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RESEARCH ARTICLE

A STUDY OF CARDIOVASCULAR RISK BEHAVIOUR AMONG MEDICAL STUDENTS IN A MEDICAL COLLEGE, GURUGRAM, HARYANA

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ABSTRACT

Introduction: Cardiovascular diseases have become the main threat these days and the main reason of cardiovascular diseases are related to our adoption of sedentary lifestyle including diet, physical activity, stress, consumption of alcohol and smoking. Its quite essential to see that those who will be the healers for many in future are to what extent leading a healthy life in their present. **Objectives:** 1. To assess the awareness and attitude of medical students towards cardiovascular disease.2. To find to association between gender and lifestyle risk factors **Material &Methods:** A cross-sectional study was conducted among medical graduates of a medical college in Gurugram. Self -Administered Questionnaire was used to collect information regarding their knowledge and attitude towards the risk factors of Cardiovascular diseases like their diet, alcohol intake, smoking, physical activity. The data was compiled in Excel sheet and analyzed by Epi-Info version 7 software. **Results:** Out of 244 medical students, 112(45.90%) were males and 132(54.09%) were females. 124(50.81%) of students had an intake of 1-2 fruits/day while 15.16% students had daily junk food intake and 19.67% regularly consumed carbonated drinks.64.34% had the habit of getting stressed easily while majority of them (73.36%) were taking proper sleep. The body mass index of more than half of them were in normal range. Only 2.04% students were smoking on regular basis and only 6.96% had alcohol more than 2 times a week. **Conclusion:** Although being doctors we are aware of good and bad but still its rarely instigated in our lifestyles. These students should also be counselled and motivated to adopt a better life so that they stay far away from developing the disease when they grow up.

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INTRODUCTION

Cardiovascular diseases (CVDs) have remained the leading causes of global death in the last 15 years which is the cause of mortality of 17.7 million people every year. Population aging, upgraded survival opportunities and hasty rise in obesogenic environment are the potential contributors. According to world health organization, it is responsible for 31% of all deaths worldwide with 75% of total CVD deaths taking place in low- and middle-income countries. Thus, here arises the need for risk assessment early in life to motivate lifestyle changes in younger individuals who may be at risk for developing the disease (Amrutha, 2014). The major cause for mortality and morbidity associated with cardiovascular disease include high blood pressure, abnormal lipids, tobacco use, excessive alcohol use, physical inactivity, obesity, unhealthy diet and stress (Rustagi *et al*., 2011). A health-promoting lifestyle is a multi-dimensional pattern of self-initiated feelings and behaviors aiming at ensuring individual's health, self-actualization, and self-accomplishment (Dangol *et al*., 2017). Thus it's quite essential to see that those who will be the future healers are how much motivated in the present to keep up with a healthy lifestyle. No such study has been conducted in the current study area. Hence, this study intended to assess the awareness and attitude of the medical students in 2nd and 3rd Prof regarding cardiovascular risk behavior and to find the association between the gender of the medical students and the cardiovascular risk behavior.

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MATERIAL AND METHODS

Study Design: A cross- sectional study was carried out among medical students of 2nd prof and 3rd prof in a tertiary medical college of Gurugram.

Study Period: All the participants were included in the study for a period of 3 months i.e. from 15th June, 2019 to 15th September, 2019.

Sample Size: Among total 250 students studying in 2nd and 3rd year, 6 were not found repeatedly, thus the sample size was found to be 244

Sampling technique: Universal sampling method.

Inclusion Criteria: All those whowere present and were willing to participate were included in the study.

Exclusion Criteria: Those who were not willing to participate or those who remained absent in the study period were excluded from the study.

Tools of the Study: All the information was collected with the help of predesigned pretested self-administered questionnaire. The questionnaire was validated and Anonymity was maintained. Knowledge, attitude and their lifestyle habits associated with the prevalence of risk of cardiovascular disease was studied which includes mainly dietary habits like consumption of fruits and vegetables, carbonated drinks, junk food habits, tobacco use, alcohol intake, sleeping pattern, physical activity and obesity. The Socio-economic status was calculated by using modified B. G. Prasad's classification. History of daily consumption of fruits, habit of skipping breakfast, frequency of consumption of carbonated drinks and fast food was also asked. History of physical activity for at least 30 minutes for 3or more than 3 days in last week was enquired.

