INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD)
© 2026 IJNRD | Volume 11, Issue 2, February 2026 | ISSN: 2456-4184 | IJNRD.ORG

A study to assess the knowledge regarding Hypertension Management among people aged above 45 years at Kashiganj, Jiaganj, Murshidabad, West Bengal

[1]Nabagita Saha, [2]Srijita Mandal, [3]Longjam Robicha Devi
[1]B.Sc. Nursing, [2]B.Sc. Nursing, [3]Assistant Professor & Head of Department
Affiliation: Dept. of Psychiatric Nursing, Aastha Nursing Institute, West Bengal, India

ABSTRACT

"*The art and science of asking questions is the source of knowledge.*" **- *Thomas Berger***

Arterial hypertension is a leading cause of death globally. Due to ageing the rising incidence of obesity and socioeconomic and environmental changes, its incidence increases worldwide. Hypertension commonly coexists with Type 2 diabetes, obesity, dyslipidemia, sedentary lifestyle, and smoking leading to risk amplification. (1) OBJECTIVES: To assess the knowledge regarding Hypertension Management & the association between the knowledge regarding Hypertension Management with socio-demographic variables. TOOLS: Socio-demographic profile & Tool for assess the knowledge regarding Hypertension Management among people aged above 45 years. HYPOTHESIS: H0: There is no relation between the knowledge regarding Hypertension Management with socio-demographic variables. H1: There is a significant association between the level of knowledge regarding Hypertension Management with socio-demographic variables. DELIMITATION: The study was limited only to above people aged between 46-70 years residing at Kashiganj. CONCLUSION: The result shows that, there were significant association about level of knowledge with selected socio-demographic variables such as occupation & education where the calculated square values are higher than the table value at $p<0.05$.

Keywords: Level of knowledge, Hypertension, Risk factors, Prevention, Management

INTRODUCTION

Hypertension is a significant and costly public health problem. It is a major but modifiable contributor for the development of cardiovascular disease. Hypertension is a major risk factor for cardiovascular diseases (CVDs) that accounted for 44% of the 42 million deaths related to noncommunicable diseases (NCDs) globally in 2019. Better management of hypertension is critical to accelerating progress toward the Sustainable Development Goal target of a one-third reduction in premature NCD-related mortality by 2030. To maximize the impact on global health, improvements in care for hypertension need to occur where prevalence is increasing most rapidly. (6)

REVIEW OF LITERATURE

Kaur P, Pattabi K, Gunasekaran A, Chakma T, Sharma M, Pathni A et al. (2025) conducted a cross-sectional survey on population-based surveillance for hypertension awareness, treatment and control in nine districts India Hypertension Control Initiative, to address limited district-level hypertension data. The objective was to estimate awareness, treatment, and control. The total number of participants were 624 people who were 18-69 years. Data were analysed using weighted estimates and prevalence ratios for associations with control. Hypertension awareness (52%), treatment (41%), and control (15%) varied significantly across districts. Key factors linked to control included healthcare access, non-alcohol use, and drug therapy a rapid district-level surveillance model proved effective. (15)

Venkatraman S, Murugan S & Jacob S. (2024) conducted a cross-sectional study on knowledge, attitude and practices regarding risk factors, prevention and treatment of hypertension among urban dwellers in Chennai to address poor public management of hypertension. The study's objective was to assess urban patients' knowledge, attitudes, and practices (KAP) concerning hypertension risk factors, prevention, and treatment. Researchers administered a validated, self-administered, QR-coded questionnaire along with blood pressure measurements to a sample of 394 OPD patients at a Chennai tertiary hospital. Data were analysed using descriptive statistics to understand KAP levels. It is found that while 70% had moderate hypertension knowledge (mean score 25.2 ± 12.4) and 84% were under 45 years old, actual preventive practices such as regular screenings, dietary adjustments, and physical activity were inadequate. Despite moderate hypertension knowledge and positive attitudes, actual preventive practices remain suboptimal. Tailored educational interventions and behaviour-change strategies are essential to improve prevention and control. [18]

MATERIALS AND METHODS

A *Quantitative Research Approach* was adopted and *Non-experimental Descriptive Research Design* was used for study.

