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Journal of Heart and Vasculature

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Short Communication

Pakistan's Silent Threat: The Escalating Crisis of Hypertension and Probable Recommendations

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Received Date: January 23, 2025 **Accepted Date**: February 18, 2025 **Published Date**: February 27, 2025.

Citation: Tariq Ashraf, Raffat Sultana, Rajkumar Sachdewani, (2025), Pakistan's Silent Threat: The Escalating Crisis of Hypertension and Probable Recommendations, *Journal of Heart and Vasculature*, 4(1); DOI:10.31579/2834-8788/027

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Abstract

Hypertension is a rapidly escalating public health concern in Pakistan, with prevalence estimates as high as 46.2%, surpassing both regional and global averages. Sedentary lifestyles, poor dietary habits, obesity, and limited awareness contribute significantly to this burden. Despite the availability of treatment guidelines, poor adherence to lifestyle modifications and medications—often due to financial constraints—results in widespread uncontrolled hypertension, particularly in rural populations. Knowledge gaps among patients, physicians, and healthcare systems further compound the issue. Comprehensive national data remain scarce, as existing evidence stems largely from small-scale studies. To address this crisis, Pakistan urgently requires large population-based surveys, targeted awareness campaigns, improved primary care training, and multi-sectoral collaboration to strengthen prevention, early detection, and management strategies.

Key words: hypertension; prevalence; risk factors, lifestyle modification; pakistan

Introduction

Hypertension is rapidly emerging as one of Pakistan's most pressing public health challenges. The National Diabetes Survey of Pakistan (NDSP) 2016–2017 reported a prevalence of 46.2% [1], a figure far higher than the average of 31.5% in low- and middle-income countries and 28.5% in high-income countries [2]. The National Health Survey of Pakistan (NHSP) revealed that among individuals over 15 years, the prevalence was 18.9%, with higher rates in urban compared to rural populations, and in men compared to women [3]. This alarming rise can largely be attributed to epidemiological and nutritional transitions, resulting in sedentary lifestyles, poor dietary habits, and increasing obesity. According to a WHO study, 82.8% of boys and 87.3% of girls aged 13– 15 years lead a sedentary lifestyle, while 54.3% of adolescents remain physically inactive [4]. Similarly, the Pakistan Adolescent School Survey showed that 80% of adolescents consume unhealthy diets [5]. Frequent intake of red meat, fatty foods, and sweet desserts drives up blood pressure, whereas inadequate consumption of fruits, vegetables, whole grains, and lean proteins diminishes protective benefits against hypertension [6]. Obesity, defined as a BMI >23 kg/m², has reached a prevalence of 70% in Pakistan and is strongly associated with hypertension [7]. Women are disproportionately affected, and childhood obesity is an emerging concern with direct links to early-onset hypertension, although comprehensive data remain scarce. Despite this burden, a large proportion of hypertensive patients remain uncontrolled. This is primarily due to poor follow-up, limited awareness of lifestyle modifications, and poor adherence to medication. Financial barriers further compound the problem. Although universal health coverage advocates equitable access without financial hardship [8], in Pakistan, healthcare expenses are largely out- of-pocket [9]. Consequently, rural populations experience higher rates of uncontrolled hypertension, unlike neighboring countries such as Bangladesh and Sri Lanka, where more structured health support exists [10]. In Karachi, non-adherence to medication was found to be closely tied to financial constraints [11].

Awareness about lifestyle modification is also insufficient. Studies from three tertiary care centers in Karachi demonstrated low knowledge scores among patients [12]. Those followed in tertiary care facilities were generally better informed than those in primary care settings [13]. The knowledge deficit is multilayered—spanning patients, physicians, healthcare infrastructure, and media [14]. Physician- related factors are also influential. For example, the Joint National Committee (JNC) recommends thiazide diuretics as the first-line therapy for most patients [16], while the Pakistan Hypertension League suggests ACE inhibitors for individuals under 55 years, and calcium channel blockers or diuretics for those above 55 [17]. However, inappropriate drug selection remains common [15].

Despite high prevalence rates, comprehensive national data on hypertension are lacking. Small-scale studies exist, but there is a clear need for large, population-based surveys to accurately assess both prevalence and management patterns. As a low- socioeconomic country with a vast population, Pakistan's limited healthcare resources exacerbate disparities, particularly among vulnerable groups, fueling the uncontrolled hypertension crisis.

