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Awareness of Risk Factors for Non Communicable Diseases among Adolescent girls aged 15-17 years in Koti, Hyderabad

Authors
Rajarikam Shravani[1], R.L. Lakshman Rao[2], Md. Abdul Wassey[3], Nazia Tabassum[4]
[1,3]Post graduate,[2]Professor and Head of the Department, [4]Senior Resident.
Department of Community Medicine, Osmania Medical College, Hyderabad
Corresponding Author
Nazia Tabassum
Senior Resident, Department of Community Medicine, Osmania Medical College, Hyderabad

Abstract
Background: *In India Non Communicable Diseases (NCDs) are estimated to account for about 53% of all deaths. The importance of adolescent age group lies in the fact that many serious diseases in adulthood have their roots in adolescence.*
Objectives: *To assess the awareness of risk factors for Non Communicable Diseases among junior college adolescent girls aged 15-17 years*
Methodology: *A cross sectional study was done among 240 adolescent girls of a private junior college in Hyderabad by using convenient sampling method. A self administered predesigned questionnaire was used for data collection.*
Results and Discussion: *Majority of the students (72%) belong to upper lower socio economic class. Most of the adolescent girls were aware that junk food and sedentary life style are risk factors for obesity and high salt intake as a risk factor for Hypertension. The awareness of Obesity as a risk factor for Diabetes Mellitus was found only in 38% of the students.*
Keywords: *Adolescent girls, non communicable disease, obesity.*

Introduction

Non Communicable Diseases (NCDs) are the leading cause of death globally. India is in the stage of epidemiological transition where the disease burden is shifting from communicable diseases to non communicable disease[1]. The sustainable development goals (SDGs) target 3.4 calls for a one third reduction in premature mortality from NCDs by 2030[2]. The behavioural risk factors responsible for NCDs are tobacco use, unhealthy diet, physical inactivity, harmful use of alcohol[3]. The World Health Organization has already warned of increasing NCDs among adolescent as a major public health problem.

As per Census India 2011, in India almost 60 percent of premature deaths among adults can be associated with behavior or conditions that began or occurred during adolescence (WHO 2002). Nearly 2 per 1,000 adolescent girls and 1 per 1,000 adolescent boys aged 15–19 suffer from diabetes[4]. Not only NCDs affect the health of girls and women, but also they affect the health and life

style of their children. Female Adolescent Health is the key to sustainable development and hence changing the lifestyle of a girl for the better, unlocks their potential to change and thus improves the whole society[5].

Materials and Methods

Institutional based cross sectional study was done in Jan-march 2016, in a Private Junior college (English medium), Koti with 240 female students. Convenient sampling was done to select the place of the study. The students who were enrolled in the college belonged to different branches like Biology, Mathematics and Economics branches of Intermediate education. The total intake of college is 240 students who belonged to various above mentioned branches. A total of 208 students were present in the college on the day of study and all of them were taken into the study after taking the informed consent from the concerned principal of the college ensuring that confidentiality will be maintained.

A pre designed semi structured questionnaire was used as a study tool. The proforma was explained to the students in detail prior to the distribution for collection of data. Data was entered in Microsoft Excel 2007 and univariate analysis was done.

Results

In the present study all the participants were female students belonging to 15-17 years age group. The data was collected by using a self administered proforma. Out of 208 proformas which were received only 200 were complete and thus analysis was done only for 200 students. Out of the 200 students awareness for smoking as risk factor for cardiovascular diseases was found in 75%(150), awareness for diabetes as a risk factor for cardiovascular diseases was found in only 45%(90), awareness for hypertension as a risk factor for cardiovascular diseases was found in 75%(150) and for Obesity was found in 70%(140).

Table no: 1 Socio economic classification of study population

KUPPUSWAMY CLASSIFICATION	Number	Percentage
UPPER(I)	0	0%
UPPER MIDDLE(II)	6	3.00%
MIDDLE/LOWER MIDDLE(III)	36	18.00%
LOWER/UPPER LOWER (IV)	144	72.00%
LOWER(V)	14	7.00%
TOTAL	200	100%