SETTING: Selected area of Jiaganj, Murshidabad, West Bengal.

SAMPLE & SIZE: 100 people aged above 45 years

TECHNIQUE: Purposive Sampling Technique

RESEARCH TOOLS & TECHNIQUES: It consists of two sections. They are as follows: -

Section A: Socio-demographic variables

It includes age, gender, religion, income, occupation & education.

Section B: Tool for assess the knowledge regarding Hypertension Management among people aged above 45 years

It is a checklist which has 4 domains and 16 items which includes- knowledge, medicine, diet & exercise.

Scoring and Interpretation

The score range 0-16 & it is divided into 3 categories. It is dichotomous questionnaire which the participants respond in "**Yes**" and "**No**" where **Yes = 1 & No = 0** score.

Level of knowledge	Score
Good knowledge	11-16
Average knowledge	6-10
Poor knowledge	0-5

VALIDITY

Validity refers to the degree to which an instrument measures what it is supposed to be measuring.

Content Validity: The degree to which the items in an instrument adequately represent the universe of content. In the current study, content validity is adapted.

RELIABILITY

Reliability of the tool was measured by calculating the internal consistency and accuracy of the tool by using Split-Half Method. [14] The items were divided into equal two parts through grouping in odd and even number questions. The co-relation co-efficient was calculated using Spearman Brown Prophecy formula. The reliability was found to be 0.87.

PILOT STUDY

Pilot study is a trial study carried out before a research design is finalized to assist in defining the research question or to test the reliability, and validity of proposed study design. [14] Pilot study was conducted in a selected area of Kashiganj, Jiaganj, Murshidabad, West Bengal. It was done among 10 participants of above 45 years aged. The findings of pilot study revealed that the tool designed to assess the knowledge on Hypertension Management was reliable and consistent.

DATA COLLECTION PROCEDURE

Written permission was obtained from the concerned authorities. Data was collected from the participants (people aged above 45 years) at Kashiganj, Jiaganj, Murshidabad, West Bengal. An informed consent was taken after explaining the purpose of the research study. The participants were assured for their confidentiality of the information given by them for ethical consideration. A *socio-demographic variables* & a self-structured *Tool for assess the knowledge on Hypertension Management among people aged above 45 years* was established to collect the data from its participants. Approximately 25 minutes was taken by each participant for entire data collection.

ETHICAL CONSIDERATIONS

Ethical principles were strictly followed throughout the research process to ensure the safety, dignity, and rights of all participants. The following measures were taken:

1. Ethical Clearance: Prior to data collection, approval was obtained from the **Chairman** and **Principal** of *Aastha Nursing Institute* to ensure the study met ethical standards and protected human participants.

2. Official Permissions: Written permission was also obtained from the **Medical Officer** of *Kashiganj Health Wellness Clinic* and **Municipality Chairman** of Azimganj, Jiaganj and relevant health authorities in Kashiganj, Jiaganj, Murshidabad to conduct the study within the premises.

3. Informed Consent: Each participant was provided with a clear explanation of the purpose, objectives, procedures, potential benefits, and the voluntary nature of the study in simple local language (Bengali). Written informed consent was obtained before participation.

4. Confidentiality and Anonymity: All information collected from participants was kept strictly confidential and used solely for research purposes. Participants were identified only by coded numbers, not by names. Completed questionnaires were securely stored and accessible only to the researcher.

5. Voluntary Participation and Right to Withdraw: Participation in the study was completely voluntary. Participants were informed of their right to withdraw from the study at any point without any explanation or penalty.

6. Privacy and Respect: Interviews were conducted in a quiet, private setting to ensure comfort and avoid external influence. The dignity and autonomy of each participant were respected at all times.

7. No Harm Principle: The study posed no physical, psychological, or social harm to the participants. The questions were non-invasive and related only to assess the knowledge regarding Hypertension Management.

