

Hypertension among the Bhatra of Bastar District, Chhattisgarh

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Abstract

Hypertension was examined among the Bhatra residing in a village of Bastar district, Chhattisgarh. Frequency of normotension was found to be comparatively lower among the females (73.86%) than the males (83.75%). But in case of mild hypertension a reverse trend was perceptible (females: 25%; males: 11.25%). Occurrence of moderate and severe hypertension was slightly higher among the males (3.75%) than their counterpart (1.14%). However, the females suffer more due to hypertension than the males in Bhatra population. Reasons behind the higher frequency of hypertension among the Bhatra females were due to high pulse rate, low height, low body weight and BMI.

Keywords: Blood pressure; Correlates; Bhatra; Chhattisgarh

Introduction

The blood that circulates throughout the body maintains a flow and pressure. The nervous system can change the flow and pressure based on the particular needs at a given time. For example, during exercise the blood pressure and flow may increase. Blood pressure is an important physiological signal to measure and monitor over time. There are dangers associated with blood pressures that are too high or too low. Obesity is a leading cause of high blood pressure. High blood pressure puts a greater workload on the heart. High blood pressure has been correlated with an increased risk for many diseases including stroke, heart attack, cardiovascular disease and kidney failure. Typically, there are no symptoms of high blood pressure. This is why it is such an important parameter to periodically have checked. High blood pressure has been treated with medication, exercise and even meditation practices.

The higher blood pressure and the longer it goes uncontrolled, the greater the damage. Uncontrolled high blood pressure can lead to: Heart attack or stroke- High blood pressure can cause hardening and thickening of the arteries (atherosclerosis), which can lead to a heart attack, stroke or other complications. Aneurysm- Increased blood pressure can cause blood vessels to swell and weaken, creating an aneurysm. Heart failure- To pump blood against the higher pressure in vessels as a result heart muscle thickens. Eventually, the thickened muscle may have a hard time pumping enough blood to meet body's needs, which can lead to heart failure. Trouble with memory or understanding- Uncontrolled high blood pressure may also affect ability to think, remember and learn. Trouble with memory or understanding concepts is more common in people who have high blood pressure [1]. The present study deals with hypertension among the Bhatra tribe of Bastar district, Chhattisgarh.

Methodology

For the purpose of identification of respondents, the investigator followed snowball (random) sampling method where in the respondents were identified with the help of study. Only after ascertaining that the respondents fit into the sampling frame they were selected. As the study took place in one village, a random sampling method was followed. As such 100 households as well as 189 were selected for the purpose of study.

The investigator had to spend three months to collect the data.

The investigator has visited villages frequently and measured the hypertension levels of the respondents at mornings. Three readings (Standing, Sitting and lying) of blood pressures of each respondent were taken maintaining an interval of 2 minutes between the readings. Mean of the three readings was reported. Blood pressure (BP) and anthropometric data (height and weight) were collected from 100 families of the tribes of 15-70 years age during the period March-June-2012.

After collection of data through the primary source it has been coded and a code book was prepared. The data were entered into a master chart very meticulously. Thereafter, it was processed into the computer through MS EXCEL package. Later, the computerized data was taken in print form and the same was cross checked with the master chart to find out error(s), if any. After getting the processed data, percentage and other statistical measurements were derived.

It has been stated that the district Bastar (south portion of Bastar) have been selected and we find this districts have more or less same topography and other features. Idea behind this is that these regions are mostly inhabited by the tribal groups i.e. Bhatras as they are considered to be the sons of the soil. It is of course an accepted truth that the groups of people due to their dependence to the nature cling to the environment and their way of life.

For the sake of classification of blood pressure the Who [2] classification was followed. Altogether 80 adult males and 88 adult females were measured.

Results and Discussion

In Table 1 the occurrence of hypertension is shown sex-wise among the Bhatra. It is evident that the frequency of normotension is much lower among the females (73.86%) than that of the males (83.75%). But

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occurrence of mild hypertension is much higher among the females (25%) than that of the males (11.25%). However, the frequency of moderate and severe hypertension among the Bhatra males and females is 3.75% and 1.14% respectively. In case of isolated systolic hypertension only one male individual is recorded, whereas among the females no such case is observed. In fine, it can be said that the female suffer more due to hypertension in this population. For a clear view of the situation the same is shown graphically in Figure 1.

