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PREVALENCE OF HYPERTENSION AMONG LOW INCOME AREAS OF MULTAN, PAKISTAN

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Abstract:
Objective: To determine the prevalence rate of hypertension in low income areas of Multan Pakistan.
Method: A cross sectional study was conducted in Multan Pakistan during month of March 2019. By adopting multistage sampling method total No. of 250 participants were approached. Data was analyzed through SPSS software.
Results: Prevalence rate of hypertension is higher in females above 30 years residing in lower regions (Block A, B) and mostly fall in stage 2. Majority 93(37.2%) of study population falls in stage 2, while 78(31.2%) and 58(23.2%) falls in stage 1 and 3 respectively. Only 21(8.4%) falls in Normal category.
Conclusions: Prevalence rate of hypertension is higher in females as compared to males belonging to lower residential areas.

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INTRODUCTION:

Hypertension is an important public health challenge worldwide because of its high prevalence and concomitant increase in risk of disease [1] . It is the most important modifiable risk factor for cardiovascular, cerebrovascular and renal disease [2].Hypertension is the leading global risk factor for mortality and disease burden [3]. Pakistan,like other developing countries faces a double burden of disease, as it passes through demographic transition, towards getting human permanency, where infectious diseases will decline and chronic diseases will become more prevalent. The risk of coronary artery disease and stroke is strongly associated with high blood pressure, especially along with other risk factors, including diabetes mellitus, renal disease, high serum cholesterol, etc.[4, 5]

This study estimates the prevalence rate of hypertension among lower income areas of Multan, Pakistan.

METHODOLOGY:

Study setting

A cross sectional study was conducted during the month of March 2019 in low income areas of Multan Pakistan. Through multistage sampling method data was collected from 250 participants belonging to different age groups ranges between 17-60 years old residing in low income areas.

Study design

In first stage areas were divided into four blocks A, B, C and D. In lower region block A and B while in upper region block C and D were included. Regions were made randomly with coin toss.

In second stage data was collected from participants by measuring their blood pressure using aneroid sphygmomanometer and stethoscope. Blood pressure was measured in all subjects in sitting position in the right arm extended to 45 degrees.

The cuff was firmly tied approximately 2.5 centimeters above the cubital fossa and was inflated and radial pulse felt simultaneously to manually ascertain the systolic pressure. The cuff was again inflated to the level of manual reading of systolic pressure plus an additional 30mmHg. The final blood pressure reading was taken with the diaphragm of the stethoscope placed on the brachial artery. Blood pressure is categorized into following four stages.

Normal   130/139 or 85/89
Stage 1   140/159 or 90/99
Stage 2   160/179 or 100/109
Stage 3 > 180

Analysis

Percentages of different variables were calculated by using SPSS software.

RESULTS:

Total 250 participants take part in our study including 112(44.8%) male and 138(55.2%) females. These participants were belonged from different age groups ranging from 17-60 years old, which is further categorized into three different groups (table.1). Further frequencies and percentages given in table 1 below.

Majority 93(37.2%) of study population falls in stage 2, while 78(31.2%) and 58(23.2%) falls in stage 1 and 3 respectively. Only 21(8.4%) falls in Normal category as given in table 2.

Prevalence rate of hypertension is higher in females above 30 years residing in lower regions (A, B) and mostly fall in stage 2 as given in table 3.

Table.1 Demographic characteristics of participants N=250

Demographic variables	Frequencies (%)
Gender	
Male	112(44.8%)
Female	138(55.2%)
Age	
17-31 years	56(22.4%)
32-46years	85(34%)
47-60 years	109(43.6%)
Residential blocks	
A	38(15.2%)
B	51(20.4%)
C	68(27.2%)
D	93(37.2%)

Table.2 Stages of hypertension along their frequency

Stages	Frequency	Percentage (%)
Normal	21	8.4%
Stage1	78	31.2%
Stage2	93	37.2%
Stage3	58	23.2%

Table.3 Hypertension stages among other variables

Stages of hypertension	Normal	Stage 1	Stage2	Stage3	Total
Gender					
Female	4	17	18	12	51
Male	3	11	12	8	34
Age (years)					
17-31 years	2	9	8	7	26
32-46years	1	7	17	14	39
47-60 years	3	9	14	9	35
Residential blocks					
A	2	10	8	3	23
B	3	5	5	1	14
C	2	4	4	2	12
D	1	6	7	2	16

CONCLUSIONS:

It is concluded from the study that

➢ Prevalence rate of hypertension is higher in females as compared to males.
➢ Participants above the age of 30 years having higher hypertension prevalence rate.
➢ Majority falls in stage 2 hypertension belongs to lower residential blocks (A, B)

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