DISCUSSION

The finding of the data has been discussed with reference to the objectives and with the finding of other studies.

Objective 1: To assess knowledge regarding Hypertension Management among selected socio-demographic variables

Based on above objective a program was administered among people aged above 45 years for assessing their knowledge level by using a self-structured knowledge tool. According to Level of Knowledge, majority of participants i.e. 63% had average knowledge, 29% participants had good knowledge and 8% participants had poor knowledge.

Objectives 2: To find the association between the knowledge regarding Hypertension Management with socio-demographic variables.

Based on above objective chi-square analysis shows that association between the knowledge regarding Hypertension Management in selected socio-demographic variables such as age, gender, religion, income, occupation & education. The result shows that, there were significant association about level of knowledge with selected socio-demographic variables such as occupation & education where the calculated square values are higher than the table value at $p<0.05$. But other socio-demographic variables such as age, gender, religion & income had no significance association with the knowledge regarding Hypertension Management where the calculated square values are lower than the table value at $p>0.05$.

DATA ANALYSIS AND INTERPRETATION

Section I: Frequency & percentage distribution of socio-demographic variables

Variables		Frequency (f) & Percentage (%)	Mean	Median	SD
Age (years)	46-50	43	52.65	51.63	5.02
	51-55	31			
	56-60	18			
	61-65	6			
	66-70	2			

*SD= Standard deviation

Table 1(i): Frequency &percentage distribution of socio-demographic variables i.e. age [n=100]

Variables		Frequency (f)	Percentage (%)
Gender	Male	57	57%
	Female	43	43%
Religion	Hindu	84	84%
	Muslim	16	16%
Income (Rs)	<20,000	77	77%
	20,000-30,000	21	21%
	>30,300	2	2%
Occupation	Business	41	41%
	Service	8	8%
	Farmer	17	17%
	None of the above	34	34%

Education	Illiterate	21	21%
	< Class 8th	60	60%
	Class 8th -12th	11	11%
	Graduate and above	8	8%

Table 1(ii): Frequency & percentage distribution of socio-demographic variables [n=100]

Section II: The knowledge regarding hypertension management among selected socio-demographic variables

Variable	Range	Frequency (f)	Percentage %	Mean	Median	SD
Good knowledge	11-16	29	29	9.15	8.83	3.14
Average knowledge	6-10	63	63			
Poor knowledge	0-5	8	8			
Total Score		100	100			

*SD= Standard deviation

Table 2: Frequency & percentage distribution of level of knowledge among selected socio-demographic variables [n=100]

According to **Level of Knowledge**, majority of participants i.e. 63% had average knowledge, 29% participants had good knowledge and 8% participants had poor knowledge. The mean and standard deviation (SD) of level of knowledge were 9.15±3.14. [**Table 2]**

