A study to assess the prevalence of Diabetics and Hypertension in selected community of Karad Taluka

Mrs. Manda Phuke	**Prof. Vaishali Mohite**	**Avinash H. Salunkhe**
MSc (N) clinical instructor, Krishna institute of nursing sciences, KIMSDU karad	Dean, Krishna Institute of nursing Sciences Dept. Med. Surg. Nursing, Karad	Vice Principal, Department - Community Health Nursing, Krishna Institute of Nursing Sciences Karad

Prof. Tukaram Zagade	**Prof. Jyoti salunkhe**
Department Med. Surg. Nursing, Krishna Institute of Nursing Sciences Karad	Department OBG Nursing Krishna Institute of Nursing Sciences Karad

ABSTRACT *Back ground*

There is evidence that the prevalence of certain noncommunicable diseases, such as diabetes and hypertension, is increasing rapidly, particularly in the urban areas, and that significant demands are being made on the health services by patients with these diseases.

Methods & Materials

Descriptive survey approach and design was used by selecting random sample technique. From Three village's i. e Karad, Kale & Vadgaon, samples were collected. The 400 Families were selected randomly for door-to-door survey to find out cases of diabetes & hypertension.The structured questionnaire is used data collection& analyzed by using descriptive & inferential statistics.

Results

Maximum 31 (41.33%) from age group 51-60 years, 50 (66.67%) female, 41 (54.66%) were having HTN, 22(29.33%) having DM & 12 (16%) having DM & HTN & taking regular treatment. 28(37.33%) having hereditary history about disease. There is no association found between demographic variable & prevalence of Diabetics and Hypertension.

Conclusion

Out of 400 families' 75 families found client of DM or HTN or both. It means every 4th or 5th family we got a client of DM or HTN or both.

INTRODUCTION

Diabetes mellitus (DM) and hypertension (HTN) have emerged as major medical and public health issues worldwide, and both are important risk factors for coronary artery disease (CAD), heart failure, and cerebrovascular disease. DM is increasing in epidemic proportions globally. According to the WHO, the prevalence of DM in adults worldwide was estimated to be 4.0% in 1995 and is predicted to rise to 5.4% by the year 2025 such that the number of adults with DM in the world would rise from 135 million in 1995 to 300 million in the year 2025 [1]. The International Diabetes Federation (IDF) has come up with much higher figures in a recent report which estimated that in 2011, 366 million people worldwide had DM and if this trend continues, by 2030, 552 million people, or one in 10 adults, will have DM [2]

Additionally, HTN affects about one billion people worldwide [3] and it is estimated that by 2025, up to 1.56 billion adults worldwide will be hypertensive [4]. Raised blood pressure (BP) is estimated to cause 7.5 million deaths, which accounts for 57 million disability-adjusted life years (DALYs) (5) The high prevalence of HTN makes it a significant factor for mortality and morbidity. Individuals with HTN are known to have a twofold higher risk of developing CAD, four times higher risk of congestive heart failure, and seven times higher risk of cerebrovascular disease and stroke.(6)

NEED FOR STUDY

In most developing countries, till recently, the priorities of health care had been the prevention and control of communicable diseases. However now the attention has begun to shift to the control and prevention of noncommunicable diseases (NCDs) including DM, HTN, CAD, and stroke in view of the rising trend of NCDs. Challenges in managing both DM and HTN more effectively include factors at the patient, provider, and system levels. Epidemiologic studies have an important clinical impact and have led to an increasing appreciation of the value of epidemiology as a scientific basis for clinical and public health practice. As primary health care is the first level of contact of the individuals, the family, and the community with the national health system, there is an urgent need for an integrated approach at primary health care (PHC) level for addressing the burden of HTN and DM. The aim of this paper is to assess the burden of DM and HTN. Community surveys from different regions and various ethnic populations are instrumental to formulate national consensus-driven policies to counteract the rising trend of non-communicable diseases.

STATEMENT

A study to assess the prevalence of Diabetics and Hypertension in selected community of Karad Taluka.

Objectives:-

1. To assess the prevalence of diabetes cases in community of Karad taluka.
2. To assess the prevalence of hypertension cases in community of Karad taluka.
3. To find out association between non communicable (DM & HTN) cases with selected socio-demographic variables.

