IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Hypertension-The Restrained Terminator: A Mini Review

Mr. Shoyeab M. Khan and Ms. Padge Sakshi Sunil
Anjuman Islam Janjira, Degree College of Science, Murud-Janjira, Raigad, Maharashtra, India

Abstract: *Hypertension, the "silent killer" is a modern day's epidemic and is an increasingly important medical and global public health issue its role in causation of coronary heart disease, stroke, and other vascular complications. Hypertension is one of the major risk factors for cardiovascular disease and this leads cause of death worldwide. High blood pressure is another home of hypertension High blood pressure, often has no symptoms most of the studies on hypertension provided the data on older of high blood pressure so. the study on prevalence pressure among younger age group and their socio- demographic variables provides the guide for requirements of any intervention. The present study indicates the Current prevalence of hypertension and its correlates in the state of Maharashtra. I've searched PubMed, Embase, Cochrane library, Google Scholar and includes cross sectional studies reporting data on hypertension prevalence among young adults. For more state I've visited national library of medicine and analyzed National family Health surrey Date (NHFS). The data collected is present using Microsoft Excel. Overall prevalence of hypertension was 35-40% and that of pre-hypertension was 40 45%. among the study population human ecology factors like age, mode of travel, physical activity, hypertension, male gender, family history of hypertension, mode of travel, physical activity, overweight, years of service, intake of coffee and smoking had shown significant association with hypertension.*

Keywords: Hypertension, Prevalence, Young adults, NFHS

I. INTRODUCTION

Hypertension is defined as systolic blood pressure measuring more than or equal to 90 mm ed in an individual according to JNC, 72 The of mercury record. global prevalence of raised blood pressure in adults aged 15 years and over was, in 2019-2015 Approximately 9.4 million deaths. around 20% and 7% of disease burden as measured in DALYS (disability adjusted life years. caused are by roused blood pressure in 2010.**[2]** Higher the blood pressure, higher the risk of both stroke and coronary events overall prevalence for hypertension in India was found to be 29.8% about 33 /. urban and 25 % rural Indians have hypertension.**[4]**

Many modifiable factors contribute to the Current high prevalence rates of blood rates They include overweight obesity harmful we Pressure. They include overweight and obesity, harmful use of alcohol, physical inactivity, psychological stress, eating food containing too much salt, inadequate intake of fruits and vegetables, socioeconomic determinants, etc **[3].**

II. METHODOLOGY

Present study may be a cross sectional study administered geographic area throughout 2019 to 2020 by National Family Health Survey (NFHS-5).**[5]** Multistage sampling technique was utilised within the study. this may be a across the nation sampling survey and therefore the information is collected completely for every state. NFHS-5 munition for geographic area was conducted from nineteen June 2019 to thirty Dec 2019 by Indian Institute of Health Management analysis (IIHMR) and TRIOs Development Support (P) Ltd. Knowledge was gathered from 31,643 households, 33,755 women, and 5,497 men. The scope of clinical, measuring, and organic chemistry testing (CAB) has conjointly been enlarged to incorporate mensuration of waist and hip circumferences, and therefore the age vary for the mensuration of vital sign and blood sugar has been enlarged.**[1]** The NFHS-5 sample has been designed to produce national, state/union territory (UT), and district level estimates of assorted indicators lined inside the survey. **[6]** The Biomarker Schedule of this survey lined measurements of height, weight, and Hb levels for children; measurements of height, weight, waist, and hip circumference,

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

and Hb levels for ladies aged fifteen-49 years and men aged 15-54 years; and vital sign and random blood sugar levels for ladies and men aged 15 years and over. **[17,18]**

III. Literature Review

There is a scarcity of targeted analysis for programs or study protocols with prehypertension because the study focus. this can be seemingly as a result of prehypertension isn't a malady class however a identification of risk(National High pressure level Education Program, 2004), that solely in recent years has been at argeted space of focus.**[12]** For reasons that seemingly appear associated with funding for this subject primarily being given to communities and health departments that have terribly restricted business capability compared to educational and laboratory settings, most studies reportage prehypertension, hypertension, or overall heart condition risk reduction as outcomes concentrate on risk issue reduction through life-style modification programs (e.g. those centered on physical activity and nutrition).

Such programs or study protocols centered in the main on fatbar and rising physical activity and/or nutrition.**[25]** just one article, Associate in Nursing analysis of exercise coaching on resting pressure level in young adults, had prehypertension because the topic of focus. this text evaluated Associate in Nursing eight-week exercise coaching protocol.**[25]** Researchers found a clinically and statistically vital seven to 12 mmHg reduction in pressure level when program completion.

