

Knowledge regarding management of hypertension among hypertensive patients: A descriptive study

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Abstract

Hypertension is an important medical and public health issue. The risk of myocardial infarction, stroke, heart failure and renal disease associated with blood pressure has shown a proportional increase and with age the prevalence of hypertension increases. As a part of aim, we tried to analyse importance of primary health care (PHC) for the management of cardiovascular and renal diseases. About 100 hypertensive patients were selected with the knowledge of non-experimental descriptive design at selected hospitals of Mangaluru, Karnataka, India. Data were collected having the information of demography and related questionnaire. Feasibility was accessed based on initial pilot study by using SPSS version 23 software and percentage of knowledge score was 37.03. The results showed significant association between knowledge with the selected demographic variables such as age ($\chi^2=15.040$), gender ($\chi^2=5.760$), religion ($\chi^2=16.580$), educational status ($\chi^2=55.280$), occupation ($\chi^2=16.240$), monthly income ($\chi^2=47.600$), type of family ($\chi^2=47.060$), area of residence ($\chi^2=21.160$), dietary pattern ($\chi^2=14.780$), habits ($\chi^2=11.040$) and frequency of eating unhealthy junk food or having outside food ($\chi^2=40.160$). The findings of the study revealed that the hypertensive patients had an average level of knowledge regarding control of hypertension through proper diet and there is a need to educate them to prevent life-threatening complications.

Keywords: Blood Pressure, Hypertension, Hypertensive patients, Knowledge, Management.

Introduction

Hypertension is a medical condition in which force exerted by the blood against blood vessels is high.^{1,2} According to American Heart Association guidelines it is defined as 130/80 mm of Hg or higher.³ One in every four person has hypertension worldwide. More than half of coronary heart diseases and two third of both strokes and heart failure events are directly attributable to high blood pressure.⁴ Risk factors for high blood pressure are age, sex, race, family history, overweight, not being physically active, using tobacco, decreased potassium and certain chronic conditions such as kidney disease, diabetes, and sleep apnoea.^{5,6} In India; hypertension affects more than 100 million individuals. In India the awareness of hypertension is poor; the treatment and control rates are also low. According to the WHO data published in 2011, coronary heart disease is the top killer, while hypertension is in the top 20 causes of death in India. In the world 1 billion people are affected with hypertension, about 33% urban and 25% rural Indians are hypertensive.⁷

A higher prevalence was noted among males (51.6%) as compared to females (38.9%).⁸ Hypertension is a modifiable risk factor. Majority of patients with hypertension remain asymptomatic and is often referred to as a silent killer. The number of people living with hypertension is predicted to be 1.56 billion worldwide by the year 2025. It is needed to know how many have knowledge regarding hypertension and also necessary to give awareness about their disease.⁹

Materials and Methods

After obtaining permission from the institutional ethics committee (Protocol No 2017/058) and concerned authority

of selected hospitals of Mangaluru, the descriptive and quantitative research approach was pre-tested on a sample size of 10 hypertensive patients. To find feasibility, a sample study was conducted. The results showed average level of knowledge among the study samples.

In the present study, the demographic variables considered were gender, age, educational status, religion, occupation, type of family, monthly income area of residence, dietary pattern habits, and frequency of eating junk food or food from outside. Spearman's Brown Prophecy Formula was used to calculate reliability coefficient and it was found to be $r(10) = 0.8$ which was statistically significant. Non probability purposive sampling technique was used to select the samples. The knowledge questionnaire was given to seven experts to evaluate for its content validity. The data were collected from 100 hypertensive patients by using criteria of demography characteristics and structured questionnaire related to knowledge on the disease process, drug management and dietary approach. The questionnaires on the management of hypertension included were 26 multiple choice questions. The score has categorized on an arbitrary basis as shown in Table 1.

Results

Demographic Variables of the Hypertensive Patients

Data presented in Table 2 depict the distribution of subjects accordingly were gender, age, educational status, religion, occupation, type of family, monthly income area of residence, dietary pattern habits, and frequency of eating junk food or food from outside.

The findings of the study demonstrated that among 100 hypertensive patients, 41% were belonged to 41-45 years

age group, 62% were females, 51% were Muslims, 56% patients had a primary school education, Self-employed constituted 39% patients, 43% had a monthly income between Rs. 5001- 10000, 50% of the patients have belonged to a nuclear family, 73% of them were living in a rural area, 51% of them were consuming a mixed diet, 37% had the habit of tobacco chewing, and 44% of them were eating junk food or outside food occasionally.

Table 1: Knowledge score categorized on an arbitrary basis

Level of knowledge	Score	Percentage (%)
Poor	0-8	0-31
Average	9-17	32-65
Good	18-26	66-100

Distribution of subjects according to their knowledge score

Table 2: Demographic variables of the hypertensive patients

S. No.	Demographic data	Frequency(f)	Percentage(%)
1	Age (in years)		
	a) Below 35	15	15
	b) 36-40	21	21
	c) 41-45	41	41
2	Gender		
	a) Male	38	38
	b) Female	62	62
3	Religion		
	a) Christian	18	18
	b) Hindu	31	31
4	Educational status		
	a) No formal education	15	15
	b) Primary school	56	56
	c) Higher secondary	24	24
5	Occupation		
	a) Private	12	12
	b) Government	20	20
	c) Unemployed	29	29
6	Monthly income (in rupees)		
	a) 1000-5000	12	12
	b) 5001-10000	43	43
	c) 10001-15000	41	41
7	Type of family		
	a) Nuclear	50	50
	b) Joint	49	49
8	Area of residence		
	a) Rural	73	73
	b) Urban	27	27

Table 3 illustrates that the majority of the hypertensive patients (60%) had average knowledge, 40% had poor knowledge and no patients had good knowledge about the management of hypertension.

