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Research Article

**A STUDY TO ASSESS THE FACTORS (AGE, CHOLESTEROL,  
BMI & DIET) WHICH INFLUENCE THE INCREASE AND  
DECREASE OF LEVELS OF BLOOD PRESSURE (BP)**<sup>1</sup>Dr. Saad Saleem Dogar, <sup>2</sup>Dr. Sonia Fida, <sup>3</sup>Dr. Ayesha Umar<sup>1</sup>Nishtar University Hospital Multan<sup>2</sup>MIKD Multan<sup>3</sup>VAWC Multan**Abstract:**

*Objective: In the population as a whole, and among people suffering from hypertension, the connection of nutritional factor in determining blood pressure (BP) is proved by much epidemiologic, experimental and clinical information.*

*In the local population of Pakistan, to find out the common factors which are affecting the levels of blood pressure is the main goal of this study.*

*Methods and Patients: A total of one hundred patients were included in the research from February 2017 to October 2017 at Mayo Hospital, Lahore. We gathered information from 100 patients. These patients were suffering from high blood pressure and any, heart disease. Some demographic data include age, sex, socioeconomic status and history of blood pressure.*

*Results: The levels of blood pressure are affected by a number of factors. The factor which influences the levels of blood pressure directly is age, cholesterol, BMI and diet.*

*Conclusion: It is concluded that for the increase and decrease in the levels of blood pressure, there are many factors which are responsible. But the main factor which effects the blood pressure levels directly is the diet.*

**Keywords:** BMI, Blood Pressure (BP), Clinical, Factors and Diet.

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**INTRODUCTION:**

In the population as a whole, and among people suffering from hypertension, the connection of nutritional factors in determining blood pressure (BP) is proved by much epidemiologic, experimental, and clinical information [1]. The basic of therapeutic involvement trials have also been the factors epidemiologically related to BP. These factors include weight, caloric. These factors include weight, caloric intake, and the mineral sodium, potassium, calcium, and magnesium. These proceedings have demonstrated that in at least some "sensitive" patients, BP may be lowered by lowering dietary calorie, alcohol, or salt content, and providing increased amounts of calcium, potassium, or magnesium [2]. For several genuine health conditions which include cardiovascular ailment, cerebrovascular malady and constant kidney ailment the factor that is dangerous and noticeable is hypertension [3]. All over the world, due to difficulties from hypertension, 2.4 million are passed. This also includes, from all passing, 45% are attributed to coronary vein illness and 51% of all passing are assigned to stroke [4]. In two types of people, these people. These relations are continuous which include youthful and middle-aged people. These relations are also steady in the more second subject, among a different gathering of racial and ethnic nature and inside and between the nations. The grown-up characterization as shown by pulse provides a system to differentiating levels of treat related with different circulatory strain classes and for designating treatment edges and manful aims in spite of the fact that there is a steadiness treats of cardiovascular crosswise over circulatory levels strain [5]. There is storage of information related to supreme and relative risks of the cardiovascular illness in people in spite of the fact that these people have a high ordinary circulatory strain and they are apparently going to have elevated risk of cardiovascular infection (given the continuum of hazard) [6]. Data on the risk of nonfatal cardiovascular occasions among people in this pulse class is confined although the data on deadly coronary occasions and trauma in people with high-typical circulatory strain are approachable. In people who have a high-typical pulse, a planned examination of the risk of cardiovascular illness is attempted by us [7].

**METHODS AND PATIENTS:**

For cardiovascular disorder (CVD), the causal danger factor is increased blood pressure (BP). Moreover, among people with hypertension, randomized clinical trials have demonstrated that for each 10mm Hg systolic BP (SBP) bringing down with medicinal treatment, in total, there is a decrease in CVD occasions by 20% coronary illness (CHD) BY 17% stroke by 27% and heart disappointment by 28%. According to this, it is a critical need for general health to control the elevated BP, and its clinical connect hypertension, counteractive action, location and treatment. It is a necessary focus for CVD aversion [8]. In the local population of Pakistan, to find out the common factors which are affecting the levels of blood pressure is the main goal of this study. A total of one hundred patients were included in the research from February 2017 to October 2017 at Mayo Hospital, Lahore. The organization of this study was according to the rules and regulations of the ethical committee of the hospital. This research will help to proceed the next finding which will study the effect of blood pressure in hypertension and its responsible factors.

