



ASSESSMENT OF KNOWLEDGE, ATTITUDE AND MEDICATION TAKING BEHAVIOUR OF HYPERTENSIVE PATIENTS IN A TERTIARY CARE TEACHING HOSPITAL

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Article Received on
07 April 2017,

Revised on 27 April 2017,
Accepted on 17 May 2017,

DOI: 10.20959/wjpps20176-9246

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ABSTRACT

Hypertension continues to be one of the most significant risk factors for the development of stroke, congestive heart failure, coronary heart failure, coronary heart disease and renal disease. The appropriate treatment of hypertension has consistently proven to reduce both the morbidity and mortality associated with cardiovascular disease. Awareness regarding symptoms, treatment, lifestyle modifications and complications among hypertensive patients is a prerequisite for designing strategies for its effective control and prevention. The aim of the study was to investigate the knowledge, attitudes and medication taking behaviour of hypertensive patients. A hospital based cross-

sectional study was carried out in a tertiary care teaching hospital. Almost 308 hypertensive patients answered to a pretested questionnaire. In the study population 68.5% were males and 31.5% females. Most of the patients were illiterate(57.46%). Most of the patients were having moderate physical activities(39%) and were non vegetarians(72.07%). Majority of hypertensive patients(49.02%) were under the age group of 60-79. Almost 48.00% of patients were normal weight. Among the male patients, 31.80% were smokers and 26% were alcoholic. About 64.28% were ready to make lifestyle modifications to prevent hypertension. Only 45.78% were aware of the symptoms of hypertension and 38.63% knew complications. About 61.36% of patients were found compliant towards the treatment regimen. Almost 28.59% of patients cited there reason for non compliance as they could not afford the cost of medicines. Nearly 20% of patients were prescribed with amlodipine and atenolol combination of drugs. The importance of clinical pharmacist and other health care professionals

involvement in monitoring of health problems, reporting possible drug related problems, measuring therapeutic compliance and counseling on lifestyle modification for hypertensive patient were realised.

KEYWORDS: Attitude, Adherence, Hypertension, Knowledge, Non compliance.

INTRODUCTION

Hypertension (HTN) is an important public health challenge. Today it is considered as one of the most common chronic diseases in rural, urban and semi urban areas of the world that needs continuous monitoring and treatment throughout the life. HTN is clinically defined as “blood pressure of 140/90 mmHg or more, based on at least two different readings at separate settings”.^[1]

Hypertension is a frequent condition and is control through both non pharmacological lifestyle factors and pharmacological treatment. Pharmacological treatment for hypertension has been shown to be effective in decreasing BP and subsequently cardiovascular events, although BP levels achieved in treated patients may still be considerably higher than those in truly normotensive persons. Lifestyle measures for lowering BP include reduced alcohol intake, reduced sodium chloride intake, increased physical activity and control of overweight. Lifestyle interventions also have the potential to reduce the need for or the amount of medications in hypertensive and prevent high BP from developing in non-hypertensive. Several models have been proposed to account for health behaviors and sustained behavioural changes. Although they may differ in content and perspective, models for behavior change stress the importance of evaluating the perceptions, attitudes, beliefs and outcome expectations of individuals as a crucial means to understand observed behaviors and to guide behavioral change. A proper assessment and understanding of KAP factors is particularly helpful in the area of chronic conditions such as hypertension, for which prevention and control necessitate a lifelong adoption of healthy lifestyles.^[2]

One of the main causes of the negative effects caused by Systemic Arterial Hypertension (SAH) is the non-adherence to hypertensive treatment, as well as the late diagnosis and the prolonged asymptomatic course of the disease, which resulted in the development of studies in the area. Estimates point out that the degree of the non-adherence to the treatments of Chronic Diseases (CD) worldwide ranges from 25% to 50%.^[3]

Considering the high morbidity due to hypertension and if a patient has knowledge about the disease, patient will be more careful about the management and a better control can be achieved. This study was conducted to know about the knowledge, attitude and medication taking behaviour of hypertensive patients who were admitted in a tertiary care teaching hospital.

