

REVIEW ARTICLE

# Attitude and Practice regarding Obesity and its Complications among Medical Students of University of Al-Qadisiyah/ Iraq

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## Abstract:

**Background:** Obesity is a growing health concern worldwide, and Iraqis are no exception to this trend. Medical students have a critical role in promoting healthy lifestyle habits and preventing chronic diseases, including obesity. Therefore, understanding their attitude and practices regarding obesity is crucial in developing effective interventions to tackle this issue.

**Aim of the study:** To evaluate attitudes, and practices regarding obesity and its complications among medical students at the University of Al-Qadisiyah.

**Participants and method:** A cross-sectional study had been conducted from March to July 2023, and included 136 participants. Descriptive statistics were used to summarize the demographic information and the responses to the questionnaire. Inferential statistics were used to determine the association between the variables and the level of attitude, and practice among medical students regarding obesity.

**Results:** The study included 36 (26.5%) of students at the clinical stage and 100 (73.5%) of students at preclinical stage. Females accounted for approximately two times the proportion of males in the study. Most of the students in the study were between the ages of 20 - 22 years and (80.9%) of them were from urban areas and (68.4%) of the students were of normal weight. The students were categorized based on the results of 100 point scores into 32 (23.5%) with low attitude, 96 (70.6%) with moderate attitude, and 8 (5.9 %) with good attitude. There was no significant difference in mean attitude score based on gender, age, years of study, and residence. There was no significant difference in mean attitude score based on body mass index (BMI). The students were categorized based on the results of 100 point scores into 81(59.6%) with low practice, 53(39.0%) with moderate practice, and good with good practice. There was no significant difference in mean practice score concerning gender, age, years of study, and residence. There was no significant difference in mean practice score concerning BMI.

**Conclusion:** Medical students have a moderate attitude toward obesity, but it is worth mentioning that there was a relatively high rate of they ashamed of their bodies if they were fat. Practice toward obesity and its complications was relatively low and medical students should be encouraged healthy lifestyles.

## Keywords:

Attitude, Practice, Obesity, Medical students.

## Introduction

Obesity is a complex, multifactorial, and preventable disease in which an excessive accumulation of body fat leads to negative effects on health (1). Today, it is the second most common cause of preventable death after smoking (2). It is an epidemic disease, which is distributed among all age groups, including children, adolescents, adults, and the elderly (3), and has been described as a global pandemic with approximately 50% of adults worldwide expected to be obese by 2030 (4). It is considered obesity when the BMI (kg/m<sup>2</sup>) of an adult is greater than or equal to 30, while overweight is considered when the BMI ranges from 25.0 to 29.9 (5). People

who are overweight or obese, especially abdominal obesity (6), compared to those with healthy weight, are at increased risk for various diseases and health conditions which are closely linked to increased mortality; these include coronary heart disease, stroke, type 2 diabetes, hypertension, dyslipidemia (7), gallbladder disease, osteoarthritis, sleep apnea and breathing problems, some types of cancer such as endometrial, breast, prostate, and colon cancers (8), mental illness such as clinical depression, anxiety, and other mental disorders, low quality of life, body pain and difficulty with physical functioning (9). According to an estimate by WHO, 80% of the aforementioned chronic disease burden is due to lifestyle and dietary factors



(10). Furthermore, obesity is a potentially modifiable well-established risk factor (11; 12) associated with an increased incidence of multiple myeloma (13).

### Method and Variables

The study was designed to be a cross-sectional one. Sample size estimation for proportion in survey type of studies; a common goal of survey research is to collect data representative of the population. The researcher gathered and used information via the survey to generalize findings from a drawn sample back to a population, within the limits of random error. The general rule relative to acceptable margins of error in survey research was 5 - 10%. The sample size could be estimated using the formula (14):  $N = Z^2 \alpha / 2 * P * (1-p) * D / E^2$

where P is the prevalence or proportion of events of interest for the study, and E is the precision (or margin of error) with which a researcher wants to measure something. Generally, E will be 5% level of significance,  $Z_{\alpha/2}$  is 1.96.