IV. Results

Prevalence of high blood pressure in geographic area in geographic area, the prevalence of high blood pressure is found 25.1%. Besides, an enormous variation within the prevalence of high blood pressure is ascertained across the districts. At the district level, the prevalence rate of high blood pressure is varied between V-J Day in Hingoli and three hundred and 65 days in Bombay. Satara, Dhule, Gadchiroli and Bombay are the districts with over half-hour prevalence of high BP, whereas Hingoli, Nagpur, Osmanabad, Wardha and Akola have a prevalence rate of but one-fifth. There are districts like Nandurbar, Jalgaon, Buldana, Gondiya, Chandrapur, Yavatmal, Bombay residential district, Pune, Ahmednagar, Bid and Solapur that show the next prevalence of high blood pressure than the state average. **[26, 5]**

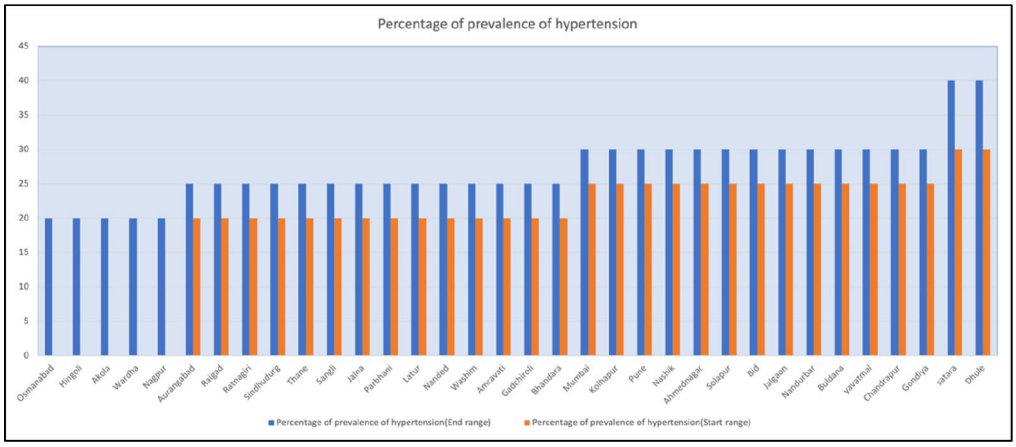

Figure 2: Percentage of prevalence of hypertension in states of Maharashtra.

4.1 Prevalence of High Blood Pressure Related to Totally Different Socioeconomic Factors

Table 1 shows the prevalence of high blood pressure in geographic area in step with the socioeconomic characteristics of the respondents. Concerning twenty-five percent (25%) of the respondent's square measure at the chance of high blood pressure. The study shows that the prevalence of high blood pressure is absolutely related to the age of the respondents and therefore the results square measure found statistically vital ($\chi 2 = p < 0.001$). **[22, 24]**

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Table 1: Prevalence of hypertension associated with different socioeconomic factors.

Sr. No.	Variables	Categories of the variables	Percentag
1	Age(Years)	18-29	29-30
		30-39	21-22
		40-49	17-18
		50-59	13-14
		60+	18-19
2	Sex	Male	45
		Female	55
3	Marital Status	Single	14
		Maried	77
		Widow/Separated/Divorced	9
4	Place of residence	Rural	57
		Urban	43
5	Education Status	Illiterate	3
		Primary	14
		Secondray	29
		Higher	54
6	Religion	Hindu	80
		Muslim	10
		Buddhist	7
		Christian	1
		Others	2
7	Caste	SC	19
		ST	14
		OBC	43
		Others	24
8	Wealth index	Poorest	20
		Poorer	19
		Middle	18
		Richer	22
		Richest	21

Figure 2 shows that the prevalence of hypertension in males (28%) is significantly higher as compared to the prevalence in females (23%). But, in the age group of sixty years and above, the prevalence of hypertension is found higher among females (42%) than among males (39%).**[26]**