72% students were from the upper lower socioeconomic class.
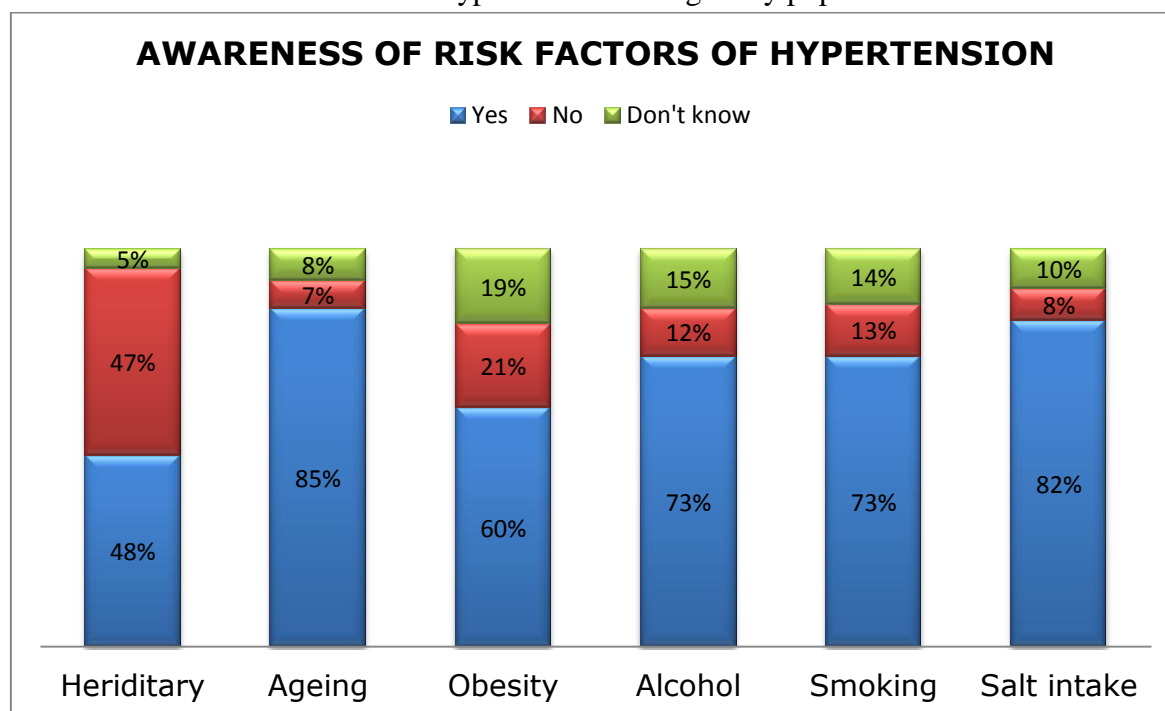
Figure no: 1 Awareness of risk factors of obesity among study population
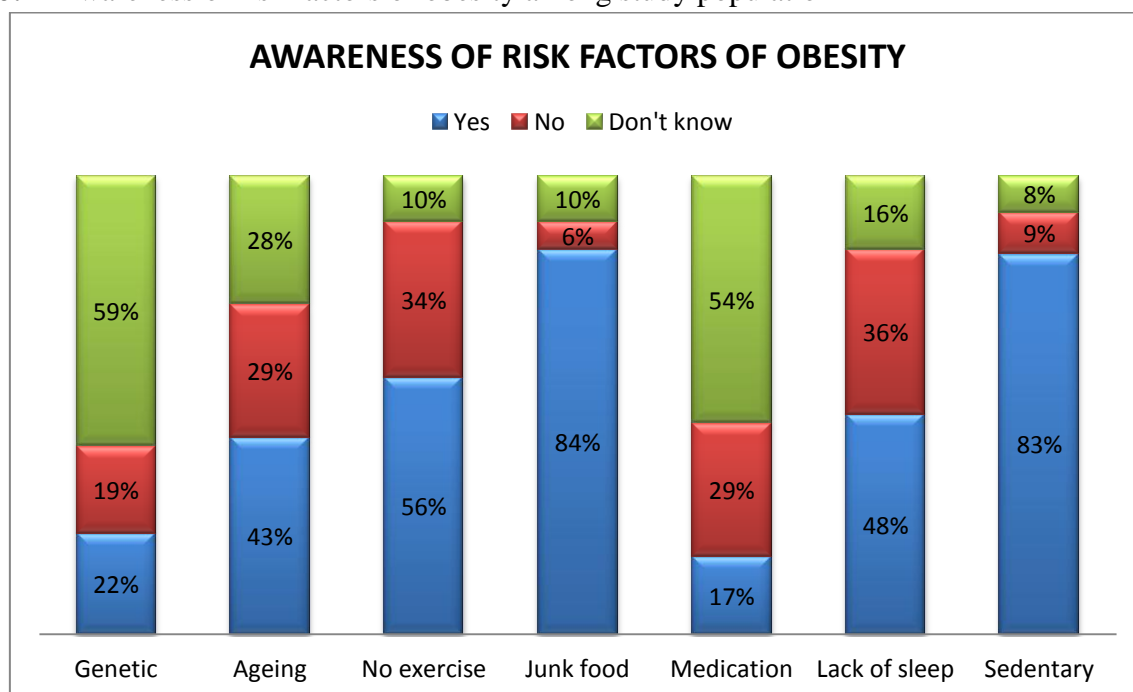
Majority of the students were aware that junk food and sedentary life style are the major risk factors for obesity. 48% students were aware that lack of sleep is a risk factor for obesity. Around 54% (108) of the girls responded as they don't know that any medication could also lead to Obesity.