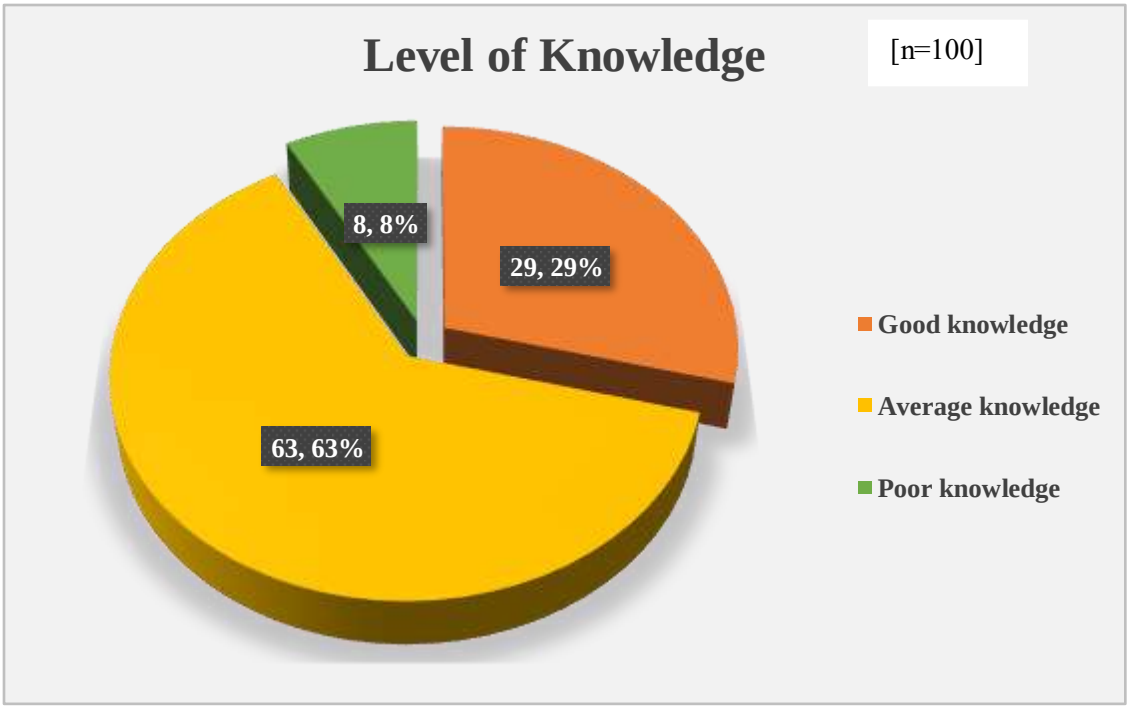

Fig 1: Pie diagram frequency & percentage distribution of Level of knowledge

Section III: Association between the knowledge regarding hypertension management with selected socio-demographic variables.

Variables		Level of knowledge			Total	$\chi 2$		df	Remarks
		Good	Average	Poor		Calculated value	Tabulated value		
Age(years)	46-50	12.47	27.09	3.44	43	4.75	15.51	8	NS
	51-55	8.99	19.53	2.48	31				
	56-60	5.22	11.34	1.44	18				
	61-65	1.74	3.78	0.48	6				
	66-70	0.58	1.26	0.16	2				
Gender	Male	16.53	35.91	4.56	57	0.182	5.99	2	NS
	Female	12.47	27.09	3.44	43				
Religion	Hindu	24.36	52.92	6.72	84	1.27	5.99	2	NS
	Muslim	4.64	10.08	1.28	16				
Income	Below 20000	22’34	48.51	6.16	77	1.912	9.49	4	NS
	20000-30000	6.09	13.23	1.68	21				
	Above 30000	0.58	1.26	0.16	2				
Occupation	Business	11.89	25.83	3,28	41	14.57	12.59	6	*S
	Service	2.32	5.04	0.64	8				
	Farmer	4.93	10.71	1.36	17				
	None of the above	9.86	21.42	2.72	34				
Education	Below class 8^{th}	17.40	37.80	4.80	60	22.21	12.59	6	*S
	Class 8^{th} -12^{th}	3.19	6,93	o.88	11				
	Graduate	2.32	5.04	0.64	8				
	Illiterate	6.09	13.23	1.68	21				

*S= Significant, NS= Non-significant, χ^2= Chi Square, df= degree of freedom

Table 3: Chi-square test associates the level of knowledge regarding Hypertension Management with selected socio demographic variables [n=100]

IMPLICATIONS

- **Nursing Practice**

1. Early Detection & Screening: Nurses play a critical role in identifying hypertensive patients through routine BP screening, especially in high-risk groups.
2. Patient Monitoring & Management: Nurses ensure adherence to medication, monitor for complications, and evaluate patient outcomes.
3. Lifestyle Counselling: Educating patients on diet, physical activity, smoking cessation, and alcohol moderation becomes a key nursing responsibility.

- **Community Health**

1. Population-Based Interventions: Community-wide awareness campaigns, BP screening drives, and health camps help reduce the burden.
2. Addressing Social Determinants: Intervening in factors such as poverty, access to healthcare, and education can improve hypertension outcomes.
3. Strengthening Primary Care: Empowering primary health centres and community health workers improves long-term management and follow-up.

