



iJRASET

International Journal For Research in
Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 11 **Issue:** III **Month of publication:** March 2023

DOI: <https://doi.org/10.22214/ijraset.2023.49245>

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A Survey Report to Identify the Risk of Hypertension Among Adults Who Are Residing at Pathanpura, Meerut, U.P

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Abstract: Blood pressure is the force of blood pushing against the walls of arteries as the heart pumps blood. When a health care professional measures your blood pressure, they use a blood pressure cuff around your arm that gradually tightens. The results are given in two numbers. The first number, called systolic blood pressure, is the pressure caused by your heart contracting and pushing out blood. The second number, called diastolic blood pressure, is the pressure when your heart relaxes and fills with blood. A blood pressure reading is given as the systolic blood pressure number over the diastolic blood pressure number. Blood pressure levels are classified based on those two numbers. Hypertension is an important public health problem worldwide. Analysis of the global burden of hypertension revealed that over 25% of the world's adult population had hypertension in 2000, and the proportion is expected to increase to 29% by 2025. According to the World Health Report 2002, cardiovascular disease accounted for 9.2% of total deaths in the African region in 2001, and hypertension remains the most important risk factor with national prevalence levels ranging from 25% to 35% in adults aged 25–64 years. Growing evidence suggests that high blood pressure constitutes the basis for the CVD epidemic in sub-Saharan Africa.

Statement: A study to assess the prevalence of hypertension among adults residing in selected community at Meerut.

Objectives

- 1) To assess the prevalence of hypertension among adults.
- 2) To find out the association between prevalence with their selected socio-demographic variables

Operational Definition

- 1) **Assess:** To guess or decide the amount or value of something.
- 2) **Prevalence:** Prevalence is the proportion of a population who have a specific characteristic in a given time period.
- 3) **Hypertension:** Defined as a mean measured blood pressure of ≥ 140 mmHg systolic and/or the mean measured diastolic blood pressure of ≥ 90 mmHg or self-reported history of hypertension.
- 4) **Adult:** Adulthood, the period in the human lifespan in which full physical and intellectual maturity have been attained. Adulthood is commonly thought of as beginning at age 20 or 21 years. Middle age, commencing at about 40 years, is followed by old age at about 60 years.
- 5) **Residing:** To live in a place permanently or for an extended period.
- 6) **Community:** Community is group of people that may or may not be spatially connected, but who share common interests, concerns or identities. These communities could be local, national or international, with specific or broad interests.

Materials and methods: The investigators decided to check the blood pressure, height and weight of adults at selected community using an instrument named sphygmomanometer, weighing machine, inch tape.

Final data was collected on 12 August 100 participants were selected from the selected rural area Pathanpura Meerut UP by the purposive sampling technique. To obtain free and frank response, purpose of the study was explained and the participants were assured about the confidentiality of their response.

Results: Percentage distribution was done and revealed the overall percentage of hypertension among adults 53 (53 %) had normal hypertensive adults, 20 (20%) had mild hypertensive adults and, 23 (23%) had severe hypertensive adults.

The study result revealed that by chi-square test it was found that there is a significant association between hypertension and a demographic variables like source of health of information at $p < 0.05$ level. There is no significant association between age, religion, family income, dietary pattern, location of residence, family history, history of weight gain in last three months, source of information, history of diabetic mellitus, and history of heart disease.

Keywords: Hypertension, Systolic, Diastolic

I. INTRODUCTION

Hypertension is an important public health problem worldwide. Analysis of the global burden of hypertension revealed that over 25% of the world's adult population had hypertension in 2000, and the proportion is expected to increase to 29% by 2025. According to the World Health Report 2002, cardiovascular disease accounted for 9.2% of total deaths in the African region in 2001, and hypertension remains the most important risk factor with national prevalence levels ranging from 25% to 35% in adults aged 25–64 years. Growing evidence suggests that high blood pressure constitutes the basis for the CVD epidemic in sub-Saharan Africa.

A. Problem Statement

A study to assess the prevalence of hypertension among adults residing in selected community at Meerut.

B. Objectives

- 1) To assess the prevalence of hypertension among adults.
- 2) To find out the association between prevalence with their selected socio-demographic variables

II. RESEARCH APPROACH

The Research approaches of the present study is Quantitative approach.

A. Research Design

A descriptive research design was chosen for the study to assess the prevalence of hypertension among adolescent, between the age group of 18-56 years.

B. Population

The Population of this study includes all the adults between the age group of 18-56 years.

C. Sample

All the adults who are the age group between 18-56 years and residing in selected community in Meerut.

D. Sampling Technique

The investigator selected Pathanpura. After selecting the residing area adults were selected in the age group between 18-56 years. In the study by using non probability convenient sampling technique. 100 samples were selected for the study.

E. Inclusion Criteria

- 1) Adults between the age group 18-56 years.
- 2) Adults who can understand both Hindi and English.
- 3) Adults who were willing to participate in the study.

F. Exclusion Criteria

- 1) Adults who have not attained age criteria.
- 2) Adults present with medical and surgical illnesses.
- 3) Adults who were not present at the time of data collection.

G. Sample Size

Sample consist of hundred adults in between age group of 18-56 years.

H. Setting

The study was conducted at Pathanpura. It belongs to the urban area of Meerut district. The population of Pathanpura are 3000 out of which hundred adults are in between the age group 18-56 years.

