Vol. 4 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

AWARENESS OF HYPERTENSION AMONG PATIENTS ATTENDING OUTPATIENT DEPARTMENT AT CIVIL HOSPITAL HYDERABAD

Javed Ahmed Noonari*
MSN Scholar, People's Nursing School, Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan. Email: 25msn14@my.lumhs.edu.pk.

Dr. Husan Bano Channar
Associate Professor, People's Nursing School, Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan.

Shaista Aghani
Clinical Instructor, Liaquat College of Nursing (Female), Jamshoro, Sindh, Pakistan.

Hussain Bux Soomro
MSN Scholar, People's Nursing School, Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan

Sanaullah Maitlo
MSN Scholar, People's Nursing School, Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan

Afroze Muhammad Ramzan
MSN Scholar, People's Nursing School, Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan

Sitara Mohammad Yousaf
MSN Scholar, People's Nursing School, Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan

Parkash Birbal
MSN Scholar, People's Nursing School, Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan

Author Details

Keywords:
Awareness, Hypertension, Risk Factors, Perception, Practices.

Received on 23 April, 2026

Accepted on 4 May 2026

Published on 13 May 2026

Corresponding E-mails & Authors*:
25msn14@my.lumhs.edu.pk.

Abstract

Introduction: Hypertension is a major non-communicable disease and a leading public health challenge worldwide. It is often asymptomatic in early stages but can lead to serious complications such as stroke, myocardial infarction, and renal failure. Lack of awareness regarding hypertension significantly contributes to poor prevention and control. **Objective:** This study aimed to assess awareness regarding hypertension among patients attending the Outpatient Department at Civil Hospital, Hyderabad. **Methodology:** A descriptive cross-sectional study was conducted from January to March 2026 at the outpatient department of Civil Hospital, Hyderabad. A total of 203 participants were selected using a non-probability

convenience sampling technique. Data were collected using a structured questionnaire. Statistical analysis was performed using SPSS version 27, and descriptive statistics, including frequencies and percentages, were applied. **Results:** Among 203 participants, 74.9% had heard about hypertension. Awareness regarding risk factors was higher for obesity (64.0%), excess salt intake (61.6%), and family history (58.1%), while awareness regarding smoking was low (39.4%). In terms of perception, 50.2% were aware of their hypertensive status, and 51.2% knew normal blood pressure values. However, 62.1% incorrectly believed that hypertension is a curable disease. Regarding practices, most participants reported limiting salt intake (72.9%), following medical advice (66.5%), and taking medication regularly (61.1%), while regular blood pressure monitoring (46.8%) and physical activity (54.2%) were lower. **Conclusion:** The study concluded that participants had moderate awareness, mixed perception, and moderately good practices regarding hypertension. Significant gaps remain in risk factor awareness, misconceptions about the disease, and preventive practices.

Introduction

Hypertension is a non-communicable disease and remains one of the leading global public health challenges. It is defined as a chronic medical condition in which the force of blood against the arterial walls remains persistently elevated, leading to progressive damage of vital organs such as the heart, brain, and kidneys.[1, 2] Because it is often asymptomatic in early stages, it is commonly referred to as the "silent killer," as complications such as stroke, myocardial infarction, and renal failure may occur without prior warning.[3, 4] Globally, hypertension continues to rise. According to the World Health Organization (WHO), an estimated 1.28 to 1.4 billion adults aged 30–79 years are living with hypertension worldwide, and nearly half remain unaware of their condition, while only a small proportion achieve adequate control.[5] This highlights a major global gap in awareness, early detection, and management. The WHO further reports that the burden of hypertension is disproportionately higher in low- and middle-income countries, where urbanization, unhealthy dietary patterns, physical inactivity, obesity, stress, and aging populations significantly contribute to increasing prevalence.[6, 7] A systematic review also reported that global awareness levels vary between 40% and 70%, with the lowest rates observed in South Asia and Sub-Saharan Africa.[8] In Pakistan, hypertension