So, P = Proportion of medical students in the University of Al-Qadisiyah (event of interest) during 2023 = 7 % which was estimated according to this formula  $P = \text{No. of medical students at University of Al-Qadisiyah} / \text{Total No. of students of the university}$ , so that sample size is:  $N = (1.96)^2 * 0.07 * (1 - 0.07) * 1 / (0.05)^2$  so that  $N = 100$  sample size. The study was conducted using a self-administered online questionnaire form which was created through Google Forms and was established depending on the information obtained from reviewing published articles and family medicine consultants. All questions were multiple choice questions except some questions that needed written answers like height, weight, and waist circumference. The online questionnaire was used to save time for both the participants and the researcher and to ensure higher data accuracy compared to paper-based surveys by preventing participants from submitting incomplete responses. The questionnaire included three sections the first was about socio-demographic and anthropometric information of the participants. The second section focused on the attitude toward obesity where the Likert scale was used to assess attitude depending on the total score of its questions; the score ranged from 1 to 5. A score of more than 3 was considered (poor attitude), a score equal to 3 was considered (moderate attitude), and a score of less than 3 was considered (good attitude) (15). The third section concerned the practices related to obesity prevention and control and this part consisted of 5 questions, where a score of "1" was assigned to a correct answer, while a score of "0" was assigned to a wrong answer. The correct answers to more than 3 questions were considered (good practice), less than 3 questions were considered (poor practice), and when the correct answers were equal to 3, the score of the practice was considered (moderate practice). After a full illustration of the aim and procedures related to the current study, the questionnaire was sent to the students of each class through social media groups (Telegram and Facebook) and the questionnaire was available for an interval of 6 weeks. A total of 143 participants completed the survey. After data depuration (i.e., missing data and incorrect or unobvious written answers), the final data set included 136 participants.

### Ethical Consideration

The study was approved by the Medical Ethics Committee of the University of Al-Qadisiyah / College of Medicine. After a

full illustration of the aim and procedures related to the current study. The questionnaires were filled out anonymously; this can encourage more honest responses, and no consent form was administered with the questionnaires; the return of a filled questionnaire was taken as consent to participate in the study.

### Statistical Analysis.

The data were collected and transformed into a spreadsheet of Microsoft Office Excel 2010 and then into an SPSS version 23. Descriptive statistics were used to summarize the demographic information and the responses to the questionnaire. Inferential statistics such as the Chi-square test, Independent t-test, and one-way ANOVA were used to determine the association between the variables and the level of obesity knowledge, attitude, and practice among medical students. The level of significance was considered at  $P \leq 0.05$ .

### The Limitations of the Study

The most important limitation was the short period of the study.

### Results

The data analysis revealed the following results:

1. The classification of the students enrolled in the study based on the study year

The classification of the students enrolled in this study based on the study year is shown in Table (1). The participants from the first year were 37 (27.2 %), participants from the second year were 23 (16.9 %), participants from the third year were 40 (29.4 %), participants from the fourth year were 14 (10.3 %), participants from the fifth year were 11 (8.1 %), and participants from the sixth year were 11 (8.1 %). Following that, the participants from the 1st, 2nd, and 3rd years were regarded as a preclinical group and the participants from the 4th, 5th, and 6th years were regarded as clinical groups, as in Figure (1).

2. The sociodemographic characteristics of the students enrolled in the study

The sociodemographic characteristics of the students enrolled in this study are shown in Table (2). There was no significant difference in the proportions of males and females between the preclinical group and clinical group ( $p = 0.905$ ). There was a significant difference in the frequency distribution of the students according to age between the preclinical group and clinical group ( $p < 0.001$ ). There was also no significant difference in the frequency distribution of the students according to residence ( $p > 0.05$ ).

