Research Article

Awareness of non-communicable diseases among the school students-A questionnaire study

V. J. Oviya[1], V. Vishnu Priya[2], R. Gayathri[2]*

ABSTRACT

Introduction: A non-communicable disease (NCD) is a disease that is not transmissible directly from one person to another. NCD includes mostly non-infectious, although there are some non-communicable infectious diseases such as parasitic diseases in which the parasite's life cycle does not include direct host-to-host transmission. NCDs are the leading cause of death globally. The primary aim of this study was to assess the aware of NCD and its risk factors among school students. **Materials and Methods:** A standard questionnaire consists of 15 questions which were prepared based on the awareness of NCDs. It was distributed about 100 school students and the responses were studied and evaluated. **Results and Discussion:** Of 100, 44% were male and 56 were female students. From the results, it was clear that 49% of the participants were aware of NCDs while 18% are not and 33% of the participants were not sure of it. Among 100, 21% of the students reported that the diseases are common in male, 22% reported to be in female while 57% in both. About 42% of the participants reported that these diseases are hereditary, 23% reported as not while 35% of the students were not sure of it. Of 100, 90% of the students are aware of the prevention to NCDs. **Conclusion:** In this study, the students above the age group of 15 showed better response than the lower aged students. Since the lifestyle habits at this age have the greater influence of these diseases, awareness and knowledge about these diseases are important. Workshops, camps, and rallies should be conducted in school to increase the awareness of these diseases.

KEY WORDS: Diabetes, Diet, Lifestyle, Non-communicable diseases, Obesity, School students

INTRODUCTION

Non-communicable diseases (NCDs) have emerged as serious public health problem worldwide affecting all the populations across the globe in general but low- and middle-income populations in particular. India stands in the midst of transition from the burden of communicable diseases to the burden of NCDs. Cardiovascular diseases (CVD), diabetes mellitus (DM), and stroke have emerged as major NCDs of public health importance in India, with morbidity and mortality in the most economically productive years of life posing a challenge to society as well as the economy of the nation.[1] DM has now become a major health problem in India with an estimated 40 million people having diabetes in 2007. An estimated 9.2 million reproductive years of life were lost in India due to CVD in 2000 with an expected increase of 17.9 million years in 2030. According to the WHO Report 2002, CVD will be the largest cause of death and disability in India by 2020.[2] The number of Ca patients is also increasing in India.[3] A variety of factors which aid advancement and development in today's society such as globalization of trade and advanced technologies act as a double-edged weapon as they lead to positive health outcome on the one hand and increased liability to poor health on the other hand as these contribute to sedentary lifestyle and unhealthy dietary pattern.[4] NCDs have common risk factors such as tobacco use, unhealthy diet, physical inactivity, high alcohol consumption, raised blood pressure (BP), and excess adiposity. The policies and programs focusing on reducing the burden of these common risk factors are likely to make a substantial impact on mitigating the mortality and morbidity due to NCDs.[5] Tackling these risk factors largely depend on actions taken in a variety of policy domains, as well as increased prevention efforts and access to services

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such as those for early detection.[6] To reduce the burden of NCDs among general population, we need to prevent all these risk factors by providing knowledge regarding risk factors. Individual's knowledge and awareness about NCDs and their risk factors are an important part of population-based preventive strategy. This knowledge of risk factors can then be applied to shift population distribution of these risk factors.[7] Awareness about NCDs and their risk factors among high school students will help to prevent NCDs at primordial level only. High schoolchildren are selected because they are at receptive age and in transition phase from adolescent to adulthood.[8] This age group is known for experimentation and vulnerability to adopt the lifestyle predisposing to NCDs. Behavioral interventions for NCD abeyance would profit the most, if initiated in this age group.[2] Since they are influential in determining the health of next generation and awareness level would also provide a baseline on which health promotional strategies can be developed, this study was conducted. Hence, the objective of this study is to assess the awareness of NCDs among school students.

MATERIALS AND METHODS

This questionnaire-based study was conducted among 100 school students. A government school was selected for the study. The questionnaire was prepared and 100 students going to high school were randomly chosen from various age group ranges from 11 to 17. After obtaining permission from the school authorities, the purpose of the study was explained to the students and then the questionnaire was distributed. This study includes only the students who were present on the day; the questionnaire was distributed and willing to participate.