represents a major non-communicable disease burden. Current evidence indicates that approximately 30–35% of the adult population is affected by hypertension, making it one of the most common chronic conditions in the country.[9] However, a significant proportion of individuals remain undiagnosed or poorly controlled due to low awareness, inadequate screening services, and limited health-seeking behavior.[10] Recent studies from Pakistan highlight that poor awareness, unhealthy lifestyle practices, and weak primary healthcare systems are key contributors to uncontrolled hypertension. Evidence shows that many patients lack adequate knowledge regarding risk factors, complications, and lifestyle modifications required for effective blood pressure control.[11, 12] One study reported that OPD patients had moderate awareness but poor lifestyle adherence, with many unaware of normal blood pressure values and complications.[13] Another study found that in primary care settings, only 72% of patients were aware of their hypertensive status, while control rates remained below 50%.[14] Hospital-based studies further indicate that a large proportion of patients attending tertiary care facilities have insufficient awareness regarding hypertension management and prevention strategies.[15] Despite being a preventable and manageable condition, hypertension continues to contribute significantly to morbidity and mortality in Pakistan. One of the major contributing factors is low patient awareness regarding risk factors, early symptoms, preventive measures, and long-term complications.[11, 16] Patients attending Outpatient Departments often lack adequate knowledge regarding blood pressure monitoring, dietary modification, physical activity, and medication adherence, leading to poor disease control and increased risk of complications.[17] Civil Hospital Hyderabad, a major tertiary care hospital in Sindh with high patient flow in the Outpatient Department, has limited evidence on hypertension awareness among its patients. Therefore, this study aims to assess awareness of hypertension among Outpatient Department patients at Civil Hospital, Hyderabad, for effective health education and prevention strategies.

Methodology

A descriptive cross-sectional study design was conducted at Civil Hospital, Hyderabad, from January to March 2026. The study population comprised patients aged 30 years and above attending the Outpatient Department of Civil Hospital, Hyderabad, including

both male and female participants who consented to participate in the study. A non-probability convenience sampling technique was used to recruit participants who met the eligibility criteria and were available during the data collection period. The sample size was calculated using the Raosoft sample size calculator at a 95% confidence level, 5% margin of error, and an estimated prevalence of 46.2%. Based on these parameters, a total of 203 participants were included in the study. Patients aged below 30 years, those admitted to inpatient wards, and those unwilling to participate were excluded from the study. Before data collection, formal permission was obtained from the Medical Superintendent, Civil Hospital, Hyderabad. The purpose and objectives of the study were explained to all participants, and written and verbal informed consent was obtained from those who agreed to participate. Participation was voluntary, and respondents were assured that they had the right to withdraw from the study at any stage without any penalty or consequences. Data were collected using a structured, adopted questionnaire divided into four sections: demographic information, knowledge regarding hypertension, perception of hypertension, and practices related to hypertension. Confidentiality and anonymity of respondents were strictly maintained throughout the study. All collected data were securely stored and used solely for research purposes. Data were analyzed using SPSS version 27. Descriptive statistics, including frequencies and percentages, were used to summarize demographic variables and responses related to hypertension awareness.

Results

The study included 203 participants. The majority of participants were in the 40–49 years age group (33.0%), followed by 20–29 years (29.6%) and 30–39 years (29.1%), while only a small proportion (8.4%) were aged 60–79 years. Regarding educational status, nearly half of the participants were graduates (45.3%), followed by uneducated individuals (30.0%), secondary education (15.8%), and primary education (8.9%). In terms of occupation, most participants were employed in government jobs (45.3%) and private sector jobs (34.0%), while a smaller proportion were housewives (16.7%) and business workers (3.9%) (Table 1).

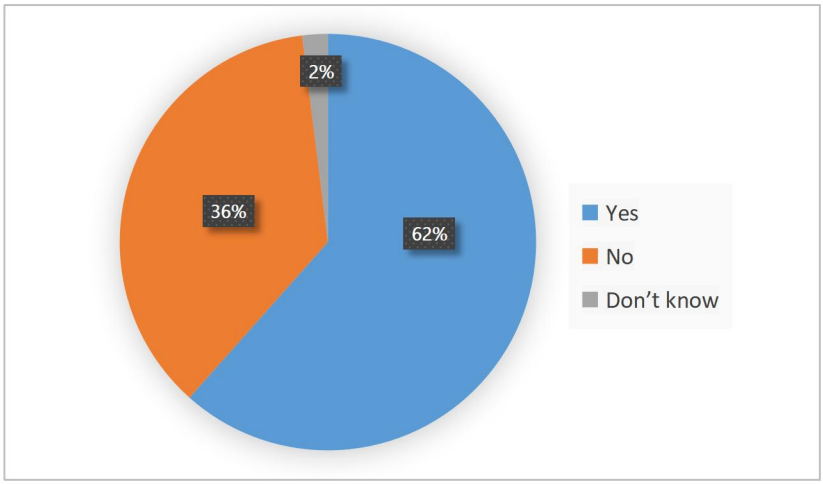
Pakistan Journal of Medical & Cardiological Review
https://pakjmcr.com/index.php/1/about
Online ISSN 3007-2387
Print ISSN 3007-2379