I. Description of the Tools

The study was conducted by checking the blood pressure level of the adults. It consists of two parts:-

- 1) **PART-1:** Demographic data consist of age, religion, family income, dietary pattern, location of residence, family history, source of health information, history of weight gain in last three months.
- 2) **PART-2:** For the assessment of the blood pressure level, height, weight of the selected adults which choose the instrument sphygmomanometer, weighing machine, inch tape. They were used to check the blood pressure, height and weight of a person. The blood pressure checked with the help of sphygmomanometer.

III. METHOD OF DATA COLLECTION

The investigators decided to check the blood pressure, height and weight of adults at selected community using an instrument named sphygmomanometer, weighing machine, inch tape.

A. Procedure of Data Collection

According to Polit and Hungler(1999)" Data collection is the process of collecting information needed to address research problem ". Final data was collected on 12 August 100 participants were selected from the selected rural area Pathanpura Meerut UP by the purposive sampling technique. To obtain free and frank response, purpose of the study was explained and the participants were assured about the confidentiality of their response.

The data collected were grouped and analysed using descriptive and inferential statistical method. Analysed data were presented in the following sections.

SECTION – I

Describes the frequency and percentage distribution of demographic variables among adults.

SECTION – II

Describes the percentage distribution of normal, mild, severe and no hypertension among adults.

SECTION- III

Describes the association between hypertension and demographic variables among adults.

Distribution of frequency and percentage Demographic Variables among Adults (N=100)

Sr. No	Demographic variables	Adults Frequency	Percentage
1	AGE 18-36		
	37-50	56	56%
	51-56	25	25%
2	GENDER		
	Male	35	35%
	Female	65	65%
3	FAMILY INCOME		
	Less than 5000Rs.5000-10000	09	09%
	Rs.10000 and above	34	34%
4	DIETARY PATTERN		
	Vegetarian	57	57%
	Non vegetarian	74	74%
		26	26%

5	LOCATION OF RESIDENCE UrbanRural Tribal	00 100 00	00% 100% 00%
6	FAMILY HISTORY OF HYPERTENSION GrandparentsParents Siblings	25 32 43	25% 32% 43%
7	HISTORY OF WEIGHT GAIN 1-3 kg More than 3 kgNo loss	29 17 54	29% 17% 54%
8	SOURCE OF HEALTHINFORMATION Newspaper Mass media Health Personnal Neighbourhood	20 56 08 16	20% 56% 08% 16%
9	HISTORY OF DIABETICMELLITUS Yes No	34 66	34% 66%
10	HISTORY OF HEART DISEASE YesNo	29 71	29% 71%

- Section II : Finding Related To Prevalence OfHypertension Among Adults

TABLE 2
Frequency and percentage distribution of prevalence of hypertension among adults
N=100

Level of Hypertension	Frequency	Percentage
Normal	57	57%
Mild Hypertension	20	20%
Severe Hypertension	23	23%
TOTAL	100	100%

Table 2 describes that among the total sample of 100 adults, 57(57%) shows normal hypertensive 20(20%) have mild hypertension and 23(23%) shows severe hypertension

• Section III- Association Between The Demographic Variable And Hypertension Among Adults Graphs

TABLE - 3

S.No	Demographic Variable	Normal	Risk 01	Hypertension	D.F	Total Value	Chi square	P.Value
01.	Age(in Years)a) 18-36 b) 37-50 c) 51-56	09 13 35	03 03 14	07 09 07	04	9.49	8.489 (N.S.)	0.0752
02.	Gender a) Male b) Female	18 38	08 17	08 11	02	5.99	0.687 (N.S.)	0.7092
03.	Family Income a) Less than ₹5000 b) ₹5000 -₹10000 c) ₹10,000 andAbove	10 33 57	0 0 0	0 0 0	04	9.49	0 (N.S.)	01
04.	Dietary Pattern a) Vegetarian b) Non - Vegetarian	47 10	12 08	15 08	02	5.99	5.078 (N.S.)	0.0789
05.	Location of Residence a) Urban b) Rural c) Tribal	0 57 0	00 20 00	00 23 00	04	9.49	0 (N.S.)	01
06.	Family history ofHypertension a) Grandparents b) Parents c) Siblings	15 18 24	06 05 09	04 09 10	04	9.49	1.4777 (N.S.)	0.8307
07.	History of weight gain inlast 3 months a) 1 – 3 kg b) More than 3kg c) No loss	17 08 33	05 04 10	09 04 10	04	9.49	1.746 (N.S.)	0.7823
08.	Source of Healthinformation a) Newspaper b) Mass Media c) Health Personal d) Neighbourhood	08 36 05 08	07 10 01 02	05 10 02 06	06	12.59	6.924 (N.S.)	0.3279
09.	History of DiabeticMellitus a) Yes b) No	16 41	05 15	12 11	02	5.99	5.03 (N.S.)	0.0808
10.	History of Heart Diseases a) Yes b) No	11 46	07 13	11 12	02	5.99	6.914 (N.S.)	0.0315

IV. RESULTS

The first objective of the study was to assess the prevalence of hypertension among adults.

Percentage distribution was done and revealed the overall percentage of hypertension among adults 53 (53 %) had normal hypertensive adults , 20 (20%) had mild hypertensive adults and , 23 (23%) had severe hypertensive adults .

The second objective of the study was to determine the association between the hypertension and demographical variables among adults.

The study result revealed that by chi-square test it was found that there is a significant association between hypertension and a demographic variables like source of health of information at $p < 0.05$ level .

There is no significant association between age , religion, family income , dietary pattern, location of residence , family history, history of weight gain in last three months, source of information , history of diabetic mellitus , and history of heart disease .

Ethical Consideration – Approval from Ethical Committee done .

Conflict of Interest – None

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