

Assess the knowledge regarding risk factors for hypertension among adults in selected areas.

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**Abstract:**

Hypertension is one of the most common non-communicable diseases and a major public health problem worldwide. It is a leading risk factor for cardiovascular diseases, stroke, kidney disorders, and premature mortality. The increasing prevalence of hypertension is mainly associated with lifestyle changes such as unhealthy diet, physical inactivity, smoking, alcohol consumption, obesity, and stress. Adequate knowledge regarding these risk factors plays a vital role in preventing hypertension and promoting healthy lifestyle behaviors among adults. However, many individuals remain unaware of the factors that contribute to the development of hypertension. Therefore, assessing the knowledge regarding risk factors of hypertension among adults is essential to identify gaps in awareness and plan appropriate health education programs. **Aim:** To assess the knowledge regarding risk factors for hypertension among adults in selected areas. **Methodology:** A quantitative research approach with a descriptive cross-sectional research design was adopted for the study. The research was conducted among 98 adults residing in selected areas. Participants were selected using a non-probability convenience sampling technique. Data were collected using a structured questionnaire consisting of two sections. Section I included demographic variables such as age, gender, education, occupation, diet, and lifestyle habits. Section II consisted of multiple-choice questions to assess knowledge regarding risk factors of hypertension including diet, physical activity, smoking, alcohol consumption, obesity, and family history. No intervention was administered during the study. **Results:** The findings revealed that 65.31% of respondents had average knowledge, 32.65% had good knowledge, and 2.04% had poor knowledge regarding risk factors of hypertension. The mean knowledge score was 9.52 with a standard deviation of 2.55. The median score was 9.17 and the mode was 8.80. The mean percentage score was 63.46%, indicating a moderate level of knowledge among the respondents. **Conclusion:** The study concluded that adults had a moderate level of knowledge regarding risk factors of hypertension. The findings highlight the need for effective health education programs and awareness campaigns to improve knowledge and promote preventive practices for the control of hypertension.

Keywords: Hypertension, Risk factors, Knowledge assessment, Adults, Awareness, Prevention.

Introduction

Hypertension, commonly known as high blood pressure, is one of the most prevalent non-communicable diseases and a major global public health challenge. It is defined as a persistent elevation of arterial blood pressure with systolic blood pressure of 140 mmHg or higher and/or diastolic blood pressure of 90 mmHg or higher measured on repeated occasions. Hypertension significantly increases the risk of cardiovascular diseases, stroke, kidney failure, and other life-threatening conditions. Because it often develops without noticeable symptoms, it is frequently referred to as a “silent killer,” making early detection and prevention extremely important⁽¹⁾.

Globally, hypertension affects a large proportion of the adult population. According to global health estimates, approximately 1.28–1.4 billion adults aged 30–79 years are living with hypertension worldwide, and nearly two-thirds of these individuals reside in low- and middle-income

countries. Despite its high prevalence, a considerable number of people remain unaware of their condition. Studies indicate that nearly 44–46% of adults with hypertension are unaware that they have the disease, which contributes to delayed diagnosis and poor management⁽²⁾.

Hypertension is widely recognized as one of the leading risk factors for cardiovascular morbidity and mortality across the world. It contributes significantly to conditions such as coronary artery disease, heart failure, cerebrovascular accidents, and chronic kidney disease. Evidence shows that effective management and control of blood pressure can substantially reduce the risk of these complications and improve overall population health^(3,7,8).

The increasing prevalence of hypertension is closely associated with rapid urbanization, unhealthy lifestyle behaviors, and changing dietary patterns. Several modifiable risk factors such as excessive salt intake, obesity, physical inactivity, tobacco use, alcohol consumption, and unhealthy

diet contribute significantly to the development of hypertension. In addition, non-modifiable factors such as age, genetic predisposition, and family history also play an important role in the occurrence of the disease. Addressing these risk factors through lifestyle modification and health education is essential for preventing hypertension and reducing its burden on healthcare systems⁽⁴⁾.

