

# Prevalence of Awareness of being Hypertensive in Patients presenting in Emergency Department of a Tertiary Care Hospital in Lahore

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## ABSTRACT

**Background:** Hypertension is a worldwide public health problem and is increasing day by day especially in developing countries like Pakistan. In spite of such high prevalence rates, awareness about hypertension is dismally low in developing countries and hence it leads to many preventable complications including Cardiovascular Diseases & strokes.

**Aim:** To get an idea about level of awareness of being hypertensive, in patients presenting in Central Emergency Department (CED) of Fatima Memorial Hospital Lahore.

**Methods:** Blood Pressure was measured using standard sphygmomanometer and a questionnaire was filled in to know the level of awareness among participants and to know the reasons of being unaware about this problem.

**Results:** Out of 200 cases of hypertension, 64(32%) were males while 136 (68%) were females out of which, 127 females were housewives. 175(87.5%) of these 200 cases, were known hypertensive while 25(12.5%) were not aware of their being hypertensive. Main reasons of being unaware were lack of symptoms (44%), unawareness of hypertension (16%) and few cases due to busy routines. Unawareness was mainly in males, younger-middle age group while family history does not show any effect on its awareness. While nonworking females were more vigilant due to home ridden non busy life seeking medical advice even on minor ailments as compared to males and working females.

**Conclusion:** Unawareness of younger to middle aged males, may be explained upon their being busy as well as unremarkable symptoms in early times of HTN.

**Keywords:** Hypertension, cardiovascular disease, stroke

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## INTRODUCTION

Hypertension is a global epidemic and according to WHO, 40% of world's population suffers from hypertension. It may reach to 1.56 billion until 2025,<sup>1</sup> Of which large proportion will be from developing countries<sup>2</sup>. It is a significant cause of morbidity and mortality especially in developing countries.<sup>3</sup> Annual 7.6 million global deaths are associated with hypertension, which constitutes 13.5% of all deaths.<sup>4</sup> It is an important and modifiable risk factor for cardiovascular disease (CVD) and Ischemic heart disease (IHD) and accounts for 62% and 49% respectively all over the world<sup>5-7</sup>

In developing countries like Pakistan, prevalence of hypertension is one of the highest and is still on the verge of rising. Pakistan is in a state of epidemiological transition like many other developing countries where there is a shift in diseases from communicable to non-communicable.<sup>8,9</sup> In a study conducted in nine low- middle income countries from NHLBI/UHG COE program (which also included Pakistan) showed that prevalence of HTN is as high as 42.3% in Pakistan with little awareness and control measures<sup>10</sup>.

In Pakistan currently no updated national data is available about prevalence of HTN in Pakistan. Last National Health Survey was conducted in 1990-1994 (about 2.5 decades ago), according to which 18.9% adults

33% 45-60 years and 60% & 70% males & females over 60 years respectively were having hypertension<sup>11</sup>.

There is extreme lacking of public awareness in spite of such high worldwide prevalence. In National Health Survey of Pakistan (NHSP), it was mentioned that only 50% cases were diagnosed, of which only half were treated.<sup>11</sup> There is also a significant gap between diagnosis and control of hypertension across the world<sup>10</sup>. Awareness about hypertension is especially low in developing countries where a large number of patients remain undiagnosed for a long period. According to NHSP, awareness of HTN in Pakistan is 15.6% in men and 36% in women which is significantly low when compared to other countries. In Pakistan no significant study about awareness of HTN in general population is available. On the other hand, multiple factors including genetic and environmental e.g. urbanization, sedentary life style are causing a constant rise in number of hypertensive cases and lowering of its awareness in Pakistan.<sup>12,13</sup> Lack of early signs & symptoms is another reason, associated with delay of diagnosis and rise in HTN cases.

Goal of this study is to know the awareness level in hypertensive patients presenting to CED of FMH Lahore and to know the factors associated with un-awareness of being hypertensive.

