



ASSESSMENT OF KNOWLEDGE ON NON-COMMUNICABLE DISEASES AND THEIR SCREENING TESTS AMONG ELDERLY POPULATION OF URBAN SLUM OF KOLKATA

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ABSTRACT **Background:** A high burden of non-communicable diseases (NCDs) is contributing to high mortality and morbidity in India. Noncommunicable diseases (NCDs) accounted for two thirds of deaths (34.5 million of a total 52.8 million) worldwide in 2010. In the same year, cancer was responsible for 8 million deaths, ischemic heart disease and stroke collectively for 12.9 million deaths, and diabetes for 1.3 million deaths, with all showing significant rising trends. The knowledge of NCDs and their related screening tests among elderly is essential for early detection which reduces further development of the disease and its complications, thereby reducing the burden of health care cost. Hence, the present study was conducted among elderly population of urban slum of Kolkata.

Methods: A community based cross-sectional was done in the Tangra urban slum area of Kolkata. A total of 200 participants were randomly selected. Informed consent and data was collected using pre- tested structured questionnaire, information was collected regarding knowledge on NCDs and their screening tests. Results were analyzed using SPSS 20.0 software and MS Excel 2007 software.

Results: Majority of the respondents were females 142 (71%) and maximum of the study participants were in the age group of 60-69 years 132 (66%). Regarding individual diseases, about 56% subjects were aware of Hypertension and 49% about Diabetes Mellitus. 78% of study subjects were aware of common NCDs out of which only 04% were aware of 6 NCDs (out of 12 NCDs considered in this study). About knowledge of screening test 54% were aware of screening test for hypertension and 38% for diabetes mellitus.

Conclusions: The study revealed that studied elderly population have poor knowledge regarding NCDs and their screening tests.

KEYWORDS : NCD, Screening tests, Elderly, Knowledge

INTRODUCTION

The World Health Organization (WHO) defines non-communicable diseases (NCDs) as chronic conditions of long duration resulting from a combination of genetic, physiological, behavioral, and environmental factors.¹ Nearly 63% of all deaths can be attributable to NCDs, making this the leading cause of mortality in the world.² While more than 36 million people die each year due to NCDs, about 80% of NCD deaths occur in low and middle-income countries.²

India is a highly populous country with a population of more than 1.3 billion which is facing an immense burden of NCDs.³ Demographic and epidemiological transitions over the past few decades have resulted in a shift in the national burden of diseases from infectious diseases to NCDs.^{3,4} In 2017, India State-Level Disease Burden Initiative Collaborators reported nationwide variations of disease burden, which highlights that the prevalence of and mortality due to NCDs have increased across all the states between 1990 to 2016.⁵

About 8.3% of all deaths and 5% of total disability-adjusted life years (DALYs) in 2016 were due to the contribution of cancer, which has doubled since 1990.⁶

In addition to contributing to mortalities and morbidities, NCDs also affect the national economy enormously. For example, the economic losses from heart disease, stroke, and diabetes were estimated to be US\$54 billion in 2015.⁷ Considering the population health and associated challenges, it is essential to explore potential avenues to alleviate the high burden of NCDs in India. Providing conventional care for NCDs in a large population can be difficult because patients living with chronic conditions need continuous monitoring and prolonged treatment.⁸

As the country suffers from a lack of adequate healthcare infrastructure and a severe scarcity of human resources for health,⁹ conventional healthcare delivery methods involving face-to-face doctor-patient

interactions might not be available to most of the people in India. Moreover, critical challenges such as long distance from the nearest health center, lack of transportation to health facilities, lack of awareness about health services, and high cost of seeking care can affect timely diagnosis and treatment of NCDs.¹⁰

These problems necessitate interventions for making healthcare for NCDs more available, accessible, and acceptable to the patients who need them the most. Furthermore, chronic diseases make individuals vulnerable to mental and physical stress.¹¹

Empowering patients and their caregivers can help in addressing health problems through enhanced participation and adherence to optimal care at the community level.¹²

METHODS

It was a community based cross-sectional study. The present study was conducted in an urban slum area located in Tangra area of Kolkata, Duration of the study was November 2020 to January 2021. Sampling Technique was Convenient sampling. A total of 200 participants were randomly selected.

Study subjects who are residents of the area for a minimum duration of 6 months and those who are willing to participate in study were included. Seriously ill, with cognitive impairment and with severe abnormality in speech and hearing were excluded from the study.

In the present study 12 common NCDs were considered such as obesity, hypertension, diabetes mellitus, anaemia, coronary artery disease, stroke, cataract, osteoporosis and cancers (breast cancer, oral cancer, cervical cancer and prostate cancer). Information was collected on socio-personal characteristics and knowledge on NCDs and their screening tests using pretested semi-structured proforma.

Questions were asked regarding the causes, symptoms, complications,

screening tests, prevention and control measures for all NCDs considered in the study. Data were analyzed using SPSS 20.0 software and MS Excel 2007 software.

RESULTS

Among 200 study subjects, majority 142 (71%) were female and 58 (29%) were male. Among the participants 105 (52.5%) were Hindu and 92 (46%) we Muslim by religion. Majority 132 (66%) belonged to the age group of 60-69 years, 125 (62.5%) were married, 162 (81%) were educated less than secondary high school and 155 (77.5%) were not working. (Table 1).

In the present study revealed that, 112 (56%) were aware about hypertension and 98 (49%) were aware about Diabetes Mellitus. Knowledge regarding other NCDs considered in the study was very less in all subjects (Table 2).