Table 1: Demographic Characteristics of Participants (n = 203)

Variable	Category	Frequency (N)	Percentage (%)
Age (years)	20–29	60	29.6%
	30–39	59	29.1%
	40–49	67	33.0%
	60–79	17	8.4%
Education	Uneducated	61	30.0%
	Primary	18	8.9%
	Secondary	32	15.8%
	Graduate	92	45.3%
Occupation	Government job	92	45.3%
	Private job	69	34.0%
	Housewife	34	16.7%
	Business	8	3.9%

Most of the participants (61.6%) had a positive family history of hypertension, while 36.4% reported no family history and 2.0% were unaware (Figure 1).

Figure 1: Distribution of Family History of Hypertension among Participants (N = 203)



The findings show that 74.9% of participants had heard about hypertension. More than half of the participants were aware that hypertension increases with age (56.7%) and that it affects both genders (60.1%). Awareness regarding family history as a risk factor was reported by 58.1% of participants. Regarding modifiable risk factors, 64.0% of

participants identified overweight and 61.6% recognized excess salt intake as risk factors for hypertension. Awareness related to fatty food intake was reported by 51.2% of participants. However, knowledge regarding smoking as a risk factor was comparatively low, with only 39.4% identifying it correctly, while 46.8% reported incorrect knowledge. Awareness regarding exercise as a preventive measure was reported by 59.1% of participants. (Table 2).

Table 2: Knowledge Regarding Hypertension among Study Participants (N = 203)

Item	Yes n (%)	No n (%)	Don't Know n (%)
Heard about hypertension	152 (74.9)	51 (25.1)	—
Hypertension increases with age	115 (56.7)	60 (29.6)	28 (13.7)
Both genders can develop hypertension	122 (60.1)	55 (27.1)	26 (12.8)
Family history increases risk	118 (58.1)	61 (30.0)	24 (11.8)
Smoking is a risk factor	80 (39.4)	95 (46.8)	28 (13.7)
Fatty food increases risk	104 (51.2)	70 (34.5)	29 (14.3)
Overweight is a risk factor	130 (64.0)	50 (24.6)	23 (11.3)
Excess salt increases blood pressure	125 (61.6)	52 (25.6)	26 (12.8)
Exercise helps control blood pressure	120 (59.1)	55 (27.1)	28 (13.7)

The findings show that approximately half of the participants were aware of their hypertensive status (50.2%) and normal blood pressure values (51.2%). Slightly more than half (54.7%) reported awareness of their target blood pressure levels. A majority of participants (61.1%) believed that controlling blood pressure reduces complications. However, 62.1% of participants incorrectly believed that hypertension is a curable disease, indicating a misconception. Only 36.5% recognized that lifestyle changes help reduce blood pressure, while more than half (51.2%) disagreed with this statement. A notable proportion of participants (75.4%) reported improvement in blood pressure over the last 12 months (Table 3).

Table 3: Perception Regarding Hypertension among Study Participants (N = 203)

Statement	Yes n (%)	No n (%)	Don't Know n (%)
I know that I have hypertension	102 (50.2)	101 (49.8)	—
I know the normal blood pressure value	104 (51.2)	92 (45.3)	7 (3.4)
I know my target personal blood	111 (54.7)	92 (45.3)	—

pressure value			
Controlling blood pressure reduces complications	124 (61.1)	62 (30.5)	17 (8.4)
Uncontrolled hypertension can lead to organ damage	103 (50.7)	29 (14.3)	71 (35.0)
Hypertension is a curable disease	126 (62.1)	32 (15.8)	45 (22.2)
Lifestyle changes help reduce blood pressure	74 (36.5)	104 (51.2)	25 (12.3)
My blood pressure has improved over the last 12 months	153 (75.4)	50 (24.6)	—

The findings show that more than half of participants reported regularly taking antihypertensive medication (61.1%) and following their doctor's advice (66.5%), indicating relatively good treatment adherence. A higher proportion of participants (72.9%) reported limiting salt intake, reflecting positive dietary modification practices. However, only 46.8% of participants reported regular blood pressure monitoring, indicating inadequate routine health surveillance. Similarly, 54.2% of participants engaged in regular exercise, indicating moderate physical activity in the study population. Smoking avoidance was reported by 64.0% of participants, suggesting comparatively better preventive behavior in this aspect (Table 4).

