

ORIGINAL RESEARCH

Knowledge attitude and practices of hypertensive patients attending out patient department of a tertiary care hospital

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ABSTRACT

Background: Hypertension (HTN) is one of the leading contributors to the global burden of diseases. Elevated blood pressure affects more than one billion individuals and causes an estimated 9.4 million deaths per year. Assessing hypertension knowledge, attitude and practice (KAP) is crucial for management of HTN. This study aimed to assess the KAP of hypertensive patients about factors affecting blood pressure. **Methods:** A cross sectional study was carried out in patients attending the out patient department in a tertiary care hospital. The study was conducted for a period of 2 months. A questionnaire was prepared in accordance with the literature to measure the knowledge attitude and practices about hypertension in general population of Kashmir, India. **Results:** 58.65% (305) of the participants demonstrated a commendable level of knowledge regarding hypertension. Additionally, 41.73% and 39.23% of participants in this category exhibited positive practices and attitudes respectively. The statistically significant p-value of 0.05 suggests that there may be a relationship between excellent knowledge and positive practices and attitudes among hypertensive patients. **Conclusion:** This study reveals a significant association between the levels of knowledge, attitude and practices among hypertensive patients. Participants with excellent knowledge exhibited more positive practices and attitude, as indicated by the lower p-value of 0.05.

Keywords: Hypertension, knowledge, attitude, practice

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INTRODUCTION

Hypertension is one of the leading contributors to the global burden of diseases. Elevated blood pressure affects more than one billion individuals and causes an estimated 9.4 million deaths per year.¹ According to Joint National committee (JNC VIII) on hypertension, Hypertension is defined as either a sustained systolic blood pressure (SBP) of greater than 140 mm Hg or a sustained diastolic blood pressure (DBP) of greater than 90 mm Hg.²

Due to its high prevalence all around the globe, hypertension is a major public health problem^{3,4,5,6}. An estimated 1.28 billion adults aged 30-79 years worldwide have hypertension, most living in low- and middle-income countries⁷. Chronic hypertension can lead to heart disease and stroke, the top two causes of death in the world⁸. Hypertension related complications are predicted to increase to 1.56 billion by 2025⁹. India has set a target of 25% relative reduction in the prevalence of hypertension by 2025. To achieve this, the Government of India launched the

Indian Hypertension Control Initiative (IHCI) to fast-track access to treatment services for over 220 million people in India who have hypertension¹⁰. The situation in India is more alarming. Review of epidemiological studies suggests that the prevalence of hypertension has increased in both urban and rural subjects and presently it is 25% in urban adults and 10 to 15% among rural adults.¹¹

Non-Pharmacological therapy or lifestyle-related changes, is an important component of treatment of all patients with hypertension. In some grade 1 hypertensive patients, blood pressure may be adequately controlled by a combination of weight loss (body mass index (BMI) <25 kg/m²), restricting sodium intake (to 5–6 g/d), increasing aerobic exercise like brisk walking (>30 min/d), moderating consumption of alcohol (ethanol/day ≤ 20–30 g in men [two drinks], ≤ 10–20 g in women [one drink]), smoking cessation, adopting Dietary Approaches to Stop Hypertension (DASH) type dietary plan, diet rich in fruits, vegetables, and low-fat dairy products

with reduced content of saturated and total fat. Diet rich in potassium, calcium, and magnesium. The majority of patients require drug therapy for adequate blood pressure control.¹²

Primary prevention, early diagnosis and controlling blood pressure are recommended since early adulthood. For controlling modifiable risk factors and reducing disease burden through assessing the levels of knowledge attitude and practice (KAP) regarding HTN in hypertensive patients plays a significant role and it improves awareness and perception. Good knowledge of HTN is associated with higher rates of BP control, decreasing morbidity and mortality as well as medication adherence.

MATERIALS AND METHODS

A cross sectional study was carried out in patients attending the out- patient department in a tertiary care hospital. The study was conducted for a period of 2

months after getting ethical clearance from institutional review board. All newly diagnosed and old patients receiving anti-hypertensive medications of age >18 years of either sex were included in the study and patients who gave voluntary consent for the study. A validated questionnaire which was used by Sadeq R et.al.¹³ was used for assessing KAP in a general population of Kashmir, India. The questionnaire covered three areas: knowledge, attitude and practice towards hypertension. There were a total of 26 questions, with 12 questions related to knowledge about hypertension, 7 questions to assess the attitude of the patient towards the disease, and 7 questions regarding practices. This questionnaire was filled in at a face to face interview with the investigator. English or Kashmiri version of questionnaire was provided as per requirement of individual.