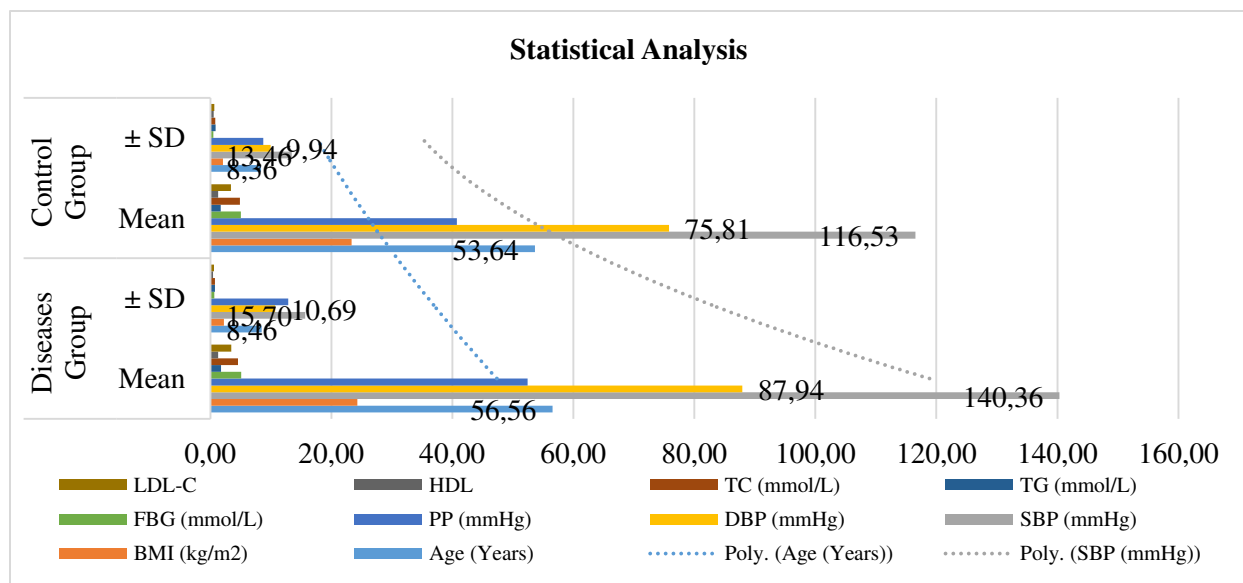
We collected information from 100 patients. These patients were suffering from high blood pressure and any cardiovascular disorder. Some demographic data is collected by us. We gather information related to high blood pressure and heart issue in the second part. For this reason, a questionnaire is prepared by us. That questionnaire is filled with patients. For the assessment of information, student's t-test was performed. By linear regression and person correlation coefficient, the relation of BP with other variables was analyzed. Multiple regression analysis studied that among variable, these relations depend on each other. This interdependence is found to correlate remarkably with BP. We expressed the data as mean  $\pm$  SD.

