

**STUDY OF PATIENTS KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS
HYPERTENSION IN NORTH KARNATAKA, RAICHUR**Ashok Mahendraker¹, Rahul Sabbu^{2*}, Amal Thomas P.³, Richa Lucy³, Pavani V.³, Doddayya H.⁴¹Medical Superintendent, Navodaya Medical College Hospital and Research Centre, Raichur 584103, Karnataka, India.²Lecturer, Department of Pharmacy Practice, NET Pharmacy college, Raichur-584103 Karnataka, India.³Pharm.D Internship students, Department of Pharmacy Practice, NET Pharmacy college, Raichur-584103 Karnataka, India.⁴Principal and Professor, NET Pharmacy College, Raichur-584103 Karnataka, India.***Corresponding Author: Dr. Rahul Sabbu., Pharm.D**

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ABSTRACT

Background: Hypertension is a silent killer disease worldwide and proper assessment of Knowledge, Attitude and Practice (KAP) factors are helpful in its management. Our aim was to assess the knowledge, attitude and practice among the hypertensive patients. **Materials and Methods:** A prospective observational study was conducted among hypertensive patients from October 2018- March 2019 which was approved by Institutional ethics committee at NMCH & RC, Raichur. 90 hypertensive patients were enrolled in the study. Suitably designed validated KAP questionnaire was used to evaluate the baseline KAP score. Data entry and statistical analysis were performed using the Microsoft Excel and SPSS windows version 16.0 software. Independent sample t-test were used. **Results:** The mean age of the participants was 54.86 ± 9.95 . Very few patients 11 (12.20%) were aware about the complications of hypertension. Only 28 (31.10 %) respondents knew the benefits of exercise. Only 31 (34.40%) patients were aware that obesity is associated with hypertension. The patients had a positive attitude towards reduction of salt intake 71 (78.80%), regular medication 69 (76.30%) and regular visit to physician 67 (75.30%). Less number of patients were going for regular health check up's and medical test including urine examination 11 (12.20%), lipid profile 14 (15.50%) and blood glucose level 26 (28.80%). **Conclusion:** Patients had good score towards attitude and poor score towards knowledge and practice towards hypertension. Therefore, proper education and awareness programs should be developed according to the need of the society which in turn would improve the knowledge of general population and will definitely bring about a positive change in attitude and practices.

KEYWORDS: Questionnaire, Knowledge, Attitude, Practice, Morbidity, Mortality.**INTRODUCTION**

Hypertension is considered as a silent killer disease worldwide as they progressively and permanently damage the organs before occurrence of any diagnosable external presentation. They are major risk factor for many other diseases like cardiovascular diseases, stroke, renal diseases and many other. The emergence of hypertension as a public health problem is strongly related to the aging of the population, urbanization and socio-economic changes favouring sedentary lifestyle, obesity, alcohol consumption, smoking and salt intake, among others.^[1] Approximately 26% of the adult population in the world have been affected by hypertension. This number is estimated to increase to 29% by 2025. In a survey conducted in South India among 26,000 adults, the prevalence of hypertension was found to be 20%. It was also observed that the prevalence was comparatively higher in men (23%) than in women (17%). The increasing prevalence of hypertension is mainly due to lack of understanding

about the disease, insufficient patient education programs, low economic status etc. which might even lead to medication non-adherence. Uncontrolled hypertension often causes issues like higher morbidity and increased health care costs. This calls for urgent prevention and control measures for hypertension.^[2]

Patient decisions to follow the recommended treatment are likely to be influenced by their beliefs about medicines as well as their beliefs about the illness that the medication is intended to treat or prevent. It has become a matter of general agreement that medical knowledge alone cannot, and indeed does not, influence people's health. An equally important partner is the state of basic education and public knowledge about the disease that influence health and therapeutic outcome and finally helps the patient to take the advice seriously rendered by a doctor.^[3] Necessary information about the treatment and other aspects can be understood only when the patients are educated well. Pharmacists can play an

important role in achieving positive therapeutic outcomes by motivating patients to adhere to the treatment.

A proper assessment and understanding of KAP (Knowledge, Attitude, Practice) factors are particularly helpful in the area of chronic condition such as hypertension for which prevention and control necessitate a lifelong adoption of healthy lifestyles.^[4] Adequate knowledge about a disease has a potential impact on the patients' attitude and practice in the management of their illnesses.