Table 4: Practices Regarding Hypertension Management among Participants (N = 203)

Practice Variable	Yes n (%)	No n (%)	Don't Know n (%)
Regular blood pressure check	95 (46.8)	80 (39.4)	28 (13.7)
Take medication regularly	124 (61.1)	79 (38.9)	—
Limit salt intake	148 (72.9)	55 (27.1)	—
Exercise regularly	110 (54.2)	65 (32.0)	28 (13.7)
Avoid smoking	130 (64.0)	50 (24.6)	23 (11.3)
Follow the doctor's advice	135 (66.5)	68 (33.5)	—

Discussion

The present study revealed that 74.9% of participants had heard about hypertension, indicating relatively good general awareness. Similar findings have been reported in recent studies conducted in Pakistan, where awareness levels among adults were moderate, but a detailed understanding of hypertension remained inadequate,

particularly regarding risk factors and long-term complications. A 2024 Pakistani study also reported limited health literacy regarding hypertension prevention and management despite reasonable general awareness. [12, 18] In this study, participants showed relatively better knowledge of obesity (64.0%), excess salt intake (61.6%), and family history (58.1%) as risk factors. However, awareness regarding smoking as a risk factor was low (39.4%). These findings are consistent with studies from Pakistan and India, where knowledge of dietary risk factors was relatively better, but awareness of smoking and physical inactivity remained insufficient.[19] Similarly, evidence from China highlights that behavioral risk factors such as smoking, poor diet, and inactivity are strongly associated with hypertension, yet awareness and control of these factors remain inadequate in many populations.[20] Regarding perception, only half of the participants were aware of their hypertensive status (50.2%) and normal blood pressure values (51.2%). Although 61.1% recognized that controlling blood pressure reduces complications, a significant proportion (62.1%) incorrectly believed that hypertension is a curable disease. Similar misconceptions have been reported in Pakistan, where hypertension is often misunderstood as a temporary condition rather than a chronic disease requiring lifelong management.[21] Furthermore, low recognition of lifestyle modification reflects inadequate understanding of non-pharmacological management, as reported in previous studies.[22] In terms of practices, the majority of participants reported limiting salt intake (72.9%), following medical advice (66.5%), and taking medication regularly (61.1%). However, regular blood pressure monitoring (46.8%) and physical activity (54.2%) were comparatively low. Similar findings have been reported in Pakistan and Saudi Arabia, where medication adherence is relatively better, but lifestyle modification and routine monitoring remain suboptimal among hypertensive patients. [23, 24]

Limitations and Future Suggestions

This study was conducted in a single tertiary care hospital, which may limit generalizability. The cross-sectional design does not allow assessment of causality. Convenience sampling may introduce selection bias. Data were self-reported, which may be affected by recall and response bias. Future studies should include multiple centers and use probability sampling for better generalization. Longitudinal and interventional

studies are recommended to assess changes over time and evaluate the impact of health education programs on hypertension awareness and practices.

Conclusion

The study concluded that patients attending the outpatient department of Civil Hospital, Hyderabad, had moderate awareness, mixed perception, and moderately good practices regarding hypertension. However, gaps were identified in knowledge of risk factors, misconceptions about hypertension, and inadequate preventive practices such as regular blood pressure monitoring and physical activity. Strengthening health education at the outpatient level is essential to improve hypertension awareness and control.

Conflict of Interest: None

Funding Disclosure: None

Authors' Contributions

JAN: Conception and study design; drafted the manuscript.

HBC: Supervision

SA, JAN: Statistical analysis; results interpretation.

HBS, SM: Discussion; manuscript review.

AMR, SMY, PB: Data collection; preparation of tables

References

1. Goorani S, Zangene S, Imig JD. Hypertension: a continuing public healthcare issue. *Int J Mol Sci*. 2024;26(1):123. doi:10.3390/ijms26010123.
2. Ranjan A, Agarwal R, Mudgal SK, et al. Determinants and knowledge of hypertension among adult population visited in outpatient department of a tertiary care centre: a cross-sectional study. *Discov Public Health*. 2025;22:163. doi:10.1186/s12982-025-00547-0.
3. World Health Organization. Global report on hypertension: the race against a silent killer. Geneva: WHO; 2023. Available from: https://www.who.int/publications/i/item/9789240081062
4. Ewadh RMJ, Kadhum SA, Jameel ZI. Study about high blood pressure and pathophysiology in human and effect of drugs in Hilla city. *J Univ Kufa*. 2025;2025:682–694.

