International Journal of Health Sciences and Research
Volume 14; Issue: 6; June 2024
Website: www.ijhsr.org
Original Research Article *ISSN: 2249-9571*

A Study to Assess the Burden of Risk Factors of Non-Communicable Diseases among Adults of Urban and Rural Community in Kalimpong, India

Dipa Chetry[1], Prof. (Dr.) Hancy Collins[2]

[1]Ph. D. Nursing Scholar, Mansarovar Global University, Sehore
[2]Professor, Faculty of Nursing Sciences, Mansarovar Global University, Sehore, MP

Corresponding Author: Dipa Chetry

DOI: https://doi.org/10.52403/ijhsr.20240612

ABSTRACT

Background: Non communicable diseases (NCDs), also known as chronic diseases, tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behavioural factors. The risk factors like tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets all increase the risk of dying from an NCD.
Method: A descriptive comparative study was conducted in the month of April 2024 in two urban and rural communities respectively. Sample size was taken 40 out of which 20 is from urban and another 20 from rural community which included adults in the age group of 22-64 years. Convenience sampling technique was used to draw the sample. A standardized WHO STEPS instrument for chronic disease risk factor surveillance was used. In Step -1, the demographic variables and behavioural measurements and in Step- 2, the physical measurements were assessed.
Result: In the comparison study of Behavioural risk factors among the adults of Urban and Rural community it was revealed that the consumption of Tobacco is higher 14(70%) in rural than 9 (45%) in urban. The Alcohol consumption is 6 (30%) which is equal in both Urban and Rural community. The consumption of unhealthy diet is higher 15 (75%) in Urban and 12(60%) in Rural. The presence of overweight is 6 (30%) in Urban and 4 (20%) in Rural. The presence of obesity is 2 (10%) which is equal in both Urban and Rural. The High risk for obesity as per waist circumference is 11(55%) in Urban and 12 (60%) in Rural community. The prevalence of Hypertension was 55% in Urban and 35% in Rural. And the prevalence of Diabetes was 35% in Urban and 25% in rural community.
Conclusion: Non communicable diseases cause the high rate of morbidity and mortality among adults of all age groups. Adequate surveillance on risk factors is the key for timely screening, prevention and management of Non communicable diseases. However proper risk assessment can prevent life threating complications and create awareness among Urban and Rural communities.

Key Words: *Knowledge, Risk factors, Non communicable disease, adults*

INTRODUCTION

Chronic Non communicable diseases are assuming increasing importance among the adult population in both developed & developing countries. The life style and behavioural pattern of people are changing rapidly. India is experiencing a rapid health transition with a rising burden of NCDs

causing significant morbidity and mortality both in urban and rural population with considerable loss in potentially productive years. Most epidemiologists accept that a set of risk factors are responsible for a major share of adult non communicable disease morbidity and premature mortality. The influence of these factors and underlying metabolic/physiological causes on the non communicable disease epidemic includes Tobacco which accounts for almost 7 million deaths each year both from direct tobacco use and second hand smoke, of these 1,70,000 are children. [1]

Almost 1.6 million people die each year due to physical inactivity. People who are insufficiently physically active have a 20% to 30% increased risk of all-cause of mortality. Around 3.3 million people die each year from the harmful use of alcohol. Adequate consumption of fruit and vegetables reduces the risk for cardiovascular diseases, stomach cancer and colorectal cancer. Raised blood pressure is estimated to cause 9.4 million deaths. At least 2.8 billion people die each year as result of being overweight or obese. Risks of heart disease, stroke and diabetes increase steadily with increasing body mass index. Raised BMI also increases the chance of certain cancers. [2]

According to the study report "India: Health of the Nation's States"- the India State-Level Disease Burden Initiative in 2017 by Indian Council of Medical Research (ICMR), it is estimated that the proportion of deaths due to Non-Communicable Diseases (NCDs) in India have increased from 37.9% in 1990 to 61.8% in 2016. [3]

Prevalence rate determine the case identification in the community. It has been estimated that if the primary risk factors were eliminated, 80% of the cases of heart disease, stroke and type 2 diabetes and 40% of cancers could be prevented. Interventions targeting the main risk factors could have a significant impact on reducing the burden of disease worldwide. Efforts focused on better diet and increased physical activity have been shown to control the prevalence of NCDs. [4]

MATERIALS AND METHODS

Research Approach- Quantitative approach

Research Design- Descriptive comparative design

Sampling technique- Non probability convenience sampling technique

Setting of the study- Kalimpong East main road in Urban community and Paiyong village in Rural community.