Figure no: 2 Awareness of risk factors of hypertension among study population

Awareness of ageing, smoking and high salt intake as risk factors for hypertension was found in 85%, 73% and 82% of the students respectively.

Figure no: 3 Awareness of risk factors of diabetes mellitus among study population
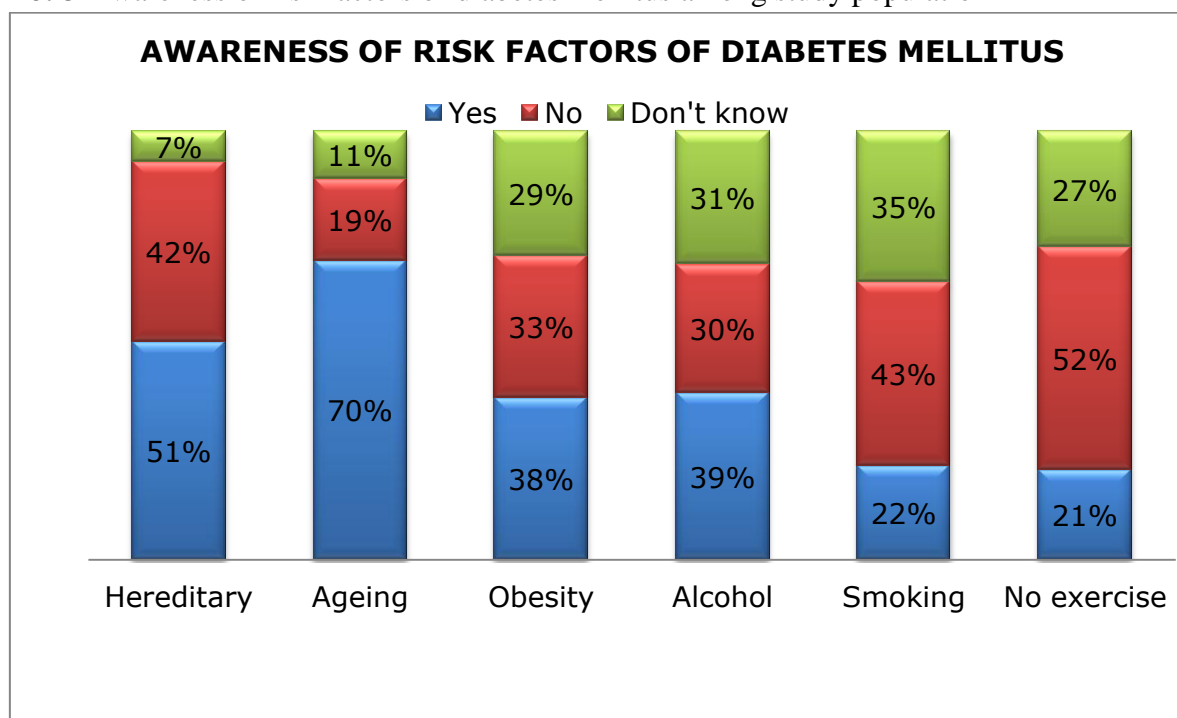
The awareness of Ageing and Obesity as the risk factors for Diabetes Mellitus was found in 70% and 38% of the students respectively.

