Original Article

Adherence to healthy dietary habit and physical activity among medical students in a tertiary care teaching hospital

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Abstract

Background: Medical students have high knowledge about healthy lifestyle, but when come into practice their adherence is poor. Many studies have reported unhealthy dietary habit and physical activity among medical students. **Methods:** A cross-sectional study conducted over a period of one month (November 2016).100 students participated. A pre-designed questionnaire was administered to collect data. Dietary habits were assessed using Dietary Quality Score. Physicalactivity was assessed using Madras Diabetic Research Foundation Physical Activity Questionnaire (MPAQ).BMI was calculated according to WHO guidelines. **Results:** It was observed that majority of students had unhealthy dietary habits (45%) and among them 46.7% were overweight and 44.4% were obese. Similarly sedentary physical activity (43%) had majority students with overweight (52.5%) and obese (71.4%) with significant p value < 0.0001.Prevalence of obesity among both genders who followed unhealthy dietary habit and physical activity were observed and found to be similar. **Conclusions:** Unhealthy dietary habit and sedentary physical activity is more prevalent among medical students. Health related programs should be conducted at regular intervals and motivation should be given to practice healthy lifestyle to overcome overweight and obesity.

Key Word: dietary habits, body mass index, medical students.

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INTRODUCTION

Medical students are known to be academically good and they usually have a good knowledge about healthy dietary habits and physical activity compared to other students. However there is no evidence to confirm that this theoretical knowledge transforms into good health practices.[2] Studies have reported that prevalence of physical inactivity and mental stress were very high among medical students[3,4]. College period is also a time for significant and rapid weight gain.[(5)] Unhealthy dietary habits and physical activity practiced during young adulthood are usually carried out in later life and can increase the risk of development of obesity which in turn leads to several chronic diseases.[(6,7)] As behaviours are changeable and effective program and guidance related to healthy dietary habit and physical activity will have a positive impact on students health.[8] Hence the present study was carried out to assess the adherence to healthy dietary habits and physical activity among medical students in a tertiary care teaching hospital.

MATERIALS AND METHODS

This was a cross-sectional study conducted over a period of one month (November 2016) among final year part-II medical students in Aarupadai Veedu Medical College, a tertiary care teaching hospital, Pondicherry. Out of 118students, 100 students who willing to participate were included in the study. The purpose of the study was

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explained to the students and verbal consent was taken before starting the study. A pre-designed questionnaire was administered to collect data in relation to dietary habit and physical activity. Dietary habit were assessed using the Dietary Quality Score.[9] According to the score obtained, dietary habit were categorised as healthy dietary habit (7-9 points), average dietary habit (4-6 points) and unhealthy dietary habit (1-3 points).The physical activity were assessed using Madras Diabetic Research Foundation Physical Activity Questionnaire (MPAQ). Based on MPAQ, physical activities were classified as sedentary, light, moderate and healthy physical activity.[10] According to WHO guidelines, height in $m^2$and weight in kg were measured and by using the formula weight (kg)/height (m^2), body mass index (BMI) was calculated. BMI≥25 kg/m^2 were considered overweight, 18-25 kg/m^2asnormal and ≥ 30 kg/m^2 were considered obese[(11)]. Data collected were entered and analysed using SPSS version22.0. Chi-square test was used to find out association with p value (< 0.05 considered significant).

OBSERVATIONS AND RESULTS

A total of 100 students participated of which male population (60%) was slightly higher compared to female(40%). Regarding their dietary habits, half of them were mixed diet(50%) ,30% were non vegetarian and 20% were vegetarian (Figure 1).Among them majority followed unhealthy dietary habit (45%) while 30% were average and only 20% were healthy dietary habit followers (Figure 2).

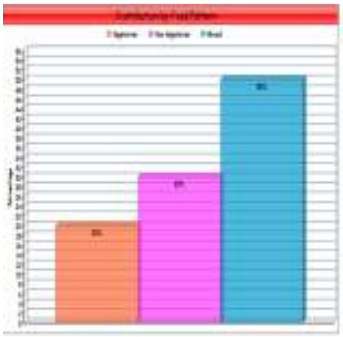

Figure 1

Figure 2

On analysing physical activity, majority were sedentary (43%). Followers of light and moderate physical activity were 29% and 21% respectively.7% followed vigorous physical activity (Figure 3).

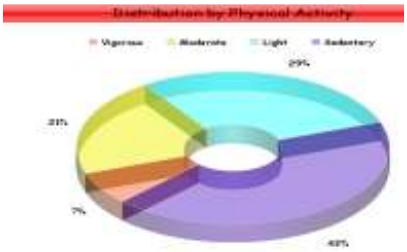

Figure 3

According to BMI, it was noted that majority were overweight (40%) and 28% were found to be obese (Figure 4).

