



Original Article

**CARDIAC RISKS IN YOUNGSTERS: A COMPARATIVE STUDY IN BETWEEN MEDICAL STUDENTS OF DUHS & LUMHS**

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**ABSTRACT**

**Introduction:** Cardiac diseases pose dangerous and debilitating effects on human beings affecting all age group members. Pakistan, like other South Asian countries, has a higher prevalence of Cardio-vascular risk factors as compared to other parts of the world, due to lack of awareness towards the risks as the literacy rate in our country is below 50%. Basic aim of our study was to detect the health status & life-style of medical students from Karachi & Jamshoro-Hyderabad, by finding out the BMI, stress level, physical activity and fast food habits. **Materials and Methods:** Students of M.B.B.S. aged between 18 to 29 years were chosen. Structured questionnaire-based cross-sectional study was conducted on 400 of L.U.M.H.S. & D.U.H.S. The BMI was calculated in metric system, categorized into 5 categories. Further, students were asked to mention their routine physical work output (walk and exercise); maximum stress taken during the ongoing year, and note down their habits of eating out on the form. **Results:** B.M.I of both groups was mostly in normal range with 68.9% from D.U.H.S and 59.4% from L.U.M.H.S. Yet, the underweight population of D.U.H.S. and overweight population of L.U.M.H.S was higher giving rise to a significant variation ( $p=0.021$ ). Routine walking habits of most L.U.M.H.S scholars were more prominent than their counter parts from D.U.H.S. ( $p=0.034$ ). Exercise was found to be another significant factor in which L.U.M.H.S participants were ahead ( $p=0.000$ ). No significant variation ( $p=0.250$ ) was seen in students, from L.U.M.H.S. & D.U.H.S., with regard to maximum stress episodes experienced during the on-going year. Students from both universities mostly preferred going to fast food once a month. **Conclusion:** B.M.I of L.U.M.H.S. students was higher than that from D.U.H.S. Exercise and routine walking habits varied significantly amongst two groups. The difference occurred due to more female candidates studying at D.U.H.S., than in L.U.M.H.S., whose BMI was observed to be quite low than males over there. Also, transportation and distance of students from their institute to their residence did let to this variation in the data achieved in walking habits. No variation was seen in stress level and eating out habits.

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margin of error. Statistical analysis has been done on SPSS version 16, for categorical variables are presented as tables and bar charts. Chi-square test was used to see the statistical significance.

**Variables:**

The main variables taken into consideration were as follows:

**1. B.M.I:** Students were asked to measure and mention their respective mass in kilograms and height in meters via weight and height measuring machine. After doing so, the individuals' B.M.I. was detected out and calculated on metric system basis. It was taken into account in order to judge the variation of body mass index with respect to participated candidates. In lieu of W.H.O classification of BMI, students were divided into four classes, i.e., class-1 (under -weight, BMI <18), class-2 (normal weight, BMI 18-24) and class-3 (over weight BMI ?25), class-4 (obese 1 BMI ?30) and class-5 (Obese 2 ?35).

**2. Physical activity:** Students were asked to mention their routine physical work output (walk and exercise) the form provided. This was taken into account to judge the level of daily work out and activity and

sedentary level of student participants.

**3. Stress:** As stress has its intimate relation with the cardiac risk, in the life of students it does have impact in the form various silent disorders. Students were asked to mention about their taking of maximum stress episodes taken during the ongoing year.

**4. Fast food:** This was asked in-order to detect to the nutritional status of the students by asking them the number of times a week (or a month) they preferred going and eating the outside junk fatty food. Often, the fried food available at the restaurants is low in

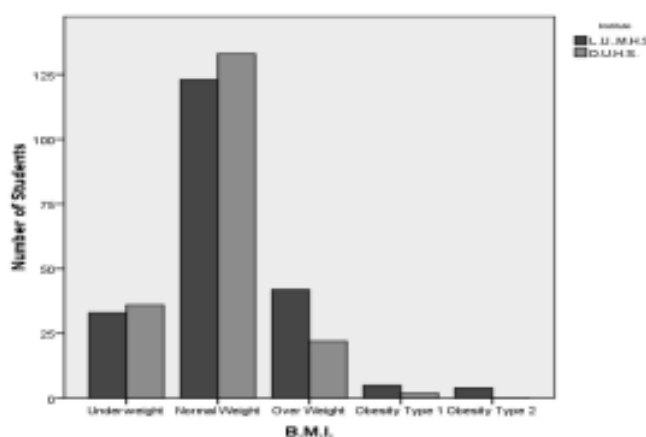


TABLE-1

Parameter( BMI )	D.U.H.S.(N=193)	L.U.M.H.S.(N=207)
Normal BMI	68.9% (n=133)	59.4% (n=123)
Under-weight	18.6% (n=36)	15.94% (n=33)
Over-weight	11.4% (n=22)	20.3% (n=42)
Obese Type 1	1.03 % (n=2)	2.4% (n=5)
Obese Type 2	0% (n=0)	1.93%(n=4)

TABLE-2

Variables	D.U.H.S.(N=193)	L.U.M.H.S.(N=207)	P-Value
Routine walking habits	43%(n=83)	53.6% (n=111)	0.034
Exercise	11.9% (n=23)	26.1 % ( n=54)	0.000
Maximum Stress	61.13%(n=118)	66.6% (n=138)	0.250
Studies as Stress Factor	78.7% (n=152)	68.5% (n=142)	
Family/Personal Issues as Stress Factor	9.8% (n=19).	14.9%(n=31)	0.115

overwhelmingly day scholars. No significant variation observed ( $p=0.250$ ).

