

Study of BMI in Junk Food Eaters of Both the Sexes in the Age Group 18-20

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Abstract

In the present study, of 100 students, 60% are consume junk food daily, 20% are occasional eaters and 20% are non eaters. In daily junk food eaters, 22 (36.66 %) students have normal BMI and 38(63.34%) have high BMI. In occasional eaters 39(15 %) students have low BMI and 17(85%) have normal BMI and in non eaters 5(25%) students have low BMI and 15 (75 %) have normal BMI. Mean values of daily junk food eaters is 26.13(S.D. \pm 2.89), of occasional eaters is 23.03 (SD \pm 2.05) and of non eaters is 18.15 (SD \pm 1.14) each which has highly significant P value (< .001) and F value = 75.22 statistically. In study of sexual dimorphism, normal BMI is found in 10 males and 14 females and high BMI in 18 males and 18 females which is statistically insignificant giving the important message that junk enhances obesity , irrespective of the sex. Raised BMI is the predictor of DM , CVS diseases, STN and stroke. Moreover, G.I.T. problems like reflux oesophagitis, Carcinoma colon and renal complications are more prevalent in junk food eaters. Increased BMI also leads to central obesity, lethargy and arthritis. This study helps to create awareness in parents and teachers of school going children and adults of Indian population in whom 60% are unaware about the side effects of the junk food.

Keywords: DM=Diabetes Mellitus; C.V.S.=Cardiovascular Disease; STN = Hypertension; Stroke; Nutritious.

Introduction

Body mass index is the ratio of wt in Kg/ht in mtr². The normal range is 18.5 – 24.9. The human physique has several aspects like size, form and composition. Difference in the size is obvious biologically and important sociologically. The conscious are somehow concerned with identification of the whole being of his bodily image and its relation to the outside world. The concept of BMI has been explored by the cardiologist and physicians as well. As per the WHO report, BMI is associated with non communicable diseases [1,2]. Hence attempt is made to compare the BMI in daily junk food eaters, Occasional junk food eaters and non eaters, so as to help the clinician to diagnose obesity, cardiac

disease and diabetes mellitus which are predicted by obesity. It certainly indicates that junk foods promotes the weight irrespective of the sex. As per WHO [3] obesity is increasing in developing countries. It reminds the proverb " longer the belt, shorter is the life." Central obesity is a predictor of high prevalence of Diabetes, Hypertension and coronary artery disease. It is impotant that junk foods are delicious and non nutritious because they prevents consumption of nutritious foods which leads to Calcium and vitamin deficiency [4]. Our government has banned many junk foods as they contain toxins which are delirious to our health [5].

Materials and Methods

Total 100 students of both the sexes of 1st year MBBS students between the age group of 18 -19 are chosen for the study.

Observation and Results

Table 1 shows that out of 100 students. In that 60

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are daily junk food eaters, occasional and non eaters are 20 each in number.

Table 2 shows in daily junk food eaters who are 60 in numbers, 22 have normal BMI within the range of 18-25 and 38 have BMI more than normal. In the occasional eaters who are 20 in number, 3 have got BMI below 18.17 of them had normal BMI. In the non eaters out of 20 .5 have low BMI and 15 have got normal BMI. This study of comparison is highly significant statistically(P value is < .001).

Table 3 -Total comparison of each group

1. In the daily junk food eaters , minimum BMI is 18.5.and the maximum is 32.2 and the mean value is 26.13 (SD ± 2.89).

2. In the occasional eaters who are 20 in numbers, minimum BMI is 18.10 and the maximum BMI is 24.9 .The mean value is 23.03 (SD ±2.05).
3. In the non eaters, again they are 20 in number, minimum BMI was 14.7 and maximum BMI was 19.8. and mean value is 18.15(S.D. ±1.14). And this study of comparison between all the 3 groups is also highly significant statistically. (p < .001). and amazon value is 75.22.

Table 4 shows sexual dimorphism of daily junk food eaters. Normal BMI is found in 10 males and 14 females. High BMI In 18males and 18 females and chi² value is 0.401. Difference is also 1 and it is statistically insignificant

Table 1: Classification of junk food eaters and their %

Junk Food	Number Of Students
Daily eaters	60(60%)
Occasional eaters	20(20%)
Non-eaters	20(20%)
TOTAL	100

Table 2: Showing % of low,normal and high BMI in each group

	LOW (<18.5 BMI)	Normal (18.5-24.49 BMI)	HIGH (>24.49BMI)	P Value
Daily eaters	0	22(36.66%)	38(63.34%)	<0.001
Occasional eaters	3(15%)	17(85%)	0	
Non-eaters	5(25%)	15(75%)	0	

Table 3: Comparative study of junk food eaters in all the 3 groups

No	Daily Eaters	Occasional Eaters	Non Eaters
n	60	20	20
Minimum	18.5	18.10	14.7
maximum	32.2	24.9	19.8
mean	26.13	23.03	18.15
SD	2.89	2.05	1.14
F Value = 75.22			
P value = < 0.001			