Understanding the level of Knowledge, Attitude and Practice will enable a more efficient process of awareness creation as it will allow the program to be tailored more appropriately to the needs of the patients.^[5] However, a little information on the assessment of KAP's is available from developing countries where hypertension have lately been recognized as a major health problem. The knowledge and attitudes of the patients have an impact on the management of the disease condition which helps in improving the medication adherence, morbidity and mortality of the patients. Hence, we examined KAP for hypertension in adults to help improve their condition and also to control the complications.

MATERIALS AND METHODS

Study design and setting

The prospective observational study was conducted for 6 months, in the inpatient of general medicine ward of Navodaya Medical College Hospital and Research

Centre, Raichur. Data was collected by using specially designed data entry form. The following information was collected for each patient demographics, smoking status, alcoholic habits. The data on the knowledge, attitude and practice of each patient were collected by using the KAP Questionnaire through an interview method.

Subjects

A prospective observational study was conducted among 90 hypertensive patients admitted in general medicine department with or without co-morbidities.

Inclusion criteria

Inclusion criteria satisfies the hypertensive patients with or without comorbid conditions aged above 20 years admitted in the general medicine ward and the patients who give verbal consent to participate in the study.

Exclusion criteria

All the out patients diagnosed with hypertension, Pediatric patients, Pregnant and lactating women were excluded from the study

Ethical consideration

The ethical approval to conduct the study was obtained from the Ethical Review Committee of Navodaya Medical College Hospital and Research Centre.

Statistical analysis: The collected data was expressed in percentage and statistical analysis were performed using Independent sample t-test for comparison between good score and poor score in knowledge, attitude and practice of hypertension.

RESULTS

Table 1: Socio demographic parameters (n=90).

Socio demographic parameters	
Age	Percentage
0 to 40	7.8%
40 to 50	28.9%
50 to 60	31.1%
60 to 70	26.7%
70 to 80	5.6%
Gender	
Male	46%
Female	54%
Smoking history	
Smokers	34.4%
Non-smokers	65.6%
Educational status	
Literate	74.4%
Illiterate	25.6%
Alcoholic history	
Alcoholics	42.2%
Non alcoholics	57.78%
Previous history of hypertension (years)	
<1	17.2%
1-5	50%
5-10	22.4%
>10	10.3%

Table 1: Describes the socio-demographic characteristics of the participants. Out of 90 study population a greater number of patients were found in the age group of 50-60 years {28(31.1%)} followed by 40-50 years {26(28.9%)}, 60-70 years {24(26.7%)}, 30-40 years {7(7.8%)} and 70-80 years {5(5.6%)}. Mean age of participants was 54.8 years (SD=9.9). In the study population, female patients were more 47(54%) than the male patients 41(46%) and a greater number of patients were illiterate 67(74%) followed by literate 23(25.6%).

Among 90 hypertensive patients most of them were non-smokers, 59(65.56%) than smokers, 31(34%). It was also observed that 38(42.22%) were alcoholics and 52(57.78%) were non alcoholics. While considering the use of tobacco, it was found that 55 patients (61.17%) were consuming tobacco. Among 90 patients, 58(64%) had a previous history of hypertension and most of them had a history of hypertension for a period of 1 to 5 years 29(50%) followed by 5 to 10 years 13(22.41%).

Table 2: Statistical significant score of KAP in hypertensive patient (n=90).

		KAP in hypertensive patient				95% Confidence Interval of the Difference		t Value	P Value
		N	Mean	Std. Deviation	Lower				
Knowledge	Good Score	34	6.59	1.05	4.53678	5.60397	18.884	<0.001	
	Poor Score	56	1.52	1.33					
Attitude	Good Score	63	4.10	0.69	2.45592	3.06789	17.938	<0.001	
	Poor Score	27	1.33	0.62					
Practice	Good Score	27	4.37	1.04	2.42871	3.16917	15.024	<0.001	
	Poor Score	63	1.57	0.69					

Table 2: describes the Independent sample t-test for comparison between good score and poor score in knowledge, attitude and practice of hypertension. Statistically significant differences between the good

score and poor score were found for knowledge, attitude and practice of participants towards hypertension (P value <0.001).