MATERIALS AND METHODS

The study was carried out in the General Medicine department of Navodaya Medical College & RC, Raichur which is 1000 bedded multi-specialty tertiary care teaching hospital. The study was approved by Institutional Ethical Committee by issuing ethical clearance certificate. The data was collected using a questionnaire. Questionnaire designed was a hybrid of the WHO STEPS, SF-36, KHDC Questionnaire and Uday Pareek scale for some additional questions to address the peculiarities in the locale of the study. The Questionnaire included social demographics of the patients, history of vaccination and drug use, general high blood pressure information, diagnosis of hypertension, knowledge about hypertension, attitude towards hypertension and its self-care including complications of hypertension, medication used by individuals for hypertension and adherence to it. A participant consent form was prepared and translated to local languages like Telugu, Hindi, Kannada and Urdu, the most common languages spoken in the study area, a detail explanation of the study was also provided to the participants before their consent was obtained.

The adequately filled questionnaires were evaluated as per the study objectives. The various parameters such as sex, distribution, professional status, educational qualifications were analysed. The data was analysed using descriptive statistical analysis.

RESULTS AND DISCUSSION

A total of 308 patients participated in the study. Out of the total 308 patients, 68.5% of the respondents were male and 31.5% were female as shown in fig. 1. These findings are similar to the findings of other similar studies where most of the study population were males.^[4-6]

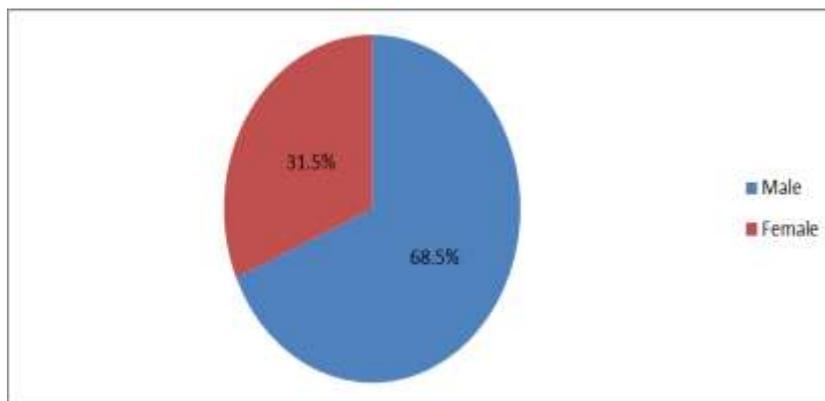


Fig. 1: Gender Distributions of hypertensive patients (n=308)

Majority of hypertensive patients(49.02%) were under the age group of 60-79 followed by 40-59 years (37.66%), more than 80 years of age(9.41%) and 18-39 years of age(3.89%) as shown in **Fig. 2**.

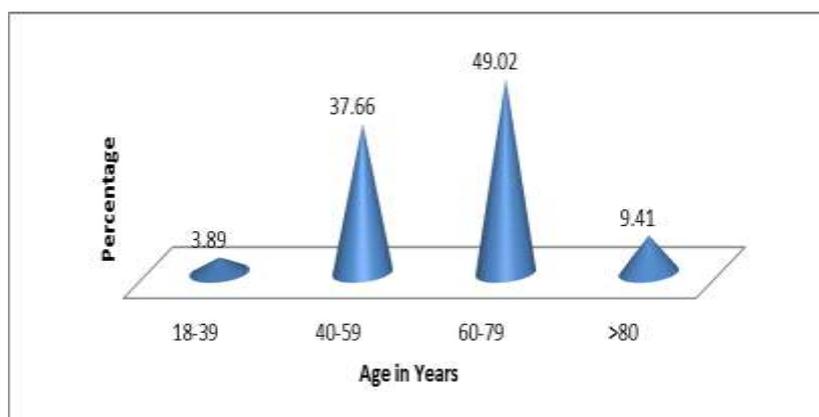


Fig. 2: Age Distribution of hypertensive patients (n=308)