3. The anthropometric measures contrasted between the preclinical and clinical groups

The anthropometric measures contrasted between the preclinical and clinical groups are shown in Table (3). Concerning BMI, most of the students were of normal weight in both groups and there was no significant difference in the frequency distribution of the students according to BMI between the study groups ( $p = 0.922$ ).

4. The response to attitude questions

A comparison of responses to the attitude questions between the preclinical and clinical groups is shown in Table (4). The responses to "Obesity is a manifestation of good health and nutrition" as strongly agree and agree were seen in 7 % and 8 % versus 11.1 % and 11.1 % of the preclinical and clinical groups, respectively and the difference was not significant ( $p = 0.852$ ).

The responses to "Obese individuals are more intelligent than non-obese individuals" as strongly agree and agree were seen in 2 % and 9 % versus 2.8 % and 8.3 % of the preclinical and clinical groups, respectively and the difference was not significant ( $p=0.510$ ). The responses to "If I were fat, I would be ashamed of my appearance" as strongly agree and agree were seen in 15 % and 36 % versus 13.9 % and 41.7 % of the preclinical and clinical groups, respectively and the difference was not significant ( $p=0.943$ ). The responses to "I hate my weight is less than my friends' weight" as strongly agree and agree were seen in 6 % and 12 % versus 8.3 % and 22.2 % of the preclinical and clinical groups, respectively and the difference was not significant ( $p=0.520$ ). The responses to "I am Dissatisfied about my current weight" as strongly agree and agree were seen in 17% and 28% versus 19.4% and 22.2 % of the preclinical and clinical groups, respectively and the difference was not significant ( $p=0.845$ ). The responses to "Reducing body weight is Not important for me" as strongly agree and agree were seen in 11% and 14% versus 8.3% and 19.4% of the preclinical and clinical groups, respectively and the difference was not significant ( $p=0.566$ ). The responses to "I am not interested in reading calories" as strongly agree and agree were seen in 11% and 32% versus 16.7% and 13.9% of the preclinical and clinical groups, respectively and the difference was not significant ( $p=0.173$ ).

#### 4.1. The level of the attitudes of students participating in the study

A comparison of the attitude scores between the preclinical and clinical groups is shown in Table (4.1). The mean score (35 points) was  $22.85 \pm 3.59$  for all the enrolled students and it was significantly higher in the preclinical group in comparison with the clinical group,  $29.54 \pm 6.13$  versus  $34.42 \pm 3.60$ , respectively ( $p=0.048$ ) and the same was observed when the score was transformed into a 100 point scale. The students were categorized based on the results of 100 point scores into 32 (23.5 %) with insufficient or low attitude, 96 (70.6 %) with moderate attitude, and 8 (5.9 %) with good or sufficient attitude. The proportion of insufficient or low attitude was lower, the proportion of moderate attitude was higher and the proportion of Good or sufficient knowledge was higher in the preclinical group in comparison with the clinical group, but the differences in proportions were statistically not significant ( $p=0.380$ ). A comparison of the mean attitude scores according to sociodemographic characteristics is shown in Table (4.2). There was no significant difference in the mean attitude scores based on gender, age, years of study, and residence ( $p>0.05$ ). A comparison of mean attitude scores according to anthropometric measures is shown in Table (4.3). There was no significant difference in the mean attitude scores based on BMI.