- **Nursing Administration**

1. Policy & Protocols: Develop and enforce evidence-based guidelines for hypertension care.
2. Resource Allocation: Ensure BP monitors, medications, and adequate staff are available.

3. Quality Improvement: Monitor outcomes, conduct audits, and use CQI methods (e.g., PDSA).
4. Technology Use: Implement EHRs, telehealth, and remote monitoring for better follow-up.

- **Nursing Research**

1. Patient Education and Self-Management: Nursing research can explore innovative education methods (digital health tools, culturally tailored interventions, motivational interviewing) and their effectiveness in improving blood pressure control.
2. Adherence to Treatment: Studies on nurse-led interventions (reminder systems, follow-up calls, community-based visits) can identify strategies that increase adherence and reduce complications.
3. Interdisciplinary Collaboration: Exploring models of nurse-led or nurse-coordinated care to optimize interdisciplinary teamwork.

- **Future Effects of Hypertension Management**

1. Reduced Morbidity and Mortality: Better control leads to fewer cases of stroke, heart attack, and kidney failure.
2. Cost Savings: Early management reduces long-term healthcare costs for patients and healthcare systems.
3. Improved Quality of Life: Controlled hypertension improves energy levels, reduces anxiety, and extends healthy life years.
4. Use of Technology: Digital tools, mobile health apps, and telehealth will increasingly support BP tracking and patient follow-up.

CONCLUSION

The findings revealed that while a small group of people demonstrated good knowledge, the majority had moderate awareness, and some had poor knowledge about Hypertension Management. A significant association was found occupation & educational qualification with knowledge level, suggesting that occupation and education play a key role in knowledge of Hypertension Management. Also, throughout the data collection, it was observed that many participants were eager to learn and expressed a genuine interest in better Hypertension Management. This indicates a strong need for structured awareness programs and support systems to bridge the knowledge gap and guide people toward healthier lifestyle.

BIBLIOGRAPHY

1. Lauder L, Mahfoud F, Azizi M, Bhatt D L, Ewen S & Kario K et al. Hypertension management in patients with cardiovascular comorbidities. European Heart Journal-2022 November 07; 44 (23): 2066-2077. Available from: https://academic.oup.com/eurheartj/article/44/23/2066/6808663
2. Nguyen Q, Dominguez J, Gullapalli N & Nguyen L- Hypertension Management: An update. American Health & Drug Benefits- 2010 Jan-Feb; 3(1): 47–56. Available from: https://pmc.ncbi.nlm.nih.gov/articles/PMC4106550/
3. Maniyara k, Kodali P B &Thankappan R K. Prevalence, awareness, treatment, control and correlates of prevalence and control of hypertension among older adults in Kerala. Indian Heart Journal- 2023, May- June; 75(3): 185-189. Available from: https://www.sciencedirect.com/science/article/pii/S0019483223000445
4. Almomani M H, Zaheya L A, Alsayyed M &Alloubani A. Public's Knowledge of Hypertension and its Associated Factors: A Cross-Sectional Study. The Open Nursing Journal- 2022 Feb 7; 16: 1-11. Available from:https://www.opennursingjournal.com/VOLUME/16/ELOCATOR/e18744346220106/FULLTEXT/
5. Wolde M, Azale T, Debalkie G D & Addis B. Knowledge about hypertension and associated factors among patients with hypertension in public health facilities of Gondar city, Northwest Ethiopia [internet]. 2022 Jun 17[cited 2025 July 19]. Available form: https://pmc.ncbi.nlm.nih.gov/articles/PMC9205496/
6. Bhatia M, Dixit P, Kumar M, Dwivedi L- Comparing socio-economic inequalities in self-reported and undiagnosed hypertension among adults 45 years and over in India: what explains these inequalities. International Journals of Equity Health-2023 Feb 2; 26: 1-5. Available form: https://doi.org/10.1186/s12939-023-01833-6

