Original Research Article

A study on Non-communicable diseases related factors at community level in Junagadh district, Gujarat.

1. Dr. Jay R. Chothani, 2. Dr. Priyank M. Dholakiya, 3. Dr. Krupa Dolasia, 4. Dr. Jaychandra N. Ratanpara, 5. Dr. Dipeshkumar D. Zalavadiya

M.B.B.S., GMERS medical college and hospital, Junagadh
M.B.B.S., GMERS medical college and hospital, Junagadh
M.B.B.S., GMERS medical college and hospital, Junagadh
Assistant Professor, Paediatrics department, GMERS medical college and hospital, Junagadh
Assistant Professor, Community medicine department, GMERS medical college and hospital, Junagadh

Corresponding Author- name, address, affiliation and email:
Name: Dr. Kapil J. Govani, (Associate Professor, Community medicine department)
Address- 7th floor, Community medicine department, GMERS medical college, Junagadh.

Affiliation- Community medicine department, GMERS medical college, Junagadh.

Email- kapilgovani@gmail.com

ABSTRACT

Introduction: Globally around 41 million people each year die due to Non-communicable diseases (NCDs), which is nearly 74% of all deaths. Objectives: (1) To assess the demographic & health profile of community participants. (2) To assess the medication status of non-communicable diseases among the community. Methodology: A cross-sectional study was conducted during January to April 2024 among community people. Among the 250 houses of urban and rural areas, total 583 people were selected for the study after informed consent. Houses were identified during family health survey. Results: Out of 583 people, 266, 45% were males and the females were 317, 55%. Majority (213, 37%) of people were belongs to ≥ 65 year age group. Majority (39%) were studied up to the primary level. Around 45% of participants had history of tobacco consumption. Conclusions: Significant family history of hypertension, CVD and renal diseases was noted among males. Significant gender wise difference were noted for the on NCD medication duration of participants.

Key words: Health profile, Community, Non communicable disease (NCD)

Introduction:

Non-communicable diseases (NCDs) is also known as chronic diseases, tend to be of long duration and are the result of many factors such as a combination of genetic, physiological, environmental and behavioural factors.[1,2] The main types of NCD are cardiovascular diseases (such as heart attacks and coronary artery diseases), cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma), hypertension and diabetes mellitus. Now a days, people of all age groups and regions of any country are affected by NCDs. These conditions are often associated with older age group people, but data shows that 17 million NCD deaths occur before the age of 70 years.[3,4] Among such premature deaths, 86% are estimated to occur in low and middle-income countries like India.[5] Children, adults and the elderly are all vulnerable to the risk factors contributing to NCDs, whether from life style factors like unhealthy diets, physical inactivity, and exposure to tobacco smoke or the harmful use of alcohol or from other environmental factors like industrialization, occupational exposure or rapid unplanned urbanization.[6,7] NCDs, especially CVD, DM, and stroke have emerged as a major public health problem in India.[8] The morbidity and mortality in most productive phase of life is a serious challenges to Indian society & economy.[9,10] Health policies & programmes focusing on reducing the burden of these common risk factors are likely to make a significant impact on mitigating the mortality and morbidity due to NCDs (4). So in current study we also assess the factors related to NCDs in community people with following objectives. (1) To assess the demographic & health profile of community participants. (2) To assess the medication status of non-communicable diseases among the community.

Methodology:

A community based cross-sectional study was conducted in Junagadh district urban and rural areas. The study period was January to April 2024. Total 250 houses were selected among selected areas. Informed consent were taken. People who denied for the informed consent and critically ill patients were excluded from study. A total of 583 people out of 250 houses were finalized as per the above inclusion & exclusion criteria. Structured, specially designed and pre-tested per forma was used for the data collection. The performa has different components e.g. socio-demographic profile, health profile of participants and on medication history for non-communicable diseases (NCDs). Microsoft MS excel used for the data entry. Data analysis was done by using MS excel and other statistical software. Appropriate statistical tests were applied e.g. proportion, mean, SD (standard deviation), chi-square and P value.

