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Original Article

Non-communicable diseases: Awareness of risk factors and lifestyle among rural adolescents.

Anju Ade^a, Chethana K V^b, Abhay Mane^c, S G Hiremath^d

^aAssociate professor, ^bPost-graduate student ^cProfessor ^dProfessor
Department of Community Medicine, Navodaya Medical College, Raichur, Karnataka-584103, India

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ABSTRACT

Abstract: Background: Noncommunicable diseases (NCDs) are the leading global causes of death, causing more deaths than all others causes combined, and they strike hardest at the world's low and middle income populations. Objectives: 1.To assess awareness of risk factors of non-communicable diseases among rural adolescents. 2. To find out their lifestyle behavior. Materials and Methods: This cross-sectional study was carried out in a field practice area of RHTC. Total 340 adolescents in the age group of 11 to 16 years of 3 govt. high-schools formed the study sample. Socio-demographic data was collected and awareness of risk factors of non-communicable diseases was assessed with the help of in a predesigned, pre-tested, self-administered questionnaire which was translated in their local language. Results: only 0.3% had good level of knowledge regarding the lifestyle risk factors. Daily consumption of fast food is low (6.8 %). Majority of students (93.2%) play games daily. As many as (68.5%) students consume fruits and vegetables daily. Majority of them (62.6%) had no idea about the prevention of NCDs. Only 127(37.4%) students felt non-communicable diseases are preventable. Knowledge regarding communicability of these lifestyle diseases was good among students, about 65.6% students knew that they are non-communicable. 34.4% students had misconception that the non-communicable diseases were communicable in nature. Conclusion: Awareness of risk factors of non-communicable diseases and knowledge regarding prevention aspects of NCDs was also low among rural school children. The study recommends promotion of supportive environment for strengthening student-based approaches and strategic delivery of health education is essential to target risk behaviors among adolescents.

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1. Introduction

Noncommunicable diseases are the leading global causes of death, causing more deaths than all others causes combined, and they strike hardest at the world's low and middle income populations. These diseases have reached epidemic proportions, yet they could be significantly reduced, with millions of lives saved and untold suffering avoided, through reduction of their risk

factors, early detection and timely treatments[1] It is expected that by 2020 in developing countries, non-communicable diseases will account for 69% of all deaths, with cardiovascular diseases in lead.[2]

The prevalence of diabetes mellitus will almost double in the next 25 years and at least 75% of those affected will be in developing countries. The burden of disease will be worse in these countries as the majority of sufferers are expected to be relatively young, of lower socioeconomic status and to suffer from severe disease of premature onset.[3]

A study by Gupta R et al reported a high prevalence of metabolic and dietetic coronary risk factors among the adolescents of the middle and upper class of India.[4] There is also

* Corresponding Author : **Dr Anju Ade**
Associate professor
Community Medicine Dept.
Navodaya Medical College,
Raichur, Karnataka-584103, India.
Mobile No- 09880965468
E-mail ID- anju.ade@gmail.com

evidence that habits developed in younger ages are likely to track through to later life.[5] Cancer has become an important public health problem in India with an estimated 7 to 9 lakh cases occurring every year. At any point of time, it is estimated that there are nearly 25 lakh cases in the country.[6]

The causes of the main chronic disease epidemics are well established and well known, including unhealthy diet and excessive energy intake, physical inactivity, overweight and obesity, tobacco use and the harmful use of alcohol. Tackling these risk factors largely depends upon actions taken in a variety of policy domains, as well as increased prevention efforts and access to services such as those for early detection[7]

With this background, present study was carried out to assess awareness of lifestyle risk factors of non-communicable diseases among rural school adolescents and to find out their lifestyle behavior.