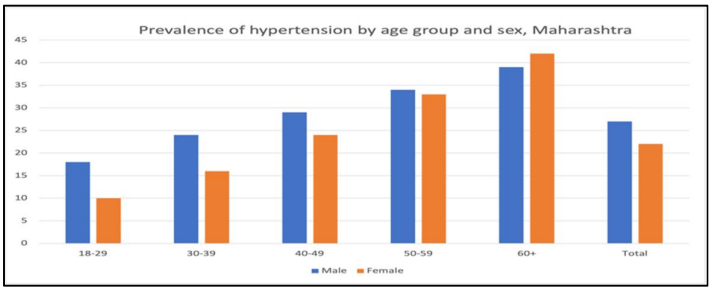

Figure 2: Prevalence of hypertension by age group and sex, Maharashtra

We have observed a higher prevalence of hypertension among widow, divorced and separated (37%, 95% CI: 35.9–38.1), compared to single and married. In contrast, when it is compared to the former, a higher prevalence of hypertension is found among the single and married at the younger age (i.e., age between 18 and 39 years). The prevalence increases after the age of forty years among widowed, divorced and separated (Fig 3).**[26]**

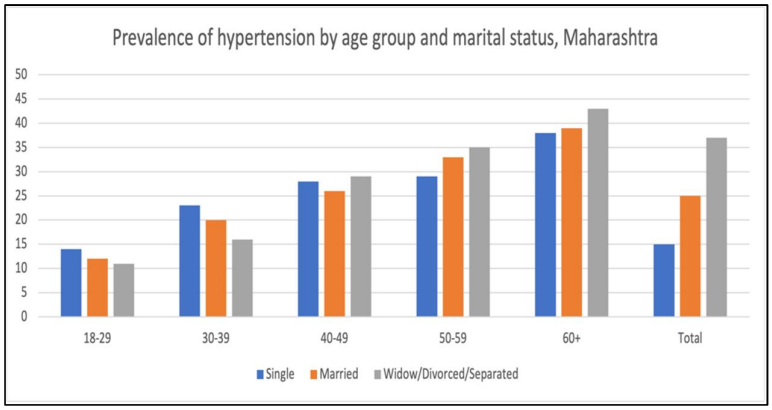

Figure 3: Prevalence of hypertension by age group and marital status, Maharashtra

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

We have additionally found an urban-rural difference in the prevalence of hypertension, which is 27% (95% CI: 25.5–27.7) in the urban areas and 24% (95% CI: 23.1–24.7) in the rural areas. No clear pattern of prevalence of hypertension by education is seen, through respondents who are illiterate and are with primary education have a higher risk of hypertension as compared to those who have higher educational activities. The prevalence of hypertension is found higher in Christian and Muslim religion. Again, respondents belong to Scheduled Tribe (ST) are found to experience a higher level of BP (i.e., 26%, 95% CI: 24.6–27.8) than the respondents from alternative castes. We have observed a higher prevalence of hypertension (i.e., 28%, 95% CI: 27.2–29.7) among the respondents belonging to the richest wealth quintile as compared to the other respondents. Further, across the seven administrative divisions, variation in the prevalence of hypertension is also observed. Nashik (28.5%, 95% CI: 26.8–30.3) and Pune (27.5%, 95% CI: 26.0–29.0) regions have shown a higher prevalence of hypertension. **[5, 26]**

V. DISCUSSION

Maharashtra ranks among the highest 5 hierarchical states in Asian country on the Human Development Index (HDI). the current study focuses the situation of cardiovascular disease in geographic area and its districts. The study has found a large variation within the rate of prevalence of cardiovascular disease within the districts of geographic area. The prevalence of cardiovascular disease is found the bottom (15%) in Hingoli (the district with low HDI rank), and therefore the highest (36%) in Bombay (very high HDI hierarchical district). **[24, 23]** Besides, regional variation is observed, and cardiovascular disease is found additional current in Pune and Nashik (regions sharing a better proportion of internet State Domestic Product). Among the individual level non-modifiable factors, age, sex, and legal status area unit found to be considerably related to cardiovascular disease. kind of like the previous studies, older participants, males, widowed, unmarried and separated, Christians and Muslims, regular tribes, low educated and wealthier respondents' area unit additional probably to be hypertensive **[7–9].**