According to USDA food guide pyramid for adults, the minimum recommendation is intake of 3 servings of vegetables and 2 servings of fruits per day. Carbonated soft drinks and Fast food is taken as a risk behavior if taken more than twice weekly. Regular physical activity is brisk walking for 30min or more for minimum 4-6 days in a week. Sedentary activity is sitting, reading, watching television, playing video games and using computer continuously for more than 4 hours. Current Smokers and Current Alcoholics are those who are consuming tobacco and alcohol (USDA).

Ethical consideration: Ethical clearance was obtained from Institutional ethical committee of SGT Medical College.

Statistical Analysis: Collected data was entered in MS Office excel sheet and was analyzed by epi-info version 7.0

RESULTS

Out of total 244 students who were included in the study, 132(54.09%) were females and 112(45.90%) were males mainly falling in the age group of (19- 22) years. Maximum students 218(89.34%) were living in the Hostel. Majority of the participants 226 (92.62%) belonged to upper socio-economic status according to Modified B.G. Prasad Scale. In this study, majority 124(50.81%) had the habit of consuming 1-2 fruits/day while 84 (34.42%) were not in the habit of eating fruits. Maximum number of students used to skip breakfast 132(54.09%).Out of which, (61)46.21% were girls and 71(53.79%) were boys who had the habit of skipping breakfast Although being the future doctors, the junk food intake was no less among the study participants. Majority of the students used to consume some form of Junk food/Fast food twice a week 98 (40.16%) and 89(36.48%) had junk food intake reported to be once weekly. Only Few of them consumed junk food daily 37(15.16%).128(52.46%) had a regular habit of drinking carbonated drinks as twice weekly, 45(18.44 %) used to consume once weekly and 23(9.42%) were having in only once a month. Table 2 depicted that mostly the participants had a sleep pattern for 7-8 hours 179(73.36%) and there were 65(26.64%) who were not able to sleep for more than 6 hours. 157(64.34%) of the medical students admitted that they used to take stress on little things thing and remain stressed for a longer time while 87(36.66%) seldom took stress. Among the total participants only 107(43.86%) were in the habit of doing exercises at least 4 times / week for minimum of 30 minutes or more as compared to 137(56.15%) who still have not indulged themselves into any mode of physical activity. Among the total participants, only 126(51.64%) had their BMI in the normal category followed by 83(34.01%) who were over –weight, 17(6.97%) were underweight and 18(7.38%) came under the category of Obese. 17(6.96%) had daily intake of alcohol, 20(8.20%) reported to have it 1-2 times/month, 73(29.92%) had once or twice a year and 54.91% never had alcohol in their life. The prevalence of smoking was quite less in the study participants.87.70% had never practiced smoking while 2.04% were regular smokers. Table 3 shows the association between the lifestyle related factors causing cardiovascular diseases with the gender of the study participants. In this study, alcohol intake was more in males 62(55.36%) as compared to females 48(36.37%) which was found to be significant ($p<0.05$). Overall the habit of smoking was not found among the majority of students (87.70%).Among those who had smoking, 23(20.54%) were males and only 5.30% were females.

Table 1. Distribution of participants according to distribution of dietary variables

DIEATRY VARIABLES	FREQUENCY	PERCENTAGE
FRUITS INTAKE/DAY		
1-2 fruits/ day	124	50.81%
≥3 fruits	44	18.03%
No fruits/day	76	31.15%
JUNK FOOD		
Daily	37	15.16%
Twice a week	98	40.16%
Once a week	89	36.48%
Once a month	20	8.19%
CARBONATED RINKS		
Daily	48	19.67%
Twice a week	128	52.46%
Once a week	45	18.44%
Once a month	23	9.42%
Total	244	100%

Table 2. Distribution of participants according to lifestyle related risk behavior.

VARIABLES	FREQUENCY(n= 244)	PERCENTAGE
SLEEP DURATION		
7 – 8 Hours	179	73.36%
< 6 hours	65	26.64%
TAKE STRESS OFTEN		
Yes	157	64.34%
No	87	36.66%
DO EXERCISE		
Yes	107	43.86%
No	137	56.15%
BODY MASS INDEX		
< 18.5(underweight)	17	6.97%
18.5 – 24.9(Normal)	126	51.64%
25.0 – 29.9(Over-weight)	83	34.01%
30.0 and above(Obese)	18	7.38%
ALCOHOL INTAKE		
Weekly(>2/week)	17	6.96%
Monthly(1-2/month)	20	8.20%
Occasionally(1-2/year)	73	29. 92%
Never	134	54.91%
SMOKING		
Weekly(>2/week)	5	2.04%
Monthly(1-2/month)	14	5.73%
Occasionally(1-2/year)	11	4.50%
Never	214	87.70%

