



A STUDY TO ASSESS KNOWLEDGE REGARDING LIFESTYLE MODIFICATIONS FOR PREVENTION OF HYPERTENSION AMONG ADULTS IN GHANGOLA VILLAGE, GREATER NOIDA, UTTAR PRADESH

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Abstract: Hypertension is an important public health concern, and many of its risk factors are modifiable through healthy lifestyle practices. The present study assessed knowledge regarding lifestyle modifications for the prevention of hypertension among adults in Ghangola Village, Greater Noida, Uttar Pradesh, and examined its association with selected socio-demographic variables. A quantitative approach with a descriptive cross-sectional design was adopted. A total of 200 adults aged 18 years and above were selected using non-probability convenient sampling. Data were collected using a structured questionnaire covering hypertension and its prevention, dietary modification, salt restriction, physical activity, weight management, tobacco and alcohol avoidance, stress management, and regular blood-pressure monitoring. Data were analyzed using frequency, percentage, and the chi-square test; $p < 0.05$ was considered statistically significant. The analyzed results showed that 26 (13.0%) participants had fair knowledge, 167 (83.5%) had good knowledge, and 7 (3.5%) had excellent knowledge; none had poor knowledge. The study concludes that most adults had good knowledge, but continued community-based health education is needed to strengthen knowledge and support preventive lifestyle practices.

Index Terms - hypertension, lifestyle modification, knowledge, prevention, adults, community health, Ghangola Village.

I. INTRODUCTION

Hypertension, or high blood pressure, is a major public health problem and is often described as a silent condition because it may remain unnoticed until complications develop. The thesis describes hypertension as contributing to serious complications involving the heart, brain and kidneys, while emphasizing that many risk factors can be modified through healthier daily practices.

The background presented in the thesis identifies unhealthy diet, excessive salt intake, physical inactivity, obesity, tobacco and alcohol use, psychological stress and inadequate sleep among the modifiable factors associated with hypertension. Lifestyle modification is therefore presented as an important component of prevention and control. Recommended practices described in the thesis include balanced nutrition, reduced salt intake, regular physical activity, maintenance of healthy body weight, stress management, avoidance of tobacco and excessive alcohol consumption, and regular blood-pressure monitoring.

The thesis also highlights the continuing need for awareness and health education, particularly in community settings. Previous literature reviewed in the thesis reported gaps in awareness of hypertension and its risk factors in rural Indian populations. Busingye et al. reported that 48% of adults in a rural Indian population were unable to identify any hypertension risk factor, while Rajkumar and Romate reported no significant relationship between a behavioural risk-factor index and hypertension knowledge in a rural Indian population. These findings support the importance of assessing knowledge at the community level.

The present study was undertaken among adults in Ghangola Village, Greater Noida, Uttar Pradesh, with the purpose of assessing existing knowledge regarding lifestyle modifications for the prevention of hypertension and identifying whether knowledge was associated with selected demographic characteristics.

II. OBJECTIVES

1. To assess the level of knowledge regarding lifestyle modifications for the prevention of hypertension among adults.
2. To find the association between knowledge regarding lifestyle modifications for the prevention of hypertension and selected demographic variables.

III. RESEARCH METHODOLOGY

A quantitative descriptive cross-sectional design was adopted among 200 adults aged ≥ 18 years residing in Ghangola Village, Greater Noida, Uttar Pradesh, selected by non-probability convenient sampling. Data were collected using a structured questionnaire assessing socio-demographic characteristics and knowledge regarding lifestyle modifications for prevention of hypertension. A pilot study among 20 adults established feasibility and clarity. Data were analysed using frequency, percentage, mean, standard deviation and chi-square test, with $p < 0.05$ considered statistically significant. Ethical clearance, administrative permission, and written informed consent were obtained; confidentiality and anonymity were maintained.

IV. RESULTS

The study included 200 adults. The demographic distribution showed that 28.5% were aged 18–30 years, 25.0% were aged 31–40 years, 25.5% were aged 41–50 years, 10.0% were aged 51–60 years and 11.0% were above 60 years. Females constituted 53.5% and males 46.5%. Most participants were married (72.5%), had primary education (56.0%), were private employees (47.0%), belonged to joint families (53.5%), and reported a monthly family income of ₹30,000–₹40,000 (98.0%).

All participants were rural residents. A mixed dietary pattern was reported by 56.5%, while 28.0% were vegetarian and 15.5% were non-vegetarian. Most participants did not take antihypertensive drugs (76.5%), had no previous history of hypertension (82.5%), and obtained health information mainly from friends or family (64.5%). Overall, 66.5% had heard of hypertension, 34.5% reported a family history of hypertension, and 47.5% had last checked their blood pressure more than one year previously.

Table 1. Frequency and percentage distribution of participants according to selected demographic characteristics (N=200)