Further, the prevalence rate of cardiovascular disease is found higher in urban areas than in rural areas **[10, 11]**. during this study, we've conjointly found that a better level of BMI (25 and above) and level of glucose (>140 mg/dl) are also the significant predictors of cardiovascular disease and are absolutely related to the prevalence of cardiovascular disease **[10, 12]**. alternative mode factors that area unit modifiable, like consumption of tobacco and alcohol and habit of smoking conjointly play a crucial role in increasing the chance of cardiovascular disease **[8, 13, 14]**. Despite awareness of the chance factors of cardiovascular disease, even among the participants with a better level of education and economic standing, prevalence of cardiovascular disease could also be high thanks to their fatness, physical inactivity and therefore the place of residence i.e., urban areas. Higher news of the matter of high force per unit area level among wealthier and educated respondents is additionally thought of as a crucial issue for the upper level of prevalence of cardiovascular disease during this cluster **[10, 15]**. Within the present study, the aim of utilizing structure model is to assess the number of variabilities within the prevalence of cardiovascular disease due to the effects of the of the various combination of things and due to the effect of every level **[16, 17]**. Hence, the smaller worth of VPC (1%) indicates that variation within the rate of prevalence of cardiovascular disease at the district level is low that will ensue to the influence of alternative factors (i.e., socio-economic characteristics, health, and mode practices). On the contrary, at the community level a better worth of VPC (13% to 14%) shows a better rate of variation within the prevalence of cardiovascular disease and may be attributed to the results of background factors **[7].** Hypertension is that the third most vital risk issue for burden of diseases in South Asia **[8]**.

Overall, the present prevalence of cardiovascular disease in geographic area is twenty fifth that is below the planet average. the speed is in line with several Asian countries like Bangladesh (24%), China (24%) and Vietnam (25%), however is inconsistent with the western countries like u. s. (20.3%) and Canada (21.4%) [**18,19,20]**. in step with a study, 20.6% of Indian men and twenty.9% of Indian ladies were full of cardiovascular disease in 2005 **[19]**. The reportable prevalence of cardiovascular disease was thirty seventh among 30–64 cohort in 1998 and fifty fifth among 40–60 cohort in 2000 in Asian country, although the speed varies from rural to urban and across the states **[21, 22]**. Action on the development of mode and its management to scale back the chance of cardiovascular disease is proscribed in Asian country. Further, inappropriate food habits and mode practices also are chargeable for the upper prevalence of cardiovascular disease **[15, 8, 14]**. correct force per unit area management live is required to avoid the chance of cardiovascular disease **[23]**. Hence, the management of the known risk factors (such because the use of tobacco and

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

consumption of alcohol) across the economic standing will improve the cardiovascular disease level of the population within the state of geographic area.

VI. Conclusion

Hypertension is additional common in urban areas than in rural areas in Republic of India. The structure analysis has shown that the variation within the rate of prevalence of high blood pressure is higher at the community (PSU) level as compared to the variation within the prevalence rate at the district level in Maharashtra. The study conjointly explores the high prevalence rate of high blood pressure in Pune, Nashik, and Amravati regions. The study emphasizes the requirement of a further focus and strategy to regulate high blood pressure among the deprived population (like uneducated and low educated, widowed, unmarried and separated, scheduled caste and scheduled tribe, and therefore the non-secular minority communities like Christians and Muslims) among whom high blood pressure is additional rife. The results intensify the present potential for preventive ways, focusing the community and direct for each medical and lifestyle-related factors like medical message, acceptable dietary practices, and social group attitudes toward healthy lifestyles. this can facilitate to realize associate degree optimum BMI level and an occasional glucose level. Moreover, correct pointers and promotion of healthy practices to stick a healthy way are needed. Further, changes in unhealthy behavior and practices at the individual level are desired. At the community and district level, there's associate degree imperative would like for acceptable intervention ways for the interference and management of high blood pressure by providing info, early designation, and treatment.

Acknowledgement

I would like to express my special thanks to our sir, Mr. Shoyeab Khan for their guidance and support. Incompleting the research paper on the hypertension-"the silent killer", secondly I would like to thank the principal sir of an human Island janjira degree College of Science, Murud janjira for providing all the facilities required for the completion of research paper.