Studies were the most prominent stress giving agents amongst the students, with  $n=152$  from D.U.H.S. and  $n=142$  students from L.U.M.H.S. admitting it (78.7.5 & 68.5% resp.). Many other students felt their family related issues and personal problems were major stress providers as per 14.9% Liaquatians ( $n=31$ ) and 9.8% Dowiites ( $n=19$ ). No significant variation observed ( $p=0.115$ ).

### 3. Junk food/Eating out habits:

Statistics further indicated that students from D.U.H.S. ( $n=101$ -52.3%) mostly preferred going to fast food once a month and same was the case of L.U.M.H.S. ( $n=108$ -52.2%). Further 31.1 % participants from D.U.H.S. ( $n=60$ ) went once a week & 21.7% from L.U.M.H.S. ( $n=45$ ). Further ( $n=15$ ) 7.8% Dowiites & ( $n=26$ ) 12.6% Liaquatians went twice a week;  $n=9$  went thrice a week and another  $n=8$  went on daily basis (4.9 and 4.1 % resp.) from D.U.H.S, while from Liaquat University, around  $n=14$  went thrice a week for Junk food and another  $n=14$  went on daily basis (6.8 and 6.8%). The chi-square test found on significant variation in this regard ( $p=0.109$ ).

## DISCUSSION

A good diet and a healthy lifestyle have a great impact on one's life esp. the youth. As a result of combined effect of mal-nourishment and lack of physical activity, there has been an accelerating rise in the cardiovascular diseases and its manifestations in the young age group. Hence, it is particularly important to adopt a healthy diet and lifestyle practice. The study was particularly concentrated on the fast food habits, body mass index variation, stress level, and participation in the physical activity on regular basis of medical students from the two institutes. Improvement in life style if made in early years (esp. during medical schooling) would produce doctors practicing and promoting healthy dietary habits and active life style. Often youngsters showing reduced exercise capacity and physical activity due to low standard of living usually have lack of interest in treatment options of C.V.Ds<sup>(13)</sup>.

The results from the Body Mass Index showed a satisfactory result as most students had a BMI considered within the normal range (18-24.99): 68.9% ( $n=133$ ) from D.U.H.S and 59.4% ( $n=123$ ) from L.U.M.H.S. On the other hand, However, we observed that 18.6 ( $n=36$ ) &

15.94% ( $n=33$ ) from Dow University and Liaquat University respectively, were found to be under weight and an almost equal ratio between the two groups was formed. On the contrary, the overweight (25-29.99) population of D.U.H.S. was 11.4% ( $n=22$ ) and that of L.U.M.H.S was 20.3% ( $n=42$ ). The Obese type 1 & 2 didn't make a significant number of participants in the research study, yet students from L.U.M.H.S. were found to be ahead in this regard to have more obese participants compared to D.U.H.S. as per the results. In this analysis we can conclude that L.U.M.H.S. students are somehow ahead with respect to obesity and overweighted population compared to D.U.H.S; yet, it is difficult to conclude in this regard about the risk amongst the students as different ethnic groups in the country have their own different B.M.I. range (students from L.U.M.H.S. being natives mostly from Interior Sindh region compared to D.U.H.S. having students from multiple ethnicities). Also, due to more male participants from LUMHS compared to DUHS, the BMI also varied in respect to more female participants from DUHS. A study at D.U.H.S. by Raza S., Sheikh M.A., Hussain M.F.A., et al. showed overall 28% students were found underweight and 17.4% were overweight, which was very much in co-relation to our study<sup>(14)</sup>. Another cross-sectional study over life-style changes between medical and non-medical students of Karachi at the Aga Khan University by Sajwani R.A., Shoukat S., Raza R., Sheikh et al. also stated that 18.2% medical students from the total participants were over-weight-also indicating co-relation to our study<sup>(15)</sup>.

When compared on the basis of physical activity, students of LUMHS were observed to be ahead of the DUHS students in this respect. About 53.6% of the students appreciated walking and 26.1% appreciated exercise from L.U.M.H.S compared to 43% and 11.9% resp. from D.U.H.S. As most of the students from L.U.M.H.S had an accommodation in the university hostels, the routine walking habits of most L.U.M.H.S scholars was ahead of Dow students. Further, it could also be said that due to daily outback from the institute to university accommodations, and also for the achievement of access to personal necessities, the students from L.U.M.H.S. were found to be physically active compared to Dowiites who were overwhelmingly day scholars. A study by Nisar N., Fatima K., et al on the life style of medical students from a private medical college of Karachi showed that 70% students were involved in walking and 47% exercised on daily basis

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