RESULTS

Table1: Levels of Knowledge Attitude and Practices of Hypertensive Patients

Levels	Knowledge		Practice		Attitude		p-value
	N	Percent	N	Percent	N	Percent	
Excellent	305	58.65	217	41.73	204	39.23	0.05
Good	124	23.85	194	37.31	213	40.96	0.01
Poor	91	17.50	109	20.96	108	20.77	0.01
Total	520	100.00	520	100.00	525	100.96	

The table 1 presents a comprehensive analysis of the levels of knowledge, attitude and practice among hypertensive patients. The data derived from a sample of 520 participants, is segmented into three distinct categories: Excellent, Good, and Poor. These categories reflect varying degrees of understanding, adherence to recommended practices, and overall attitude towards hypertension management.

In the excellent category, comprising 58.65% of the participants, a substantial number (305) demonstrated a commendable level of knowledge regarding hypertension. Additionally, 41.73% and 39.23% of participants in this category exhibited positive practices and attitudes respectively. The statistically significant p-value of 0.05 suggests that there may be a relationship between excellent knowledge and

positive practices and attitudes among hypertensive patients.

Conversely, the good category encompassing 23.85% of the sample demonstrated moderate levels of knowledge (124 participants) with 37.31% and 40.96% exhibiting positive practices and attitudes respectively. The associated p-value of 0.01 suggests a significant relationship between good knowledge and positive practices and attitudes.

In the Poor category, representing 17.50% of participants, 91 individuals displayed limited knowledge about hypertension. The associated percentages for positive practices and attitudes were 20.96% and 20.77% respectively. The p-value of 0.01 indicates a significant association between poor knowledge and less favourable practices and attitudes.

Knowledge of Hypertensive Patients Attending OPD		No.	Percent
HYPERTENSION IS CONSIDERED AS			
Chronic disease		415	79.81
Curable disease		65	12.50
Don't know		40	7.69
Total		520	100.0
HYPERTENSION BELONGS TO THE DISEASE OF			
Cardiovascular system		436	83.85
Neurological system		33	6.35
Don't know		51	9.81
Total		520	100.0
THE NORMAL RANGE OF BP IS			
150/90		35	6.73

120/80	475	91.35
60/30	6	1.15
Don't know	4	0.77
Total	520	100.0
THE MAIN SYMPTOM OF HYPERTENSION IS		
Weight loss	40	7.69
Headache	430	82.69
Thirst	30	5.77
Don't know	20	3.85
Total	520	100.0
A PREDISPOSING FACTOR OF HYPERTENSION		
Infection	64	12.31
Obesity	395	75.96
Regular exercise	36	6.92
Don't know	25	4.81
Total	520	100.0
RISK OF HYPERTENSION CAN BE REDUCED BY		
Immunization	25	4.81
Weight loss	480	92.31
Hand wash	10	1.92
Don't know	5	0.96
Total	520	100.0
THE MAIN CAUSE OF HYPERTENSION IS		
Anaemia	45	8.65
Atherosclerosis	350	67.31
Excessive sweets intake	104	20.00
Don't know	21	4.04
Total	520	100.0
THE COMPLICATION OF HYPERTENSION IS		
Pneumonia	10	1.92
Osteoporosis	5	0.96
Sudden death	480	92.31
Don't know	25	4.81
Total	520	100.0
CAN HYPERTENSION BE TREATED BY (REGULAR INTAKE OF MEDICATION)		
No	35	6.73
Yes	455	87.50
Don't know	30	5.77
Total	520	100.0
CAN HYPERTENSION BE TREATED BY (GARLIC INTAKE)		
No	105	20.19
Yes	300	57.69
Don't know	115	22.12
Total	520	100.0
CAN HYPERTENSION BE TREATED BY (TRADITIONAL MEDICINE)		
No	485	93.27
Yes	30	5.77
Don't know	5	0.96
Total	520	100.0
THE APPROPRIATE DIET FOR HYPERTENSION IS		
Low Fruit Diet	12	2.31
Low Salt Diet	500	96.15
Don't Know	8	1.54
Total	520	100.0

In a study of 520 hypertensive patients attending the outpatient department (OPD), the majority (79.81%) considered hypertension as a chronic disease, while

12.50% believed it to be curable, and 7.69% were unsure. Regarding the classification of hypertension, 83.85% identified it as a disease of the cardiovascular

system, 6.35% associated it with the neurological system, and 9.81% didn't know. When asked about the normal range of blood pressure (BP), 91.35% recognized 120/80 as normal, while 6.73% thought 150/90 was normal.