5. Cheraghi Z, Azmi-Naei B, Cheraghi P, Doosti-Irani A. The global prevalence of uncontrolled hypertension: a systematic review and meta-analysis. *BMC Public Health*. 2025;25:4259. doi:10.1186/s12889-025-25553-4.
6. Schutte AE, Venkateshmurthy NS, Mohan S, Prabhakaran D. Hypertension in low- and middle-income countries. *Circ Res*. 2021;128(7):808–826. doi:10.1161/CIRCRESAHA.120.318729.
7. Abdulmumeen IO. Knowledge, attitude and awareness of adolescent hypertension among student nurses in a tertiary institution in Kwara State. *Arch Case Rep*. 2025. doi:10.29328/journal.acr.1001145.
8. Zhou T, Wang Y, Zhang H, et al. Primary care institutional characteristics associated with hypertension awareness, treatment, and control in China PEACE project. *Lancet Glob Health*. 2023;11(1):e83–e94. doi:10.1016/S2214-109X(22)00428-4.
9. Elahi A, Ali AA, Khan AH, et al. Challenges of managing hypertension in Pakistan: a review. *Clin Hypertens*. 2023;29:17. doi:10.1186/s40885-023-00245-6.
10. Soe MS, Hlaing SS, Mon AS. Determinants of awareness, treatment and control of hypertension in Myanmar. *BMJ Public Health*. 2025;3(2):e002810. doi:10.1136/bmjph-2025-002810.
11. Ashraf T, Sultana R, Sachdewani R. Pakistan's silent threat: the escalating crisis of hypertension. *Pak Heart J*. 2025;58(3):281–283. doi:10.47144/phj.v58i3.3327.
12. Huma S, Bijrani SA, Wassan SM, et al. Hypertension knowledge among non-hypertensive adults in Pakistan. *Pak J Health Sci*. 2024:103–109. doi:10.54393/pjhs.v5i08.1926.
13. Shariful Islam M, Fardousi A, Sizear MI, et al. Effect of leisure-time physical activity on blood pressure: a systematic review and meta-analysis. *Sci Rep*. 2023;13:10639. doi:10.1038/s41598-023-37149-2.
14. Mushcab H, Al Mutairi A, Al Matroud A, et al. Lifestyle intervention to prevent hypertension in primary healthcare settings. *Prev Med Rep*. 2023;36:102487. doi:10.1016/j.pmedr.2023.102487.
15. Ahmed EHH, Maphasha OM, Okeke SO. Knowledge, attitudes and practices on hypertension among patients. *S Afr Fam Pract*. 2025;67:e1–e8. doi:10.4102/safp.v67i1.6094.

16. Sohail MM, Sohail MU, Awan MUS, et al. Prevalence and predictors of uncontrolled hypertension in Pakistan. *Int J Pharm Res Technol*. 2025;15:2844–2852. doi:10.55529/ijprt.1125.
17. Kalam A, Wang P, Haile GB, et al. Hypertension knowledge and sociodemographic variables in Bangladesh. *Sci Rep*. 2025;15:43414. doi:10.1038/s41598-025-17415-1.
18. Tariq M, Din MAU, Mustafa ZU, et al. Risk factors of hypertension among adults in Pakistan. *Pak Armed Forces Med J*. 2023;73(Suppl):S119. doi:10.51253/pafmj.v73iSuppl-1.3910.
19. Maheswari DL, Anand DRG, Jeyalakshmi DP, et al. Predisposing factors and awareness of hypertension in rural India. *Int J Sci Res*. 2024;13(11):1445–1448. doi:10.21275/SR241120113302.
20. Zhang X, Wu J. Temporal trends of hypertension in China. *Blood Press*. 2025;34:2468172. doi:10.1080/08037051.2025.2468172.
21. Noor N, Hassan D, Khalid S, Kashif M. Perceptions about hypertension in Pakistan. *East Mediterr Health J*. 2024;30(10):682–688. doi:10.26719/2024.30.10.682.
22. Yaqoob S, Yaseen M, Jarullah FA, et al. Lifestyle modifications among hypertensive patients in Karachi. *Ann Med Surg*. 2022;82:104587. doi:10.1016/j.amsu.2022.104587.
23. Barak W, Butt NI, Ayesha A, et al. Knowledge and treatment adherence in hypertensive patients. *Cureus*. 2025;17(4):e81762. doi:10.7759/cureus.81762.
24. Al-Hazmi AH, Alanazi ADM, Thirunavukkarasu A, et al. Hypertension knowledge and medication adherence in Saudi Arabia. *Front Public Health*. 2025;12:1378561. doi:10.3389/fpubh.2025.1378561.