In Table 2 the correlates of hypertension is shown sex-wise. It can be seen from the Table that the female differ significantly with the males in respect of pulse rate, height, weight and BMI. In others cases a more or less similar value is noted for the males and females. However, the mean values for age, diastolic pressure, bicep, triceps and sub-scapular skin-fold are slightly higher among the males than that of the females. The mean values are plotted in Figure 2.

Type	MALE		FEMALE	
	No.	%	No.	%
Normotension	67	83.75	65	73.86
Mild hypertension	9	11.25	22	25.00
Moderate & severe hypertension	3	3.75	1	1.14
Isolated systolic hypertension	1	1.25	-	-
Total	80	100.00	88	100.00

Table 1: Blood pressure among the Bhatra.

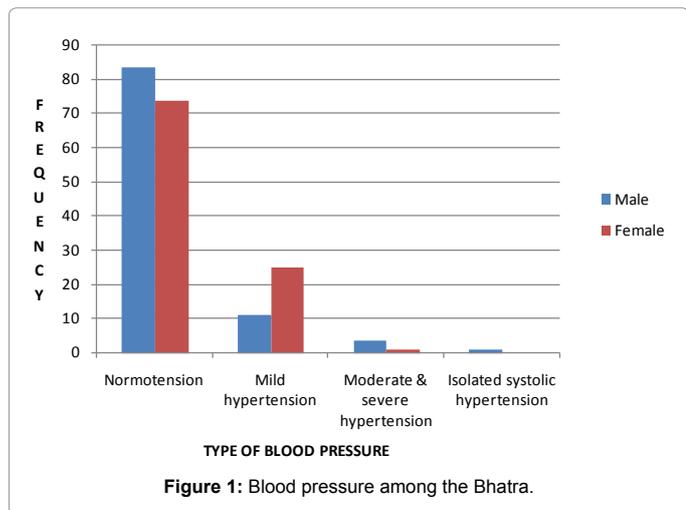


Figure 1: Blood pressure among the Bhatra.

Correlates	Male (n=80)		Female (n=88)		t-value (d.f.=166)
	Mean	S.D.±S.E.	Mean	S.D.±S.E.	
Age	32.45	14.94±1.67	31.49	14.31±1.53	0.42
Systolic pressure (mmHg)	121.10	16.07±1.80	123.16	17.62±4.88	0.79
Diastolic pressure (mmHg)	81.04	12.97±1.45	80.04	11.86±1.26	0.52
Pulse rate	81.94	13.83±1.55	90.34	16.09±1.71	3.61*
Height (cm)	154.25	9.63±1.08	148.52	8.39±0.89	4.12*
Weight (kg)	46.51	9.06±1.01	40.25	7.47±0.80	4.90*
BMI	19.40	2.78±0.31	18.13	2.48±0.26	3.12*
Bicep skin-fold	8.46	2.91±0.32	7.87	2.48±0.26	1.41
Triceps skin-fold	7.96	2.35±0.26	7.63	1.47±0.16	1.08
Sub-scapular skin-fold	7.81	1.83±0.20	7.75	1.97±0.21	0.18
Calf skin-fold	8.57	2.50±0.28	8.30	2.09±0.22	0.78

*Significant at 0.05 level of probability

Table 2: Mean, S.D. and S.E. of the correlates of hypertension.

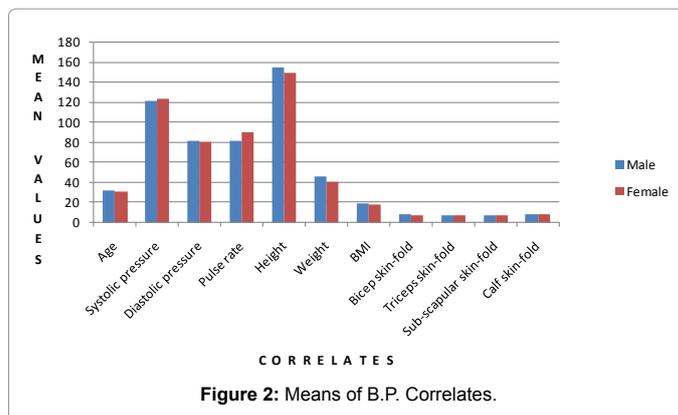


Figure 2: Means of B.P. Correlates.

In fine, thus it can be said that the reasons behind the higher frequency of hypertension among the Bhatra females are due to high pulse rate, low height, weight and BMI.

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