Almost 48.00% of patients were having normal weight, 36% were overweight and 16% were underweight (**Fig. 3**). Similar results were found in the study conducted by Malik A et al.^[7]

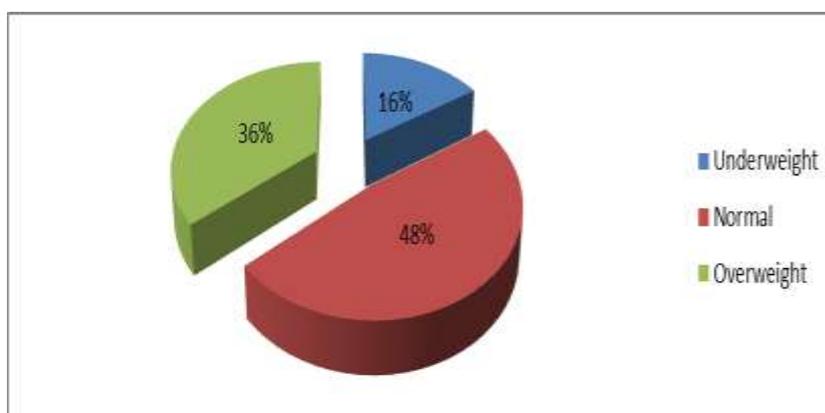


Fig. 3: BMI of study population (n=308)

Most of the patients were illiterate(57.46%), 24.02% patients with primary, 10.38% with secondary education and 3.89% were graduates as shown in **Table 1**.

Table 1: Literacy rate of hypertensive patients (n=308)

Educational Level	Number (%)
Primary	74 (24.02)
Secondary	32 (10.38)
Graduate	12 (3.89)
Illiterate	177 (57.46)
Intermediate	13 (4.22)

As depicted in **Fig. 4**, most of the patients were having moderate level of physical activities (39%), 34% with heavy physical activities whereas 27% were having sedentary lifestyle.

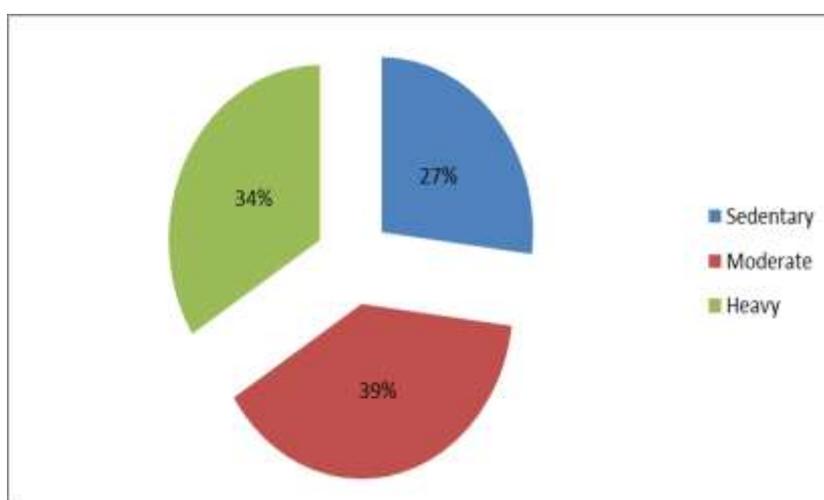


Fig. 4: Physical activities in hypertensive patients (n=308)

Majority of patients were non vegetarians that is 72.07% as shown in **Fig. 5**.

