



CODEN [USA]: IAJ PBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF  
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.2638256>Available online at: <http://www.iajps.com>

Research Article

**ANALYSIS OF EFFECT OF KNOWLEDGE ABOUT  
HYPERTENSION AND THEIR RELATIONSHIP WITH  
CONTROL OF BLOOD PRESSURE**<sup>1</sup>Dr Areeba Ashfaq, <sup>2</sup>Dr Fareeha Ghafoor, <sup>1</sup>Dr Tauqeer Azhar<sup>1</sup>Bahawal Victoria Hospital, Bahawalpur, <sup>2</sup>Lahore General Hospital Lahore.

Article Received: February 2019

Accepted: March 2019

Published: April 2019

**Abstract:**

**Introduction:** Hypertension (HTN) is one of the most common medical disorders, associated with an increased incidence of all-cause and cardiovascular disease (CVD) mortality. Fifty-four per cent of strokes and 47% of cardiac deaths are attributed to suboptimal blood pressure control.

**Aims and objectives:** The basic aim of the study is to find the relationship of knowledge about hypertension with the control of blood pressure.

**Methodology of the study:** This cross sectional study was conducted in Bahawal Victoria hospital, Bahawalpur during April 2018 to November 2018. The data was collected from 200 patients of high blood pressure and visited the OPD of hospital. The data was collected through a prepared questionnaire in which we collect the basic demographic data of patients. BMI of all the randomly selected patients were measured by measuring height and weight. The blood pressure (BP) levels were measured from the right and left arms of the subjects in a sitting position. BP was measured twice with 10 min interval.

**Results:** The data was collected from 200 patients of both genders. It was found that 36.5% of the subjects with HT consumed enough fruit/vegetables ( $\geq 3$  times a day), 31.3% of them exercised sufficiently (at least 3 days and 150 min per week) while 52.0% of the study population did not exercise at all. On comparison of knowledge as a composite score between uncontrolled and controlled hypertensive; Mean (SD) was 21.85(4.74) v18.67 (4.70) (p value :< 0.001) Knowledge score on most of individual item questions between the two group was significantly different.

**Conclusion:** It is concluded that patients who were aware that elevated BP levels lead to reductions in life expectancy had a higher compliance level with medication use and follow-up visits than patients without this awareness.

**Corresponding author:****Dr. Areeba Ashfaq,**

Bahawal Victoria Hospital, Bahawalpur.

QR code



Please cite this article in press Areeba Ashfaq et al., *Analysis of Effect of Knowledge about Hypertension and Their Relationship with Control of Blood Pressure.*, Indo Am. J. P. Sci, 2019; 06(04).

**INTRODUCTION:**

Hypertension (HTN) is one of the most common medical disorders, associated with an increased incidence of all-cause and cardiovascular disease (CVD) mortality. Fifty-four per cent of strokes and 47% of cardiac deaths are attributed to suboptimal blood pressure control. Despite presence of a variety of antihypertensive medications hypertension remains uncontrolled [1]. Data on 22,282 patients, from national and regional blood pressure control and antihypertensive pharmacotherapy prescribed in cardiology practice quotes figure of overall 21.2% controlled hypertension. The control rates of hypertension in patients presenting to primary care range from 37% in Italy to 65% in South Africa and Canada. According to a survey in 2010 control rates of hypertension are barely 6% in primary health care settings of Pakistan [2].

High blood pressure (HBP) is a leading major risk factor for chronic diseases and deaths. The prevalence of patients with hypertension (HT) had reached from 600 million in 1980 to one billion in 2008 [3]. The prevalence of HBP was approximately 40% among adults of 25 years and above in 2008 [4]. Approximately 7.5 million people (12.8% of all-cause deaths) die every year due to HBP. It is estimated that HT is responsible for 45% of deaths due to heart diseases and 51% of deaths due to stroke. HBP consists of 3.7% of Disability Adjusted Life Years (DALY). Even prehypertension (PreHT) increases mortality risk due to cardiovascular and stroke-related diseases [5].

Despite the high burden of hypertension, most affected persons are not aware of its presence, thus increasing the occurrence of associated complications, particularly among elderly populations [3]. Awareness of the diagnosis of hypertension is an important determinant of treatment and medication adherence [6].

**Aims and objectives**

The basic aim of the study is to find the relationship of knowledge about hypertension with the control of blood pressure.

**Methodology of the study**

This cross sectional study was conducted in Bahawal Victoria hospital, Bahawalpur during April 2018 to November 2018. The data was collected from 200 patients of high blood pressure and visited the OPD of hospital. The data was collected through a prepared questionnaire in which we collect the basic demographic data of patients. BMI of all the randomly selected patients were measured by measuring height and weight. The blood pressure (BP) levels were measured from the right and left arms of the subjects in a sitting position. BP was measured twice with 10 min interval. The systolic BP (SBP) and diastolic BP (DBP) were recorded at the first and fifth phases respectively using a sphygmomanometer. The average of the four BP measurements was used for analysis.

**Statistical analysis**

The data were analyzed with SPSS package program. Statistical analyses were carried out by the help of simple correlation tests and backward LR model of multiple variables binary logistic regression.

