A Study of Socio-Demographic Profile, Health Profile and Awareness on Non Communicable Diseases among Urban Population of Ahmedabad, Gujarat

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ABSTRACT

Introduction: The current epidemic of non-communicable diseases in India is attributed to increased longevity and lifestyle changes resulting from urbanization.

Objectives: (1) To assess the socio-demographic & health profile of urban population. **(2)** To evaluate awareness on risk factors of non communicable diseases (NCD).

Methodology: A cross sectional study was conducted among urban population of central and south zone of Ahmedabad municipal Corporation (AMC) area during February to May 2015. Pretested performa was used for study. Among 200 houses, total 517 people were selected for study after their informed consent.

Results: Out of 517 people, males were 54.9% & females were 45.1%. Majority of people were belongs to 35 to 45 yr. age group (22.1%). Majority (51.3%) of people had habit of khaini (mixture of tobacco & lime). Majority (45.6%) of them were found sedentary workers. According to study group, ageing was commonest risk factor for NCD.

Conclusions: Mean age was 47.3 ± 2.1. Among different NCDs, majority of people were found on medication for Hypertension. Gender wise comparison of body mass index (BMI) shows significant statistical difference.

Key words: Non communicable disease (NCD), urban population, Ahmedabad

INTRODUCTION

In the international public health, Non-communicable diseases (NCDs) are now major challenges in developing as well as industrialized countries.[1] However, chronic diseases account for about 60% of the 565 million total deaths in the world.[2,3] The share of the burden of NCDs in these deaths is about 46% of the global burden of these diseases in developing countries.[4,5] This proportion of NCD-related deaths is expected to increase to 57% from 46% by 2025, and far too many will suffer from preventable diseases and health conditions.[3,6] The World Health Organization (WHO) stated in 2002 that although infectious diseases remain a formidable enemy, the population is ageing and non-communicable diseases are rising.[4] Economic progress is better South Asia in recent decades but is struggling to find a road towards sustainable development.[7] Increased longevity and life style modification due to rapidly growing urbanization are major factors for epidemic of non-communicable diseases in India.[8,9] However, recent data suggest that non-communicable diseases are already the commonest cause of death in some parts of rural India also.[10] Hypertension has been widely studied in community surveys, though nationally representative estimates are available only in a few countries. Several studies across India also

report a higher prevalence in adults in urban compared with rural areas.[11] Deaths from coronary heart disease in India rose from 1.17 million in 1990 to 1.59 million in 2000 and are expected to rise to 2.03 million in 2010.[12] India has a higher number of people with diabetes than any other country, with estimates ranging from 19.4 million in 1995 to 32.7 million in 2000.[13] Chronic obstructive airway diseases (emphysema and chronic bronchitis) and asthma, resulting from indoor and outdoor air pollution, account for a large proportion of the burden of chronic respiratory diseases.[14] Morbidity from respiratory diseases accounts for 65 million cases and about 580 000 deaths in India.[15] Regarding prevalence of cancer, the most common cancers in males are of lung and oropharynx and in females are of the cervix, uterus, and breast.[16] So, the study was conducted to assess the socio-demographic & health profile of urban population and to evaluate awareness on risk factors of NCD's.

METHODOLOGY

A cross sectional study was conducted among urban slum population of central and south zone of Ahmedabad municipal Corporation (AMC) area. Total 200 houses were selected for study purpose from above two zones. First house was selected as per Head count survey data. Then other houses were continuously selected on basis of availability and consent of family members of ≥15 yr age. Details regarding study and their objectives were discussed with family members and informed consent was taken prior to study. Among those houses where family members denied for the same were excluded from study. The study was conducted during February to May 2015. Fully structured performa, which was specially designed in local language and pre-tested, was used for data collection purpose. The performa has different components e.g. socio-demographic profile, health status of population, awareness on non communicable diseases (NCD) etc. After the data collection, each person was taught on different aspects on NCDs and advises were given for healthy life style. IEC materials e.g. pamphlets, charts and photographs etc. were used to improve the knowledge of people on NCDs. Post data collection, data entry was carried out and data analysis was done by using appropriate statistical software e.g. Excel, Graph pad etc. and applying suitable statistical tests e.g. Chisquare test, proportion, Mean etc.