Table 4. Association of gender and lifestyle related risk behavior

RISK FACTORS	MALES(112)	FEMALES(132)	TOTAL(N=244)	STATISTICAL VALUE
1.Alcohol intake +	62 (55.36%)	48 (36.37%)	110(45.08%)	χ^2=8.827 p-value = 0.002965
Alcohol Intake -	50 (44.63%)	84 (63.64%)	134 (54.91%)	
2. Smoking	23 (20.54%)	7 (5.30%)	30 (12.30%)	χ^2 = 13. 0377 p = 0.000305
Non-smoker	89 (79.46%)	125 (94.70%)	214 (87.70%)	
3. Stress often	58 (51.79%)	99 (75%)	157 (64.34%)	χ^2 = 14.2322 p-value = 0.000162
Don't take stress	54 (48.21%)	33 (25%)	87 (35.66%)	
4. Physical activity(+)	63 (25.82%)	44 (33.33%)	107 (43.85%)	χ^2 = 12.9325 p-value = 0.000324
Physical activity(-)	49 (43.75%)	88 (66.67%)	137 (56.15%)	

(p<0.05). Same as Stress taking habit was more in females (75%) as compared to males (25%). In the current study, only 25.82% of males had reported physical activity at least 4 times a week for 30 min while 33.33% females were doing physical exercise.(p<0.05).

DISCUSSION

In the current study, out of total 244 medical students who participated in the study, 112 were males as compared to 132 females. The dietary risk behavior related to fruits intake, junk food intake and carbonated drinks were seen in number of participants. In the present study, 76(31.15%) were there who were not in the habit of eating fruits. 44(18.03%) were those who really were eating more 3 or more fruits and major students 124(50.81%) used to eat 1-2 fruits regularly while a study in Delhi(2) revealed that 12% of the students had an intake of 3 or more fruits per day which was less than the current study. The reason for this variation could be the increased awareness regarding Non-communicable diseases and the consistent motivation to stay fit among the participants due to the various CMEs n health awareness programs conducted in the institute.

The current study reveals that majority still had high intake of junk food. 37(15.16%) had the habit of consuming some form of junk/fast food on the daily basis followed by 98(40.16%) who had consumed twice a week and 89(36.48%) were there who had fast food at least once a week and only 20(8.19%) were there with the fast food consumption of once in a month. If we see a study done in Nagpur(5), 41.67% of students had the habit of consuming fast food more than 5 times /week which was quite high compared to the current study. While in a study done in Karachi (Gilani, 2017), 90% of students report to have junk food once a week. Intake of carbonated drinks was found on a daily basis by 48(19.67%) participants, 52.48% admitted to consume any carbonated drinks twice a week, 45(18.44%) used to have it once a week and only 23(9.42%) had this once a month while in a study done in Karnataka (Mullick, 2015) respectively. Frequent intake of carbonated soft drinks and fast foods was reported by 16.5% and 24.7% students, respectively. If we see the association between gender and lifestyle risk behavior, alcohol intake was reported more in boys (55.36%) as compared to girls (36.37%) and similarly boys had a habit of smoking (12.3%) more than girls. This indicates more chances of boys developing cardiovascular disease in future. The association was found to be significant (<0.05). If we see a study in Nagpur (Meenal, 2016), 29.31% males and 11.29% females were in the habit of regular intake of alcohol. The current study had a higher prevalence due the study area as its close proximity of a metro city, the westernized culture prevails to a greater extent in the current study. Physical activity regularly was done more by 33.33% females and only 25.82% of males. Few reported to have started but "THE JOSH REMAINS HIGH" just for a day or two and then laziness takes over. Rest of the students daily made a plan but the day of implementation is still yet to come. While in a study in Nagpur shows that 77.41% of females and 44.84% of males practices some mode of physical activity either morning or evening.

Conclusion

Lack of awareness about Cardio Vascular Risk Factors are much prevalent in the medical students. The future medicos still were practicing habits which makes them pro for developing cardiovascular risk disease like Alcohol intake, Smoking, sedentary lifestyle, skipping breakfast, intake of junk food. The students need Counselling sessions to change their unhealthy behavior and adopt healthier living style. Behavior change communication and health education session are essential to target these risk behaviors and make them modify. Thus, these studies help the students to assess their behavior and worked as a mirror of self-assessment to them.

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