Results:

Among 250 houses, total 583 people were selected for study. Participants were selected on the basis of their availability and consent at time of data collection. Out of 583 people, 266 (45%) were male and 317 (55%) were female. Table-1 shows socio-demographic profile of the study group. Majority of people were belong to ≥ 65 yr. age group (37%) followed by 45 to 65 yr. age group (31%). Mean age of study group was 56.7 ± 9.1. Majority (228, 39%) of them were studied up to primary level followed by 25% of higher secondary level. Around 26% people were illiterate. Majority (54%) of them belonged to middle socio-economic class followed by lower socio-economic class (39%). Family history of NCD (DM, Hypertension, CVD) shows nearly 15% to 25% positive history. Majority (181, 31%) people had normal body mass index (BMI) level. 28% people were overweight and 25% were obese. Around 262 (45%) participants were tobacco users (<10 yr). Majority (71%) of the participants informed that they were not alcohol users. Majority (74%) of the participants informed that they were not narcotic drug users (Table-2). Regarding blood pressure monitoring, majority participants had normal systolic and diastolic values. E.g. Systolic BP (<140 mm/hg) in 58% and diastolic BP (<90 mm/hg) in 56% participants. Table-3 shows on medication status of participants particularly for NCD medications. Among participants on medication, history of cardiac medicines since <5yr was noted in 19% participants. Majority of hypertensive participants took anti-hypertensive drug since 5-10 yr (26%). Majority of diabetic participants took anti-diabetic drug since <5 yr (21%). Majority (117, 20%) of chronic kidney disease (CKD) patients was on medication since 5 to 10 yr. Medication for stress or psychological treatment duration was <5 yr in majority (14%) patients on treatment.

Discussion:

Chronic non communicable diseases (NCD) are increasing importance among adult population in both developed and developing countries. in current study Majority of people were belong to more than 65 yr. age group (37%) followed by 45-65 yr age group (31%). Mean age was 56.7 ± 9.1. Table-1 shows socio-demographic profile of participants. 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.[1,5] Current study shows 74% people were literate (men- 77%, women- 71%). Gender wise significant difference for educational status was noted. Health profile of study group was shown in Table-2. Significant difference noted for family history of hypertension, CVD and renal diseases among male and female (P: <0.05). No significance

difference for BMI stages were noted. Majority (73%) of people had habits of oral or smoke tobacco. Regarding alcohol usage (71%) and narcotic drug (74%) history majority participants were reply 'No'. Gender wise higher BP difference was significantly noted for both systolic and diastolic (P: <0.05). In 2004, 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.[10] Current study reveals, majority of males (33%) and females (30%) were having normal BMI level. Gender wise comparison of on NCD medication was shown in table-3. Significant difference noted for the Cardio-vascular (CVD), Anti-hypertensive, Anti-diabetic and Chronic kidney disease (CKD) patients.

Conclusions & Recommendations:

Females (55%) were higher than male. Mean age was 56.7 ± 9.1 noted. Few of people (26%) were found illiterate. Commonest addiction was tobacco in any form (73%). Majority of people were having sedentary life style. Majority of males (33%) and females (30%) were having normal BMI status. No gender wise significant statistical difference was noted for BMI status of males & females. Gender wise higher BP difference was significantly noted for both systolic and diastolic (P: <0.05). Significant difference noted for patients on medication for the CVD, anti-hypertensive, anti-diabetic and CKD drugs. Community awareness various preventive aspects of NCDs, regular medication etc. should be emphasized.

Table-1: Socio-demographic (S-D) profile of study participants (N=583).

Particulars	Total (N=583)	%	Male (N=266)	%	Female (N=317)	%	P value	Chi-square
Age								
≤ 25 yr	78	13	25	9	53	17	<0.0001	34.9
26-45 yr	114	20	43	16	71	22		
46-65 yr	178	31	67	25	111	35		
≥ 65 yr	213	37	131	49	82	26		
Marital status								
Married	492	84	218	82	274	86	0.13	2.2
Unmarried	91	16	48	18	43	14		
Religion								
Hindu	462	79	215	81	247	78	0.45	1.61
Muslim	106	18	43	16	63	20		
Others	15	3	8	3	7	2		
Education								

Illiterate	153	26	62	23	91	29	0.007	14.2
Primary	228	39	102	38	126	40		
Higher Secondary	146	25	82	31	64	20		
Graduate	40	7	11	4	29	9		
Post Graduate	16	3	9	3	7	2		
S-E Classification								
Upper	42	7	18	7	24	8	0.9	0.14
Middle	316	54	145	55	171	54		
Lower	225	39	103	39	122	38		

(S-E= Socio-Economic, P<0.05= Significant)

Table-2: Health profile of study participants (N=583).