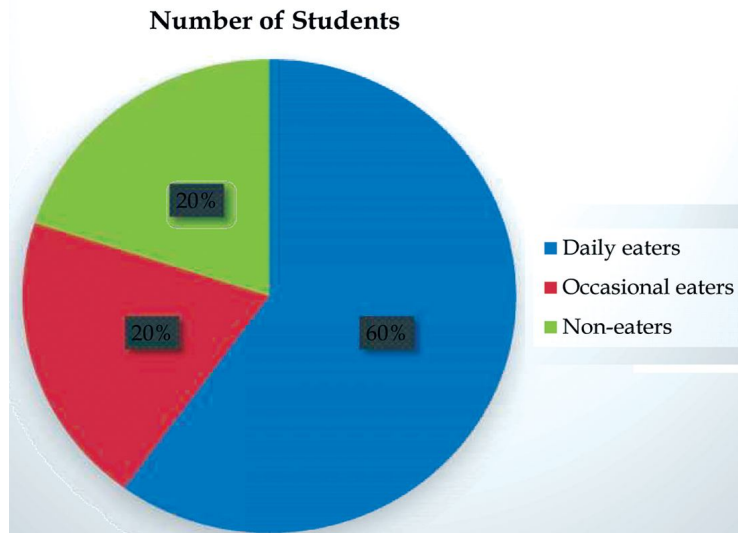


Fig. 1:

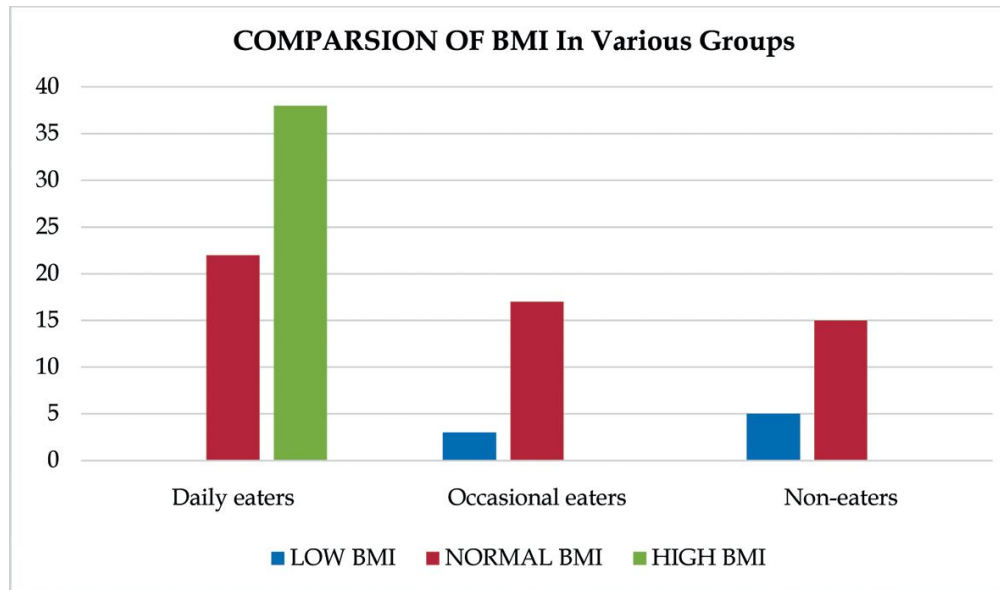


Fig. 2:

Table 4:

BMI Vs Sex in Junk Food eaters			
	Male	Female	Total
Low BMI	0	0	0
Normal	10	14	24
High BMI	18	18	36
	28	32	

chi s0.4018,df=1, P= 0.5262
 *Low BMI has been excluded from Chi Square Analysis

Discussion

In the present study, the study of BMI is made in the 3 groups of junk food eaters. They are classified into 3 groups. A. daily junk food eaters (60%). B. occasional junk food eaters (20%) and non junk food eaters (20%).

In the study of daily junk food eaters, it is observed that 22 (36.6%) have normal BMI, while 38 (63.3%) have high BMI. In the occasional eaters, 3 students (15%) have got low BMI and 17 (85%) have normal BMI. but in non eaters 5 students (25%) have low BMI and 15 (75%) have normal BMI. This comparative study shows significant P values statistically. (P <.001). When the mean value of all the 3 groups are studied, the mean value of junk food eaters is 26.13 (SD ±2.89), mean value of occasional eaters is 23.03 (SD ± 2.05) and mean value of non eaters is 18.15 (SD ± 1.14). Which is highly significant statistically. P < .001) and F value = 75.22 but in the study of sexual dimorphism it was observed that in males 10 have normal BMI and 18 have high BMI and in females 14 have normal BMI and 18 have high BMI. This value is insignificant statistically (P=0.52). chi² value is

0.401 and the difference is 1.

It is interesting to note that by eating the junk food, both males and female adults have gained the BMI considerably indicating that junk food adverse effects occurs irrespective of the sex. Apart from DM, HT, Coronary artery diseases, stroke the raised BMI leads to obesity which is associated with gastro oesophageal reflux diseases [5] and also impair the pharmacokinetics and pharmacodynamics of drugs, implying altered drug distribution leading to secondary complications [6]. As junk foods are rich in carbohydrates with high glycaemic index [7] which are sold outside the home are made delicious and hence popularly called supersized food [8]. It is also observed that daily junk food eaters have peculiar life style and prefer to have food outside the home and while having the food watch TV and games will be unaware of the quantity of food swallowed by them [9]. It is also reported that Ca colon, endometrium and kidney are more prevalent in the daily junk food eaters [10]. It is also observed that an increased BMI leads to obesity leading to lethargy, sedentary lifestyle and osteoarthritis.

Summary and Conclusion

The present study of classification of junk food eaters like daily, occasional and non eaters are very much useful to the nutritional experts, school authorities, paediatricians and physicians to create awareness among the parents and the children because raised BMI leads to obesity which will impair the physical activity and lifestyle in growing children. Instead of blaming the junk food sellers, it is the

responsibility of the parents to convince the children about the side effects of the junk foods and it is also the shared responsibility of the teachers to discourage the junk foods in the schools. This research paper has made an attempt and will be useful if only the awareness is created among unaware parents and negligent teachers because our country is inferior to many underdeveloped countries in participating in Olympic and international games.

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