Sample size- A sample size of 40 adults were selected, where 20 adults were from Urban Community and another 20 were from Rural community.

Ethical approval was taken from the concerned authorities of the community heads and informed consent was obtained from the respondents.

DESCRIPTION OF THE TOOL

The standardized WHO STEPS instrument for chronic disease risk factor surveillance which was used has Step – 1 and Step – 2 parts. In Step -1, the demographic variables and behavioural measurements such as Tobacco use, Alcohol consumption, Diet, Physical activity, History of Raised Blood Pressure and History of Diabetes was assessed. In Step- 2, the physical measurements such as Height, Weight, Blood Pressure, Waist circumference and Hip Circumference were assessed.

Statistical Methods

The data collected were tabulated, analyzed and interpreted through frequencies, percentages and standard deviation. Excel and SPSS (statistical package for social science) were used for the analysis of data.

RESULTS

The study was conducted among 20 Urban and 20 Rural adults. In the urban community, the majority of the respondents 9 (45%) were in the age group of 45-64 years and 12 (60%) of the respondents were male. Majority of the respondents 8 (40%) had the educational status of higher secondary education. Majority of the respondents 7 (35%) occupation is self-employed. Majority of the respondents 10 (50%) family income was >

Rs. 40,000. In the rural community, the majority of the respondents 10 (50%) were in the age group of 45-64 years and 13 (65%) of the respondents were male. Majority of the respondents 10 (50%) had the educational status of higher secondary education. Majority of the respondents 8 (40%) occupation is self-employed. Majority of the respondents 9 (45%) family income was > Rs. 40,000.

Table 1 n=40

Sl. no	Behavioral Risk Factors	Urban	Rural	Total
		Frequency (%)	Frequency (%)	Frequency (%)
1.	Consumption of Tobacco	9 (45%)	14 (70%)	23 (57.5%)
2.	Alcohol use	6 (30%)	6 (30%)	12 (30%)
3.	Consumption of Unhealthy diet	15 (75%)	12 (60%)	27 (67.5%)
4.	Lack of physical Activity	10 (50%)	8 (40%)	15 (37.5%)
5.	Overweight	6 (30%)	4 (20%)	10 (25%)
6	Obesity	2 (10%)	2 (10%)	4 (10%)
7.	High risk for obesity as per waist circumference	11 (55%)	12 (60%)	23 (57.5%)

Table 1 shows the comparison of Behavioral risk factors among the adults of Urban and Rural community. The consumption of Tobacco is higher 14(70%) in rural than 9 (45%) in urban. The Alcohol consumption is 6 (30%) which is equal in both Urban and Rural community. The consumption of unhealthy diet is higher 15 (75%) in Urban and 12(60%) in Rural. The presence of overweight is 6 (30%) in Urban and 4 (20%) in Rural. The presence of obesity is 2 (10%) which is equal in both Urban and Rural. The High risk for obesity as per waist circumference is 11(55%) in Urban and 12 (60%) in Rural community.

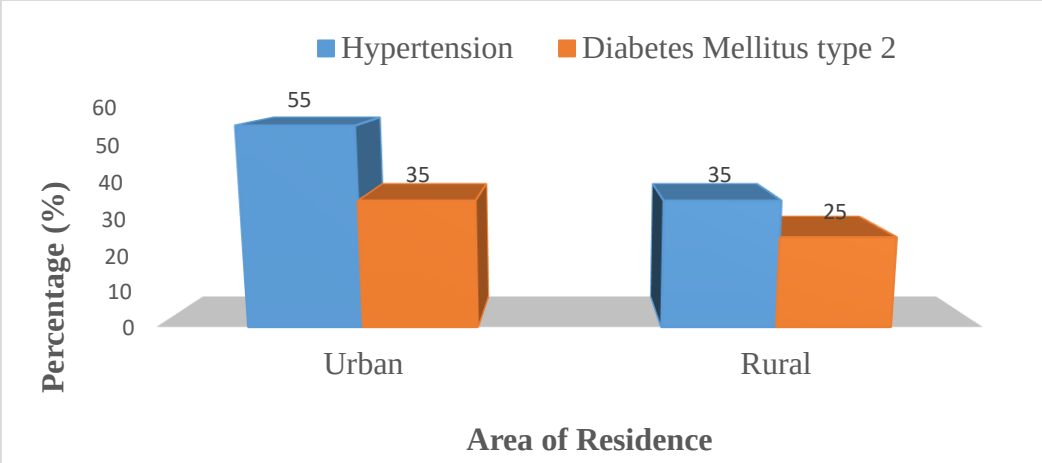

Figure 1: Comparison of prevalence of Hypertension and Diabetes Mellitus type 2 among adults of Urban and Rural Community