RESULTS

Among 200 houses, total 517 people were selected for study. The selection of people was done on the basis of their availability and consent at time of data collection. Out of 517 people, males were 284 (54.9%) and females were 233 (45.1%). Table-1 shows socio-demographic profile of study group. Majority of people were belong to 35 to 45 yr. age group (22.1%) followed by 45 to 55 yr. age group (19.7%). Mean age of study group was 47.3 ± 2.1. Majority (139, 26.9%) of them were studied up to primary level. Few people (88, 17%) were found illiterate. Majority (265, 51.3%) of people had habits of Khaini (mixture of tobacco & lime) followed by Gutkha (231, 44.7%) eating. Only 14.7% people had no addiction habits. The life style of study group was classified according to their occupational status. Majority of them were found sedentary workers (236, 45.6%) followed by moderate worker (152, 29.4%). Various anthropometric measurements (e.g. height, weight, BMI) and other health related analysis was done (Table-2).

No gender wise significant difference was noted for blood pressure analysis (P: >0.05). BMI status shows, majority of males (37.3%) and females (42.1%) were normal. Significant statistical difference was noted for BMI status of males & females (P: <0.0001). About 39.4% males and 37.8% females were not on any medication related to NCDs. The rest of people were on medication for any single/multiple NCD diseases.

Table-1: Socio-demographic profile of study group (N= 517)

Socio-demographic Variables	Participants (%)
Age Distribution	
15 to 35 year	129 (25)
35 to 55 year	216 (41.8)
55 to 75 year	159 (30.8)
≥ 75 year	13 (2.5)
Gender	
Male	284 (54.9)
Female	233 (45.1)
Education level	
Illiterate	88 (17)
Primary	139 (26.9)
Secondary	128 (24.8)
Higher secondary	114 (22.1)
Graduate & above	48 (9.3)
Habits of patients*	
No Habits	76 (14.7)
Gutkha	231 (44.7)
Khaini	265 (51.3)
Bidi	133 (25.7)
Alcohol	88 (17)
Other (drugs)	12 (2.3)
Life style (as per occupation status)	
Sedentary worker	236 (45.6)
Moderate worker	152 (29.4)
Heavy worker	129 (25)

(*= multiple answers)

Table-2: Health profile of study group. (N=517)

Health profile	Male (%)	Female (%)	Total (%)	Chi-square	P value
Systolic BP (mm Hg)					
Normal (<130)	114 (40.1)	97 (41.6)	211 (40.8)	2.7	0.2
High normal (130-140)	92 (32.4)	61 (26.2)	153 (29.6)	(df:2)	
Hypertensive (>140)	78 (27.5)	75 (32.2)	153 (29.6)		
Diastolic BP (mm Hg)					
Normal (<85)	138 (48.6)	124 (53.2)	262 (50.7)	5.8	0.05
High normal (85-90)	75 (26.4)	41 (17.6)	116 (22.4)	(df:2)	
Hypertensive (>90)	71 (25)	68 (29.2)	139 (26.9)		
Body Mass Index (BMI) level					
Underweight (<18.5)	36 (12.7)	43 (18.5)	79 (15.3)	21.7	<0.0001
Normal (18.5- 24.99)	106 (37.3)	98 (42.1)	204 (39.5)	(df:3)	
Pre-obese (25- 29.99)	87 (30.6)	32 (13.7)	119 (23)		
Obese (≥30)	55 (19.4)	60 (25.8)	115 (22.2)		
People on medication*					
Coronary Heart Dz.	24 (8.5)	11 (4.7)	35 (6.8)	4	0.5
Hypertension	88 (31)	79 (33.9)	167 (32.3)	(df:5)	
Diabetes Mellitus	67 (23.6)	54 (23.2)	121 (23.4)		
COPD	45 (15.8)	39 (16.7)	84 (16.2)		
Cancer	4 (1.4)	6 (2.6)	10 (1.9)		
None	112 (39.4)	88 (37.8)	200 (38.7)		

(COPD= chronic obstructive pulmonary disease, * = Multiple answers)

Table-3: Gender wise comparison of awareness on risk factors (N= 517)

