

Pattern of Hypertension in Rural Area

Mominul Islam

Founder and Owner, Jonosastho Diagnostic Center, Porsha, Naogaon.

***Corresponding Author:** Mominul Islam, Founder and Owner, Jonosastho Diagnostic Center, Porsha, Naogaon.

Received Date: 31 March 2026 | **Accepted Date:** 3 April 2026 | **Published Date:** 9 April 2026

Citation: Mominul Islam, (2026), Pattern of Hypertension in Rural Area, *Journal of Clinical and Laboratory Research*, 9(2); DOI:10.31579/2768-0487/204

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Abstract

Hypertension is a major public health problem all over the world. In Bangladesh it is in increasing trend. No part (urban or rural) is immune. This survey based epidemiological work was carried out at rural areas of northern part of Bangladesh irrespective of gender and race. The study subjects were selected conveniently from health camp. The mean SBP and DBP were 125.89 ± 18.17 mmHg and 76.29 ± 13.31 mmHg, respectively. Prevalence of hypertension was 39.75%. The average SBP was 126.48 ± 18.11 mmHg in men and 122.07 ± 14.61 mmHg in women. The average DBP was 82.34 ± 13.42 mmHg in men and 76.0 ± 11.24 mmHg in women. Holistic preventive measurement is necessary to stop high blood pressure.

Key words: socio-demographic; infertility; overweight; polycystic ovary syndrome; lifestyle habits

Introduction

Hypertension is an important worldwide public-health challenge.¹ It has been identified as the prominent risk factor for mortality, and is ranked third as a cause of disability-adjusted life-years.² Bangladesh is in the midst of an epidemiologic transition. This country is starting to observe a shift in the major causes of death from mainly infectious diseases and nutritional deficiencies to those due to chronic diseases. The scant population-based data available indicate that the prevalence of hypertension in Bangladesh is increasing. Moreover, in Bangladesh, about 85.0% of total population lives in villages. They are not interested to go to physicians when they become sick due to their poor socio-economic condition, life style as well as due to lack of awareness.³ Therefore in villages undetected and untreated hypertensive patients are more. The proportion of hypertension among rural population is still undetected though this has strong impact on physical, mental and social burden. Increasing evidences in various international settings. ⁴ have identified various socio-demographic, dietary, and life style related risk factors among hypertension patients. Primary prevention is key to the control of the epidemic of non-communicable diseases including hypertension, and the identification of major risk factors is important to determine public health priorities.⁴

Methods

This study was conducted at northern part of Bangladesh through a health camp where mixed and heterogeneous population had come for treatment. The data were collected using opportunistic sampling technique. For blood pressure measurement digital BP apparatus was used. BP was measured three times, 3 to 5 minutes apart from the left arm while the subject was in sitting position and the arm rested on a flat surface. The average of the last two measures was used to determine elevated BP. The data were cleared and entered in to SPSS 26.0 statistical software. Confidentiality of information was maintained.

Results

The average SBP was 126.48 ± 18.11 mmHg in men and 122.07 ± 14.61 mmHg in women. The average DBP was 82.34 ± 13.42 mmHg in men and 76.0 ± 11.24 mmHg in women. More than half of the respondents had normal blood pressure followed by raised blood pressure (7.75%), stage I hypertension (15%) and stage ii hypertension (24.75%).