METHODOLOGY
RESEARCH APPROACH-
Survey approach

RESEARCH DESIGN
Descriptive research design

RESEARCH SETTING
Place of survey and the population
Karad is a city in the satara district of Maharashtra, had been the place of survey. Demographic characteristic of the sample population is given in table no. 1. The population is stable and usually consumes mixed diet consisting of rice, Bhakari of Jawar & also chapatti as the chief component and soyabean & ground nut oil as the main cooking medium. We select randomly three villages for sample collection i. e Karad, Kale & Vadgaon where we done door-to-door survey to find out the detected cases of diabetes, hypertension. We done survey of total 400 families

Questionnaire
The following information was collected from each subject by using structured questioner: age, sex, occupation, and income status, and dietary pattern, family history of disease, past history of disease & any examination of blood pressure and blood sugar, and addictions.

Methods
Administered the structured questionnaires and check their BP & urine sugar according to their disease condition after getting past history of any disease condition of each participant.

METHODS OF DATA COLLECTION
The steps used for data collection were as follows:-

1. The investigator introduced herself to subject.
2. The investigator explained the purpose of the study to subject.
3. Informed written consent was taken from the each subject.
4. Data will be collect by using questionnaire structured interview schedule
5. Data collected was tabulated and analyzed.

SAMPLING TECHNIQUE
Purposive sampling technique will be used for the present study.

SAMPLE SIZE
The sample consists of 75 cases of selected non communicable diseases from selected community of karad Taluka.

CRITERIA FOR SAMPLE COLLECTION
INCLUSION CRITERIA
Diabetic & hypertensive clients from the family.

EXCLUSION CRITERIA
Clients who suffers with the other noncommunicable diseases than Diabetic & hypertension.

DATA COLLECTIONS PROCEDURE
- Formal permission was obtained from the authorities & ethical clearance was obtained
- After establishing a good rapport with subjects, they were made aware about the aims and objectives of study & informed written consent was obtained from the subjects.
- Administer structured questioner to collect data.

ANALYSIS AND INTERPRETAION
- The data obtained was compiled, stating the frequency of every response in each item.
- Distribution of sample characteristic according to demographic variables of respondents.
- Statistical analysis was done by calculating the percentages of each frequency & applied chi-square test to find out the association between non communicable (DM & HTN) cases with selected socio-demographic variables.

RESULTS -
Table 1: Distribution of subjects is according to demographic variables.(N=75)

Sr. no.	Demographic variable	Frequency	%
1	**Age in years.**		
	40-50	19	25.33%
	51-60	31	41.33%
	61-70	16	21.33%
	71-80	06	8%
	Above 81	03	4%
2	**Sex**		
	Male	25	33.33%
	female	50	66.67%
3	**Education**		
	Illiterate	22	29.33%
	Primary education	26	34.67%
	Secondary education	22	29.33%
	Graduate	05	6.67%
	Higher graduate	0	0
4	**Religion**		
	Hindu	47	62.67%
	Muslim	13	17.33%
	Boudh	11	14.67%
	Christian	0	0
	other	4	5.33%
5	**Dietary habits**		
	Vegetarian	22	29.33%
	Mix diet	53	70.67%
6	**Monthly family income in rupees**		
	1, 000 - 2,000.	3	4%
	2,001 – 3,000.	4	5.33%
	3,001 – 4,000	17	22.66%
	> 4,001	51	68%
9	**Occupation**		
	Service	12	16%
	Farmer	21	28%
	Business	11	14.67%
	House work	31	41.33%
10	**Hereditary History**		
	Yes	28	37.33%
	No	47	62.67%

10	Type of family		
	Joint	45	60%
	Nuclear	28	37.33%
	Extended	02	2.66%
11	Information through		
	T. V.	57	76%
	News paper	26	34.66%
	Friends	19	25.33%
	Health worker	7	9.33%
12	No. Of Cases		
	DM	22	29.33%
	HTN	41	54.66%
	DM with HTN	12	16%

A total 400 families were screened from three different areas i.e. 150 families from Kale village, 150 families from Vadgaon village & 100 families from Karad city for the study, out of that in 75 families having client on the treatment of DM or HTN or DM with HTN.