#### 5. The response to the practice questions

A comparison of responses to the practice questions between the preclinical and clinical groups is shown in Table (5). The response to "Are you checking your weight frequently?" was seen in the majority of the students in the preclinical and the clinical groups and the difference was not significant ( $p=0.878$ ). The positive response to "Are you modifying eating habits, and physical activity frequently in order to maintain your physique?" was seen in 39% and 44.4% of the preclinical group and the clinical group, respectively and the difference was not significant ( $p$

$=0.568$ ). The responses to "Are you trying to limit the amount of junk food that you consume?" were seen in 63% and 61.11% in the preclinical group and the clinical group, respectively and the difference was not significant ( $p=0.841$ ). The responses to "Are you doing moderate exercise 30min/ day for at least 2-3 days per week?" were seen in 35% and 25% in the preclinical group and the clinical group, respectively and the difference was not significant ( $p=0.271$ ). The response to "Did you succeed in reducing your weight?" was seen in 23% and 19.4% in the preclinical group and the clinical group respectively and the difference was not significant ( $p=0.659$ ).

#### 5.1. The level of the practice of students participating in the study

A comparison of practice scores between the preclinical and clinical groups is shown in Table (5.1). The mean 5 points score was  $2.36 \pm 0.95$  for all the enrolled students. There was no significant difference in the mean 5 points score and 100 points score between the preclinical and clinical groups ( $p=0.688$ ). The students were categorized based on the results of 100 point scores into 81(59.6%) with insufficient or low practice, 53(39.0%) with moderate practice, and sufficient or good with good or sufficient practice. The proportion of insufficient or low practice was lower, the proportion of moderate practice was higher and the proportion of good or sufficient practice was higher in the preclinical group in comparison with the clinical group, but the differences in proportions were statistically not significant ( $p=0.391$ ). A comparison of the mean practice scores according to sociodemographic characteristics is shown in Table (5.2). There was no significant difference in the mean practice scores concerning gender, age, years of study, and residence ( $p>0.05$ ). A comparison of the mean practice scores according to the anthropometric measures is shown in Table (5.3). There was no significant difference in the mean practice scores concerning BMI ( $p>0.05$ ).

## Discussion

### 1. The attitude level of participating students in the study

In the current study, it had been observed that the mean score (35 points) was  $22.85 \pm 3.59$  for all the enrolled students who were categorized based on the results of 100 point scores into 32 (23.5 %) with insufficient or low attitude, 96 (70.6 %) with moderate attitude and 8 (5.9 %) with good or sufficient attitude. Based on the observation of (17), the attitude of students was also positive except that 20% believed that obesity is inherited and can not be reduced. Based on the observation of (16), they reported that in year 1, there were 0 % poor attitude, 93.3 % moderate, 6.7 % good, and in year 2, 0 % poor attitude, 86.8 % moderate attitude, 13.2 % good attitude and based on the observation of (18), the authors reported that the attitude was distributed as Good (77%), Fair (23%) and Poor (0%). Thus, poor attitude in the current study is higher than that in the study of (16) and the study of (18), which can be attributed to the lower participation of BMI adverse outcomes in the early years of the medical teaching program. The study observed no significant association between the attitude score and BMI, this finding is similar to that of (19) who also reported no significant association between attitude level and BMI. According to a study by (20), the results of attitudes regarding risk factors of obesity in 279 medical students from urban and rural areas were good in

111 and 39, satisfactory in 72 and 34, and not satisfactory in 21 and 2, respectively. It is worth mentioning that the study shared the level score of knowledge only but did not share its questions exactly. According to the current study, the mean score of attitude regarding residency was 22.72, and 23.38 in urban and rural areas, respectively.

2. The practice level of participating students in this study  
 This study reported that the mean 5 point score was  $2.36 \pm 0.95$  for all the enrolled students who were categorized based on the results of 100 point scores into 59.6 % with insufficient or low practice, 39.0 % with moderate practice, and 1.5 % with Sufficient or good practice. Indeed, the present results are in accordance with those by (18) who reported that the practice was poor in (44 %), fair in (52 %), and good in (4 %). A study reported that in year 1 it was 81.7 % good practice, 18.3 % poor practice, and in year 2 it was 19.1 % good practice and 80.9 % poor practice. Therefore, the rates of good practice in the current study were extremely low in comparison with (16) and this was due to different questions used to assess practice or a different method of calculations of practice score, but, this finding is alarming in that students in the University of Al-Qadisiyah who should be encouraged to adopt practices to keep BMI within normal acceptable ranges that are consistent with good quality of health and life, nevertheless, it is worth to mention that most of the participants in the present study were within the normal weight, thus they may not practicing activities to lose weight. In the current study, the practice level was not significantly associated with any of the anthropometric measures but (19) reported a significant association between the practice level and BMI as practice was significantly higher among higher BMI. According to a study by (20), it was observed that the percentage of the study participants who are doing regular exercise was found to be higher in urban than in rural population but it was not found to be statistically significant. The percentage of participants who were not doing any exercise was found to be higher in rural when compared to urban and the result was not statistically significant.