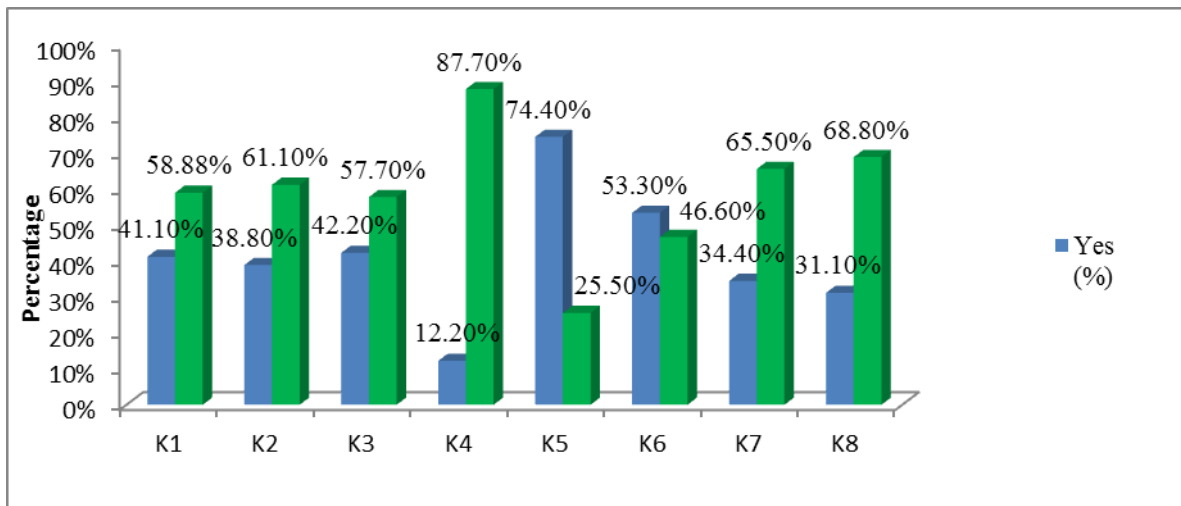


Figure 1: Knowledge level of patients regarding Hypertension. (n=90)

A high proportion of the patients showed poor knowledge on hypertension as shown in the Figure 1. Very few patients 11(12.20%) were aware about the complications of hypertension. Only 28(31.10 %) respondents knew the benefits of exercise. Only 31(34.40%) patients were aware that obesity is associated with hypertension.

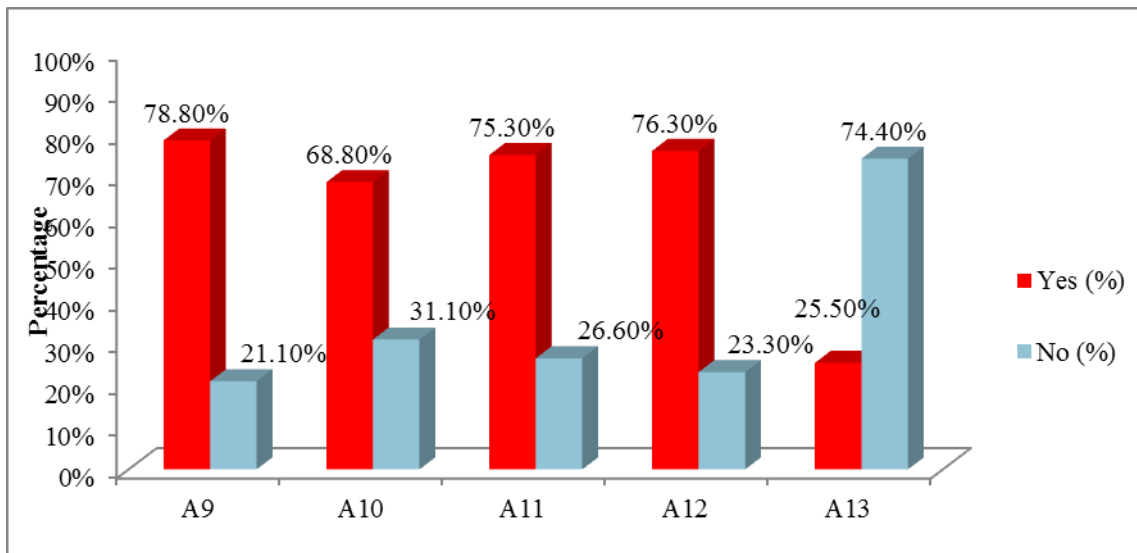


Figure 2: Attitude level of patients regarding Hypertension. (n=90)