Table 1

Shows that the age group of the participants from 40 to above 80, out of this maximum 31 (41.33%) participants are from age group of 51-60 years, 19 (25.33%) of the participants from 40-50 years age group. 50 (66.67%) of the participants are female & 25 (33.33%) are male, 26 (34.67%) having primary education were as 22(29.33%) are illiterate & same proportion having secondary education. 47 (62.67%) participants are from Hindu religion & 53 (70.67%) are taking mixed type of diet. Maximum respondents 51(68%) monthly family income is more than 4000. Occupation of maximum respondents is 31(41.33%) house work & 21(28%) farmer. 28(37.33%) having hereditary history about their illness were as 47(62.67%) don't have hereditary history about their illness. maximum respondents 45(60%) are from joint family. Maximum respondents 57(76%) are getting information through television & very few 7(9.33%) are getting from health workers. Maximum respondents are having history of HTN 41(54.66%) were as 12 (16%) having history of both HTN & DM.

Table 2: Association between non communicable (DM & HTN) cases with selected socio-demographic variables.

Variables	DM	HTN	BOTH(DM & HTN)	Chi square	P value	Degree of freedom
Age						
40-50year	04	10	05			
51-60year	11	17	03			
61-70year	05	10	01	10.048	0.2616	08
71-80 year	02	03	01			
Above 81years	0	01	02			
Sex						
Male	08	13	04	0.1397	0.9325	02
female	14	28	08			
Education						
Illiterate	07	11	04			
Primary	06	16	04			
Secondary	07	12	03	1.847	0.9332	06
Graduate	02	02	01			
Post Graduate	0	0	0			
Religion						
Hindu	17	22	08			
Muslim	04	07	02	6.867	0.3333	06
Boudh	01	08	02			
Other	0	04	0			
Dietary habits						
Vegetarian	08		03	0.7573	0.6848	02
Mix diet	14		09			
Occupation						
Service	03					
Farmer	07			1.847	0.9332	06
Business	04					
House work	08					
Hereditary History						
Yes	09		04	0.2121	0.8994	02
No	13		08			

Table 2 reveals that there was no statistically significant association between non communicable (DM & HTN) cases with selected socio-demographic variables.

DISCUSSION

Accurate information on the prevalence of major public-health importance is required to have informed health policy decision. Therefore, it is crucial to document prevalence estimations for the major non-communicable diseases for the purposes of research and interventions.

In present study Maximum respondents are having history of HTN 41(54.66%) & 22(29.33%) respondents are having history of DM were as 12 (16%) having history of both HTN & DM. It means out of every five persons of DM or HTN was found to be HTN & DM .Similar findings found in a study conducted by sonia hammami et al. on prevalence of diabetes mellitus among non institutionalized elderly in monastir city about prevalence of DM was 27.4%[7]. A study conducted by Mark David Joshi et al. reported Prevalence of hypertension was 22.8%which is lower than my study[8]. A study conducted by *Ayah R* et al. *reported* that One out of every seven hypertensive was found to be diabetic with an almost five fold likelihood of a hypertensive being diabetic[9].

In this study the highest proportion 31 (41.33%) of participants are in age group of 51-60 years, 19 (25.33%) of the participants from 40-50 years age group. 50 (66.67%) of the participants are female & 25 (33.33%) are male. comparable findings noted in A study conducted by SS Reddy, GR Prabhu found highest Prevalence of HTN in the 50-60 years group (38.0%). In males, the proportion of hypertension was slightly higher (9.6%) compared to that in females (7.6%) but the difference was however not statistically significant[10].contrace finding were found in study conducted by C. Muninarayana et.al. 22 (71%) males and nine (29%) are females. Also they have reported Higher prevalence of hypertension was found in business occupation (15.2%), family history of hypertension (23.3%), non-vegetarian diet (8.8%)[11] were as in present study found that Occupation of maximum respondents is 31(41.33%) house work & 21(28%) farmer & 28(37.33%) having hereditary history about their illness & 53 (70.67%) are taking mixed type of diet.

Higher prevalence of DM& HTN was found with higher educational level in both women and men 26 (34.67%) having primary education were as 22(29.33%) are illiterate & same proportion having secondary education but the difference was not significant, this is consistent with the findings of Sonia Hammami et al[1] but the contrast findings noted in the study conducted by Antonio D Evaristo-Neto et.al, where the prevalence was higher in those with a lower educational level[12].

Conclusion

Out of 400 families' 75 families found   client of   DM or HTN or both. It means every 4th or 5th family we got a client of DM or HTN or both. Very few respondents have got information about DM OR HTN through health workers. To meet the twin challenge of DM and HTN in developing countries, PHCs will have to be strengthened with a concerted and multipronged effort to provide promotive, preventive, curative, and rehabilitative services.

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