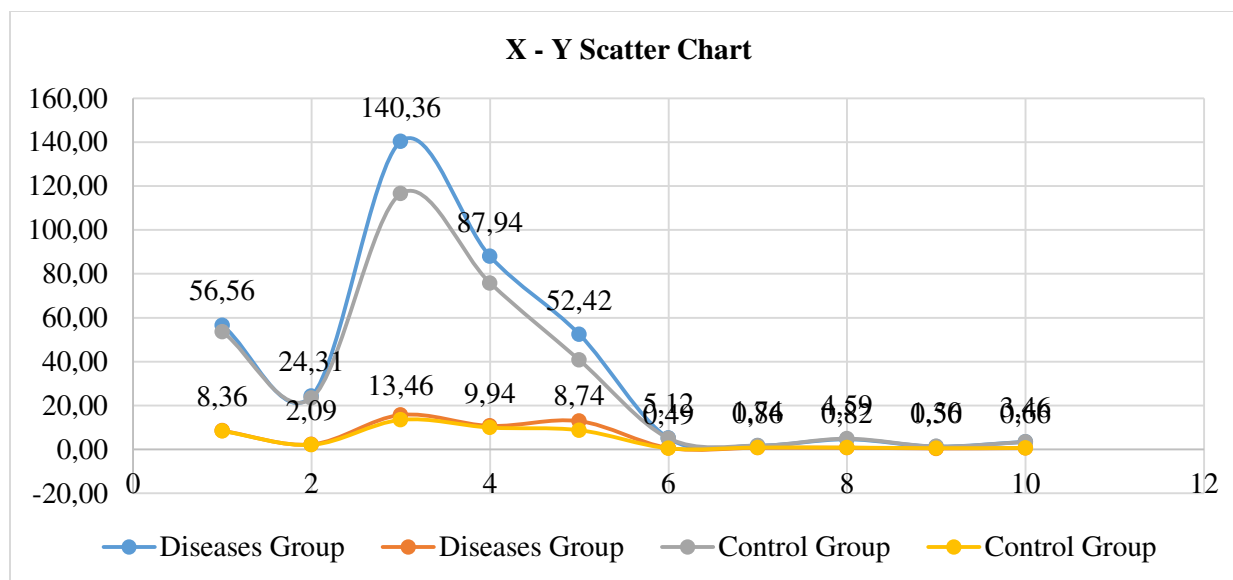
**RESULTS:**

The level of blood pressure is affected by a number of factors. The factors which influence the level of blood pressure directly are age, cholesterol, BMI and a diseased group which was effected from the low and high blood pressure issue are listed in the tabular data. The role of diet in the blood pressure level is explained graphically.

**Table:** Statistical analysis value of Control group and diseased group

Variable	Diseases Group		Control Group		T-Value	P-Value
	Mean	± SD	Mean	± SD		
Age (Years)	56.56	8.46	53.64	8.36	1.72	0.08
BMI (kg/m <sup>2</sup> )	24.31	2.26	23.37	2.09	2.20	0.03
SBP (mmHg)	140.36	15.70	116.53	13.46	8.25	0.00
DBP (mmHg)	87.94	10.69	75.81	9.94	5.97	0.00
PP (mmHg)	52.42	12.87	40.72	8.74	5.43	0.00
FBG (mmol/L)	5.12	0.65	5.06	0.49	1.76	0.08
TG (mmol/L)	1.74	0.75	1.69	0.86	1.84	0.07
TC (mmol/L)	4.59	0.76	4.88	0.82	1.71	0.09
HDL	1.30	0.43	1.31	0.56	1.72	0.09
LDL-C	3.46	0.58	3.38	0.66	1.14	0.27





### DISCUSSION:

The basis of the present study is the certain problem arising from the previous nutritional involvements in hypertension [9]. First, the physiological basis remains undetermined, which indicates the effect of diet on BP trials, as most previous involvement le biochemical data. Second with few peculiarities and with the little judgement of the advantage of the overall diets meeting. Present nutrients recommendation; these studies have tested the efficiency of changing a single dietary component [10]. Third, possibly as a result of lifestyle changes included in their performance, only limited success is achieved by diet policies. By analyzing the BP, weight, biochemical and hormonal responses to two food plans conforming to present guidelines of American heart association and the national academy of sciences, we have started to address these problems. We supervised subjects. These subjects are administered with and without concomitant hyperlipidemia as a part of a multicenter, irregular, controlled clinical trial.

In 2010, the leading dangerous factor for the overall global burden of disorder was high blood pressure patient living with cardiovascular disorder and excessive use of preventive drugs, there is a recent retardation in the death rate due to cardiovascular disease in the countries with high income the strategies for primary prevention could be purified by a recent understanding of the relation of blood pressure with different non-fatal and fatal results of cardiovascular disorder this could inform the design of upcoming clinical trials [11].

According to the report of the prospective studies

collaboration meta-analysis of 61 cohort enlisted between 1950 and 1990, there exist log-linear relations of systolic blood pressure with death from an ischemic disorder of heart and stroke. This relation exists in participant aged 40 – 89 year, with no obvious threshold below which no further retardation in danger is seen, down to a blood pressure of 115/15 mm [12]. These findings antecede many initiatives of the health of the public. These initiatives include efforts to lower the intake of salt, use of tobacco and more excessive use of blood pressure-lowering treatments for primary prevention and did not give knowledge about major chronic and non-fatal disorder. These disorders include heart failure, a disorder of peripheral artery abdominal aortic aneurysm, and stable angina [13]. Significantly for lifetime incidence, non- present assessment are available. And the year of life which are connected with hypertension attributable to specific hearth disease lost although in the studies held previously, the association of cardiovascular disease risk or cardiovascular disease-free years of life lost, have estimated by the investigators. only the cardiovascular disease was their main focus. They are with only one study so far to have analyzed the incidence of the specific cardiovascular disorder in a competing risk context [14].

### CONCLUSION:

It is concluded that for the increase and decrease in the levels of blood pressure, there are many factors which are responsible. But the main factor which is responsible. But the main factor which effects the blood pressure levels directly is the diet.

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