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ASSESSMENT OF AWARENESS ABOUT CARDIOVASCULAR DISEASES RISK FACTORS AMONG FIRST YEAR MEDICAL STUDENTS IN GAYA, BIHAR

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ABSTRACT

Background: There are several risk factors contributing to cardiovascular diseases, such as age, gender and ethnicity. Positive family history, being overweight is also additional risk factors. Other life style factors that contribute to hypertension and cardiovascular diseases are smoking, stress, physical inactivity, consumption of alcohol, increase salt intake, reduce potassium intake. The objective of the study was to assess the awareness about cardiovascular diseases risk factors among first-year medical students. **Methods:** A cross-sectional study was carried out among 136 first-year medical students of Medical College in Gaya, Bihar during the period of six months. A self-administered, pre-tested structured questionnaire was used to obtain information about awareness of cardiovascular diseases risk factors including diet, physical activity, smoking, and alcohol habits from the study subjects. **Results:** The study subjects were 136 first-year medical students belonging to 18–23 years age group. There was good awareness about high fat food, high sugar intake, smoking and alcohol consumption as cardiovascular diseases risk factors. **Conclusions:** There is good awareness about cardiovascular diseases risk factors among first-year medical students.

KEYWORDS: Awareness, Cardiovascular diseases, Risk factors, Medical students.

INTRODUCTION

The prevalence of cardiovascular disease (CVD) is rising worldwide and it accounts for 17% of the total mortality. Factors linked to an increased risk of CVD are family history, age, sex, cigarette smoking, excessive alcohol consumption, abnormal lipid and lipoprotein, high blood pressure, high blood glucose, physical inactivity, overweight and obesity. WHO noted that CVD has no geographic, socioeconomic or sex boundaries. It is estimated that far from being confined to the most developed countries, cardiovascular disease is the leading cause of death in developing countries as well. Hypertension is a major contributor to the global disease burden. It poses an important public health challenge to both economically developing and developed countries including Asia.[1]

Hypertension confers the highest attributable risk to deaths from cardiovascular disease and epidemiological data provide convincing evidence that the risk of cardiovascular disease related to blood pressure is graded and continuous. This risk is evident even in childhood; with elevated blood pressure predicting hypertension in adulthood, and adverse effects of elevated blood pressure in childhood on vascular structure and function, specifically left ventricular hypertrophy, are already apparent in youth. There are several risk factors contributing to hypertension, such as age, gender and ethnicity. It is common in men over 45 years and women over 55 years. Positive family history being overweight and obese is also additional risk factors. Other life style factor that contribute to hyper tension are smoking, stress cell phone use and physical inactivity, consumption of alcohol, increase salt intake reduce potassium intake.[2] It has been predicted that these diseases will increase in India and this country will be host to more than half the cases of heart disease in the world.[3].CVDs are increasing now a days among the medical professionals. Lifestyle related behavioral risk factors are mainly implicated for this increased burden, and research related to these risk factors among medical students is essential, considering their role as future physicians and role models in public health intervention programs. Limited study was conducted about CVD risk factors in this area.

Thus, this study was carried out with the objective to assess the awareness about CVD risk factors among first year medical students in Gaya, Bihar.

METHODS

A cross-sectional study was conducted during the period of six months among first-year medical students. Total 136 First year medical students belonging to 18–23 year age group who were willing to participate were included as study subjects. A detailed informed consent was taken from the study subjects before data collection. A self-administered, pre-tested structured questionnaire was used to obtain information about awareness of cardiovascular diseases risk factors including diet, physical activity, smoking, and alcohol habits from the study subjects. Data were collected after obtaining ethical approval from the ethical committee of the college. Data was entered in MS excel sheet and analyzed statistically using percentage, proportions, and z test. When z value was more than 1.96, the p value will be less than 0.05 and observed difference was considered to be statistically significant.

RESULTS

It was observed from Table 1 that the study subjects were 136 first year medical students in the 18–23 years age group, large proportion of them belongs to 20-21 years age group. There were 71 (52.50%) male and reaming 65 (47.80%) were females. Out of 136 study subject there were 110 (80.88%) from urban area and 26 (19.12%) from rural area.

Table 1: Demographic characteristics of study population (n=136).

	Frequency	Percentage (%)
Age(in years)		
18	2	1.47
19	28	20.59
20	49	36.03
21	41	30.15
22	10	7.35
23	6	4.41
Sex		
Male	71	52.5
Female	65	47.8
Residence		
Rural	110	80.88
Urban	26	19.12

Table 2: Awareness about CVD risk factors (modifiable) among study population.