The main symptom reported by the patients was a headache (82.69%), followed by weight loss (7.69%) and thirst (5.77%). Obesity (75.96%) emerged as the predominant predisposing factor for hypertension, while infections (12.31%) and regular exercise (6.92%) were also noted. Participants believed that hypertension could be reduced by weight loss (92.31%), immunization (4.81%), and hand wash (1.92%).

Regarding the causes of hypertension, 67.31% attributed it to atherosclerosis, 20.00% to excessive sweets intake, and 8.65% to anemia. Sudden death

(92.31%) was identified as the most common complication of hypertension, followed by pneumonia (1.92%) and osteoporosis (0.96%).

A large majority (87.50%) believed that hypertension could be treated by regular intake of medication, while 57.69% thought garlic intake could be a treatment. Traditional medicine was considered less effective, with only 5.77% endorsing it as a treatment method. When asked about an appropriate diet, 96.15% suggested a low salt diet, while 2.31% considered a low fruit diet suitable.

The study reflects diverse perceptions among hypertensive patients regarding the nature, causes, and management of hypertension. The findings highlight the importance of patient education and awareness programs to promote accurate understanding and effective management of hypertension.

Attitude of Hypertensive Patients Attending OPD		
	No.	Percent
YOU SHOULD CHECK YOUR BLOOD PRESSURE REGULARLY		
Strongly disagree	30	5.77
Disagree	15	2.88
Neutral	20	3.85
Agree	250	48.08
Strongly agree	205	39.42
Total	520	100.0
YOU SHOULD CHECK YOUR LIPID PANEL REGULARLY		
Strongly disagree	30	5.77
Disagree	20	3.85
Neutral	75	14.42
Agree	195	37.50
Strongly agree	200	38.46
Total	520	100.0
IT IS BETTER TO HAVE A NORMAL BODY WEIGHT TO BE PROTECTED FROM HYPERTENSION		
Strongly disagree	20	3.85
Disagree	30	5.77
Neutral	37	7.12
Agree	203	39.04
Strongly agree	230	44.23
Total	520	100.0
YOU SHOULD FOLLOW YOUR PHYSICIANS INSTRUCTIONS TO HAVE A CONTROLLED HYPERTENSION		
Strongly disagree	16	3.08
Disagree	34	6.54
Neutral	25	4.81
Agree	195	37.50
Strongly agree	250	48.08
Total	520	100.0
REGULAR EXERCISE CAN IMPROVE YOUR HEALTH		
Strongly disagree	3	0.58
Disagree	4	0.77
Neutral	3	0.58
Agree	250	48.08
Strongly agree	260	50.00
Total	520	100.0
INCREASING SALT AND SUGAR INTAKE IS BENEFICIAL FOR HEALTH		

Strongly disagree	230	44.23
Disagree	95	18.27
Neutral	85	16.35
Agree	65	12.50
Strongly agree	45	8.65
Total	520	100.0
FAST FOODS (BURGERS, CHIPS) CAUSE HEALTH PROBLEMS (LIKE HYPERTENSION)		
Strongly disagree	4	0.77
Disagree	11	2.12
Neutral	10	1.92
Agree	255	49.04
Strongly agree	240	46.15
Total	520	100.0

Among 520 hypertensive patients attending the outpatient department (OPD), their attitudes towards various health practices were explored. The majority of patients (87.5%) agreed or strongly agreed that regularly checking blood pressure is essential. Similarly, a significant number (75.96%) recognized the importance of regularly checking lipid panels. Concerning body weight, a substantial portion of patients (83.27%) believed that it is better to have a normal body weight for protection against hypertension. Additionally, a large majority (85.58%) agreed or strongly agreed that following physicians' instructions is crucial for controlling hypertension. When it comes to the role of regular exercise in improving health, an overwhelming majority (98.08%) agreed or strongly agreed that it can have a positive impact. Conversely, a significant number of patients (62.5%) strongly disagreed or disagreed with the idea that increasing salt and sugar intake is beneficial for health.

Finally, in terms of fast foods causing health problems like hypertension, the majority (95.19%) agreed or strongly agreed with this statement. The findings suggest a general awareness and positive attitude among hypertensive patients towards health practices that can contribute to the management and prevention of hypertension.