Health profile	Total	%	Male (N=266)	%	Female (N=317)	%	P value	Chi-square
Family Hx-DM								
Yes	97	17	48	18	49	15	0.4	0.5
No	486	83	218	82	268	85		
Family Hx-Hypertension								
Yes	146	25	52	20	94	30	0.006	7.3
No	437	75	214	80	223	70		
Family Hx-CVD								
Yes	138	24	44	17	94	30	0.0003	13.04
No	445	76	222	83	223	70		
Family Hx-Renal Dz.								
Yes	85	15	31	12	54	17	0.008	2.9
No	498	85	235	88	263	83		
Body mass index (BMI)								
Underweight	94	16	51	19	43	14	0.13	5.7
Normal	181	31	87	33	94	30		
Over weight	162	28	70	26	92	29		
Obese	146	25	58	22	88	28		
Tobacco user								
No	155	27	63	24	92	29	0.02	8.1
< 10 yr	262	45	112	42	150	47		
≥ 10 yr	166	28	91	34	75	24		
Alcohol user								
No	415	71	153	58	262	83	<0.0001	44.9
< 10 yr	104	18	72	27	32	10		
≥ 10 yr	64	11	41	15	23	7		

Narcotic drug								
No	433	74	177	67	256	81	0.0003	16.2
< 10 yr	125	21	72	27	53	17		
≥ 10 yr	25	4	17	6	8	3		
Systolic BP								
<140 mm/hg	337	58	134	50	203	64	0.001	10.5
≥140 mm/hg	246	42	132	50	114	36		
Diastolic BP								
<90 mm/hg	326	56	125	47	201	63	<0.0001	15.1
≥90 mm/hg	257	44	141	53	116	37		

(Hx= History, DM= Diabetes Mellitus, CVD= Cardiovascular disease, P<0.05= Significant)

Table-3: Details of study participants on medication / treatment at present (N=583)

People on medication	Total (N=583)	%	Male (N=266)	%	Female (N=317)	%	P value	Chi-square
CVD		0		0	0	0		
< 5 yr	112	19	42	16	70	22	0.008	11.6
5-10 yr	88	15	41	15	47	15		
≥ 10 yr	57	10	37	14	20	6		
None	326	56	146	55	180	57		
Hypertension		0		0	0	0		
< 5 yr	71	12	31	12	40	13	0.09	6.4
5-10 yr	152	26	82	31	70	22		
≥ 10 yr	78	13	30	11	48	15		
None	282	48	123	46	159	50		
Diabetes Mellitus		0		0	0	0		
< 5 yr	122	21	42	16	80	25	0.009	11.4
5-10 yr	75	13	29	11	46	15		
≥ 10 yr	43	7	21	8	22	7		
None	343	59	174	65	169	53		
Cancer		0		0	0	0		
< 5 yr	67	11	32	12	35	11	0.6	1.7
5-10 yr	58	10	22	8	36	11		
≥ 10 yr	10	2	4	2	6	2		
None	448	77	208	78	240	76		
CKD		0		0	0	0		
< 5 yr	92	16	37	14	55	17	0.007	11.9
5-10 yr	117	20	40	15	77	24		
≥ 10 yr	9	2	3	1	6	2		
None	365	63	186	70	179	56		
Stress (Psychological)		0		0	0	0		
< 5 yr	83	14	41	15	42	13	0.5	2.4

5-10 yr	50	9	27	10	23	7		
≥ 10 yr	12	2	5	2	7	2		
None	438	75	193	73	245	77		

(CVD= Cardiovascular disease, CKD= Chronic kidney disease, P<0.05= Significant)

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