Presence of Risk factors of NCDs*	Male (n=284) (%)	Female (n=233) (%)	Chi square	P value
Ageing	216 (76.06)	187 (80.26)	1.3	0.2
Genetic/Hereditary	110 (38.73)	92 (39.48)	0.03	0.8
Tobacco habits	96 (33.8)	75 (32.19)	0.1	0.7
Alcohol habits	102 (35.92)	64 (27.47)	4.1	0.04
Sedentary life style	88 (30.99)	153 (65.67)	61.8	<0.0001
Eating habits	143 (50.35)	101 (43.35)	2.5	0.1
Stressful life	87 (30.63)	56 (24.03)	2.8	0.09
Occupational exposure	65 (22.89)	44 (18.88)	1.2	0.3
S-E status	34 (11.97)	63 (27.04)	19	<0.0001
Environmental exposure	45 (15.85)	33 (14.16)	0.3	0.6

(S-E= Socio Economical, * = Multiple answers)

Majority of males (31%) and females (33.9%) were taking medication for hypertension. No gender wise significant difference was found for taking medication for different NCDs (P: 0.5). Awareness on different risk factors for NCDs was checked (Table-3). According to study group, commonest risk factor for NCDs was ageing (males - 76.1% and females - 80.3%). Statistically significant difference was noted regarding awareness among males and female for different risk factors of NCDs like alcohol consumption, sedentary life style and S-E status (Table-3).

DISCUSSION

Chronic non communicable diseases (NCD) are assuming increasing importance among adult population in both developed and developing countries.[1,2] in current study Majority of people were belong to 35 to 45 yr. age group (22.1%) and mean age was 47.3 ± 2.1. As per the National Family Health Survey (NFHS-4), 2015-16 data on literacy rate of India, 85.6% men and 68.4% women were literate.[17] current study shows 83% people were literate (men- 88.1%, women- 76.8%). Majority (51.3%) of people had habits of oral tobacco chewing in form of Khaini followed by Gutkha (44.7%). Recommended Diet/Energy requirement for each individual is based certain factors; level of physical activity in routine life is one of the key factors. Life style can be classified as sedentary, moderate and heavy working based on physical activity/occupation. Higher risk for NCDs is common in sedentary lifestyle.[5] Majority of people were found sedentary workers (45.6%) followed by moderate worker (29.4%) in current study. Health profile of study group was shown in Table-2. There was no gender wise significant difference noted for blood pressure analysis (P: >0.05). Higher body mass index (BMI) is associated with morbidity and mortality especially that related to diabetes mellitus and cardiovascular diseases. In 1997, a WHO

expert committee classified a BMI of 25.0 – 29.0kg/m as overweight, 30 – 34.9 kg/m as obesity and ≥ 35 kg/m as morbid obesity.[18] current study reveals, majority of males (37.3%) and females (42.1%) were having normal BMI level. Still significant statistical difference was noted for BMI status among different genders (P: <0.0001). Majority of males (39.4%) and females (37.8%) were not on any medication related to NCDs. Among those on NCD medication, majority of males (31%) and females (33.9%) were taking Anti hypertensive drugs. No gender wise significant difference was noted for NCD medications (P: 0.5). Gender wise comparison on awareness of risk factors for NCD was shown in table-3. Study reveals ageing was the commonest risk factor for NCDs (males - 76.1% & females - 80.3%). Gender wise significant association was noted for awareness on different risk factors e.g. Alcohol consumption, sedentary life style and S-E status (Table-3).

CONCLUSIONS & RECOMMENDATIONS

Males (54.9%) were higher than female. Mean age was 47.3 ± 2.1 noted. Few of people (17%) were found illiterate. Commonest addiction was oral tobacco chewing in form of Khaini (51.3%). Majority (45.6%) of people were having sedentary life style based on their physical activity level. Majority of males (37.3%) and females (42.1%) were having normal BMI status. Significant statistical difference was noted for BMI status of males & females (P: <0.0001). Among people on NCD medication, majority of males (31%) and females (33.9%) were taking Anti hypertensive drugs. According to study group, ageing was the commonest risk factor for various NCDs. Significant gender wise awareness on different risk factors of NCDs were noted (P: <0.0001). Community awareness various preventive aspects of NCDs, regular medication etc. should be emphasized.

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