References

[1]. WHO. A global brief on hypertension Silent killer, global public health crisis. World health day 2013, Geneva.
[2]. NIH. Seventh report of Joint National Committee on Prevention, detection, evaluation & Treatment of High Blood Pressure (JNC 7), NIH publication No. 04-5230, August 2004 available at http://www. nhlbi.nih.gov/guidelines/hypertension/jnc7full.pdf. Last accessed on December 10th, 2013.
[3]. WHO. Global Status Report on Non-communicable diseases, 2014.
[4]. Park K. Park ‘s Textbook of preventive and social medicine, 23rd ed. Jabalp
[5]. http://rchiips.org/NFHS/NFHS-5_FCTS/COMPENDIUM/Maharashtra.pdf
[6]. Messing K. Women workers. In: Wallace RB, Kohatsu N, Brownson R., Schecter A.J., Scutchfield D, Zaza S (Editors). Maxcy-RosenauLast. Public Health & Preventive Medicine. 15th Ed. New York: Mc graw hill; 2008: 829.
[7]. Le C, Jun D, Yichun L, Zhankun S, Keying Z (2011) Multilevel analysis of the determinants of pre-hypertension and hypertension in rural southwest China. Public Health Rep 126:420–7. https://doi.org/10. 1177/003335491112600316 PMID: 21553671
[8]. Anchala R, Kannuri NK, Pant H, Khan H, Franco OH, Angelantonio ED, Prabhakaran D (2014) Hypertension in India. J Hypertens 32:1170–1177. https://doi.org/10.1097/HJH.0000000000000146 PMID: 24621804
[9]. Banerji M, Kusuma YS, Das PK (2003) Prevalence of Hypertension Among an Urban Population of Bhubaneswar City, Orissa, India. J Hum Ecol 14:377–381.
[10]. WHO (2001) Prevalence, awareness, treatment, and control of hypertension among the elderly in Bangladesh and India: a multicentre study. Bull World Health Organ 79:490–500. PMID: 11436469
[11]. Maharashtra Human Development Report (2012). The Government of Maharashtra.
[12]. Meshram II, Laxmaiah A, Rao KM, Arlappa N, Balkrishna N, Reddy CG et al (2014) Prevalence of Hypertension and Its Correlates among Adult Tribal Population (20 Years) of Maharashtra State, India. Int J Heal Sci Res 4:130–139.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

[13]. Nagammanavar R, S G, Reddy CSP, et al (2015) A Study of Prevalence and Factors of Hypertension among the Bank Employees of Bellary City: A Cross Sectional Study. J Sci 5:459–466.

[14]. Kini S, Kamath VG, Kulkarni MM, Kamath A (2016) Pre-Hypertension among Young Adults (20– 30Years) in Coastal Villages of Udupi District in Southern India: An Alarming Scenario. PLoS One 20– 30. https://doi.org/10.1371/journal.pone.0154538 PMID: 27128029

[15]. Tiwaskar M (2016) Hypertension Control in India: Are we there Yet? OR Uncontrolled and Resistant Hypertension: The Indian Perspective. J Assoc Physicians India 64:11–12.

[16]. [16]. Khan M, Shaw J (2011) Multilevel logistic regression analysis applied to binary contraceptive prevalence data. J Data Sci 9:93–110.

[17]. Merlo J, Asplund K, Lynch J, Rastam L, Dobson A (2004) Population effects on individual systolic blood pressure: A multilevel analysis of the World Health Organization MONICA Project. Am J Epidemiol 159:1168–1179. https://doi.org/10.1093/aje/kwh160 PMID: 15191934

[18]. WHO (2013) A Global Brief on Hypertension. Geneva, Switzerland. http://ish-world.com/downloads/pdf/global_brief_hypertension.pdf

[19]. Kearney PM, Whelton M, Reynolds K, Muntner P, Whelton P, He J (2005) Global burden of hypertension: analysis of worldwide data. Lancet 365:217–23. PMID: 15652604

[20]. Rahman MM, Gilmour S, Akter S, Abe SK, Saito E, Shibuya K (2014) Prevalence and control of hypertension in Bangladesh: a multilevel analysis of a nationwide population-based survey. J Hypertens 1–8.

[21]. Poulter NR, Prabhakaran D, Caulfield M (2015) Hypertension. Lancet 2015; 386: 801–12. https://doi.org/10.1016/S0140-6736(14)61468-9 PMID: 25832858

[22]. Kashyap V, Kumar C, Haider S, Singh S, Sagar VB (2015) Prevalence of Hypertension and Its Association with Selected Socio-Demographic Factors in a Rural Area of Jharkhand. 14:1–6.

[23]. International Institute for Population Sciences (2015) National Family Health Survey—4, 2015–16. State Fact Sheet, Maharashtra.

[24]. Sawicka K., Szczyrek M., Jastrzebska I., Prasal M., Zwolak A., Daniluk J. (2011) Journal of Pre-Clinical and Clinical Research, Hypertension – the silent killer.

[25]. Zafar K., Ram V., Kumar M., Gupta M., Kumar S., Verma V., Singh P., (2017), International Journal of Research in Medical Sciences, The prevalence of hypertension among young adults in a rural population of North India, 4869, VL - 5

[26]. Mahadev D., Shraboni P., (2016) International Institute for Population Sciences, Prevalence, and correlates of hypertension in Maharashtra, India: A multilevel analysis.