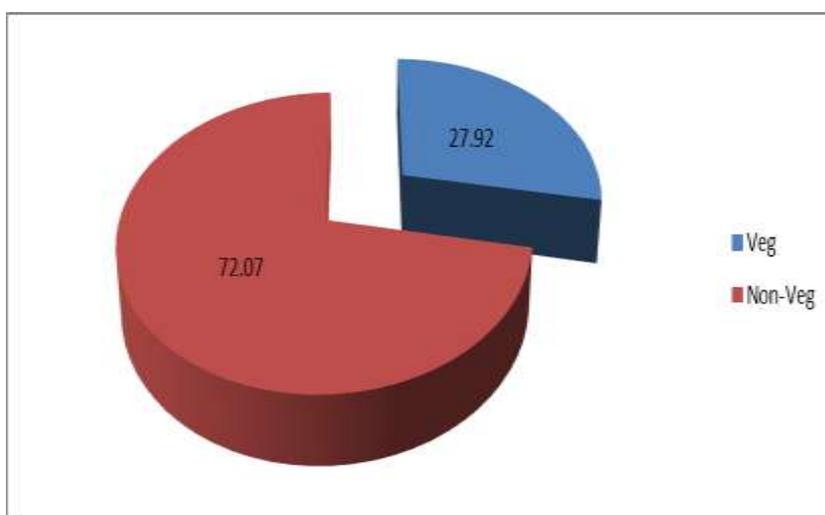


Fig. 5: Dietary habits of hypertensive patients (n=308)

As shown in **Table 2**, 98 patients (31.8%) of male patients were smokers and 80 patients (26.00%) were alcoholic. About 130 patients(42.20%) had a habit of consuming added salts.

Table 2: Lifestyle of study population (n=308)

Lifestyle Habits	Number (%)
Smoking*	98 (31.80)
Alcohol*	(26)
Added salt	(42.20)

*In male Subjects

Patients knowledge about hypertension were assessed and are reported in **Table 3a and 3b**. Almost 273(88.64%) patients knew that they are hypertensive whereas 35 patients (11.36%) were unaware. About 50.69% of patients maintained Blood pressure of reading of 140/90 throughout the year. BP measurement at home was performed for 32.79% of patients, but 2.59% of patients were unaware of such self screening methods. Only 45.78% were aware of the symptoms of hypertension and 38.63% knew complications as shown in **table 3b**. About 41.61% of patients were having satisfactory knowledge regarding definition, normal blood pressure levels, signs and symptoms of hypertension, and risk factors of hypertension whereas majority of patients (58.39) were having unsatisfactory knowledge. Also 48.15% of patients had good attitude towards hypertension. Similar findings were seen in study conducted by Ahmad S et al.^[8]

Attitude of patients towards hypertension was measured in **Table 3a**. About 74.02% of patients thought that hypertension is unpreventable and 59.74% opined that dietary approaches to prevent hypertension would do no good. About 64.28% were ready to make lifestyle modifications to prevent hypertension.

About 61.36% of patients were found compliant towards the treatment regimen as shown in **table 3b**. Nearly 20% of patients were prescribed with amlodipine and atenolol combination of drugs.

Table 3a: Hypertension knowledge (N=308)

Category	Yes	No	Don't Know
High Blood pressure Information			
Do you have blood pressure?	273 (88.64%)	-	35 (11.36%)
Blood pressure of reading of 140/90 was maintained throughout the year?	156 (50.69%)	49 (15.94%)	103 (33.46%)
BP measurement at home	101 (32.79%)	199 (64.62%)	08 (2.59)
High cholesterol Information	55 (17.85%)	109 (35.39%)	144 (46.76%)
Knowledge about Hypertension			
Elevated BP is called hypertension	233 (75.64%)	45 (14.61%)	30 (9.74%)
Normal values of BP Known	156 (50.64%)	-	152 (49.35%)
Headache, dizziness, tiredness are the symptoms of hypertension	141 (45.78%)	89 (28.89%)	78 (25.33%)
Hypertension a treatable condition	16 (5.19%)	236 (76.62%)	56 (18.18%)
Medication alone can control Hypertension	147 (47.72%)	115 (37.33%)	46 (14.93%)
Being overweight increases risk for hypertension?	85 (27.59%)	108 (35.06%)	115 (37.33%)

