

对伊拉克卡尔巴拉省部分大学生肥胖知识和态度的评估

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【摘要】:

背景: 肥胖是全世界范围内严重的公共卫生问题, 随着饮食习惯和身体活动的改变, 肥胖在世界范围内变得越来越普遍, 冠状动脉疾病、高血压、胆结石和糖尿病都与肥胖有关。年轻人作为社区的一部分, 他们对肥胖的知识、态度和实践的比例可能会对社区产生积极的影响(至少对他们的家庭而言)。因此, 了解年轻人的观点和信念至关重要。因此, 为了评估卡尔巴拉省本科生对肥胖的知识和态度, 为此进行了一项横断面研究。方法: 从2022年11月到4月, 招募了一批本科生样本, 以确定他们对肥胖的知识和态度。该研究包括444名参与者, 他们是通过简单随机抽样技术选出的。本研究采用自填式问卷, 问卷包含两部分: 第一部分是人口统计学特征, 第二部分用于评估知识, 研究人员根据WHO标准设计了态度问卷, 然后提交给专家。结果: 研究样本中, 女性284人(64%), 男性160人(36%); 59.9%的参与者年龄≤20岁。至于肥胖知识水平的总体评估, 54%的人获得了良好和可接受的分数。尽管如此, 超过86%的受访者态度积极。结论: 通过结果观察, 我们发现人们对肥胖的认识相当好(54%)。在伊拉克卡尔巴拉省的大学生中, 86%的人明显渴望对减少肥胖持积极态度。

【关键词】: 肥胖、知识、态度、大学生

An Assessment of Knowledge and Attitude Toward Obesity among a Sample of Colleges Students in Karbala Province, Iraq

【Abstract】:

Background: Obesity is a serious public health concern worldwide, and it is becoming more common worldwide as dietary habits and physical activities change. Coronary artery disease, hypertension, cholelithiasis, and diabetes are all known to be associated with obesity. Young people as a part of the community and the proportion of their knowledge, attitudes, and practices regarding obesity may lead to positive reflections on the community (at least for their families). Thus, understanding young individuals' viewpoints and beliefs is crucial. Therefore, to evaluate the knowledge and attitudes of undergraduate students toward obesity in Karbala Province, a cross-sectional study was conducted. **Methodology:** A sample of undergraduate students was recruited to identify their knowledge of and attitudes toward obesity from November to April 2022. The study included 444 participants who were selected using a simple random sampling technique. A self-administered questionnaire was used to achieve the aim of the study that contained two parts: the first part was demographic characteristics, the second part was used to assess the knowledge, and the researchers, according to WHO criteria designed attitude, the questionnaire after being presented to the experts. **Result:** Of the total sample of the study 284(64%) were female and 160 (36%) were male; 59.9 % of the participants were in the aged group ≤ 20 years. As for the overall assessment of obesity knowledge level, 54 % had Good and Acceptable scores. Nevertheless, more than 86% of respondents had positive attitude scores.

Conclusion: Through the results, it was observed that there was a fairly good awareness of obesity (54%). There was also a very noticeable, clearly serious desire to increase toward a positive attitude of 86% toward obesity reduction among the college students in Karbala province, Iraq.

【Keywords】 : Obesity, knowledge, attitude, college students

1. Introduction

Obesity is defined as having excess body fat compared to the optimal amount, and this increase in body fat is due to the results from an energy imbalance between calorie intake and expenditure, and it is influenced by a number of intricate underlying factors connected to genetics, environment, and behavior "Food is a key component of these factors" [1]. Consequently, to understand the expanding obesity epidemic, researchers are increasingly interested in researching food habits [2]. Meanwhile, several studies have established a relationship between Body Mass Index (BMI) and diverse epidemiological factors, such as lifestyle of the population. For example, a direct relationship has been found between BMI and sedentary work, alcohol consumption, physical exercise, and educational level [3]. A major risk factor for diabetes was a BMI of 26 kg/m², while there was a strong association between arthritis and hypertension with a BMI score of 30 or higher [4].

Obesity is known to be a risk factor for certain chronic diseases, in particular, being closely associated with disorders such as diabetes, cardiovascular diseases, osteoporosis, and certain types of cancer, and complications that present high rates of morbidity and mortality in Europe and other highly developed nations. Obesity is not only viewed as a disease in itself, but it also causes expansion and worsens many other conditions [5]. Hyperinsulinemia, hyperglycemia, impaired glucose tolerance, and increased plasma triglyceride levels are diagnostic complications of abdominal obesity [6]. Over 2.8 million people die each year due to weight gain, reaching epidemic proportions globally. In 2016, approximately 650 million adults were obese worldwide. Meanwhile, over 1.9 billion persons around the world are reportedly overweight [7]. Undergraduate students as a part of the community and the proportion of their knowledge, attitudes, and practices regarding obesity may lead to positive reflection on the community (at least for their family). Therefore, this study was conducted to assess knowledge and attitudes regarding obesity among college students in Karbala, France.