In developing countries such as India, hypertension has emerged as a major public health concern. The burden of hypertension continues to increase due to demographic changes, population aging, and rapid socioeconomic development. Studies have shown that hypertension accounts for a substantial proportion of deaths related to stroke and coronary heart disease in India. Furthermore, a large number of adults remain unaware of the risk factors associated with hypertension, which limits the effectiveness of preventive strategies and early detection programs⁽⁵⁾.

Awareness and knowledge regarding hypertension risk factors play a crucial role in preventing the disease and promoting healthy lifestyle practices. Adequate knowledge enables individuals to adopt preventive behaviors such as maintaining a balanced diet, engaging in regular physical activity, avoiding tobacco and alcohol consumption, and managing stress effectively. Community-based educational programs and health promotion activities are therefore essential to improve awareness and encourage early screening for hypertension among adults⁽⁶⁾.

Considering the increasing burden of hypertension and the importance of preventive strategies, assessing the level of knowledge regarding its risk factors among adults becomes essential. Understanding the awareness level of individuals can help identify knowledge gaps and guide the development of targeted health education programs aimed at reducing the prevalence and complications of hypertension. Therefore, the present study aims to assess the knowledge regarding risk factors for hypertension among adults in selected areas.

Research Gap

Although hypertension is widely recognized as a major public health problem, several studies have revealed that awareness and knowledge regarding its risk factors remain inadequate among adults. Many individuals are unaware of modifiable lifestyle factors such as high salt intake, obesity, physical inactivity, and alcohol consumption that contribute to hypertension. Furthermore, most available studies focus on the prevalence and clinical aspects of hypertension rather than assessing the level of knowledge regarding its risk factors in community populations.

There is limited research assessing knowledge regarding risk factors of hypertension among adults in selected community areas, particularly in developing regions. Therefore, the present study aims to assess the knowledge of adults regarding risk factors for hypertension to identify educational needs and support the development of effective preventive strategies.

Objective

To assess the knowledge regarding risk factors for hypertension among adults in selected areas.

Assumption

Adults may have varying levels of knowledge regarding risk factors of hypertension. Knowledge regarding hypertension risk factors influences preventive health behaviours among adults. Educational status and lifestyle factors may affect awareness of hypertension risk factors.

Methodology

Research Approach:

A quantitative research approach was adopted to assess the knowledge regarding risk factors for hypertension among adults.

Research Design:

A descriptive cross-sectional research design was used to evaluate the level of knowledge among adults in selected areas.

Samples and Sampling Technique:

The study was conducted among **98** adults residing in selected areas, and participants were selected using a non-probability **convenience sampling** technique.

Tools Used in the Study:

Data were collected using a structured questionnaire consisting of two sections. **Section I** included demographic variables such as age, gender, education, occupation, and lifestyle factors. **Section II** consisted of multiple-choice questions designed to assess knowledge regarding risk factors of hypertension including diet, physical activity, smoking, alcohol consumption, obesity, and family history.

Methods of Data Collection:

Prior permission was obtained from the concerned authorities and informed consent was taken from the participants. Data were collected by administering the structured questionnaire to the adults in selected areas. The purpose of the study was explained, confidentiality was assured, and participants were given adequate time to complete the questionnaire. The collected data were then organized for analysis.

Results

Table No.1 Frequency and percentage distribution of sample according to demographic variable :

Age	Frequency	Percentage
18 To 20	23	23.47
21 To 22	16	16.32
23 To 24	38	38.78
Above	21	21.43

Gender	Frequency	Percentage
Male	43	43.88
Female	55	56.12

Educational Qualification	Frequency	Percentage
Primary Education	1	1.02
Secondary Education	33	33.67
Graduate	41	41.84
Postgraduate	23	23.47

Diet	Frequency	Percentage
Vegetarian	53	54.08
Non-Vegetarian	45	45.92

Lifestyle Habits	Frequency	Percentage
Smoking	17	17.34
Alcohol	21	21.43
Smoking and Alcohol	14	14.29
None of the above	46	46.94