Study also shows that 108 (54%) and 76 (38%) were aware of the screening tests for hypertension and diabetes mellitus respectively. Knowledge regarding screening tests for other NCDs was not satisfactory (Table 3).

Out of 98 hypertensive subjects, 86 (87.76%) knew about the disease and 84 (85.71%) knew about screening test to detect the disease. Among 62 diabetics subjects 52 (83.87%) aware about the disease and 48 (77.42%) aware about the screening test (Table 4).

It is observed in our study that, knowledge on NCDs and their screening tests was found to be average in subjects who were <70 years, studied upto high school and were not working anymore. (Table 5)

DISCUSSION

Increasing burden of NCDs is one of the major public health challenges for developing countries. According to recent WHO report, commonest NCDs like cardiovascular diseases (CVD), cancers (Ca) and diabetes mellitus (DM) account for 53% of all deaths in India. Awareness about NCDs and their risk factors among general population is low.¹³ To decrease the burden of NCDs, we should assess the existing knowledge regarding NCDs and their screening tests among general population so that early interventions targeting primary prevention is essential. This study was conducted among elderly population in an urban field practice area of medical college to assess the knowledge regarding NCDs and their screening tests.

In the present study, majority were females 142 (71%) and were in the age group of 60-69 years 132 (66%). Most of them were Hindu 105 (52.5%), educated up to secondary high school 162 (81%). In the study conducted by Feng et al, it was found that among 1329 elderly, majority were females, belonged to age group 60- 63 years, and had only attended elementary school.¹⁴

In 98 hypertensive subjects, 86 (87.76%) were aware of the disease and 84 (85.71%) knew about the screening test. Among 62 diabetes subjects, 52 (83.87%) were aware of diabetes and 48 (77.42%) knew about screening test. The study conducted by Kalavathy et al showed that among 185 hypertensive, only 44.9% were aware of the disease and 42.7% were aware about treatment.¹⁵ Similar study conducted by Kaur et al, found that among 100 elderly patients 93 were aware of both hypertension and diabetes. Among 61 hypertensives, 52 knew the symptoms and among 42 diabetics, 25 knew the symptoms.¹⁶

In the present study, knowledge on different NCDs and their screening tests was found to be average among subjects.

CONCLUSION:

To conclude, the overall knowledge regarding NCDs and their screening tests is poor among the elderly population. However, the knowledge regarding Hypertension, Diabetes Mellitus and their screening tests is found to be good. It is recommended that community-based and more practical comprehensive health promotion programs for NCD prevention involving the community will have positive impacts in preventing NCDs in India.

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Table 1: Socio-demographic Profile Of The Study Participants (n=220).

Socio-demographic profile		Frequency	
		Number	%
Gender	Male	58	29
	Female	142	71
Religion	Hindu	105	52.5
	Muslim	92	46
	Christian	3	1.5
Age (years)	60-69	132	66
	70-79	54	27
	≥80	14	7
Marital Status	Married	125	62.5
	Others	75	37.5
Education	<High school	162	81
	≥High school	38	19
Occupation	Working	45	22.5
	Not working	155	77.5

Table 2 : Knowledge Of Study Subjects Regarding NCDs (n=200).

Knowledge for NCDs	Number	%
Hypertension	112	56
Diabetes mellitus	98	49
Cataract	58	29
CHD	19	9.5
Anaemia	15	7.5
Stroke	27	13.5
Oral cancer	32	16
Breast cancer	6	3
Cervix cancer	14	7
Obesity	26	13
Osteoporosis	34	17
Prostate cancer	0	0

Table 3: Knowledge Of The Study Participants On Screening Tests For NCDs (n=200).

Screening for NCDs	Frequency	
	Number	%
Hypertension	108	54
Diabetes mellitus	76	38
Cataract	28	14
CHD	22	11
Anaemia	16	8
Obesity	8	4
Stroke	6	3
Breast cancer	3	1.5
Cervix cancer	2	1
Oral cancer	2	1
Osteoporosis	1	0.5
Prostate cancer	0	0

Table 4: Distribution Of Study Subjects According To Their Knowledge On NCDs And Their Screening Tests.

Group	Awareness of NCD				Aware of screening test for NCD			
	Yes		No		Yes		No	
	Num ber	%	Num ber	%	Num ber	%	Num ber	%
Hypertension (n=98)	86	87.76	12	12.24	84	85.71	14	14.29
Diabetes Mellitus (n=62)	52	83.87	10	16.13	48	77.42	14	22.58

Table 5: Distribution Of Knowledge On NCDs And Their Screening Tests According To Socio-personal Characteristics.

Characteristics	Knowledge of NCDs		Knowledge on screening tests for NCDs		
	Numbe r	%	Numbe r	%	
Gender	Male (n=58)	46	79.31	38	65.52
	Female (n=142)	56	39.44	48	33.80

Religion	Hindu (n=105)	64	60.95	58	55.24
	Muslims (n=92)	56	60.87	48	52.17
Age (years)	60-69 (n=132)	64	48.48	56	42.42
	≥70 (n=68)	46	67.65	42	61.76
Marital status	Married (n=125)	78	62.40	68	54.40
	Others (n=75)	42	56.00	38	50.67
Education	<High school (n=162)	98	60.49	84	51.85
	≥High school (n=38)	32	84.21	28	73.68
Occupation	Working (n=45)	32	71.11	29	64.44
	Not working (n=155)	88	56.77	76	49.03

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