2. Methodology

2.1. Research Techniques

A descriptive cross-sectional survey was conducted from November 1, 2022, to March 29, 2023. A pre-validated questionnaire-based survey, with direct interviews with each participant, showed a response rate of 96 %. A simple random sampling technique was applied to select 444 undergraduate students from Karbala, Provence, Iraq to be involved in this study.

Study variables Knowledge and attitude levels were

the outcome variables of interest. The sociodemographic characteristics of the participants were considered as independent variables.

2.2. Ethical Considerations

Ethics accreditation was obtained from the Research Ethics Committee Directorate of the Technical Institute of Karbala, and all the required permissions were obtained from the Ministry of Higher Education and Scientific Research.

2.3. Research Instruments

The interview was based on a well-structured questionnaire form that was pre-tested in a pilot study and subsequently updated by the literature review to ensure reliable information according to WHO criteria after being presented to experts. The questionnaire consisted of two parts: the first part contained some demographic characteristics and the second consisted of the knowledge and attitude domains.

2.4. Statistical Analysis

Data were analyzed using SPSS software version 25, and are displayed as percentages (%) and numbers (N). Chi-square tests were applied for statistical analysis to examine the relationship between demographic characteristics and participants' knowledge and attitudes. Statistical significance was set at $p \leq 0.05$. Incomplete questionnaires were excluded.

3. Results

Of the 444 participants involved in this study, 284 (64%) were female and 160 (36%) were male. According to the age group, 59.9 % of the participants were aged ≤ 20 years. In contrast, 64% of the respondents lived in urban areas. Regarding marital status, 97.3% of the participants were single (Table 1).

表 1
Table 1 Sociodemographic characteristics

Variable	No.	%
Gender	Female	284 64
	Male	160 36
Age Group	≤ 20 years	266 59.9
	≥ 21 years	178 40.1
Residence	Rural	151 34
	Urban	293 66
Marital status	Single	432 97.3
	Married	12 2.7
Total		444 100

Table 2 illustrates the general information about obesity, and 71.8% mentioned hearing about it. Meanwhile, 57.7% of the participants confirmed that this meant excessive accumulation of fats. 40.8% “aware the obesity score could be measured by Body Mass Index” and 36.5% believe that obesity was increase BMI above 30.

When the participants were questioned regarding the most predisposing factors that lead to obesity, the vast majority of participants aware that “eating lots of carbohydrates” (70.3%), “drinking a lot of soft drinks” 85.6% “and eating fast food” 80.6% (Table 3).

表 2
Table 2 General information about obesity

Variable	Total: 444	
	No.	%.
Ever heard about obesity?	Yes	319 71.8
	No	68 15.3
	I don't know.	57 12.8
Obesity means	Excessive fat accumulation	256 57.7
	The heavy weight of the body	188 42.3
Obesity scales are calculated as follows	Assessment of body lipid levels	168 37.8
	Waist circumference	95 21.4
	BMI	181 40.8
Is there a difference between overweight and obesity?	Yes	203 45.7
	No	144 32.4
	I don't know.	97 21.8
Increase in body mass index above 30 kg/m ²	Yes	162 36.5
	No	166 37.4
	I don't know.	116 26.1

表 3
Table 3 Factors leading to obesity

Variable	Total: 444	
	No.	%.
Eating many fruits and vegetables	Yes	187 42.1
	No	210 47.3
	I don't know.	47 10.6
Consuming a large amount of carbohydrates	Yes	312 70.3
	No	50 11.3
	I don't know.	82 18.5
Drinking many soft drinks	Yes	380 85.6
	No	20 4.5
	I don't know.	44 9.9

Drinking a lot of water	Yes	114 25.7
	No	267 60.1
	I don't know.	63 14.2
Drinking fresh juice	Yes	173 39.0
	No	244 55.0
	I don't know.	27 6.1
Eating fast food	Yes	358 80.6
	No	15 3.4
	I don't know.	71 16.0

More than 50% of the participants were aware that obesity caused joint problems, diabetes mellitus, hypertension, shortness of breath, chronic kidney disease, irritable bowel syndrome, osteoarthritis, and biliary stones (Table 4).

In contrast, 44.4% and 41.9% of the patients had breast cancer and atherosclerosis, respectively.