Questionnaire

The questionnaire consisted of questions regarding their personal data, including age, gender, their awareness on NCDs and its risk factors, preventive measures, and their source of knowledge on NCDs. The question was mostly closed ended. The responses from the students were collected and the results were analyzed.

RESULTS

Of 100, 44 students were male while 56 students were female. In this study, 38% belong to the age group ranges 16–18, 30% to the age group ranges 13–15, and remaining 31% to the age group ranges 10–11.

Of 100, 49% were aware of the term NCDs, 18% of the students were not while 33% of the students were not sure. In this study, 58% were aware of diabetes, 46% aware of obesity, 45% aware of hypertension, 21% aware of cataract, 44% aware of cancer, 29% aware of osteoarthritis, and 21% were aware of cataract as NCDs.

Among 100, 34% thought that NCDs are fatal, 18% responded as a non-fatal disease, 36% were not sure of it, and 12% of the students were not aware of it.

About 63 students reported textbooks as their source of knowledge, 49 reported as media, 58 students reported teachers as their source, and 9 students reported parents as a source.

In this study, 59% of the students reported that their family members were affected by these NCDs, 35% of the students responded negatively while 11% were not sure of it.

Of 100, 44 students reported that NCDs are hereditary, 59 students as environmental, 23 students as self-eminence, and 43 as the result of inadequate nutrition.

In this study, 21% of the students reported males as the major gender affected by these NCDs and 22% reported females while 57% reported equal gender predilection.

Among 100, 48% of the students reported that adults are mostly affected by NCDs, 36% reported older people, 10% of the students reported adolescents, and 6% of the students reported that children are mostly affected.

In this study, 42% of the students reported that NCDs are hereditary and 23% of the students reported as not while 35% were not sure of it.

Of 100, 54 reported tobacco use as a risk factor, 51 students reported lack of physical activity as a factor, and 48 students reported alcohol consumption as a factor, while 28 reported high salt intake and 30 reported increasing age as the risk factor.

Among 100, 64% of the students responded eating healthy foods as a preventive measure, 62% of the students reported doing exercises as preventive measures, while avoiding tobacco and alcohol, meditation, and avoiding junk food were the preventive measures for 56%, 45%, and 59% of the students, respectively.

DISCUSSION

Before discussing the study, it is better to discuss the limitations of this study. This study was done only among high school students studying in government high school in Chennai. This study does not include other students and the results are based only on the data obtained from survey conducted among these participants.

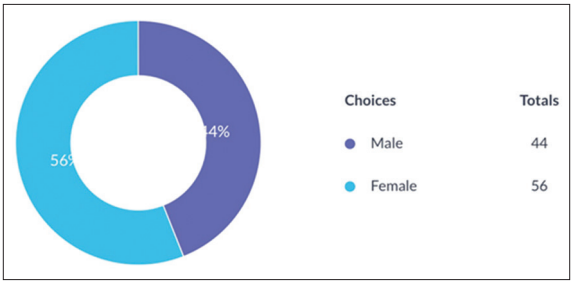

Chart 1: Distribution of participants on gender

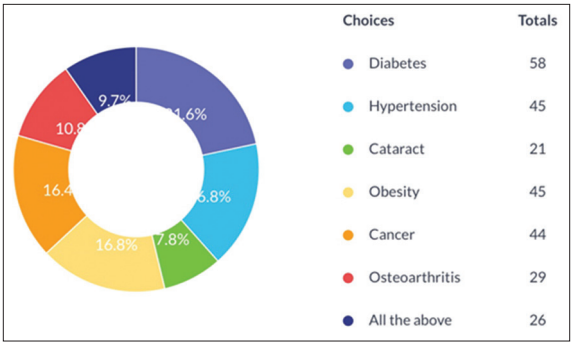

Chart 2: Awareness of common non-communicable diseases among study subjects

NCDs represent the iceberg phenomenon of the diseases spectrum. The hidden portion of iceberg is, however, brought out only by community-based surveys. Epidemiological field studies of NCDs are going importance over the past two decades. NCDs are dispersed from corner to corner of the globe irrespective of the socioeconomic and demographic status with mounting tendency in low- and middle-income countries.[9]

The basic tenet of public health regarding primary prevention thus obtains the contextual value. As a long-term measure for NCD prevention, health education is a priority in this population. Health education should reflect in the increased awareness resulting in adoption of healthy behavior. The current study intended to assess the awareness levels regarding NCDs and their risk factors among school students.