DISCUSSION

The present study reveals that the consumption of Tobacco is higher 14(70%) in rural than 9 (45%) in urban. The Alcohol consumption is 6 (30%) which is equal in both Urban and Rural community. The consumption of unhealthy diet is higher 15 (75%) in Urban and 12(60%) in Rural. The presence of overweight is 6 (30%) in Urban and 4 (20%) in Rural. The presence of obesity is 2 (10%) which is equal in both Urban and Rural. The High risk for obesity as per waist circumference is 11(55%) in Urban and 12 (60%) in Rural community.

A study conducted to assess the prevalence and determinants of behavioral and biological risk factors of NCDs among tribal adults of rural community Siliguri in Darjeeling District. The research finding revealed that the prevalence of current tobacco uses and alcohol uses were 69.8% and 40.7%, respectively; 96.5% consumed unhealthy diet and 2.9% were physically inactive. The prevalence of abdominal

obesity and overweight were 26.2% and 12.2%, respectively. Odds of tobacco use were significantly raised among men (adjusted odds ratio [AOR]: 47.7 [95% confidence interval (CI) 11.1, 203.9]) and increased age of the participants. [5]

A study conducted on Co-occurrence of Behavioural Risk Factors of Non-communicable Diseases and Social Determinants among Adults in Urban Centres of South-western Ethiopia. This study employed a cross-sectional design. Sample size was 1,191 adults and Multistage sampling technique was used. The WHO's STEPS instrument was used for data collection. The result showed that 4.8% of participants were smokers and 15.6% indulge in harmful drinking. Prevalence of physical inactivity was 60.45%, and 94.8% consumed insufficient fruit and vegetables. Regarding co-occurrence of these factors, 65.5% of participants had two or more behavioural risk factors. [6]

CONCLUSION

The determination of behavioural risk factors and awareness on primary prevention, early diagnosis will have significant impact on reducing Non communicable diseases at an early adulthood period onwards. Major strength of the study is that a community health nurse can identify the Behavioural risk factors and lifestyle determinants with risk assessment and surveillance and can act as facilitator to prevent complications and premature death due to Non communicable diseases. The weakness of the study is that the sample was drawn using a convenience sampling technique.

Declaration by Authors

Ethical Approval: Approved
Acknowledgement: None
Source of Funding: None
Conflict of Interest: The authors declare no conflict of interest.

REFERENCES

1. National Library of Medicine. The burden of non-communicable diseases in developing countries. [Internet]. 2005[updated 2005 Jan]. Available from https://www.ncbi.nlm.nih.gov
2. World Health Organization. Physical activity. Available from https://www.who.int/news-room/fact-sheets/detail/physical-activity
3. Status of Non-Communicable Diseases (NCDs) in India (internet) (updated 2022 Feb 8). Available from https://www.pib.gov.in
4. Non-communicable disease (Internet) (Updated 2023 March 30). Available from https://en.wikipedia.org/wiki/Non-communicable_disease
5. Bhar D, Bhattacherjee S, Das D.K. Behavioral and biological risk factors of noncommunicable diseases among tribal adults of rural siliguri in Darjeeling District, West Bengal: A cross-sectional study. Indian J Public Health 2019 Apr-Jun;63(2):119-127.
6. Zenu S, Abebe E. Co-occurrence of Behavioral Risk Factors of Non-communicable Diseases and bSocial Determinants among Adults in Urban Centers of Southwestern Ethiopia in 2020: A Community-Based Cross-Sectional Stud. Jouranl of Multi-Disciplinary Health 2021 Jun 23:14:1561-1570.

How to cite this article: Dipa Chetry, Hancy Collins. A study to assess the burden of risk factors of non-communicable diseases among adults of urban and rural community in Kalimpong, India. *Int J Health Sci Res.* 2024; 14(6):80-83. DOI: *10.52403/ijhsr.20240612*

******