



**A SURVEY ON COMPARING BODY MASS INDEX (BMI) OF PHARMACY STUDENTS
IN THE MEDICAL UNIVERSITIES OF SINDH, PAKISTAN****SIYAL FJ^{1*}, SHAFIQUE S², KHOSO MH^{3*}, SALEEM R⁴, SIDDIQUI SJ⁵, SHAIKH NA⁶
AND MUSTAPHA O²****1:** Institute of Pharmacy @ Shaheed Mohtarma Benazir Bhutto Medical University Larkana**2:** College of Pharmacy @ Dow University of Health Sciences Karachi**3:** Department of Biochemistry @ Shaheed Mohtarma Benazir Bhutto Medical University Larkana**4:** College of Pharmacy @ Liaquat University of Medical and Health Sciences Jamshoro**5:** Faculty of Community Medicine @ Shaheed Mohtarma Benazir Bhutto Medical University Larkana**6:** Department of Urology @ Shaheed Mohtarma Benazir Bhutto Medical University Larkana***Corresponding Author: Fahad Jibran Siyal: E Mail: fahad_jibran_hbk@hotmail.com*****Co-Corresponding Author: Mir Hassan Khoso: mir_khoso@yahoo.com****Received 17th March 2020; Revised 20th April 2020; Accepted 12th May 2020; Available online 1st Oct. 2020****<https://doi.org/10.31032/IJBPAS/2020/9.10.5233>****ABSTRACT**

The main objective of this study is to compare the BMI of Pharmacy students of two different Universities of Sindh, Pakistan. Body Mass Index (BMI) explains relative weight for the height. It is correlated with the fat content of body and it is also not gender specific. It is mainly used to assess obesity. According to WHO (World Health Organization) it is divided into following categories (i) < 18.5 kg/m² i.e. Underweight (ii) 18.5–24.9 kg/m² i.e. Normal (iii) ≥ 25.0 kg/m² i.e. Overweight which is also divided into following (a) 25.0–29.9 kg/m² i.e. pre-obese (b) 30.0–35.9 kg/m², i.e. Obese class 1 (c) 36.0–39.9 kg/m² i.e. obese class 11(d) ≥40 kg/m² i.e. obese 111. A cross sectional survey has been conducted through online questionnaire in google forms between 25 May 2020 to 26th May 2020. A total of 118 student Participated in this survey i.e. 62 students were randomly included from Institute of Pharmacy @ Shaheed Mohtarma Benazir Bhutto Medical University Larkana (SMBBMU) and 56 students from College of Pharmacy, Dow University of Health Sciences Karachi (DOW). Students form SMBB Medical University Larkana were marginally Normal 64.5% in comparison with DOW university students that were about 62.5%, in comparison with

DOW the students of SMBBMU were underweight in lesser extent which were about 24.3% compared to 28.6%, SMBBMU students were overweight which were about 11.3% compared to 7.1 of DOW, there was not a single student who was on pre-obese stage but there was one student from DOW who was at pre-obese stage.

Keywords: BMI, Medical Universities, Pharmacy

INTRODUCTION

Essential part of body also includes body fat because energy source is provided by it. It also works as a shock absorber and heat insulator. It produces many hormones such as resistin, adiponectin and leptin and also estradiol. If it is in large quantity or small quantity it causes problems in body. Obesity is termed closely with body fat [1, 2]. Obesity and its connected diseases are the main cause of type 11 diabetes, osteoarthritis, cardiovascular disease, hypertension, colon cancer, breast cancer and menstrual abnormalities [3-6]. Body Mass Index (BMI) explains relative weight for the height. It is correlated with the fat content of body and it is also not gender specific. It is mainly used to assess obesity [2]. BMI has presented greater correlation with hypertension (continuous) with both sex [3-6]. According to WHO (World Health Organization) it is divided into following categories (i) $< 18.5 \text{ kg/m}^2$ i.e. Underweight (ii) $18.5\text{--}24.9 \text{ kg/m}^2$ i.e. Normal (iii) $\geq 25.0 \text{ kg/m}^2$ i.e. Overweight which is also divided into following (a) $25.0\text{--}29.9 \text{ kg/m}^2$ i.e. pre-obese (b) $30.0\text{--}35.9 \text{ kg/m}^2$, i.e. Obese class 1 (c) $36.0\text{--}39.9 \text{ kg/m}^2$ i.e. obese

class 11(d) $\geq 40 \text{ kg/m}^2$ i.e. obese 111 [7]. The main objective of this study is to compare the BMI of Pharmacy students of two different Universities of Sindh, Pakistan. Evidence suggests that obesity is connected to poor body mass index especially in the women with obese and overweight who present larger body image dissatisfaction than normal ones. Obesity and fat inclination and their attitude were reported in one of studies in the students of the universities [8]. Previous studies suggest awareness of obese and also overweight are an important factor for to start and then follow weight related behavior. Research studies have reported that awareness of being overweight or obese is an essential factor to start following weight-related behaviors

METHODOLOGY

A cross sectional survey has been conducted through online questionnaire in google forms between 25th May 2020 to 26th May 2020. A total of 118 student Participated in this survey i.e. 62 students were randomly included from Institute of Pharmacy @ Shaheed Mohtarma Benazir Bhutto Medical University Larkana

(SMBBMU) and 56 students from College of Pharmacy, Dow University of Health Sciences Karachi (DOW). Online questionnaire contains demographic information which included name, age, and sex, weight along with height. It was calculated with the help of formula $\text{weight (kg)/height}^2 \text{ (m}^2\text{)}$ as per WHO [7]. SPSS was used for evaluation and data was represented in the form of graphs, Means and percentages.