2. Materials and Methods:

This cross-sectional study was carried out in a field practice area of RHTC, Singnaudi, under the administrative control of Department of Community Medicine, Navodaya Medical College, in Raichur district, Karnataka state of India. The population of this area is about 5500. The study protocol was approved by the ethical committee of Navodaya Medical College, Raichur. There are only 3 high-schools in this area. All the adolescents of classes from 6th to 10th classes in the age group 11-16 years were included for the study. As there are no pre-university colleges (11th & 12th) in this area, 17-19 years age group students were not included in this study. A prior permission from the school administration was taken. Purpose of the study was explained to students and school authorities. Verbal consent was obtained from study participants. Study period was for one month, from 22/08/12 to 22/09/12.

Data collection Technique - Sociodemographic characteristics of the study participants was collected. To assess awareness of risk factors of non-communicable diseases, in each class, with the help of teachers, Pre-designed and Pre-tested questionnaire was distributed was collected from students after one hour. Study questionnaire was prepared in local language for easy understanding of students. The questionnaire was explained to the students beforehand and the questionnaire included questions regarding the risk factors of three main non-communicable diseases ie Cancer, Diabetes Mellitus, Cardiovascular diseases and questions about their lifestyle like their dietary habits, Physical activities etc.

Data analysis: Data was entered into excel spreadsheet analyzed in SPSS version 17.

3. Results and Discussion

The present study was carried out in RHTC, Singanaudi, a field practice area of Community Medicine department of Navodaya Medical College; Raichur in three Govt. schools. A total of 340 students in the age group 0f 11 to 16 years comprised the study

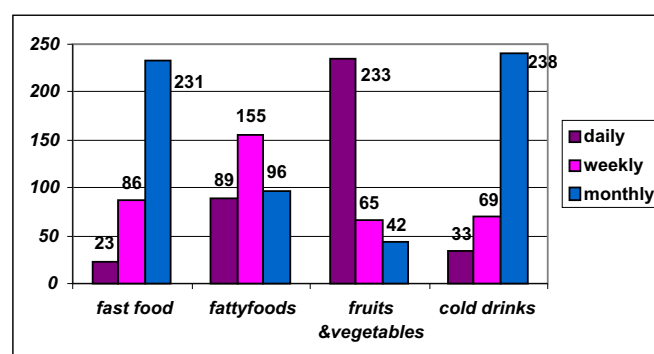
subjects. Out of these, most of them were Hindu by religion 326(95.8%) and 12 were Muslims (3.5%) and only 2(0.6%) were Christians. The proportion of males (70.9%) was higher than females (29.1%). Risk factors included in the study questionnaire were Alcohol use, Use of Tobacco, Gutka, Obesity, Passive smoking, Smoking, Fast food, Stress, Anxiety, Use of Soft drinks, Sedentary lifestyle/ , Lack of physical exercises, Excess salt intake, Lack of personal hygiene etc.

Table 1: Level of awareness of risk factors of non-communicable diseases.

Level of awareness	No	Percent
Upto 3 risk factors (Low)	259	76.2
4 to 7 risk factors (Medium)	80	23.5
8 to 11 risk factors (High)	1	0.3
Total	340	100.0

Table 1 shows awareness level of risk factors of NCDs. It can be seen that majority of students (76.2%) had low awareness (upto three lifestyle risk factors). 23.5% students were aware about 4 to 7 risk factors of NCDs, so these students comprise students with medium level of awareness group and only 3% had good level of knowledge regarding the lifestyle risk factors. Similar findings were reported by the study conducted in Pune by Banerjee A. et al reported that awareness about modifiable risk factors such as obesity, physical inactivity, though present to some extent, was low and the knowledge about hypertension and increased blood cholesterol being risk factors was very low among the study population.[8] Divakaran B et al [9] reported -that majority (84.8%) of students had low awareness regarding lifestyle risk factors of NCDs. Only 0.8% of students were having good knowledge regarding lifestyle risk factors.

