

A STUDY ON DISTRIBUTION OF SELECTED RISK FACTORS FOR NON COMMUNICABLE DISEASES AMONG PATIENTS ATTENDING GENERAL OPD IN MEDICAL COLLEGE, KOLKATA.



Community Medicine

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ABSTRACT

India is undergoing significant social and demographic changes, marked by rapid urbanization; rising income and improved health care. In India, nearly 5.8 million people die from NCDs every year or in other words 1 in 4 Indians has a risk of dying from an NCD before they reach the age of 70. An observational descriptive epidemiological study with cross-sectional design was carried out in General OPD (GOPD) of Medical College, Kolkata to find out the proportion of selected risk factors of Non-communicable diseases. The survey focussed on the four main behavioural risk factors of NCDs: tobacco use, harmful alcohol consumption, unhealthy diet and lack of physical activity; and the four key physiological risk factors for NCDs: overweight and obesity, raised blood pressure, raised blood lipids and raised blood glucose. The survey questionnaire was adapted from the WHO STEPS instrument, with information being gathered in three sequential steps. Among the patients attending GOPD 46.34%, 23.27% and 20.73% were suffering from Diabetes Mellitus, Hypertension, and Chronic Pain respectively. The Mean age of onset of alcohol consumption was 20.6 years. The Mean age of onset of tobacco use was 21.5 years. The average number of tobacco used per day by a person is 6.75 cigarettes. The average amount of alcohol consumed by a person per day is 157.5ml. The average SBP was 133mmHg and DBP is 81mmHg. The average BMI was 26.55. Male gender and rural residence were found to be significantly associated with smoking whereas alcohol consumption is associated only with male gender. Urban residence and nuclear family members have significantly high association with hypertension. Urban and unmarried population is significantly obese.

KEYWORDS

Non communicable disease, General outdoor patient, Behavioural risk factor.

INTRODUCTION-

Rapid population growth, urbanization, a nutritional transition, and indoor and outdoor air pollution are among the factors contributing to the growing burden of the major global non-communicable diseases (NCDs). 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 behaviours factors. The main types of NCDs are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma) and diabetes. (*Essential ncd interventions_lr_settings.Pdf*, n.d.)

According to the second Global Status Report on Non-communicable Diseases 2014 released by the World Health Organization on January 19, 2015, 'Attaining the nine global NCD targets; a shared responsibility' is the theme of this global report. The report aims to inform Ministries of Health and all stakeholders of the progress made on targets set in 2013, 2 years after world leaders agreed to tackle this global health problem at a United Nations high-level meeting. In May 2013, the World Health Assembly adopted a global NCD action plan monitoring framework with 25 indicators and 9 voluntary global targets set for 2025.

According to the latest statistics in the report, NCDs continue to be the leading cause of deaths worldwide and were responsible for 38 million of the world's 56 million deaths in 2012. An estimated 17.5 million NCD deaths were caused by cardiovascular disease, including 6.7 million from strokes. Some 16 million of NCD deaths occurred in people aged <70 years of age and are eminently preventable. Of these premature deaths, 82% occurred in low- and middle-income countries. (*Organizational Update | Stroke*, n.d.)

In India, nearly 5.8 million people (WHO report, 2015) die from NCDs (heart & lung diseases, stroke, cancer and diabetes) every year or in other words 1 in 4 Indians has a risk of dying from an NCD before they reach the age of 70 (WHO | India, n.d.). In a report "India: Health of the Nation's States" by Ministry of Health & Family Welfare (MOHFW),

Government of India (GOI), it is found that there is increase in the contribution of NCDs from 30% of the total disease burden-disability-adjusted life years' (DALYs) in 1990 to 55% in 2016 & also an increase in proportion of deaths due to NCDs (among all deaths) from 37% in 1990 to 61% in 2016. This shows a rapid epidemiological transition with a shift in burden to NCDs.

India is undergoing significant social and demographic changes, marked by rapid urbanization, rising income and improved health care. High prevalence of common risk factors like tobacco use, alcohol use, unhealthy diet, obesity and physical inactivity are found to be risk factors in different studies throughout the World. In response to the "WHO Global Action Plan for the Prevention and Control of NCDs 2013-2020", India is the first country to adopt the National Action Plan with specific national targets and indicators aimed at reducing the number of global premature deaths from NCDs by 25% by 2025 (*National Urban Health Mission*, n.d.). In view of this prevailing scenario this study is conducted with the objectives of identifying socio demographic profile of patients attending General OPD, Medical College, Kolkata, finding out the proportion of selected risk factors of Non-communicable diseases among the study subjects.

METHODOLOGY

An observational descriptive epidemiological study which is cross-sectional designed & hospital based was carried out in General OPD (GOPD) of Medical College, Kolkata on Monday & Friday of every week for 6 months. The GOPD of Monday & Friday come under the surveillance of Community Medicine Department of Medical College Kolkata. Total sample size was 82. All patients aged from 20 to 30 years attending at GOPD on Monday and Friday & diagnosed with any of the Non-communicable diseases within last 6 months were included. Patients whose diagnosis is not confirmed by biochemical, radiological investigations & patients who did not give consent were excluded from the study. Pre-designed pre-tested validated WHO STEPS Questionnaire for Non communicable diseases is used in this study. Socio-demographic and behavioral information was collected in step 1 & physical measurements such as height, weight and blood

pressure were collected in step 2 while biochemical measurements for blood glucose and cholesterol were taken in step 3 with respondents in a fasting state.