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**METHODOLOGY**

It was a trans-sectional, hospital and questionnaire based study. Two hundred hypertensive cases of both genders presenting to CED of Fatima Memorial Hospital Lahore were included in this study. Patients unable to give history and refused to answer questionnaire, were excluded.

**Hypertension:** It was defined in accordance with Seventh Annual Report of Joint National Committee (JNC-7) guidelines<sup>14</sup>, as an average systolic BP >140mmHg or diastolic BP > 90mmHg or participant /patient taking anti-hypertensive drugs. Standard mercury sphygmomanometer was used to measure BP. Two readings were taken in sitting position after a rest of at last five minutes and with an interval of 5-mins between both readings. Their average was taken then to define BP Measurement. Questionnaire was filled through one to one interview.

**Data analysis:**Data entry and analysis was done on software SPSS – 23 version. Data was modeled in simple percentages and frequencies.

**RESULTS**

Total 200 numbers of participants were included in this study of which 64 were males and 136 were females. Of these 136 females, 127(63.5% of total hypertensive patients) were housewives. In our study group of 200 patients, 175 patients were those who were known hypertensive and 25 were those who had high BP on presentation in CED but were not aware of being hypertensive.

Table 1: Number of Hypertensive Patients

Gender	n	%age
Males	64	32
Females	136	68
Total	200	100

Table 2: Awareness status among Hypertensive patients

Description	n	%age
Aware of being Hypertensive	175	87.5
Unaware of being Hypertensive	25	12.5
Total Patients	200	100

Table3: Impact of education on awareness of being Hypertensive

Education	Aware	Unaware
Illiterate	75(37.5%)	6(3%)
Primary & Middle	23(11.5%)	1(0.5%)
Secondary & Higher Secondary	52(26%)	9(4.5%)
Graduate & Post Graduate	25(12.5%)	9(4.5%)

Figure 1: Number of Hypertensive Patients

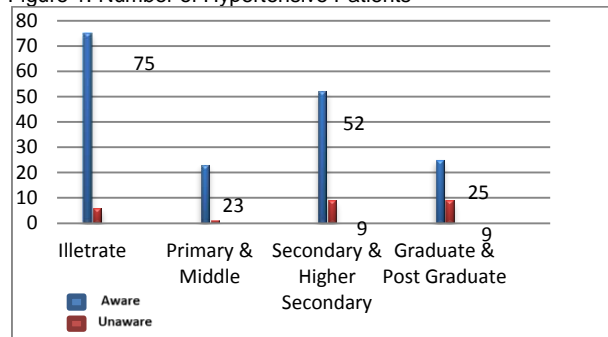


Table 4: Impact of family history of HTN on the awareness of being hypertensive

Family H/ HTN	Aware			Unaware		
	Male	Female	Total	Male	Female	Total
Positive	33(16.5%)	81(40.5%)	114(57%)	11(5.5%)	8(4%)	19(9.5%)
Negative	16(8%)	45(22.5%)	61(30.5%)	3(1.5%)	3(1.5%)	6(3%)

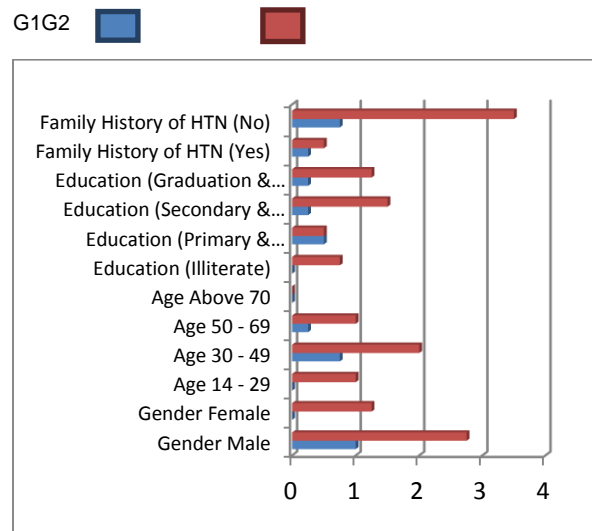
Table 5: Major Reasons for patients for not getting their BP checked on regular basis