The study indicates that hypertensive patients attending the OPD generally have a positive attitude towards health practices associated with hypertension management. There is a strong awareness of the importance of monitoring blood pressure and lipid panels regularly, maintaining a normal body weight, following physicians' instructions, and engaging in regular exercise. The majority also recognizes the negative impact of unhealthy dietary choices, such as increasing salt and sugar intake and consuming fast foods, on hypertension and overall health. These positive attitudes are encouraging and underscore the importance of continued health education and promotion efforts among hypertensive individuals.

Practice of Hypertensive Patients Attending OPD	No.	Percent
DO YOU TAKE YOUR MEDICATION REGULARLY?		
No	70	13.46
Yes	450	86.54
Total	520	100.0
DO YOU FOLLOW A REGULAR CONTINUOUS EXERCISE?		
No	370	71.15
Yes	150	28.85
Total	520	100.0
DO YOU CHECK YOUR BLOOD PRESSURE REGULARLY?		
No	110	21.15
Yes	410	78.85
Total	520	100.0
DO YOU FOLLOW A LOW SALT DIET?		
No	70	13.46
Yes	450	86.54
Total	520	100.0
DO YOU TRY TO REDUCE YOUR WEIGHT?		
No	255	49.04
Yes	265	50.96
Total	520	100.0
DO YOU TRY TO AVOID PHYSICAL AND EMOTIONAL STRESS?		

No	90	17.31
Yes	430	82.69
Total	520	100.0
DO YOU FOLLOW A LOW FAT DIET?		
No	130	25.00
Yes	390	75.00
Total	520	100.0

The habits and practices of 520 hypertensive patients attending the outpatient department (OPD) were examined to understand their health behaviors. The majority of patients (86.54%) reported taking their medication regularly, indicating a high adherence to prescribed treatments. However, when it comes to following a regular continuous exercise routine, only 28.85% of patients reported doing so, with a larger proportion (71.15%) not engaging in regular exercise. Checking blood pressure regularly is a crucial aspect of hypertension management, and a significant number of patients (78.85%) reported doing so. In terms of dietary habits, a substantial majority (86.54%) claimed to follow a low-salt diet, which aligns with recommended dietary practices for hypertension. Additionally, when it comes to weight management, almost half of the patients (50.96%) reported actively trying to reduce their weight.

Managing stress is also important for hypertensive patients, and the majority (82.69%) reported attempting to avoid both physical and emotional stress. Lastly, dietary choices were explored, and 75.00% of patients reported following a low-fat diet. The findings indicate a mix of positive and challenging health practices among hypertensive patients attending the OPD. While there is high adherence to medication and a considerable effort to follow dietary recommendations such as low-salt and low-fat diets, there is a notable gap in engaging in regular continuous exercise. Addressing barriers to regular exercise and promoting holistic lifestyle changes may further enhance the overall management of hypertension among these patients. Continuing education and support for healthier lifestyle choices remain essential components of hypertension care.

DISCUSSION

A high proportion of participants showed good basic knowledge on hypertension. Foreexample majority of participants (79.81%) recognised high blood pressure to be a threat to health which is comparable to the Dugee Otgontuya et al.¹⁴96.15% participants had knowledge that low salt diet has an impact on control of blood pressure and 92.31% knew that risk of hypertension can be reduced by weight loss. All these findings were comparable with the study done by Aubert et al.¹⁵ who reported >96% knew role of salt and obesity in hypertension.

In this study, 58.65% of the participants had knowledge about hypertension, while we observed poor score in attitude and practice part of the questionnaire. It concludes that the responders had

good knowledge but poor attitude (41.73%) and practice (39.23%) towards hypertension which correlates with another study done by Parmarlet al,¹⁶ where 98% of the participants knew that hypertension is the disease state and poor score was observed in attitude and practice.

This study aligns with previous literature that emphasizes the importance of patient education and awareness in managing chronic conditions like hypertension. Previous research studies done by Chimberengwa PT et al.¹⁷ and Naseem S et al.¹⁸ has consistently highlighted the positive impact of knowledge on adherence to recommended practices and cultivation of a positive attitude towards disease management. The findings underscore the need for targeted interventions aimed at improving knowledge levels among hypertensive patients, with the potential to positively influence their practices and attitudes.

CONCLUSION

This study reveals a significant association between the levels of knowledge, attitude and practices among hypertensive patients. Participants with excellent knowledge exhibited more positive practices and attitudes, as indicated by the lower p-value of 0.05. This underscores the importance of focusing on patient education to enhance overall hypertension management. The study aligns with existing literature emphasizing the crucial role of knowledge in influencing patient behaviour and underscores the need for targeted interventions to improve understanding and adherence among hypertensive individuals.

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