The survey focussed on the four main behavioural risk factors of NCDs: tobacco use, harmful alcohol consumption, unhealthy diet and lack of physical activity; and the four key physiological risk factors for NCDs: overweight and obesity, raised blood pressure, raised blood lipids and raised blood glucose. The survey questionnaire was adapted from the WHO STEPS instrument, with information being gathered in three sequential steps. Step one involved asking questions on demographic information such as age, sex, marital status, education and occupation, housing and social amenities as well as dietary history on salt, sugar, fat, fruits and vegetable intakes.

The data was compiled in MS Excel Sheet and Statistical analyses were performed with SPSS 20.0. Association in qualitative data were measured by chi-square test or Fisher's exact test. $P < 0.05$ was considered statistically significant.

RESULT

51.22% male attended OPD, 63.41% Hindu, 56.1% from rural areas and most of them were married hailing from joint family. In the risk factors 9.51% were smokers, 46.34% consumed alcohol and family history of diabetes and hypertension were present among 34.14% and 12.2% respondents respectively.

Table 1. Socio-demographic profile of the study participants. (n=82)

Variable	Categories	Frequency	Percentage (%)
Gender	Male	42	51.22
	Female	40	48.78
Religion	Hindu	52	63.41
	Muslim	30	36.59
Residence	Urban	36	43.90
	Rural	46	56.10
Marital status	Married	60	73.17
	Unmarried	22	26.83
Family type	Nuclear	20	24.40
	Joint	62	75.60
Educational status	Primary	16	19.52
	Middle	28	34.14
	Secondary	32	39.02
	Higher Secondary	0	0
	Graduate	6	7.32
Occupation	Professional	6	7.32
	Semi professional	0	0
	Clerk, Shop-owner	10	12.20
	Skilled worker	8	9.76
	Semi-skilled worker	10	12.20
	Unskilled	11	13.40
	Unemployed	37	45.12

Among the patients attending GOPD 46.34%, 23.27% and 20.73% were suffering from Diabetes Mellitus, Hypertension, and Chronic Pain respectively. 8 people were suffering from COPD.

Table 2. Distribution of the participants as per diagnosed morbidities. (n=82)

Morbidity	Frequency	Percentage (%)
Diabetes Mellitus	38	46.34
Hypertension	19	23.27
Chronic Pain (Musculo-skeletal)	17	20.73
Chronic Obstructive Pulmonary Disease	8	9.76

Table 3. Distribution of participants based on risk factors for Non communicable diseases (n=82)

Variable	Categories	Frequency	Percentage (%)
Tobacco use	Smoker	16	19.51
	Non-smoker	52	63.42
	Passive smoker	14	17.07
Alcohol consumption	Yes	38	46.34
	No	44	53.66
Family H/O Diabetes Mellitus	Present	28	34.14
	Absent	54	65.86

Family H/O Hypertension	Present	10	12.20
	Absent	72	87.80

Male gender and rural residence were found to be significantly associated with smoking whereas alcohol consumption is associated only with male gender. Urban residence and nuclear family members have significantly high association with hypertension. Urban and unmarried population is significantly obese.

DISCUSSION

In present study 52.38% of adult males and 20% of adult females smoked cigarettes. Sieminska A, Jassem E. et al³ showed In 2015, 16.7 % of adult males and 13.6 % of adult females smoked cigarettes. Generally, men tend to use all tobacco products at higher rates than women. Current study shows urban study subjects were using both smoke and smokeless tobacco products than rural subjects. Vivek Gupta, Kapil Yadav et al⁴ had shown the use of smoked tobacco by urban-slum respondents is nearer to rural respondents than the urban respondents. On the other hand, for smokeless forms of tobacco, the urban-slum respondents' prevalence is much higher than that of the rural respondents being nearer to the prevalence in urban populations. Current study shows 71.42% of adult males and 20% of adult females consumed alcohol. In Wilsnack RW, Vogeltanz ND, Wilsnack SC, Harris TR, et al. Men are more likely to consume alcohol than women are; male drinkers consume larger quantities of alcohol than female drinkers do. In current study 33.34% of adults in urban population and 15.21% of adults in rural population have hypertension. In Rajeev Gupta et al⁶ Hypertension from India in the last twenty years have shown that prevalence in urban locations has stabilized to about 25-30% but it has increased in rural populations from 15% to 25%. Current study shows 44.45% of urban study subjects and 21.73% of rural study subjects were found to be overweight and obese. Babu Rao and SyamSundar Junapudi⁷ had shown 34.7% of urban population and 25.1% of rural population were found to be overweight and obese.

CONCLUSION:

NCD risk factor detection should become an integral part of function of health system, particularly in a country like India where not only in urban but in rural areas also NCD are rising sharply. Relative lack of adequate risk factor data, inadequate coverage and absence of a standardized preventive strategy are the major deficiencies. This Need of risk factor detection is to be overcome for a more effective NCD control to decrease NCD burden.

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