表 4
Table 4 Sociodemographic characteristics

Variable	Total: 444	
	No.	%.
Joint pain	Yes	298 67.1
	No	57 12.8
	I don't know.	89 20
Atherosclerosis	Yes	186 41.9
	No	65 14.6
	I don't know.	193 43.5
Diabetes mellitus	Yes	367 82.7
	No	23 5.2
	I don't know.	54 12.2
Hypertension	Yes	375 84.5
	No	11 2.5
	I don't know.	58 13.1
Breast cancer	Yes	197 44.4
	No	152 34.2
	I don't know.	95 21.4
Shortness of breath	Yes	274 61.7
	No	155 34.9
	I don't know.	15 3.4
Chronic kidney disease	Yes	238 53.6
	No	159 35.8
	I don't know.	47 10.6
Irritable bowel syndrome	Yes	277 62.4
	No	51 11.5

	I don't know.	116	26.1
	Yes	244	55
Osteoarthritis	No	178	40.1
	I don't know.	66	14.9
	Yes	314	70.7
Biliary stone	No	45	10.1
	I don't know.	85	19.1

Figure 1 illustrates the obesity of college students. Regarding the overall assessment, this figure shows that 54% of the study sample had adequate knowledge.

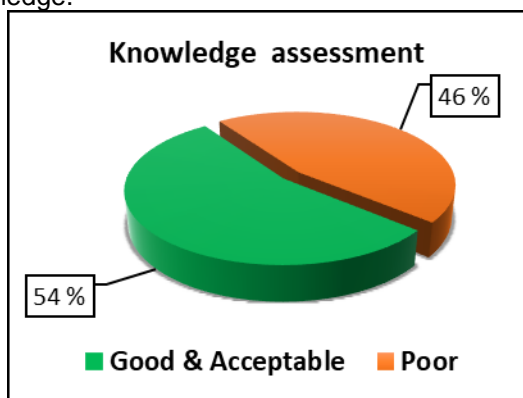


图 1

Fig.1 Levels of knowledge about obesity

A five-point Likert scale was used to evaluate participants' attitudes. Only a few participants demonstrated a negative attitude toward obesity, which contrasted sharply with their responses regarding knowledge (Table 5).

表 5
Table 5. General attitudes toward obesity

Variables	No.	Total: 444	
		No.	%
Overweight is a good indicator of nutrition and health	Strongly agree	10	2.3
	Agree	43	9.7
	Neutral.	156	35.1
	Disagree	105	23.6
	Strongly disagree	130	29.3
Obese individuals are more intelligent	Strongly agree	13	2.9
	Agree	22	5.0
	Neutral.	78	17.6
	Disagree	166	37.4
	Strongly disagree	165	37.2
Obesity is considered a social stigma	Strongly agree	96	21.6
	Agree	139	31.3
	Neutral.	144	32.4
	Disagree	51	11.5

	Strongly disagree	14	3.2
	Strongly agree	54	12.2
Obesity is a manifestation of beauty	Agree	58	13.1
	Neutral.	111	25.0
	Disagree	154	34.7
	Strongly disagree	67	15.1
You are content with your current body weight	Very comfortable	118	26.6
	Somewhat satisfied	196	44.1
	Indifferent	63	14.2
	Dissatisfied	53	11.9
	Strongly dissatisfied	14	3.2
It is crucial for you to lose weight	Critical	178	40.1
	Somewhat important	133	30.0
	Indifferent	86	19.4
	Unimportant	35	7.9
	Extremely unimportant	12	2.7
Are you concerned in physical activity (Exercise)	Very concerned	46	10.4
	Somewhat concerned	66	14.9
	Indifferent	95	21.4
	Unconcerned	153	34.5
	Strongly Unconcerned	84	18.9

Figure 2 reveals the attitudes toward the overall assessment of the study sample; the results show that 86% had a positive attitude level.

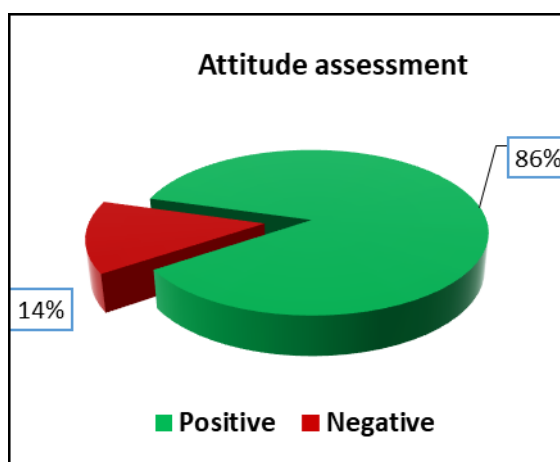


图 2

Fig.2 Levels of attitude toward obesity

Table 6 shows the relationship between knowledge and attitude level with some demographic characteristics of the study sample; for the knowledge domain, the study showed a highly significant difference (p-value < 0.05) between gender, age groups, and marital status. In the attitude domain, there was a highly significant difference between gender and age groups, with no association with marital status.