Figure 1: Dietary habits of the study participants



As shown in figure 1, daily consumption of Fast food like potato chips, puffs, burgers was low among students; which may be due to the non-availability of fast food items in this rural area. Similar findings were reported by Divakaran B et al [9] In present study More number of students (68.5%) consume fruits and vegetables daily as the study participants are of agricultural background and

they grow vegetables and fruits in nearby area and which are easily available to them at cheaper rate. Only 9.7% students have cold drinks daily that is again may be due to the fact that non-availability of soft drinks in the small shops also they cannot afford the costly brands of soft drinks Jagdish et al[10] reported consumption of carbonated drinks was more among affluent adolescents studying in public schools.

Table 2: Physical activity of the study participants

Activity	Daily		Weekly/Monthly		Nil	
	No	%	No	%	No	%
Games						
Exercises	317	93.2	16	4.7	7	2.1
	75	22.1	196	57.6	69	20.3

Majority of students (93.2%) play games daily or engage themselves in playing games as provision of facilities for outdoor games are available in schools for playing games like kabaddi,cricket, vollybol, badminton, kho-kho etc which is beneficial for them. Two schools are residential schools and daily one hour is compulsory of sports and games in these schools. But when asked about exercises, only 22.1% students are involved in daily exercises like walking, jogging, yoga, bicycling, swimming etc. Divakaran B et al [9] reported that only small number of children engage themselves in daily activities of exercise and games. Jagdish et al[10] reported low level of physical activity among affluent adolescents.

Figure 2: Knowledge regarding non-communicable diseases.

Figure 2 shows that majority (52.6%) of students heard about Cancer which may be due to the fact that their schools are near to primary health centre where posters of hazards of Tobacco addiction are exhibited .Nearly half students heard of cardiovascular diseases and Diabetes mellitus.

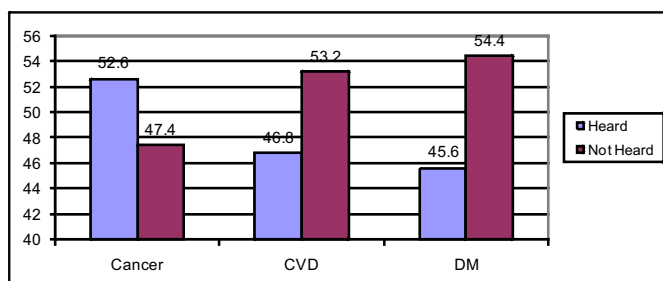
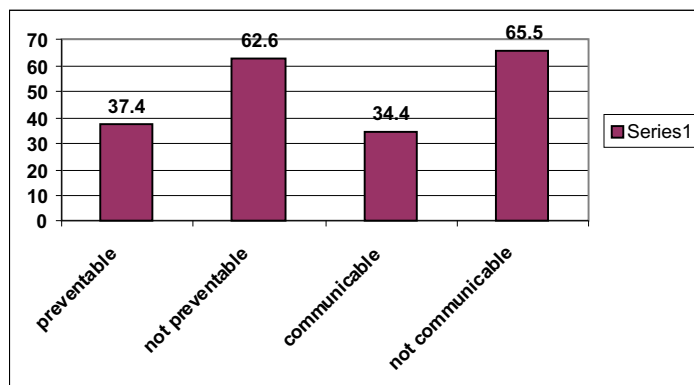


Figure 3: Figure 3 shows awareness of the school children regarding the preventable aspect of NCDs. Majority of them (62.6%) had no knowledge about the prevention of NCDs. Only 127(37.4%) students felt NCDs are preventable.

Knowledge regarding communicability of these lifestyle diseases was good among students, about 65.6% students knew that they are non-communicable.34.4% students had no idea that the NCDs were communicable in nature.



4. Conclusion

Awareness of risk factors of NCDs and knowledge regarding prevention aspects of NCDs was also low among rural school children. The study recommends promotion of supportive environment and strategic delivery of health education is essential to target risk behaviors among adolescents.

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