RESULTS

A total of 56 students participated from DOW university in this survey i.e. 91.1 percent were females (51) and 8.9% were males (5) as shown in **Table 1** and Mean age from Dow was 22.1071 as shown in **Table 3** the majority of students were Normal which were about 62.5%, and underweight students were about 28.6% overweight students were about 7.1% and one student was pre-obese. Majority of students were about 22 years of age which were 37.5% as shown in **Table 3**.

A total of 62 students participated in this survey from SMBBMU and Majority of students were of age group 20 which were about 32.3% as shown in **Table 6**, 83.9% students were females (52) and 16.1% students were males (10) as shown in **Table 4**. 64.5% of students were normal (40), 24.2% of students were underweight (15) and 11.3 % of students were overweight (7) as shown in **Table 5**. Mean age from SMBBMU was 21.4839. Overall the majority of students were of age group 22 which were about 28% (33) as shown in **Table 7**. Overall as shown in **Table 8** majority of students were normal which were about 61.9% (73), 26.3% students were underweight (31), 11% of students were overweight (13), 0.8% of students were pre-obese (1). The Mean Age was 21.7458 and S.D. was 1.46, 103 females which were about 87.3 % and 15 males which were about 12.7%.

Table 1: (SEX) DOW University

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	5	8.9	8.9	8.9
Female	51	91.1	91.1	100.0
Total	56	100.0	100.0	

Table 2: (BMI) DOW University

	Frequency	Percent	Valid Percent	Cumulative Percent
Underweight	16	28.6	28.6	28.6
Normal	35	62.5	62.5	91.1
Overweight	4	7.1	7.1	98.2
Pre-obese	1	1.8	1.8	100.0
Total	56	100.0	100.0	

Table 3: (AGE) DOW University

	Frequency	Percent	Valid Percent	Cumulative Percent
20.00	6	10.7	10.7	10.7
21.00	10	17.9	17.9	28.6
22.00	21	37.5	37.5	66.1
23.00	13	23.2	23.2	89.3
24.00	3	5.4	5.4	94.6
25.00	3	5.4	5.4	100.0
Total	56	100.0	100.0	

Table 4:(SEX) SMBB Medical University Larkana

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	10	16.1	16.1	16.1
Female	52	83.9	83.9	100.0
Total	62	100.0	100.0	

Table 5: (BMI) SMBB Medical University Larkana

	Frequency	Percent	Valid Percent	Cumulative Percent
Underweight	15	24.2	24.2	24.2
Normal	40	64.5	64.5	88.7
Overweight	7	11.3	11.3	100.0
Total	62	100.0	100.0	

Table 6: (Age) SMBB Medical University Larkana

	Frequency	Percent	Valid Percent	Cumulative Percent
19.00	6	9.7	9.7	9.7
20.00	10	16.1	16.1	25.8
21.00	20	32.3	32.3	58.1
22.00	12	19.4	19.4	77.4
23.00	6	9.7	9.7	87.1
24.00	4	6.5	6.5	93.5
25.00	4	6.5	6.5	100.0
Total	62	100.0	100.0	

Table 7: (Age) OVERALL

	Frequency	Percent	Valid Percent	Cumulative Percent
19.00	6	5.1	5.1	5.1
20.00	16	13.6	13.6	18.6
21.00	32	27.1	27.1	45.8
22.00	33	28.0	28.0	73.7
23.00	17	14.4	14.4	88.1
24.00	7	5.9	5.9	94.1
25.00	7	5.9	5.9	100.0
Total	118	100.0	100.0	

Table 8: (OVERALL BMI)

	Frequency	Percent	Valid Percent	Cumulative Percent
Underweight	31	26.3	26.3	26.3
Normal	73	61.9	61.9	88.1
Overweight	13	11.0	11.0	99.2
Pre-obese	1	.8	.8	100.0
Total	118	100.0	100.0	

DISCUSSION

Students from SMBB Medical University Larkana were marginally Normal 64.5% in comparison with DOW university students that were about 62.5%, in comparison with DOW the students of SMBBMU were underweight in lesser extent which were about 24.3% compared to 28.6%, SMBBMU students were overweight which were about 11.3% compared to 7.1% of DOW, there was not a single student who was on pre-obese stage but there was one student from DOW who was at pre-obese stage.

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