**RESULTS:**

The data was collected from 200 patients of both genders. It was found that 36.5% of the subjects with HT consumed enough fruit/vegetables ( $\geq 3$  times a day), 31.3% of them exercised sufficiently (at least 3 days and 150 min per week) while 52.0% of the study population did not exercise at all. On comparison of knowledge as a composite score between uncontrolled and controlled hypertensive; Mean (SD) was 21.85(4.74) v18.67 (4.70) (p value  $< 0.001$ ) Knowledge score on most of individual item questions between the two group was significantly different.

**Table 01:** Comparison of knowledge score in patients with controlled and uncontrolled hypertension

Characteristic	score	Overall Mean(SD)	Controlled hypertension Mean(SD)	Uncontrolled hypertension Mean(SD)	*P value
What does hypertension mean?	1	0.46(0.49)	0.52(0.49)	0.28(0.45)	<0.001
Is HTN dangerous for your health?	1	0.62(0.48)	0.66(0.47)	0.53(0.50)	0.01
What should be your systolic BP?	1	0.69(0.45)	0.74(0.43)	0.56(0.49)	<0.001
What should be your diastolic BP?	1	0.68(0.46)	0.73(0.44)	0.54(0.49)	<0.001

Which measure is more important?	1	0.18(0.39)	0.21(0.41)	0.11(0.31)	<0.001
Would lowering BP improve your health?	1	0.67(0.46)	0.71(0.45)	0.58(0.49)	0.12
Is high BP asymptomatic?	1	0.31(0.46)	0.36(0.48)	0.16(0.37)	<0.001
Can changing lifestyle lower your BP?	1	0.82(0.37)	0.86(0.34)	0.72(0.44)	<0.001

### DISCUSSION:

Sufficient knowledge about hypertension in patients has been associated with greater medication adherence and better blood pressure control. Several knowledge based instruments have been tested for assessment of the same in hypertensive patients. However only one has been reported with specific item questions, the Hypertension knowledge interview schedule which is validated for the Spanish population. High blood pressure (HBP) Knowledge Test has been used as another validated instrument tested on Korean population [7]. The item questions used in this test are comparable to what has been used in our study. Our results suggest that patients are knowledgeable about HTN in general, but are less knowledgeable about specific factors related to their condition, and specifically their own level of BP control [5]. The median duration of HTN was 14 years, suggesting that even though these patients have had this condition for a long duration their knowledge is inadequate. Patients were unaware that SBP is important in BP control and reported that physicians did not emphasize the significance of high SBP levels. Further, many patients (41%) did not know their BP value nor could they accurately report whether it was elevated [8].

Patients were knowledgeable about the meaning of HTN, and the seriousness of the condition to their health. Ninety-six percent knew that lowering BP would improve health and 96% thought that people can do things to lower their high BP [9]. Nearly 70% of patients knew that high BP could lead to congestive heart failure. Almost all patients were aware of their HTN with 91% reporting that a doctor or health care provider had told them that they have HTN. These findings are consistent with NHANES III data suggesting that there has been an increase in BP awareness [10].

### CONCLUSION:

It is concluded that patients who were aware that elevated BP levels lead to reductions in life expectancy had a higher compliance level with medication use and follow-up visits than patients without this awareness. More emphasis needs to be made on target blood pressure and need for taking anti hypertensives for life to patients by physicians.

### REFERENCES:

1. Roccella EJ, Horan MJ. The National High Blood Pressure Education Program: measuring progress and assessing its impact. *Health Psychol.* 1988;(suppl):297–303.
2. Roccella EJ, Bowler AE, Ames MV, Horan MJ. Hypertension knowledge, attitudes, and behavior: 1985 NHIS findings. *Public Health Rep.* 1986;101:599–606.
3. Hunink MG, Goldman L, Tosteson AN, et al. The recent decline in mortality from coronary heart disease, 1980-1990. The effect of secular trends in risk factors and treatment. *JAMA.* 1997;277:535–42.[PubMed]
4. Schmeiser-Rieder A, Kunze U. Blood pressure awareness in Austria: a 20-year evaluation, 1978–1998. *Eur Heart J.* 2000;21:414–20.
5. Hinds C. A hypertension survey: respondents' knowledge of high blood pressure. *Int Nurs Rev.* 1983;30:12–4.
6. Weiland SK, Keil U, Spelsberg A. Knowledge and attitudes towards hypertension and hypercholesterolemia in a population of southern Germany: results from a population survey in the Augsburg area. *Soz Praventivmed.* 1991;36:5–8.
7. Chockalingam A, Fodor JG. Treatment of raised blood pressure in the population: the Canadian experience. *Am J Hypertens.* 1998;11:747–9
8. Ahluwalia JS, McNagny SE, Rask KJ. Correlates of controlled hypertension in indigent, inner-city hypertensive patients. *J Gen Intern Med.* 1997;12:7–14.
9. Kjellgren KI, Svensson S, Ahlner J, Saljo R. Hypertensive patients' knowledge of high blood pressure. *Scand J Prim Health Care.* 1997;15:188–92.
10. Carney S, Gillies A, Smith A, Taylor M. Hypertension education: patient knowledge and satisfaction. *J Hum Hypertens.* 1993;7:505–8.