Reasons	Total Number of patients in G1 (4)	Total Number of patients in G2 (16)
Unaware of being hypertensive	0	4
Busy routine	2	1
No nearby health facility	1	0
Carelessness	1	0
No Symptoms	0	11

Table 6: Demographics of participants in Group1 and Group2

Demographics			
		Total Number of patients in G1 (4)	Total Number of patients in G2 (16)
Gender	Male	4	11
	Female	0	5
Age	14-29	0	4
	30-49	3	8
	50-69	1	4
	Above 70	0	0
Education	Illiterate	0	3
	Primary & Middle	2	2
	Secondary & Higher Secondary	1	6
	Graduation & Postgraduation	1	5
Family history of HTN	Yes	1	2
	No	3	14

Figure 2: Demographics (G1 & G2)



Among 175 participants aware of being hypertensive group, 171 were getting their BP checked regularly at some clinic or at home and 4 were not getting their BPs checked regularly. We named these 4 participants as Group1(G1) and evaluated demographics of these 4 patients. Among 25 participants who were included in study due to their presentation of raised of blood pressure although they were not aware of being hypertensive, 9 were getting their BP checked occasionally and 16 were those who never got their BP checked before that. We named these 16 participants as Group2 (G2) and evaluated their demographics.

## DISCUSSION

Our main aim of study was to know the number of people who present incidentally with raised BP in CED of FMH although they were not previously known hypertensive and then further analyze demographic details/characteristics of these individuals.

With reference to our results in Table 6 and Figure 2, most of individuals who were not getting their BP checked regularly were in younger-middle age group. This finding is consistent with many other studies that have shown same results. A study conducted in Venezuela showed that younger age <30 is associated with lower levels of knowledge about HTN<sup>15</sup>. Similarly, study conducted in Baghdad, Iraq has also shown that older age group is associated with higher levels of awareness & knowledge about HTN and younger age group is associated with lower levels of knowledge & awareness about HTN<sup>16</sup>. This finding can be attributed to the fact that younger-middle age group is the busiest time of one's life with their social, professional and family life and also due to vague or absent symptoms (silent killer). According to NHSP, incidence rises abruptly after 20-29 years of age.<sup>11</sup>

Female gender is associated with higher prevalence of HTN especially due to the fact that they are mostly confined at home, adopting sedentary life style especially in middle age.<sup>11,17-19</sup> In spite of higher prevalence rate, females also have good awareness, control & treatment rate as compared to men mainly due to higher health seeking behavior.

This can also be contributed to the fact that females being in reproductive age group get screened multiple times during their checkups. Higher level of awareness in females as compared to males in our study, is consistent with many other studies<sup>10,12</sup>.

Considering association between Education and awareness, our study reflects that in contrary to the studies<sup>16,20</sup>, the awareness of being hypertensive is rather inversely proportional to the literacy rate (Table 3, Fig 1). But as the participants are mainly house wives, it can be explained that they seek medical advice on even minor ailments as compared to males and working females. Similarly negligence in BP checkup in unaware group is rather higher in literate ones (Table 6).

Similarly in contrast to other studies<sup>16,21</sup> our results show no ecological relation as awareness and unawareness both are high in cases with positive family history 57% and 30.5% respectively and are at lower level in patients with negative family history 30.5% and 3% respectively (Table

4). While, negligence of medical checkup in unaware group is associated with males and patients of non-hypertensive families (table 6) while symptomless early phase is mainly responsible for not getting checked up by this hypertensive group (Table 5).

**Limitations:** Our small sample size and conduction of study in a specific regional area makes it hard to generalize its results to the whole population.

## CONCLUSION

It was observed that unawareness was mainly found in younger to middle aged males resulting in being undiagnosed. Elder age group, female gender and idleness is associated with increased level of awareness of their being hypertensive. Family history has no remarkable association with awareness as unaware group also belong to positive family history of HTN. However unawareness of younger to middle aged males, may be explained upon their being busy as well as unremarkable symptoms in early times of HTN.

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