7. Rajan J, Sakthibalan M, Raj G M &Mamgairkkarasi A- Knowledge, attitude and practice of hypertension among hypertensive patients in a tertiary care teaching hospital. International Journal of Basic & Clinical Pharmacology- 2019 May 5: 8(5), 1013–1018. Available form: https://doi.org/10.18203/2319-2003.ijbcp20191593
8. Kasaahun C W, Asasahegn A, Hagos D, Ashenafi E, Tamene F, Addis G et al. Knowledge on Hypertension and Self-Care Practice among Adult Hypertensive Patients at University of Gondar Comprehensive Specialized Hospital, Ethiopia, 2019.International Journal of Hypertension-2020 April 21; 18 (1): 258-269. Available from: https://onlinelibrary.wiley.com/doi/10.1155/2020/5649165
9. Mohammad R & Bansod D W- Hypertension in India: a gender-based study of prevalence and associated risk factors. BMC Public Health 24- 2024 Oct 01; 24: 1-17. Available from: https://doi.org/10.1186/s12889-024-20097-5
10. ASSESS Definition & Meaning [Internet]. 2025 July [updated 2025 July 24; cited 2025 July 26]. Available form: https://www.merriam-webster.com/dictionary/assess
11. Knowledge [Internet]. 2017 Nov 30 [cited 2025 July 20]. Available form: https://www.librarianshipstudies.com/2017/11/knowledge.html?m=1
12. Kumari MJ. Adult Health Nursing-I, 1st ed. New Delhi /London, Jaypee Brothers Medical Publishers; 2023, Chapter - VI, p.333
13. Sharma S K, Nursing Research and Statistics. 4th ed. Kundli, Haryana: Rajkamal Electric Press; RELSEVIER RELX India Pvt. Ltd; 2023. Chapter -II, V, VII, VIII, IX; p.30-31,79,112- 45,170,201-31.
14. Kaur P, Pattabi K, Gunasekaran A, Chakma T, Sharma M, Pathni A K et al. Population-based surveillance for hypertension awareness, treatment, and control in nine districts- India Hypertension Control Initiative, 2018–19. J Hum Hypertens - 2025 March 22; 39: 376–86. Available from: https://doi.org/10.1038/s41371-025-01005-9
15. Hiremath J, Wander G, Dasbiswas A, Garg R, Mantri R, Khan A et al. Optimizing Screening Strategies for Hypertension in India: A Consensus Statement. J Assoc Physicians India- 2025 April 1;73(4): e40-e46. Available from: https://www.japi.org/article/japi-73-4-e40
16. Islam Md M, Hossain Md S, Rahman Md M, Nakamura R & Sato M. Healthy lifestyle knowledge and age at hypertension diagnosis: a primary health care-based survey in Bangladesh. Journal of Human Hypertension- 2025 April 25; 39: 448-456. Available from: https://www.nature.com/articles/s41371-025-01019-3?utm_
17. Venkatraman S, Murugan S, & Jacob S. Knowledge, Attitude, and Practices Regarding Risk Factors, Prevention and Treatment of Hypertension Among Urban Dwellers in Chennai: A Cross-Sectional Study. Hypertension Journal. 2024 Jan-March; 10(1): 7–12. Available from: https://doi.org/10.61081/htnj/24v10i103
18. Yadav P K, Kalyani V C, Narayan D, & Kataria N A descriptive study to assess knowledge related to hypertension and its impact upon exercises and sleep pattern among adults from communities of Uttarakhand [internet]. 2023 march 31, [cited 2025 July 24]. Available from: https://pmc.ncbi.nlm.nih.gov/articles/PMC10243414/
19. Sudharsanan N, Ali M K, &Mcconnell M. Hypertension knowledge and treatment initiation, adherence, and discontinuation among adults in Chennai, India. BMJ- 2020; 11(1): 1-7. Available from: https://bmjopen.bmj.com/content/11/1/e040252
20. Jadhav U & Purohit A. Hypertension and beyond in Indian clinical practice study: a nationwide survey assessing knowledge, attitude and practices of physicians. International Journal of Advances in Medicine- 2021 Nov 11; 8(11): 1701–1709. Available from: https://doi.org/10.18203/2349-3933.ijam20214132