Table No: 2 Awareness of risk factors of non communicable diseases among study population

RISK FACTOR	YES		NO		DON'T KNOW		TOTAL
	No.	%	No.	%	No.	%	
AWARENESS OF RISK FACTORS OF OBESITY/ OVERWEIGHT AMONG STUDY SUBJECTS							
GENETIC DISEASE/FAMILIAL DISEASE	44	22.00%	38	19.00%	118	59.00%	200
AGING	86	43.00%	58	29.00%	56	28.00%	
LACK OF EXERCISE	112	56.00%	68	34.00%	20	10.00%	200
JUNK FOOD	168	84.00%	12	6.00%	20	10.00%	200
MEDICATION	34	17.00%	58	29.00%	108	54.00%	200
LACK OF SLEEP	96	48.00%	72	36.00%	32	16.00%	200
SEDENTARY NATURE OF WORK	166	83.00%	18	9.00%	16	8.00%	200
AWARENESS OF RISK FACTORS OF HYPERTENSION							
HERIDITARY	96	48.00%	96	47.00%	10	5.00%	200
AGE ADVANCEMENT	170	85.00%	14	7.00%	16	8.00%	200
OBESITY	120	60.00%	42	21.00%	38	19.00%	200
ALCOHOL	146	73.00%	42	12.00%	30	15.00%	200
SMOKING	146	73.00%	26	13.00%	28	14.00%	200
INCREASE INTAKE OF SALT	164	82.00%	16	8.00%	20	10.00%	200
AWARENESS OF RISK FACTORS OF DIABETES MELLTUS							
HEREDITARY	102	51.00%	84	42.00%	14	7.00%	200
AGE ADVANCEMENT	140	70.00%	38	19.00%	22	11.00%	200
OBESITY	76	38.00%	66	33.00%	58	29.00%	200
ALCOHOL INTAKE	78	39.00%	60	30.00%	62	31.00%	200
SMOKING	44	22.00%	86	43.00%	70	35.00%	200
LACK OF EXERCISE	42	21.00%	104	52.00%	54	27.00%	200

Discussion

The aim of the study was to study the awareness of certain risk factors of non communicable disease like obesity, hypertension and diabetes among adolescent girls. The risk factors assessed were age, lack of exercise, genetic, junk food consumption, drugs, lack of sleep, obesity ,smoking, high salt intake, Alcohol, sedentary life style and lack of physical exercise for obesity, hypertension and diabetes.

Majority of the adolescent students were aware that junk food and sedentary life style are the major risk factors for obesity and 48%(96) were aware that lack of sleep is a risk factor for obesity. In study conducted by Shivalli S. et al it was found that 18.2% were aware that increase in body mass index is an indicator of obesity[6].

In this study the awareness of ageing and salt intake as risk factors for hypertension was found in 85%(170) and 82%(164) students respectively whereas the awareness of smoking and obesity as hypertension risk factors was found in only 73%(146) and 60%(120) students respectively. In a study conducted by Shivalli S. et al it was found that 54.1% and 47.4% adolescents were aware that tobacco use and obesity were risk factors for hypertension[6].

In the study done by Chaudhari et al found that the baseline knowledge of the students regarding the risk factors of hypertension such as high salt consumption, obesity, stress, and lack of physical activity was 25.9%, 23.3%, 65.5%, and 21.6%, respectively, which was significantly increased to 73.3%, 61.2%, 92.2%, and 45.7%, respectively, after the intervention[7].

In this study the awareness of obesity, ageing and family history of diabetes mellitus as risk factors for Diabetes mellitus was found in 38%(76), 70%(140) and 51%(102) of the students respectively whereas in the study by Shivalli S. et[6] al the awareness for same risk factors was found in only 47.4%, 27% and 27.1% of the adolescents. The overall awareness of risk factors for non communicable disease was not satisfactory .Similar results found in study conducted by Divakaran B et al[8], 84.8% adolescents were having very low awareness about the risk factors for non communicable diseases. In study conducted by Anju ade et al[9] only half the adolescents were aware of diabetes risk factors.

Conclusion

Primordial prevention is the key intervention for preventing Non communicable diseases so there is a need and scope for the health education activity regarding risk factors of non communicable disease to promote healthy life style among students. There is a need for focus on adolescent girls in NPCDCS Programme to prevent and control common NCDs by encouraging behavior and life style changes. More importantly, adolescence provides an opportune time for positive behaviour modification, to mitigate the emergence of risk factors of Non Communicable Diseases (NCDs). Because the main preventable risk factors for NCDs such as poor dietary habits and sedentary lifestyles have their beginnings in this age.

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