Awareness about CVD modifiable risk factors	Yes N (%)	No N (%)	Do not know N (%)	Z-Test	P-value
High fat food	132(97.06)	03(2.21)	1(0.74)	10.97591	0.001
High sugar intake	116(85.29)	14(10.29)	06(4.41)	8.231932	0.001
Alcohol consumption	132(94.29)	08(5.71)	00(0.0)	0.79281	0.001
Smoking	123(90.44)	12(8.82)	01(0.74)	9.432422	0.001
Air pollution	99(72.80)	37(27.20)	00(0.0)	5.316456	0.001
Tobacco chewing	105(77.21)	27(19.85)	04(2.94)	6.345448	0.001
Fast food	127(93.38)	07(5..15)	02(1.47)	10.11842	0.001
Passive smoking	106(77.94)	28(20.59)	02(1.47)	6.516946	0.001
High salt intake	122(89.71)	12(8.82)	02(1.47)	9.260924	0.001
Soft drinks	92(67.65)	42(30.88)	02(1.47)	4.115966	0.001
Sedentry lifestyle	124(91.18)	11(8.09)	01(0.74)	9.603921	0.001
High blood pressure	119(87.50)	17(12.50)	00(0.0)	8.746428	0.001
Eevated Seram cholestrol	128(94.12)	07(5.15)	01(0.74)	10.28992	0.001
Recurrent respiratory infction	101(74.26)	31(22.79)	04(2.94)	5.659453	0.001
Diabeties	122(89.71)	12(8.82)	02(1.47)	9.260924	0.001
Regular Exercise	20(14.71)	113(83.09)	03(2.21)	-8.23193	0.001
Oral contraceptive	84(61.76)	47(34.56)	05(3.68)	2.743977	0.003
Obesity	130(95.59)	05(3.68)	01(0.74)	10.63291	0.001
Stressful life	133(97.79)	3(2.21)	00(0.0)	11.14741	0.001
Eating vegetable can reduce heart disease	105(77.21)	26(19.12)	05(3.68)	6.345448	0.001
Cessation of smoking reducesrisk of heart disease	114(83.82)	20(14.71)	02(1.47)	7.888935	0.001

High fibre diet	35(25.74)	101(74.26)	00(0.0)	-5.65945	0.001
High protein diet	17(12.50)	115(84.56)	04(2.94)	-8.74643	0.001

It was seen from Table 2 that there was good awareness about CVD risk factors among medical students about 132 (97.06%), 116 (85.29%) students were aware that eating high fat food and high sugar intake were CVD risk factors respectively. 132 (94.29%), 123 (90.44%) students were aware that alcohol consumption and smoking were CVD risk factors respectively. Out of 136 students 17 (12.50%), 47 (34.56%) and 106 (77.94%) students were not aware that high blood pressure, use of oral contra captive and passive smoking were CVD risk factors respectively. There was good awareness about obesity, 130 (95.59%), stressful life 133 (97.79%), elevated serum cholesterol 128 (94.12%), sedentary life style 124 (91.18%), high salt intake 122 (89.71%) were risk factors for CVD. 99 (72.80%) students were answered that air pollution was risk factors for CVD, similarly 35 (25.74%) and 101 (74.26%) students were answered that taking high diet and recurrent respiratory infection were risk factors respectively.

Table 3: Awareness about CVD risk factors (non modifiable) among study population.

Awareness about CVD non modifiable risk factors	Yes N (%)	No N (%)	Do not know N (%)	Z-Test	P-value
Family history of hypertension	122(89.71)	11(8.09)	03(2.21)	9.263524	0.001
Increasing age	129(94.85)	07(5.15)	00(0.0)	10.46141	0.001
Type A- personality	77(56.62)	50(36.76)	09(6.62)	1.543487	0.06
Women are more risk of getting heart disease	55(40.44)	78(57.35)	03(2.21)	-2.22948	0.001
Male are more risk of getting heart disease	95(69.85)	39(28.68)	02(1.47)	4.630462	0.001

It was seen from Table 3 that family history of hypertension is risk factor for CVD answered by 122 (89.71%) students, 95 (69.85%) students were responding that male are more risk of getting heart diseases and 55 (40.44%) students were responding that females are at more risk of getting the heart disease. Only 77 (56.62%) students were aware that type A personality is risk factors for CVD, 129 (94.85%) students were aware that increasing age is the risk factor.