**Conclusion:**

Medical students have a moderate attitude toward obesity but it is worth mentioning that there was a relatively high rate of regarding the shame of their bodies if they were fat, so should foster a positive attitude among medical students towards obesity by teaching them to treat obesity as a clinical condition, not a personal failing, and avoid stigmatizing attitudes towards obese patients. Practice toward obesity and its complications was low so medical students should be encouraged to participate in community health programs related to obesity to promote healthier lifestyles and reduce obesity rates

**Acknowledgments**

We would like to thank all the participants in this study.

**Tables:**

Table (1): Classification of students enrolled in this study based on year of study

Year of Study	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	Total
n	37	23	40	14	11	11	136
%	27.2	16.9	29.4	10.3	8.1	8.1	100

Table (2): Sociodemographic characteristics of students enrolled in this study

Characteristic	Total		Pre-clinical n = 100		Clinical n = 36		P
	N	%	n	%	n	%	
<b>Gender</b>							
Male	48	35.3	35	35.0	13	36.1	0.905 C NS
Female	88	64.7	65	65.0	23	63.9	
<b>Age (years)</b>							
17 – 19	38	27.9	38	38.0	0	0.0	< 0.001 C ***
20 – 22	70	51.5	57	57.0	13	36.1	
23 – 25	20	14.7	4	4.0	16	44.4	
> 25	8	5.9	1	1.0	7	19.4	
<b>Residence</b>							
Urban area	110	80.9	77	77.0	33	91.7	0.153 C NS
Rural area	26	19.1	23	23.0	3	8.3	

n: number of cases; C: chi-square test; F: Fischer exact test; NS: not significant;\*\*\*: significant at  $p \leq 0.001$

Table (3): Anthropometric measures contrasted between preclinical and clinical groups

Characteristic	Total		Pre-clinical n = 100		Clinical n = 36		P
	n	%	n	%	N	%	
<b>BMI</b>							
Underweight	10	7.4	8	8.0	2	5.6	0.922 C NS
Normal weight	93	68.4	69	69.0	24	66.7	
Overweight	20	14.7	14	14.0	6	16.7	
Obese	13	9.6	9	9.0	4	11.1	

n: number of cases; C: chi-square test; NS: not significant

Table (4): Comparison of response to attitude questions between preclinical and clinical groups