Figure 2 shows that majority of the patients had a good attitude towards hypertension. The patients had a positive attitude towards reduction of salt intake

71(78.80%), regular medication 69(76.30%) and regular visit to physician 67(75.30%).

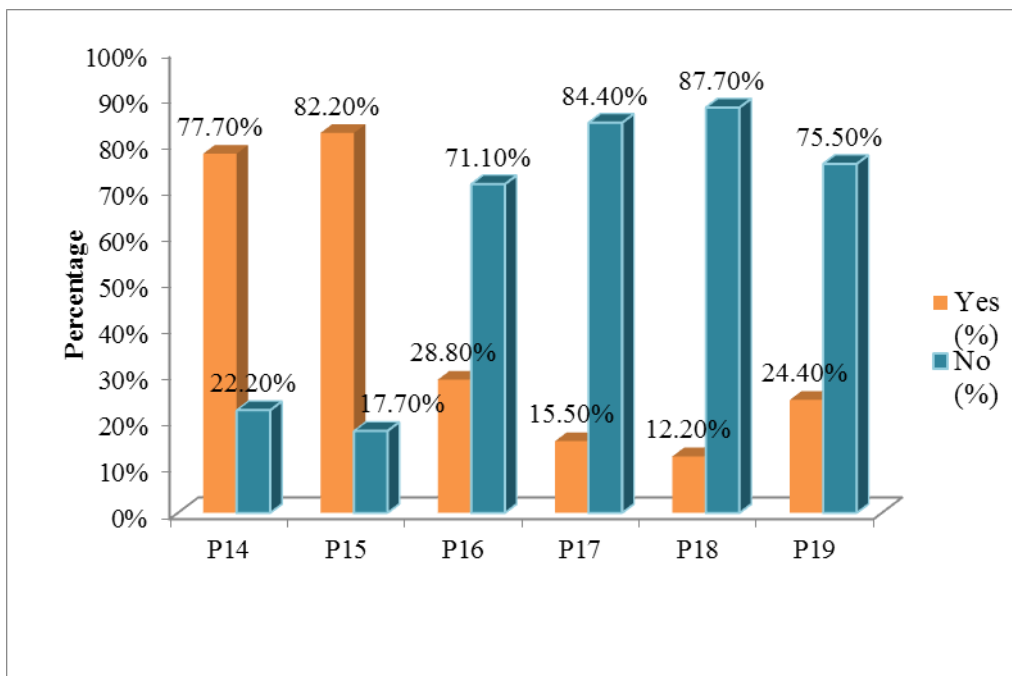


Figure 3: Practice level of patients regarding Hypertension. (n=90)

From Figure 3, it can be seen that the response to practice questions were poor. Less number of patients were going for regular health check up's and medical test including urine examination 11 (12.20%), lipid profile 14 (15.50%) and blood glucose level 26(28.80%).

DISCUSSION

A prospective observational study was carried out in 90 hypertensive patients. The patients were categorized on the basis of age, gender, educational status, social history and history of hypertension.

The mean age of hypertensive patients is 54.8 years (SD=9.9) where most of the respondents were aged 31-40 years. From these results it is clearly seen that hypertension was more in elderly populations. The ability of the body to process dietary salt decreases with age along with reduced elasticity of the blood vessel could also be a reason for high blood pressure. It can also be caused by poor diet or lack of exercise in elderly people.

In this study majority of the patients were females 47 (54 the data suggests that female patients are more suffered

by hypertension than that of males. On the contrary, studies show that men are more prone to hypertension than women especially below the age of 50. After the age of 50, women are at a higher risk for the disease because of menopause. The causes among men for the development of hypertension are stress, alcohol intake, tobacco, diet, etc. This condition is caused in women due to obesity, menopause, contraceptive pills, lack of exercise, etc.