Attitude towards Hypertension			
Do you think high blood pressure is preventable?	63 (20.45%)	228 (74.02%)	17 (5.51%)
Dietary approaches to reduce hypertension do no good.	184 (59.74%)	82 (26.62%)	42 (13.63%)
Would you change your lifestyle to if needed to prevent hypertension?	198 (64.28%)	23 (7.47%)	87 (28.24%)

Table 3b: Hypertension knowledge (N=308)

Self-care about hypertension			
Are you aware of any complication of hypertension?	119 (38.63%)	121 (39.28%)	68 (22.07%)
Do you know the complication of hypertension?	57 (18.50%)	220 (71.42%)	31 (10.06%)
Have you been told that stroke is related to hypertension?	35 (11.36%)	90 (29.22%)	183 (59.41%)
Medication & Adherence			
Any medications prescribed to lower high blood pressure	281 (91.23%)	17 (5.51%)	10 (3.24%)
Compliance to prescribed medicine	189 (61.36%)	105 (34.09%)	10 (3.24%)
Use of non-prescription medicines &	112	129	67 (21.75%)

Supplements	(36.36%)	(41.88%)	
Any problems taking medications	84 (27.27%)	193 (62.66%)	31 (10.64%)

As shown in **Fig. 6**, majority of patients that is 75% had awareness about hypertension whereas 25% were unaware of this condition.

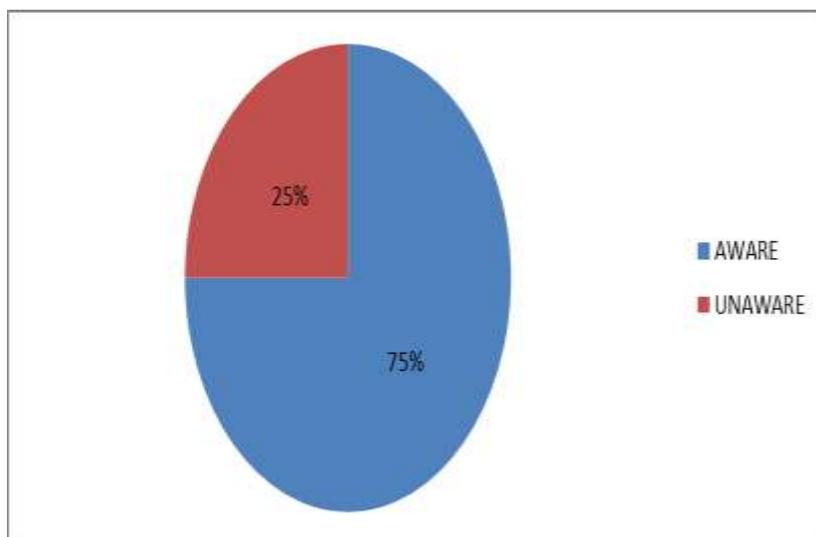


Fig 6: Awareness of Hypertension

As shown in **Fig. 7** majority of patients (28.59%) opined the main reason for non compliance as they could not afford the cost of medicines followed by medication is not easily available(24.88). Also 3.22% of patients preferred for alternative medicine.