Characteristic	Total		Pre-clinical n = 100		Clinical n = 36		P
	n	%	n	%	N	%	
<b>Obesity is a manifestation of good health and nutrition</b>							
Strongly agree	11	8.1	7	7.0	4	11.1	0.852 C NS
Agree	12	8.8	8	8.0	4	11.1	
Neutral	6	4.4	4	4.0	2	5.6	
Disagree	40	29.4	31	31.0	9	25.0	
Strongly disagree	67	49.3	50	50.0	17	47.2	
<b>Obese individuals are more intelligent than non-obese individuals</b>							
Strongly agree	3	2.2	2	2.0	1	2.8	0.510 C NS
Agree	12	8.8	9	9.0	3	8.3	
Neutral	32	23.5	26	26.0	6	16.7	
Disagree	63	46.3	42	42.0	21	58.3	
Strongly disagree	26	19.1	21	21.0	5	13.9	
<b>If I were fat, I would be ashamed of my appearance</b>							
Strongly agree	20	14.7	15	15.0	5	13.9	0.943 C NS
Agree	51	37.5	36	36.0	15	41.7	
Neutral	24	17.6	18	18.0	6	16.7	
Disagree	28	20.6	22	22.0	6	16.7	
Strongly disagree	13	9.6	9	9.0	4	11.1	
<b>I hate my weight is less than my friends' weight</b>							
Strongly agree	9	6.6	6	6.0	3	8.3	0.520 C NS
Agree	20	14.7	12	12.0	8	22.2	
Neutral	23	16.9	17	17.0	6	16.7	
Disagree	56	41.1	42	42.0	14	38.9	
Strongly disagree	28	20.6	23	23.0	5	13.9	
<b>I am Dissatisfied about my current weight</b>							

Strongly agree	24	17.6	17	17.0	7	19.4	0.845 C NS
Agree	36	26.5	28	28.0	8	22.2	
Neutral	39	28.7	30	30.0	9	25	
Disagree	30	22.1	20	20.0	10	27.8	
Strongly disagree	7	5.1	5	5.0	2	5.6	
Reducing body weight is <b>Not important</b> to me							
Strongly agree	14	10.3	11	11.0	3	8.3	0.566 C NS
Agree	21	15.4	14	14.0	7	19.4	
Neutral	30	22.1	24	24.0	6	16.7	
Disagree	31	22.8	20	20.0	11	30.6	
Strongly disagree	40	29.4	31	31.0	9	25	
I am <b>not interested in</b> about reading calories							
Strongly agree	17	12.5	11	11.0	6	16.7	0.173 C NS
Agree	37	27.2	32	32.0	5	13.9	
Neutral	44	32.3	30	30.0	14	38.9	
Disagree	18	13.2	11	11.0	7	19.4	
Strongly disagree	20	14.7	16	16.0	4	11.1	

n: number of cases; C: chi-square test; NS: not significant

Table (4.1): Comparison of attitude score between preclinical and clinical groups

Characteristic	Total n = 136	Preclinical n = 100	Clinical n = 36	P
Attitude Score 35				
Mean ±SD	22.85 ±3.59	23.21 ±3.51	21.83 ±3.65	0.048 I *
Range	12 -31	14 -31	12 -29	
Attitude Score 100				
Mean ±SD	65.27 ±10.24	66.31 ±10.02	62.38 ±10.44	0.048 I *
Range	34.29 -88.57	40 -88.57	34.29 -82.86	
Attitude Group				
Insufficient or low	32 (23.5 %)	21 (21.0 %)	11 (30.6 %)	0.380 C NS
Moderate	96 (70.6 %)	72 (72.0 %)	24 (66.7 %)	
Sufficient or good	8 (5.9 %)	7 (7.0 %)	1 (2.8 %)	

n: number of cases; I: independent samples t-test; C: Chi-square test; NS: not significant; \*: significant at p ≤ 0.05

Table 4.2: Comparison of mean attitude score according to sociodemographic characteristics

Characteristic	n	Mean	SD	p
Gender				
Male	48	22.90	3.94	0.904 I NS
Female	88	22.82	3.40	
Age (years)				
17-19	38	22.95	3.30	0.456 O NS
20-22	70	23.03	3.37	
23-25	20	22.80	3.99	
>25	8	20.88	5.54	
Years of study				
First	37	22.68	3.42	0.135 O NS
Second	23	22.57	3.78	
Third	40	24.08	3.33	
Fourth	14	22.36	2.50	
Fifth	11	21.73	3.38	
Sixth	11	21.27	5.14	
Residence				
Urban	110	22.72	3.45	0.396 I NS
Rural	26	23.38	4.16	

n: number of cases; I: independent samples t-test; C: Chi-square test; NS: not significant; \*\*: significant at p ≤ 0.01