表 6

Table 6 The relationship between levels of knowledge and attitude with some demographic characteristics

Variables	Levels of Knowledge		P value	
	Adequate	Adequate		
Gender	Female	81	203	0.001
	Male	155	5	
Age Group	18-20	203	63	0.001
	21-23	38	140	
Marital status	Married	9	3	0.001
	Single	229	203	

Variables	Levels of Attitude		P value	
	Positive	Negative		
Gender	Female	278	6	0.001
	Male	98	62	
Age Group	18-20	204	62	0.001
	21-23	171	7	
Marital status	Married	10	2	0.001
	Single	370	62	

4. Discussion

Recently, the World Health Organization (WHO) estimated that there are more than 300 million obese individuals in the world [8]. Meanwhile, it presents a challenge to public health and requires medical intervention, modification of individual behavior, and environmental changes [9]. It is considered a major risk factor for non-communicable diseases such as cardiovascular disease, type 2 diabetes, physical disabilities, and psychosocial conditions [10].

The WHO describes an escalating global epidemic of overweight and obesity "globesity" that is taking over many parts of the world. "If immediate action is not taken, millions will suffer from a serious health disorder [11].

Health education is one of the most important preventive measures to reduce the spread of obesity, especially if health awareness is disseminated among young people. Therefore, a descriptive cross-sectional study was conducted with a sample of undergraduate students to identify their knowledge of and attitudes toward obesity.

As shown in Table 1, out of 444 participants in this study, 284 (64%) were female and 160 (36%) were male, 266 (59.9%) were in the age groups 18-20 years, 293 (66%) lived in an urban area, and 97.3% were single. Our study was compatible with recent study findings among Chinese university students 2021, 64.6% were female, and the age ranged from 16 to 24 years [12].

Regarding general information about obesity in Table 2, 71.8% of the study participants were informed about obesity. Furthermore, 57.7% of confirmed that it is "an excessive accumulation of fats in the body," 40.8% believed that the level of obesity could be

measured by Body Mass Index and 36.5% believed that obesity was increase BMI above 30. These results are compatible with other findings among Medical Students in Faisalabad, Pakistan, 2020 [13]. As shown in Table 3, 70.3% of participants were aware that the risk factors for obesity were "eating lots of carbohydrates," 85.6% "drinking a lot of soft drinks" and 80.6% "eating fast food," which is a good indicator of participants' awareness of the risk factors that lead to insulin resistance and obesity. Interestingly, extra than half of the participants understood that obesity might result in joint pain, diabetes mellitus, hypertension, shortness of breath, chronic renal disease, irritable bowel syndrome, osteoarthritis, and biliary stones when we questioned them about the consequences of obesity. In contrast, 41.9% of the patients presented with atherosclerosis and 44.4% had breast cancer, as shown in Table 4.

Overall, the results in Figure 1 indicate that 54% of undergraduate students had good knowledge of obesity (54%). Most respondents had an unclear understanding of BMI, which may be related to their universal lack of expertise in general medicine. Generally, however, most interviewees were unfamiliar with the concept of obesity.

In this study, students were observed to have sound knowledge about the causes and effects of obesity, which is compatible with studies carried out on Malaysian and Indian medical students [14-15]. However, focus should be placed on improving students' knowledge regarding parameters for the determination of obesity, as nearly half of the participants were unfamiliar with obesity, and two-thirds of the students had not heard that obesity means an increase in body mass index above 30, which was quite striking.

As shown in Table 6, a five-point Likert scale was used to evaluate the participants' attitudes; the response in the attitude section was satisfactory. Almost all students (86%), as shown in Figure 2, had a positive attitude, and only a few participants demonstrated a negative attitude toward obesity, which contrasted sharply with the responses regarding knowledge, which was better than a similar survey conducted in Hungary [16].

5. Conclusions and Recommendations

In general, 54% of the study sample had adequate knowledge, with highly significant differences between gender, age groups, and marital status, and 86% had a positive attitude with a strong relationship with gender and age groups.

Although 54% of college students have adequate knowledge and 86% have a positive attitude, strengthening education about obesity is necessary to help undergraduates apply this knowledge to their daily habits and practices. Furthermore, the institution should focus on bridging the gap between knowledge and practice through lectures and by providing as many healthy food and sports facilities as possible.

Declarations

Author Contributions

Ali abd Al-Latif G. contributed to the completion of the practical and discussion sections. **Maytham Salim AL-Nasrawii** contributed by writing the introduction section and a discussion of the research and the abstract. **Mohammad Abdul Baqi Abdul Mohsin** contributed to the statistical analysis of the data and the writing of the research methods and references.

Ethical Approval and Consent to participate

The Research Ethics Committee of the Technical Institute of Karbala granted all necessary clearances and ethical approval.

Conflict of interest

The authors declare that they have no conflicts of interest.

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