The awareness level of NCDs among the school students was not satisfactory. However, awareness was significantly better among students who were >15 years of age.

Diseases such as diabetes, hypertension, cancer, and obesity were common among the students compared to other diseases such as cataract and osteoarthritis [Chart 1]. Many students reported textbook and teachers as their main source of knowledge compared to media and parents. Students were asked whether anyone in their family was affected by NCDs. Many reported positively and it acted as an another source of knowledge about NCDs.

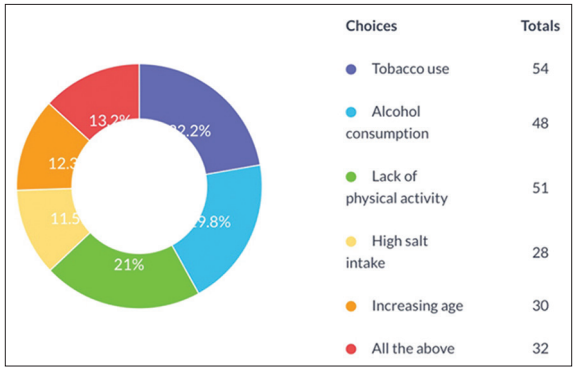

Chart 3: Awareness of risk factors of non-communicable diseases

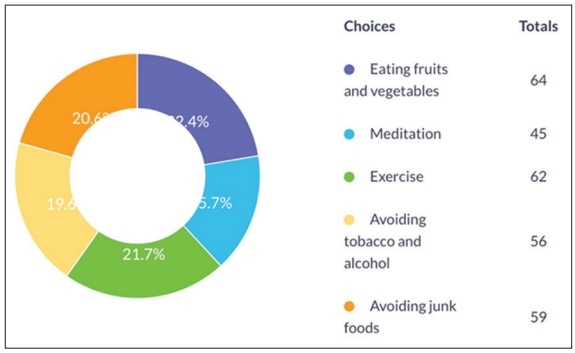

Chart 4: Awareness of preventive measures for non-communicable diseases among participants

Many students reported NCDs as the environmental and hereditary diseases while few reported it as the result of inadequate nutrition [Chart 2]. Many responded NCDs occur primarily in adults and older people, but few reported it in children and adolescents.

Only few students were aware of the hereditary influence of NCDs (42%) while few were not sure of it.

Many students reported tobacco use, lack of physical activity, and alcohol consumption as the risk factors for NCDs. Only few were aware about high salt intake as another risk factor [Chart 3].

Majority of the students were aware of the preventive measures for NCDs which include eating healthy foods, doing exercises, avoiding tobacco, avoiding junk foods, and meditation [Chart 4].

A study conducted by Batlish *et al.* among schoolchildren from classes 9–12, regarding awareness of risk factors of NCDs showed that the level of knowledge was very low among them.[10] The Persian Gulf healthy heart project, conducted in Iran by Nabipour *et al.*, was a school-based intervention study. It found that the classroom-based cardiovascular health promotion had a significant effect on the heart health knowledge.[11]

In a study conducted among school-going children in New Delhi by Misra *et al*., it was estimated that 15–25% of the urban schoolchildren in India are at risk of developing type 2 diabetes at an early age.[12] Divakaran *et al*. reported only small number of children engage themselves in daily activities of exercises and outdoor games.[13] Goyal *et al*. reported low level of physical activity among affluent adolescents.[14]

Taha *et al*. reported that <50% of the students knew about beneficial effects of physical activity in the prevention of NCDs.[15] Aubert *et al*. also reported that 79% of the respondents were aware of the benefits of physical exercise on BP in a study conducted in Seychelles.[16]

CONCLUSION

This study concludes that awareness of NCD among the school students is relatively low. The study recommends promotion of supportive environment and strategic delivery of health education is essential to target risk behaviors among adolescents. Lifestyle changes and dietary modifications should be promoted among them. More efforts need to be put in to increase knowledge in the community regarding NCDs.

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