly higher in case of Omanis patients by quadruple. From table (7), which presented the distribution of the study subjects in accordance to Body Mass

89 Index (BMI), showed that the majority of study subjects was in obese range (85 % for Egyptian patients and 79% Omanis patients) and body mass index were higher for the Egyptian obese patients than that of the Omanis obese patients with nonsignificant differences. The field of anthropometry encompasses a variety of human body measurements such as weight, height, and size, including skinfold thicknesses, circumferences, lengths, and breadths. Anthropometry is a key component of nutritional status assessment adults (20). Concerning to body mass index (BMI), from 25 to 29.9 was described as overweight while, between 30 and 39.9 was described as obesity (5). Low-income individuals face a greater risk of obesity because they tend to consume more high-calorie foods that are cheaper. In contrast, healthy foods such as those high in fiber and low in calories are often more expensive, and their production cannot be easily industrialized (21)

Table (6) Body measurements and money spend on food for the Egyptian and Omanis obese patients.

Variable	Egyptian Mean±SD	Omanis Mean±SD
Height (cm)	163.07 ±11.50 a	162.96±8.11 a
Actual weight(kg)	96.93±7.04 a	95.14±10.89 a
Skin layer thickness (mm)	27.34±4.27 a	24.92±4.26 b
Arm circumference(mm)	49.02±8.78 a	46.04±8.36 b
Circumference of the arm muscle(mm)	27.81±8.69 a	24.76±8.16 b
#Money spends on food	1500.76 ±86.21 b	4508.51±64.81 a

Values are means ± SD (n = 100 for each group). Values superscribed with different letters in the same row are significantly different at p ≤ 0.05.# Money spend (EGP: Egyptian pound; OMR: Oman Rial).

Table (7): Distribution of the study subjects in accordance to Body Mass Index (BMI).

Variable	Egyptian	Omanis
Underweight %	0	0
Normal weight %	0	0
Overweight%	15	21
Obesity%	85	79
Mean±SD	36.44±7.33 a	35.77±6.81 a

Body mass index (BMI) for every subject was calculated as weight in kilograms divided by height in meters squared (kg/m2) and was categorized as normal, 18.50~24.99, overweight, 25.00~29.99, and obese, ≥ 30.00

CONCLUSION

In conclusion, the obtained results showed that lifestyle and unhealthy dietary habits led to an increase in overweight and obesity rates which caused a negative impact on the health status of Egyptian and Omanis population . The obtained results aim to improve obese eating behaviors such as providing markets healthy meals and increase physical activity. Increasing education about nutrition, especially information

90 relating to sources of nutrition and healthy weight management.

REFERENCES

1. Mehrzad, R. The global impact of obesity. In: Mehrzad R,editor. Obesity. Amsterdam: Elsevier, (2020), 55–72.

2. Abolfotouh, M.A.; Soliman, L.A.; Mansour, E. ;Farghaly, M and El Dawaiaty, A.A. Central obesity among adults in Egypt: Prevalence and associated morbidity. East Mediterr. Health J., (2008), 14:57–68.

3. Jawad, A. A. and Pekka, J. J. Prevalence and 10-year secular trend of obesity in Oman. Saudi Med. J.,(2004), 25(3):346-51.

4. Hassan, H. A. and El-Gharib, N. E. Obesity and Clinical Riskiness Relationship: Therapeutic Management by Dietary Antioxidant Supplementation- a Review. Appl. Biochem. Biotechnol., (2015), 175 (8): 1-19.

5. Musaiger, A.O. The state of food and nutrition in the Arabian Gulf countries". World Review of Nutrition and Dietetics, (1987), 54: 105-173.

6. DRI (Dietary Reference Intake): For Energy, Carbohydrate Fibers, Fat, Fatty Acids, Cholesterol, Protein and Amino acids. www .Nap.edu, (2002).

7. Kim, H. Y. Statistical notes for clinical researchers: Post-hoc multiple comparisons. Restorative dentistry & endodontics, (2015), 40(2): 172-176.

8. Grodner, M.; Long, S. and DeYoung, S."Nutrition in Patient Care". In Sandra DeYoung. Foundations and clinical applications of nutrition: a nursing approach (3rd. ed.). Mosby, St. Louis, Mo. , (2004), 406–407.

9. Jellife, D. B. Assessment of nutritional status of Community. Wld. Hlth. Org.Mono. Ser., (1966),53.

10. SPSS. Statistical pakage for social science, computer software,ver.10. SPSS company. London, UK.statistics version 10.copyright 1995 Analytical software windows version, (1998), 95.

11. Seo, M.H.; Lee, W.Y. and Kim, S.S. Korean Society for the Study of Obesity Guideline for the Management of Obesity in Korea. J. Obes. Metab. Syndr.,(2019),28(2):143.

12. Her, E.S. (2019). Nutrients Intake and Health Indices by Occupation in Middle-Aged Men - Using the Korean National Health and Nutrition Examination Survey (KNHANES) 2013-2016 – The Korean Journal of Food and Nutrition,(2019), 32(3): 216-225.