Occupation	Frequency	Percentage
Unemployed	16	16.32
Private Sector	23	23.47
Entrepreneur	18	18.37
Government	41	41.84

The demographic data show that the majority of respondents 38 (38.78%) were in the age group of 23–24 years, followed by 23 (23.47%) aged 18–20 years, and 21 (21.43%) above 24 years. Most participants were female 55 (56.12%), while 43 (43.88%) were male. Regarding education, the highest proportion 41 (41.84%) were graduates, followed by 33 (33.67%) with secondary education and 23 (23.47%)

postgraduates. More than half of the respondents 53 (54.08%) were vegetarians. Concerning lifestyle habits, 46 (46.94%) reported no habits, while 21 (21.43%) consumed alcohol and 17 (17.34%) smoked. In terms of occupation, the majority 41 (41.84%) were government employees, followed by 23 (23.47%) in the private sector.

Table No.2 Percentage distribution according to the knowledge level

Score Range	Knowledge Level	Frequency	Percentage
0 TO 5	Poor Knowledge	2	2.04
6 TO 10	Average Knowledge	64	65.31
11 TO 15	Good Knowledge	32	32.65

The table shows that the majority of respondents 64 (65.31%) had average knowledge regarding risk factors of hypertension. About 32 (32.65%) respondents had good

knowledge, while only 2 (2.04%) had poor knowledge. This indicates that most adults had an average level of knowledge about hypertension risk factors.

Table No.3 Mean, Median, standard deviation and mean % respondent on level of prevalence

Aspect	Maximum Score	Prevalence of respondent				
		Mean	Standard deviation	Median	Mode	Mean %
Knowledge Level	11	9.52	2.55	9.17	8.80	63.46 %

The analysis of knowledge regarding risk factors of hypertension among respondents showed that the maximum obtainable score was 15, while the mean score obtained by the respondents was 9.52. The mean percentage was 63.46%, which indicates that the overall level of knowledge among the respondents was average to moderately adequate. The median value of 9.17 suggests that half of the respondents scored below this value and half scored above it. The mode value of 8.80 indicates that the most frequently occurring score among respondents falls within the average knowledge range. The standard deviation of 2.55 shows that there was a moderate variation in the knowledge scores among respondents. Overall, the findings indicate that most respondents had average knowledge regarding the risk factors of hypertension, highlighting the need for health education and awareness programs to improve knowledge and promote preventive practices among adults.

Discussion: The present study assessed the knowledge regarding risk factors of hypertension among adults in selected areas. The findings revealed that the mean knowledge score was 9.52 out of 15, with a mean percentage of 63.46%, indicating that the overall level of knowledge among respondents was moderate. The median score of 9.17 further suggests that half of the participants scored above this value and half scored below it, reflecting an average level of awareness among the study population. The mode score of 8.80 shows that the most frequently obtained score fell within the average knowledge category. The standard deviation of 2.55 indicates a moderate variation in knowledge scores among the respondents.

The distribution of knowledge levels also revealed that the majority of respondents had average knowledge, while a smaller proportion demonstrated good knowledge, and only a

few participants had poor knowledge regarding hypertension risk factors. These findings suggest that although adults possess some awareness about hypertension and its associated risk factors, there are still gaps in knowledge that need to be addressed.

Hypertension is a major public health problem, and adequate knowledge about its risk factors is essential for prevention and early management. Therefore, community-based health education programs and awareness campaigns are necessary to improve knowledge and encourage healthy lifestyle practices among adults to reduce the risk of hypertension.

Conclusion: The present study concluded that adults in the selected area possess a moderate level of knowledge regarding the risk factors of hypertension. The findings showed that the mean knowledge score was 9.52 with a mean percentage of 63.46%, indicating average awareness among the respondents. Most participants demonstrated average knowledge, while a smaller proportion had good knowledge and very few had poor knowledge. Although respondents were somewhat aware of hypertension risk factors, gaps in knowledge still exist. Therefore, there is a need for effective health education, awareness programs, and preventive strategies to improve knowledge and promote healthy lifestyle practices for the prevention and control of hypertension among adults.

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