To evaluate association between level of knowledge and demographic variables

Null hypothesis were applied to evaluate association between level of knowledge and demographic variables.

Our study revealed an association between knowledge score and the selected demographic variables such as gender ($\chi^2=5.760$), age ($\chi^2=15.040$), religion ($\chi^2=16.580$), educational status ($\chi^2=55.280$), occupation ($\chi^2=16.240$), monthly income ($\chi^2=47.600$), type of family ($\chi^2=47.060$), area of residence ($\chi^2=21.160$), dietary pattern ($\chi^2=14.780$), habits ($\chi^2=11.040$) and frequency of eating junk food or food from outside ($\chi^2=40.160$). Hence rejected the null hypothesis for the same variables.

9	Dietary pattern a) Vegetarian b) Non vegetarian c) Mixed	21 28 51	21 28 51
10	Habits a) Smoking b) Alcoholism c) Tobacco chewing d) No bad habits	18 16 36 30	18 16 36 30
11	How frequently eat junk food or food from outside a) Daily b) Once in a week c) Once in a month d) Some times	4 16 36 44	4 16 36 44
n=100			

Table 3: Distribution of subjects according to their knowledge score

Level of knowledge	Frequency (f)	Percentage (%)
Poor	40	40
Average	60	60
Good	0	0
n=100		

Table 4: Mean, median, mean percentage and standard deviation of knowledge score

Max. score	Range	Mean	Median	Mean%	Standard Deviation
26	4-17	9.63	13.00	37.03	2.963
n=100					

Table 5: Association between knowledge and selected demographic variables

S. No	Demographic variables	Median<13	Median≥13	Chi-square(χ ²)	df	p-value
1	Age a)Below 35 b)36-40 c)41-45 d)46 and above	1 5 8 3	14 16 33 20	15.040	3	0.002*
2	Gender a)Male b)Female	6 11	32 51	5.760	1	0.016*
3	Religion a)Christian b)Hindu c)Muslim d)Others	2 4 11 0	16 27 40 0	16.580	3	0.000*
4	Educational status a)No formal education b)Primary school c)Higher secondary d)Degree and above	2 5 7 3	14 50 17 2	55.280	3	0.000*
5	Occupation a)Private b)Government c)Un employed d)Self employed	1 1 4 11	11 19 25 28	16.240	3	0.001*

6	Monthly income a)1000-5000 b)5001-10001 c)10001-15000 d)15001 and above	0 8 8 1	12 35 33 3	47.600	3	0.000*
7	Type of family a)Nuclear b)Joint c)Extended	7 10 0	43 39 1	47.060	2	0.000*
8	Area of residence a)Rural b)Urban	15 2	58 25	21.160	1	0.000*
9	Dietary pattern a)Vegetarian b)Non vegetarian c)Mixed	3 7 7	18 21 44	14.780	2	0.001*
10	Habits a)Smoking b)Alcoholism c)Tobacco chewing d)No bad habits	4 2 5 6	14 14 31 24	11.040	3	0.012*
11	How frequently eat junk food or food from outside a)Daily b)Once in a week c)Once in a month d)Sometimes	0 3 7 7	4 13 29 37	40.160	3	0.000*
n=100, *significant, table value:0.05						

Discussion

Demographic characteristics of the sample

The findings of the study revealed that among 100 hypertensive patients 41% of hypertensive patients were belonged to the age group of 41-45 years, around 62% were females, 51% of them were Muslims, 56% of the samples had primary education, 39% of the patients were self-employed, 43% of them had the monthly income of Rs/-5001-10000, 50% of them were belonged to nuclear family, 73% of them were residing in rural area, 51% of them were consuming mixed diet, 37% had the habit of tobacco chewing, and 44% of them were eating junk food or food from outside occasionally.

In a cross-sectional study conducted among 400 hypertensive patients selected from 50 primary care centres to assess the knowledge of hypertensive patients about their hypertension 52.9% were woman and 39.6% were aware of the objectives of systolic BP control.¹⁰

The knowledge of hypertensive patients regarding the management of hypertension

The majority of the hypertensive patients (60%) had average knowledge, 40% had poor knowledge and none of them had good knowledge about management of hypertension.

In a study conducted in the medical outpatient clinic of Olabisi Onbanjo University Teaching hospital in Nigeria, to assess the knowledge and awareness of hypertension among 254 hypertensive patients with systemic hypertension about

One in 10 patients and (11.4%) were aware that nil symptom is the commonest symptom of hypertension, while 37% were not aware that hypertension could cause renal failure. Only about one-third (35.4%) of the patients knew that hypertension should ideally be treated for life, while 58.3% believed that anti-hypertensive drug should be used only when there are symptoms. This study has demonstrated adequate knowledge of hypertension in a patient with hypertension. Organization of Hypertensive club or society could be encouraged.¹¹

A national survey was undertaken in all the states of India to determine the hypertension awareness among the general population between the ages of 15- 49 years. The study concluded that patients who were known about their disease are treated well, but their control rate is very poor. This study suggest to improve the access to health facility in rural areas to diagnose the hypertensive cases and treat them effectively.¹²

The association between knowledge score with selected demographic variables

In the present study association between knowledge on management of hypertension was found with the selected demographic variables such as age, gender, religion, educational status, occupation, monthly income, type of family, area of residence, dietary pattern, habits and frequency of eating junk food or food from outside.

Conclusion

In our study, we found about 60% of patients were having hypertension and had the knowledge on the regarding management of hypertension and 40% did not have the same and hence we opine that knowledge regarding the management of hypertension is must and essential to prevent the complication based on health care teaching and training.

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Conflict of Interest: None.

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