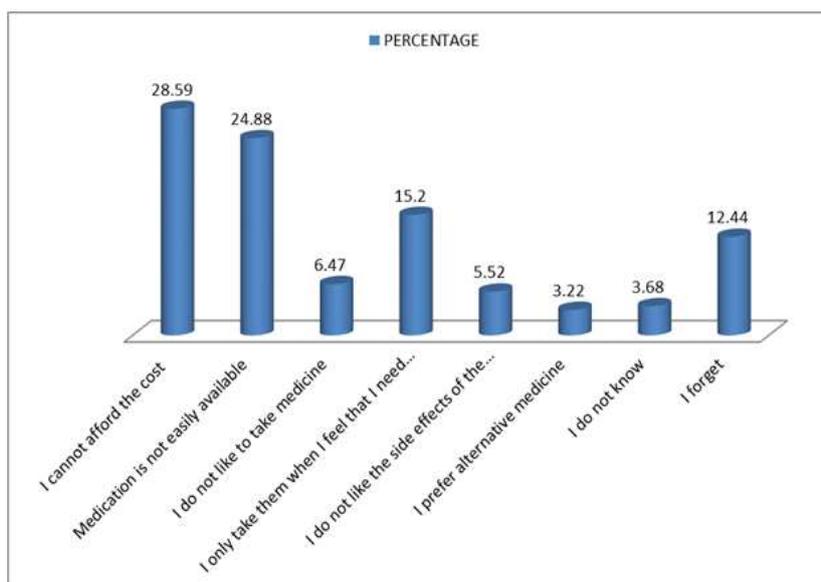


Fig. 7: Reasons for Non-Compliance in hypertensive patients (n=217)

As depicted in **Fig. 8**, among 278 patients (remaining people do not know what drugs they are taking) nearly 20% of patients were under the combination therapy of Amlodipine and Atenolol, 16% under Atenolol monotherapy followed by Amlodipine therapy. Least patients that is 2% of patients were under combination therapy of Telmisartan and Hydrochlorothiazide.

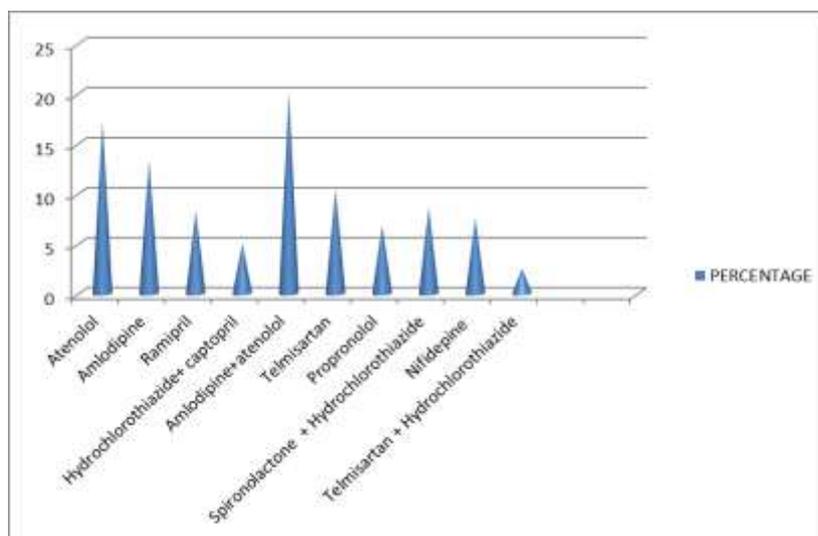


Fig 8: List of medications prescribed for management of hypertension (n=278*)

The difference in the findings among different studies may be due to the differences in the literacy of the study patients, the training received by them and availability of information on hypertension and diabetes.^[9]

We conducted this descriptive survey to understand the current status of HTN knowledge, awareness, and attitudes in a group of hypertensive patients. Our results suggest that patients are knowledgeable about HTN in general, but are less knowledgeable about specific factors related to hypertension. Similar findings were seen in study conducted by Oliveria SA et al.

CONCLUSION

This study projects the need of increasing disease awareness, encouraging regular physical activity, abstaining from smoking and alcohol intake of fibre and potassium and promotion of literacy and screening programs in those having family history of hypertension may go a long way in preventing the hypertension in this community. We also realized the importance of clinical pharmacist and other health care involvement in monitoring of patient's health problems, reporting possible drug related problems, measuring therapeutic compliance and counseling on lifestyle modifications in rural.

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