DISCUSSION

The present study assessed the awareness of risk factors of CVD among entry level students in a medical college. The present study shows that about 90% of participant was aware of stress, high cholesterol obesity, high fat food, alcohol consumption, smoking, sedentary life style were risk factors for CVD. Ruksana et al in their study found that about 70% participant were aware of risk factors stress, high cholesterol, obesity and 60% were aware of high salt intake and high calories diet as a risk factor for CVD. A study conducted by Rizwana et al found that 70% of the participants were aware that stess, high cholesterol and obesity were risk factor of hypertension.[1] In the study conducted by George and Andhuvan, overweight was considered as a major risk factor (100%) for heart disease by the participants followed by high cholesterol level (98%), high blood pressure level (94%) and smoking (92%).[2]

In the present study 70% participants were aware that male, increasing age and history of hypertension were risk factors for CVD. Where as in Ruksana et al study, 50% were not aware of risk factor male gender, increasing age positive family history of CVD.[3]

In our study 122 (89.71%) and 105 (77.21%) students were aware that high salt intake and tobacco chewing are risk factors respectively. Study conducted by Rizwana et al found that 70% of the participant were aware that stress high cholesterol and obesity were risk factor of hypertension.[4] More than 60% were aware of high salt intake and high calorie diet being risk factor. A good knowledge of high salt intake 89.71% found in our study. However, a gap in knowledge was seen in two modifiable risk factor i.e. oral contraceptive (34.56%) and male 28.68% of the participant were not aware that these were risk factor for CVD. Over all knowledge of risk factors for CVD was good in our study. The study conducted in rural women population by Kumar et al shows that smoking (68%), high blood pressure (46%), high cholesterol 56% high fat food 64% over weight 60% participant aware that these are the risk factor for CVD.[5]. In the study conducted by Pikala et al found that regarding knowledge of CVD prevention, about 68% of participants had poor awareness of preventive methods.[6] Most of the studies mentioned method of CVD prevention was relaxing, avoiding stress (51.2%) and increasing physical activity (50.3%).[7,8] Smoking cessation and reduction of alcohol consumption was mentioned by 44.1% and 34.5% of respondents respectively. Most of the study participants were aware about the sedentary lifestyle, smoking and obesity as the risk factor for the heart disease. Only half the study participants were aware of the type A personality can contribute to the reduction in the heart disease.[9,10] There was low awareness about the oral contraceptive as risk factor of the heart disease.

CONCLUSION

Study concludes that majority of the participant had good level of awareness with regard to cardio vascular diseases risk factors such as high fat intake, high sugar intake smoking and alcohol intake among first year medical students. This will ensure that students will become good prevention oriented physicians.

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REFERENCES

1. Shaikh RB, Mathew E, Sreedharan J, Muttappallymyalil J, Sharbatti SA, Basha SA. Knowledge regarding risk factors of hypertension among entry year students of a medical university J Family Community Med, 2011; 18(3): 124-9.
2. Aketer R, Assadi RA, Ahadi H, Singh H, Lamichhane S, Gopakumar A, et al. Awareness about hypertension among entry year under graduate health science students Gulf medical university, Ajaman, UAE. Proceeding of the 6th annual scientific meeting of Gulf medical university, 5th and 6th November, 2014; 35-44.
3. George C, Andhuvan G. A population-based study on Awareness of Cardiovascular Disease Risk Factors. Indian J Pharmacy Pract, 2014; 7(2): 23-5.
4. Amruth M, Mullick S, Balakrishna AG, Prabhudeva MC. Assessment of awareness about cardiovascular disease risk factors and association between overweight and family history of cardiovascular disease among first-year medical students of a medical college in Karnataka. Int J Med Sci Public Health, 2015; 4(1): 92-6.
5. Kumar R, Sharan KH. A comparative study on awareness of cardiovascular risk determinants among rural and urban women population of Davangere district, Karnataka, India. Int J Community Med Public Health, 2016; 3(12): 3336-9.
6. Pikala M, Kaleta D, Bielecki W, Maniecka-Bryła I, Drygas W, Kwaśniewska M. Awareness of cardiovascular prevention methods among residents of post-communist polish provinces with highest mortality rates. Cent Eur J Public Health, 2011; 19(4): 183–9.
7. Rustagi N, Taneja D, Mishra P, Ingle G. Cardiovascular risk behaviour among students of a medical college in Delhi. Indian J Community Med, 2011; 36(1): 51–3.
8. Singh SK, Narang RK, Chandra S, Chaturvedi PK, Dubey AL. Smoking habits of the medical students. Indian J Chest Dis Allied Sci., 1989; 31: 99–103.
9. Praveen PA, Roy A, Prabhakaran D. Cardiovascular disease risk factors: a childhood perspective. Indian J Pediatr, 2013; 80(1): 3–12.
10. George GM, Sharma KK, Ramakrishnan S, Gupta SK. A study of cardiovascular risk factors and its knowledge among school children of Delhi. Indian Heart J., 2014; 66(3): 263–71.