Demographic Variable	Frequency (N)	Percentage (%)
1. Age (Years)		
i) 18-30	57	28.5
ii) 31-40	50	25.0
iii) 41-50	51	25.5
iv) 51-60	20	10.0
v) Above 60	22	11.0
2. Gender		
i) Male	93	46.5
ii) Female	107	53.5
3. Marital Status		
i) Married	145	72.5
ii) Single	40	20.0
iii) Widowed	15	7.5
iv) Divorced	0	0
4. Educational Status		
i) Illiterate	57	28.5
ii) Primary Education	112	56.0
iii) Secondary Education	24	12.0
iv) Graduation and Above	7	3.5
5. Occupation		
i) Housewife	77	38.5
ii) Student	25	12.5
iii) Private Employee	94	47.0
iv) Government Employee	4	2.0
6. Monthly Family Income		
i) ₹30,000–₹40,000	196	98.0
ii) ₹50,000 and Above	4	2.0
7. Type of Family		
i) Nuclear	74	37.0
ii) Joint	107	53.5
iii) Extended	19	9.5
8. Do you take any hypertensive drug		
i) Yes	47	23.5
ii) No	153	76.5
9. Dietary Pattern		
i) Vegetarian	56	28.0
ii) Mixed	113	56.5

iii)	Non-vegetarian	31	15.5
10. Previous History of Hypertension			
i)	Yes	35	17.5
ii)	No	165	82.5
11. Source of Health Information			
i)	Friends/Family	129	64.5
ii)	Internet	39	19.5
iii)	Media/TV/Radio	32	16.0
12. Heard of Hypertension			
i)	Yes	133	66.5
ii)	No	67	33.5
13. Family History of Hypertension			
i)	Yes	69	34.5
ii)	No	131	65.5
14. Last Blood Pressure Check			
i)	Within 6 months	65	32.5
ii)	6-12 months	40	20.0
iii)	More than 1 year ago	95	47.5

Table 2. Level of knowledge regarding lifestyle modifications for prevention of hypertension (N=200)

Knowledge Level	Score	Frequency (N)	Percentage (%)
Poor	0–5	0	0.0
Fair	6–10	26	13.0
Good	11–15	167	83.5
Excellent	16–20	7	3.5
Total	–	200	100.0

Table 2 shows that the majority of participants (83.5%) had good knowledge regarding lifestyle modifications for the prevention of hypertension. A further 13.0% had fair knowledge and 3.5% had excellent knowledge. None of the participants fell into the poor-knowledge category.

Table 3. Association between knowledge level and selected socio-demographic variables (N=200)

S. No.	Socio-demographic Variable	χ^2 Value	df	p-value	Significance
1	Age Group	11.684	8	0.17	NS
2	Gender	4.822	2	0.09	NS
3	Marital Status	3.721	4	0.45	NS
4	Educational Status	2.030	6	0.92	NS
5	Occupation	8.387	6	0.22	NS
6	Monthly Family Income	0.989	2	0.61	NS
7	Type of Family	1.955	4	0.75	NS
8	Hypertensive drug	3.59	3	0.47	NS
9	Dietary Pattern	3.379	4	0.50	NS
10	Previous History of Hypertension	2.201	2	0.34	NS
11	Source of Health Information	2.413	4	0.67	NS
12	Heard of Hypertension	0.492	2	0.79	NS
13	Family History of Hypertension	4.137	2	0.13	NS
14	Last Blood Pressure Check	2.034	4	0.73	NS

*P<0.05 (Significant), NS – Not Significant

No statistically significant association was found between knowledge level and any of the selected socio-demographic variables because all reported p-values were greater than 0.05. Place of residence was not subjected to chi-square analysis because all 200 participants were rural residents. The thesis therefore reports acceptance of the null hypothesis at the 0.05 level of significance.

V. DISCUSSION

The present study found that most adults demonstrated good knowledge regarding lifestyle modifications for the prevention of hypertension. The findings are notable because the participants were drawn from a rural community and a substantial proportion had only primary education. The thesis reports that 83.5% had good knowledge, while 13.0% had fair and 3.5% had excellent knowledge, with no participant classified as having poor knowledge.

The findings differ from the rural Indian population described by Busingye et al., in which 48% of adults were unable to identify any hypertension risk factor. As discussed in the thesis, differences may relate to population characteristics, educational exposure, geographical setting and assessment tools.

The study also found no statistically significant association between knowledge and the selected socio-demographic variables. This finding is consistent with the thesis discussion of Rajkumar and Romate, who reported no significant relationship between a behavioural risk-factor index and hypertension knowledge among adults in rural India. The present findings suggest that health education should not be limited to a particular demographic group and should be provided broadly within the community.

The thesis emphasizes the role of nurses and community health workers in health promotion, counselling, screening and reinforcement of healthy lifestyle practices. The reviewed literature also describes the potential of structured lifestyle interventions and health education delivered through frontline health workers to support hypertension prevention and management.

VI. CONCLUSION

The study concluded that the majority of adults in Ghangola Village had good knowledge regarding lifestyle modifications for the prevention of hypertension. However, the relatively small proportion with excellent knowledge indicates continuing scope for strengthening awareness. No statistically significant association was observed between knowledge level and the selected socio-demographic variables. The findings support the need for regular, comprehensive and community-based health education focusing on healthy diet, salt restriction, physical activity, healthy body weight, stress management, avoidance of tobacco and excessive alcohol consumption, and regular blood-pressure monitoring.

VII. LIMITATIONS

The thesis identifies several limitations: the study used a limited sample size; the cross-sectional design did not allow changes in knowledge over time to be assessed; the study assessed knowledge rather than long-term adoption or practice of lifestyle modifications; and no structured teaching programme was provided, so the effectiveness of health education on knowledge or lifestyle practices could not be determined.

VIII. IMPLICATIONS AND RECOMMENDATIONS

For nursing education and practice, the thesis recommends strengthening education on hypertension risk factors and preventive lifestyle practices and using community visits, health camps and routine health assessments to reinforce preventive messages. Nursing administration can support community-based health education, screening and health-promotion activities. Nursing research can further evaluate structured teaching and community-based interventions.

The thesis recommends studies with larger samples, development and evaluation of structured teaching programmes, interventional studies to determine the effectiveness of health education, regular community awareness programmes on healthy lifestyle practices and replication of similar research in different geographical areas.

IX. CONFLICT OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this study.

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