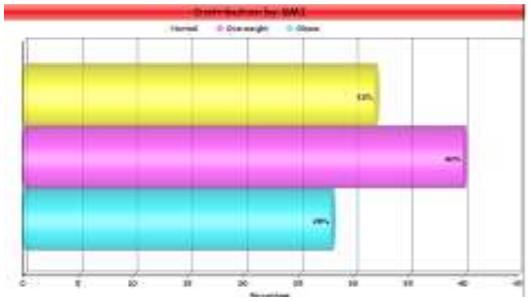

Figure 4

On comparing dietary habit with BMI, most of them with unhealthy dietary habit were found to be overweight (46.7%) and obese (44.4%). All students who took healthy diet had normal BMI with significant p value (Table 1).

Table 1: Correlation between Dietary Habit and BMI

Dietary Habit	BMI							
	Normal		Overweight		Obese		Total	
	F	%	F	%	F	%	F	%
Healthy	25	78.1%	0	0%	0	0%	25	25%
Average	3	9.4%	19	47.5%	8	28.6%	30	30%
Unhealthy	4	12.5%	21	52.5%	20	71.4%	45	45%
Total	32	100%	40	100%	28	100%	100	100%

X^2 = 74.122 p < 0.0001 Significant

On Correlating physical activity with BMI, majority of students followed sedentary physical activity were (52.5%) overweight and (71.4%) obese while moderate physical activity had (40.6%) normal BMI with p value <0.0001(Table 2).

Table 2: Correlation between of Physical Activity and BMI

Physical Activity	BMI							
	Normal		Overweight		Obese		Total	
	F	%	F	%	F	%	F	%
Vigorous	7	21.9%	0	0%	0	0%	7	7%
Moderate	13	40.6%	8	20%	0	0%	21	21%
Light	10	31.3%	11	27.5%	8	28.6%	29	29%
Sedentary	2	6.2%	21	52.5%	20	71.4%	43	43%
Total	32	100%	40	100%	28	100%	100	100%

X^2 = 42.8843 p < 0.0001 Significant

On the basis of results, majority of both gender (male 43.3% and female 47.5%) followed unhealthy dietary habit. Similarly, majority of both gender (male 41.7% and female 45%) had sedentary physical activity. Gender wise distribution in relation to dietary habit and physical activity were statistically insignificant (Table 3 and 4).

Table 3: Distribution of Gender according to their dietary habit

Dietary Habit	Male		Female		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Healthy	17	28.3%	8	20%	25	25%
Average	17	28.3%	13	32.5%	30	30%
Unhealthy	26	43.4%	19	47.5%	45	45%
Total	60	100%	40	100%	100	100%

X^2 = 0.8981 p = 0.6382 Not Significant

Table 4: Distribution of Gender according to their physical activity

Physical Activity	Male		Female		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Vigorous	5	8.3%	2	5%	7	7%
Moderate	12	20%	9	22.5%	21	21%
Light	18	30%	11	27.5%	29	29%
Sedentary	25	41.7%	18	45%	43	43%
Total	60	100%	40	100%	100	100%

X^2 = 0.5661 p = 0.9041 Not Significant

DISCUSSION

The aim of this study was to analyse adherence towards healthy dietary habit and physical activity among medical students. Nutrition knowledge is moderate among non-medical students (Azizi *et al)*[12]compared to medical students who had high knowledge (Emanmokbel Alissa *et al* [13]). But when it come to practices, prevalence of unhealthy lifestyle behaviour is almost same among medical and non medical students. This present study shows that prevalence of unhealthy dietary habits were in fact more among medical students. It was also found out that people who had unhealthy dietary habit were found to be overweight and obese similar to Meenal Vinay

Kulkarni *et al*.[14]This study also shows all the students following healthy dietary habit had normal BMI similar to a Karachi study.[15]In this present study, majority of the students were having sedentary physical activity and among them the prevalence of overweight state and obesity were high when compared to those practicing moderate physical activity and who had normal BMI. It proves that dietary habit and physical activity were inversely proportional to BMI similar to Bushra Ashraf *et al*.[16] In this study ,prevalence of overweight and obesity were similar among both gender who followed unhealthy dietary habit and sedentary physical activity which is against Inam-ul- Haq *et al*.[17]This study emphasis that healthy dietary habit and moderate to vigorous physical activity should be followed among medical students to prevent developing overweight and obesity in future.[18,19,20]

CONCLUSION

Unhealthy dietary habit and sedentary physical activity is more prevalent among medical students. Health related programs should be conducted at regular interval and motivation should be given to students to practice healthy lifestyle to obesity.

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