13. Camhi, S.M.; Must, A.;Gona, P.N.; Hankinson, A.;Odegaard, A.; Reis, J.; Gunderson, E.P.; Jacobs, D.R. and Carnethon, M.R. Duration and stability of metabolically healthy obesity over 30 years. **Int. J.Obes. (Lond)**, (2019), 43:1803–1810.

14. Wannamethee, S.G.; Shaper, A.G. and Whincup, P.H. Modifiable lifestyle factors and the metabolic syndrome in older men: Effects of lifestyle changes. J. Am. Geriatr. Soc., (2006),54(12):1909–1914.

91

15. WHO, World Health Organization, Global nutrition targets 2025: Policy Brief Series, (2017).

16. Alzahrani, S.H.; Saeedi, A.A.;Baamer, M.K.;Shalabi, A.F. and Alzahrani, A.M. Eating habits among medical students at king abdulaziz university, jeddah, Saudi arabia. International journal of general medicine, (2020),13:77.

17. Niyaz Ö. Eating habits in terms of gender among Turkish agricultural engineering students: A cross-sectional study. Progress in Nutrition, (2020),22(2):568-76.

18. Sabbour,S.M.; Hussein, W.M. and Amin, G.E.E. Fruit and vegetable consumption among medical students in an Egyptian University: knowledge, practice, and attitude towards accessible healthy food. Egyptian Journal of Community Medicine, (2018),36(1).

19. Yousif, A. E.; Sahar, A. and Dina, M. A. Dietary pattern and quality of life among obese children. Journal of Home Economics, (2020), 30 (1):128-141.

20. Madden, A.M. and Smith, S. Body composition and morphological assessment of nutritional status in adults: a review of anthropometric variables. J. Human Nutrition and Dietetics, (2014), 29 (1):7-25 .

21. Marteleto, L.J. L.; Gama, C.D. ; Dondero, M. and Brown L.E.C. The weight of inequality: Socioeconomic status and adolescent body mass in Brazil Social Forces, (2017), 95 (4) :1637-1666. .

التغذية وعلوم الاطعمة

تقييم العوامل المؤثرة على الحالة الغذائية لمرض السمنة المصريين والعمانيين (مسح ميداني)

حمدية أحمد هلال، نهاد رشاد الطحان، محمود محمد الفرماوي

قسم التغذية وعلوم الأطعمة. كلية الاقتصاد المنزلي. جامعة المنوفية، شبين الكوم، مصر

الملخص العربي:

تعرف السـمنة بتراكم الدهون فى الجسـم و لها تأثير سـلبى على الصـحة. لذا تهدف الدراسـة الى تقييم الحالة الغذائية للمصـابين بالسـمنة من مصـر وعمان والتعرف على العوامل المتعلقة بالمرض. تم الدراسة بمشاركة 200 رجل مما يعانون من السمنة (100 مصريين و100 عمانيين) التى بلغت أعمارهم من 17 إلى 40 سـنة . وتضـمنت الدراسـة تقييم المقاييس الجسـمانية و العادات الغذائية والحالة الصحية والاجتماعية والتاريخ الغذائي للحالات .من خلال استبيانات لمدة 3 أيام تم تقدير المأخوذ من الغذاء خلال 24 سـاعة السـابقة ومقارنتها بالمأخوذ من الاحتياجات المأخوذة اليومية. وقـد أشـارت النتائج الى انه لا يوجد فروق معنوية بين المجموعتين فى الوزن , الطول وكتلة الجسـم . النسبة الأعلى من المشاركين متزوجين وحاصلين على تعليم جامعى .الأغلبية كانوا من الفئة الثانية للسـمنة (كتلة الجســم من 35 الى 40) , لا يقومون بأيأنشطة , يتناولون 3 وجبات , يتناولون الوجبات البينة من الأطعمة العالية السعرات مثل الحلويات والسندوتشات ويستهلكون الوجبات السريعة . ويعد الملح و المشروبات الغازية و الوجبات السريعة استهلكت بكميات معتدلة من قبل المشاركين .وكان المشاركين يعانون من الآلام فى الظهر والسـكر .وأشــارت النتائج أن المرضى المصريـين اسـتهلكوا الحديد ذات المصـدرالنباتى والمستويات العالية من الصـوديوم وبينماباقى العناصر الغذائية كانت اقل معنويا عند المقارنة بالمأخوذ اليومى للمرضى العمانيين.لذلك من خلال هذه النتائج يمكن أن نسـتنتج أن كلا المجموعتين كان لديهم عوامل متقاربة فى إحداث السـمنة . ولذلك تناول غذاء صـحى وتغيير العادات الغذائية والقيام بالأنشطة البدنية تلعب دور حيوى فى التحكم فى السمنة.

الكلمات الكاشفة: السمنة-العناصر الغذائية- المقاييس الجسمانية – العادات الغذائية