Most of the patients enrolled in the study are illiterates and it accounts for 67(74%) and remaining were 23(26%) literates. Researchers have shown that health literacy is a stronger predictor of health status than socioeconomic status, age or ethnic background. Education is an indicator of knowledge that the patient has regarding the disease conditions. The overall percentage of educated patients was found to be low in the present study and has been linked to poor health outcomes.

In our study, social habits like smoking, alcohol consumption and tobacco use were considered as these are the major risk factor for developing hypertension. Out of the total study population 38 (42.22%) were alcoholics, 35 (38.88%) were tobacco users and 31 (34.44%) were smokers. Alcohol can have a serious long-term effect on blood pressure and studies have shown that heavy drinking can lead to increased risk of hypertension. Smoking increases the risk of vascular complications in people who already have hypertension. The nicotine in cigarette smoke raises the blood pressure and heart rate, narrows arteries and hardens their walls, and makes the blood more likely to clot. It stresses the heart and sets up for a heart attack or stroke.

In the total study population, history of hypertension was taken into consideration in which 58(64%) patients were previously diagnosed with hypertension and rest 32(36%) patients were newly diagnosed. This study showed that patients with hypertension had significant knowledge about the disease and its risk factors. This may be due to the knowledge provided by the health care professionals during their previous visit.

Among the previously diagnosed hypertensive patients most of them have hypertension for a period of last 1 to 5 years (50%).

Knowledge, Attitude and Practice of patients regarding Hypertension

Knowledge level of patients regarding Hypertension

Among 90 patients, only 37 patients (41.10%) knew that hypertension is a disease and only 35 patients (38.80%) knew the normal level of BP. About 38 patients (42.20%) knew the symptoms of hypertension. Only 11 patients (12.20%) knew the complications of hypertension and 67 patients (47.40%) recognized that diet rich in salt causes hypertension. About 48 patients (53.30%) knew that smoking and alcohol consumption is

one of the risk factors for developing hypertension. Only 31 patients (34.40%) recognized that obesity is associated with hypertension. Very few patients (31.10%) were aware that exercise has a beneficial role in hypertension. This data showed that the patients have poor knowledge regarding hypertension. This may be due to the poor educational status of the participants.

Attitude level of patients regarding Hypertension

Majority of the patients 71(78.80%) considered that salt intake should be reduced to prevent hypertension. Around 62 patients (68.80%) thought that regular checking of blood pressure is important. Most of the patients (75.30%) have an attitude that regular follow up with the physician is important. Around 76.30% of the participants have an attitude that regular medication is important in hypertension. 23 patients (25.50%) have an attitude that regular exercise is not important for healthy life. This data suggest that patients have better attitude towards hypertension except few.

Here we observed that participants had a positive attitude towards hypertension, i.e., they were well aware about the need of regular medication and reduction in salt intake.

Practice level of patients regarding Hypertension

Majority of the patients (77.70%) knew that when the last BP check-up has done and 74 patients (82.20%) remembered their last visit to the physician. Few patients (28.80%) were aware about their last blood sugar level check-up. About 14 patients (15.50%) knew about their last lipid level check-up, a very few patients (12.20%) had a fair idea about their urine examination. Few patients (24.40%) also had a habit of doing exercises. This data showed that the practice of the patients towards Hypertension was not very impressive.

From the results of the practice questions, it was found that the participants have poor knowledge regarding the importance of frequent health check-ups. It may be due to lack of importance and awareness for need of it.

CONCLUSION

The burden of non-communicable disease: hypertension is increasing in developing countries and is a significant public health problem in both urban and rural areas. Based on the findings we observed that patients had good score towards attitude and poor score towards knowledge and practice among hypertension. Therefore, proper education and awareness programs should be developed according to the need of the society which in turn would improve the knowledge of general population and will definitely bring about a positive change in attitude and practices. Our study suggests that, patient counselling by the clinical pharmacist can play a vital role in improving patients knowledge, attitude and practice towards disease management which will improve the KAP scores.

ABBREVIATIONS

BP: Blood pressure, **KAP:** Knowledge Attitude and Practice, **n:** number of people.

CONFLICT OF INTEREST

No conflict of interest.

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