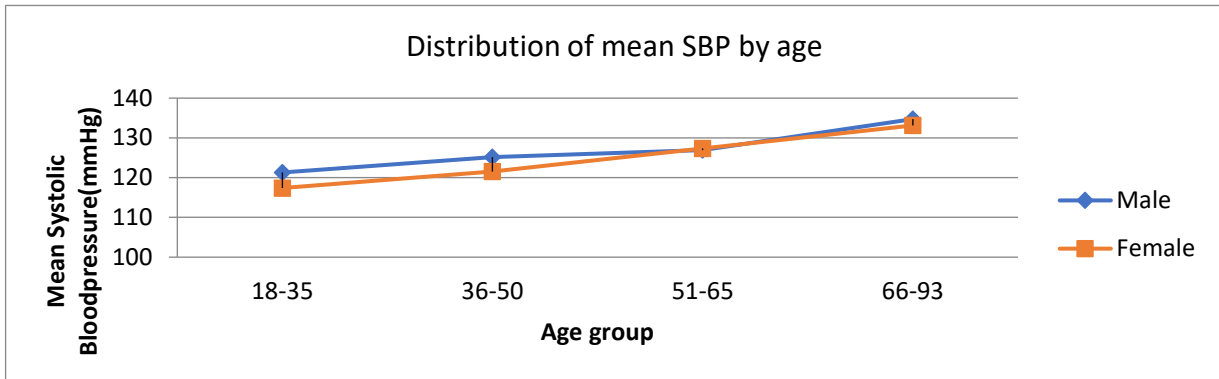


Figure 1: Mean SBP by age

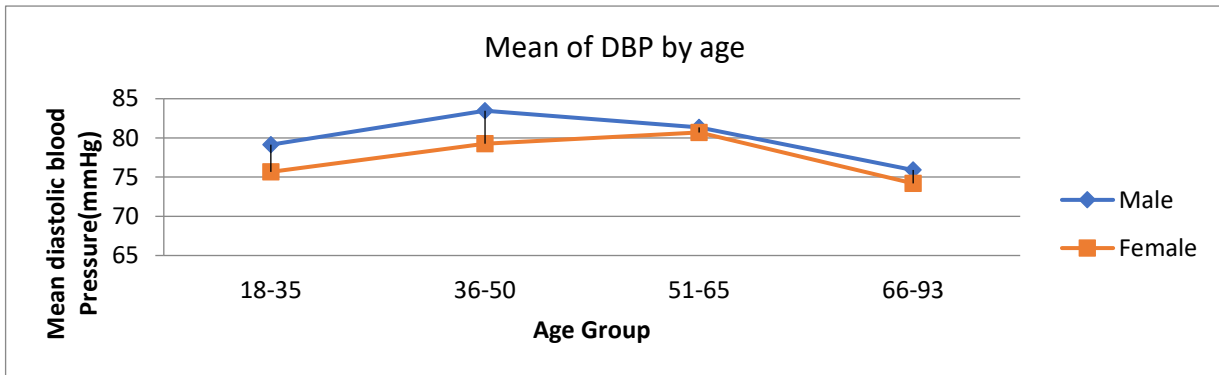


Figure 2: Mean DBP by age

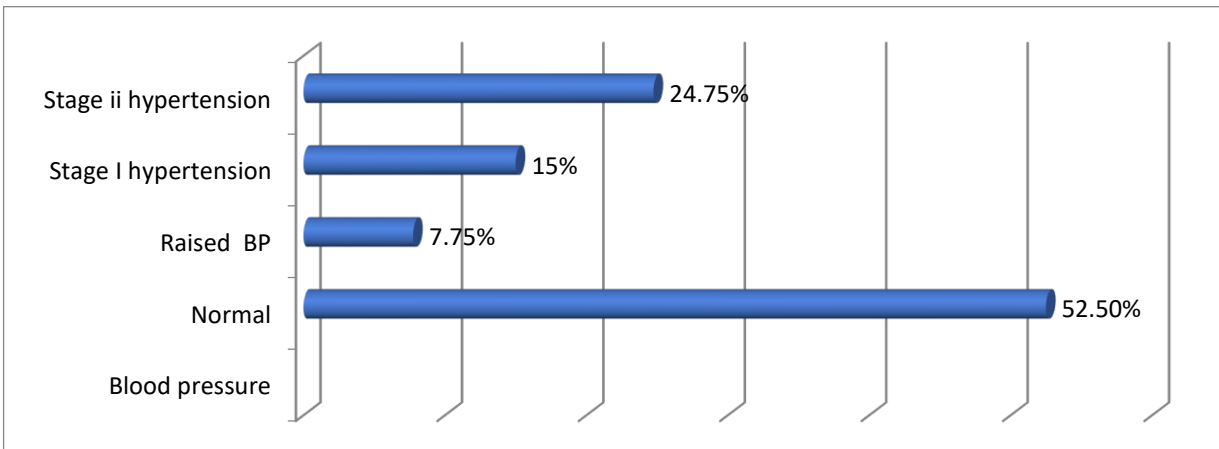


Figure 3: Status of blood pressure

Discussion

The prevalence of hypertension in this study was 39.75%. This indicates high burden of unapparent morbidity related to hypertension which increases the risk of subsequent complication. According to a recent report, 18% of the Bangladeshi population has hypertension.⁵ Age was independently associated with hypertension and the odds increased with an increase in age. This can be explained by the fact that with increased age the walls of the larger arteries become stiffened mainly due to arteriosclerotic structural changes, calcification and increased peripheral vascular resistance of smaller arteries.⁶ This indicates that hypertension related morbidity increases with increased age along with subsequent complications. Cigarette smoking causes activation of the sympathetic nervous system and oxidative stress associated with increase markers of inflammation leading to endothelial dysfunction, vascular injury, plague progression, and increased arterial stiffness leading to development of hypertension.⁷ Even though some argue

that BMI along is not good predictor of cardiovascular disease indicating that adverse health consequences are associated with increased adiposity rather than an increase in body weight,⁸ evidence showed that higher BMI accounts for 75% of the risk of primary hypertension which is intermediated by increased renal tubular sodium reabsorption that impairs natriuretic.⁹ Several community-based studies conducted in different parts of Bangladesh revealed BMI ≥ 25 kg/m² associated with hypertension.¹⁰ Similar observation has been made in our study revealing that having higher BMI was associated with hypertension.

Conclusion

Moderately high prevalence of hypertension was assessed among adults in study indicating a major public health problem. Vigorous community awareness program is necessary to elevate consciousness level regarding complications of hypertension.

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DOI:10.31579/2768-0487/204

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