Table 4.3: Comparison of mean attitude score according to anthropometric measures

Characteristic	n	Mean	SD	P
BMI (kg/m <sup>2</sup> )				
Underweight	10	23.80	2.97	0.530 O NS
Normal	93	22.70	3.59	
Overweight	20	23.55	4.07	
Obese	13	22.08	3.23	

n: number of cases; I: independent samples t-test; O: one-way ANOVA; NS: not significant

Table (5): Comparison of responses to practice questions between preclinical and clinical groups

Characteristic	Total		Pre-clinical n = 100		Clinical n = 36		p
	n	%	n	%	n	%	
Are you checking your weight frequently?							
Yes	107	78.7	79	79.0	28	77.8	0.878 C NS
No	29	21.3	21	21.0	8	22.2	
Are you modifying eating habits, and physical activity frequently in order to maintain your physique?							
Yes	55	40.4	39	39.0	16	44.4	0.568 C NS
No	81	59.6	61	61.0	20	55.6	
Are you trying to limit the amount of junk food that you consume?							
Yes	85	62.5	63	63.0	22	61.1	0.841 C NS
No	51	37.5	37	37.0	14	38.9	
Are you doing moderate exercise 30min/ day for at least 2-3 days per week?							
Yes	44	32.4	35	35.0	9	25	0.271 C NS
No	92	67.6	65	65.0	27	75	
Did you succeed in reducing your weight?							
Yes	30	22.1	23	23.0	7	19.4	0.659 C NS
No	106	77.9	77	77.0	29	80.6	

n: number of cases; C: chi-square test; NS: not significant

Table (5.1): Comparison of practice score between preclinical and clinical groups

Characteristic	Total n = 136	Preclinical n = 100	Clinical n = 36	P
Practice Score 5				
Mean ±SD	2.36 ±0.95	2.38 ±0.98	2.31 ±0.86	0.688 I NS
Range	0 -5	0 -5	1 -4	
Practice Score 100				
Mean ±SD	47.21 ±18.96	47.60 ±19.65	46.11 ±17.12	0.688 I NS
Range	0 -100	0 -100	20 -80	
Practice Group				
Insufficient or low	81 (59.6 %)	59 (59.0 %)	22 (61.1 %)	0.391 C NS
Moderate	53 (39.0 %)	39 (39.0 %)	14 (38.9 %)	
Sufficient or good	2 (1.5 %)	2 (2.0 %)	0 (0.0 %)	

n: number of cases; I: independent samples t-test; C: Chi-square test; NS: not significant

Table 5.2: Comparison of mean practice score according to sociodemographic characteristics

Characteristic	n	Mean	SD	P
Gender				
Male	48	2.46	0.94	0.375 I NS
Female	88	2.31	0.95	
Age (years)				
17-19	38	2.32	0.96	0.076 O NS
20-22	70	2.39	0.94	
23-25	20	2.65	0.93	
>25	8	1.63	0.74	

Years of study				
First	37	2.22	0.85	0.456 O NS
Second	23	2.57	1.08	
Third	40	2.43	1.03	
Fourth	14	2.29	0.83	
Fifth	11	2.64	0.92	
Sixth	11	2.00	0.77	
Residence				
Urban	110	2.32	0.92	0.288 I NS
Rural	26	2.54	1.07	

n: number of cases; I: independent samples t-test; O: one-way ANOVA; NS: not significant

Table 5.3: Comparison of mean practice score according to anthropometric measures

Characteristic	n	Mean	SD	P
BMI (kg/m <sup>2</sup> )				
Underweight	10	2.90	0.99	0.178 O NS
Normal	93	2.34	0.96	
Overweight	20	2.10	0.85	
Obese	13	2.46	0.88	

n: number of cases; I: Independent

## Figures:



Figure (1): Pie chart showing the classification of students enrolled in this study based on year of study

## References

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