To address these challenges, the following steps are urgently needed:

1. Conducting national, population-based surveys to determine the true burden of hypertension.
2. Implementing public awareness campaigns to educate communities on risk factors and the importance of lifestyle modifications.
3. Promoting patient self-management through diet, exercise, and regular blood pressure monitoring.
4. Training primary healthcare providers to screen, diagnose, and manage hypertension consistently, with emphasis on follow-up.
5. Fostering collaboration between healthcare systems, government bodies, and community stakeholders to tackle lifestyle and environmental drivers of hypertension.

Authors' Contribution

TA, RS, and RS: Concept and design, data acquisition, interpretation, drafting, final approval, and agree to be accountable for all aspects of the work.

Acknowledgment: None

Funding: No specific grant for this research from any public, commercial, or not-for-profit funding agency

References

1. Basit A, Tanveer S, Fawwad A, Naeem N, NDSP Members. Prevalence and contributing risk factors for hypertension in urban and rural areas of Pakistan; a study from second National Diabetes Survey of Pakistan (NDSP) 2016–2017. Clin Exp Hypertens. 2020;42(3):218–24.
2. Mohsen IM. Hypertension in developing countries: a major challenge for the future. Curr Hypertens Rep. 2018;20(5):38.
3. Rafique I, Saqib MAN, Munir MA, Qureshi H, Rizwanullah KS, Khan SA, et al. Prevalence of risk factors for noncommunicable diseases in adults: key findings from the Pakistan STEPS survey. East Mediterr Health J 2018;24(1):33-41.
4. World Health Organization. Regional Office for the Eastern Mediterranean. Country factsheet insufficient physical activity. Pakistan; 2015.
5. Khuwaja AK, Khawaja S, Motwani K, Khoja AA, Azam IS, Fatmi Z, et al. Preventable lifestyle risk factors for non-communicable diseases in the Pakistan Adolescents Schools Study 1 (PASS-1). J Prev Med Public Health. 2011;44(5):210–7.
6. Mansoori S, Kushner N, Suminski RR, Farquhar WB, Chai SC. Added sugar intake is associated with blood pressure in older females. Nutrients. 2019;11(9):2060.
7. Akram J, Rehman HR, Muneer F, Hassan S, Fatima R, Khan TM, et al. Hypertension and obesity: a cross-sectional study. Eur J Med Heal Sci. 2021;3(4):90-4.
8. Datta BK, Husain MJ, Fatehin S. The crowding out effect of out-of- pocket medication expenses of two major non-communicable diseases in Pakistan. Int Health. 2019;12(1):50–9.
9. Jafar TH, Gandhi M, Jehan I, Naheed A, de Silva HA, Shahab H, et al. Determinants of uncontrolled hypertension in rural communities in South Asia—Bangladesh, Pakistan, and Sri Lanka. Am J Hypertens. 2018;31(11):1205–14.
10. Aslam N, Shoaib MH, Bushra R, Farooqi FA, Zafar F, Ali H, et al. Out of pocket (OOP) cost of treating hypertension in Karachi, Pakistan. Pak J Pharm Sci. 2018;31(3(Supplementary)):1039–44.
11. Almas A, Bhamani F, Khan AH. Better physician-patient communication; an important milestone in control of hypertension, a multicenter study from Karachi, Pakistan. J Coll Physicians Surg Pak. 2014;24(12):952–4.
12. Ashfaq T, Anjum Q, Siddiqui H, Shaikh S, Vohra EA. Awareness of hypertension among patients attending primary health care centre and outpatient department of tertiary care hospital of Karachi. J Pak Med Assoc. 2007;57(8):396–9.
13. Almas A, Godil SS, Lalani S, Samani ZA, Khan AH. Good knowledge about hypertension is linked to better control of hypertension; a multicentre cross sectional study in Karachi, Pakistan. BMC Res Notes. 2012;5(1):579.
14. Al-Makki A, DiPette D, Whelton PK, Murad MH, Mustafa RA, Acharya S, et al. Hypertension pharmacological treatment in adults: a world health organization guideline executive summary. Hypertension. 2022;79(1):293–301.
15. Schwartz GL, Sheps SG. A review of the sixth report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. Curr Opin Cardiol. 1999;14(2):161–8.
16. Hussain IM, Naqvi BS, Qasim RM, Ali N. Current trends in treatment of hypertension in Karachi and cost minimization possibilities. Pak J Med

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