

**Dr.BRR Government College Jadcherla**

**Department of Zoology**

**Student Study Project**

**On**

**“Recording of Blood Pressure  
Measurement in different age groups  
at Dr.BRR Govt.Degree College  
Jadcherla”**

**Academic Year 2021-22**



**Dr. BRR GOVERNMENT DEGREE COLLEGE**

**JADCHERLA – 509 301**

**(Accredited with B<sup>++</sup> by NAAC )**

Dr. CH.Appiya Chinnamma, M.Sc., Ph.D.  
Principal

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The department of Zoology has conducted student study projects during the academic year 2021-22

**Title: “Recording of Blood Pressure Measurement in different age groups at Dr.BRR  
Govt.Degree College Jadcherla”**

Place of Work: Dr.BRR Government Degree College Jadcherla T.S

Members of The Group Project:

1. M.Naveena B.Sc., (BZC) II year 20033006445054 *M. Naveena*
2. . M.Ashwini B.Sc., (BZC) II year 20033006445573 *M. Ashwini*
- 3.S.Laxmi B.Sc., (BZC) II year 20033006445073 *S. Laxmi*
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A Group Project

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By

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Supervised By

K.Neeraja, Asst.Professor of Zoology

*Neeraja*  
Supervisor  
Principal

PRINCIPAL  
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Jadcherla-509 301.

*[Signature]*  
In-Charge of the Department

DEPT. OF ZOOLOGY  
Dr. BRR GOVT. COLLEGE  
JADCHERLA



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Student Study Project Certificate

**CERTIFICATE**

This to certify that, the project work “**Recording of Blood Pressure Measurement in different age groups at Dr.BRR Govt.Degree College Jadcherla**” is a bonafide work done by M.Naveena, M.Ashwini, S.Laxmi , P.Kalyani, T.Lavanya and M.Nikhitha the students of B.Sc (BZC) IV semester under my supervision in Zoology at the Department of Zoology Dr.BRR Government Degree College Jadcherla during the academic year 2021-22 and the work has not been submitted to any other college or university either par or full for the award of any degree.

Place

Date:

Jadcherla  
27/7/2022

K. Neeraja

Asst, Prof, of Zoology

**Department of Zoology**

**Dr.BRR Government Degree College Jadcherla**

A Student Group Project

on

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Supervised by K.Neeraja, Asst.Professor, Department of Zoology Dr.BRR Government College Jadcherla

**Acknowledgements:**

The members of this project extend thanks to Dr.CH.Appiya Chinnamma, Principal for permitting to conduct this project.

The team is indebted to all the college staff and student community for their cooperation.

Special thanks are due to Sri B.Ravinder Rao,HOD, Smt.K.Subhashini Asst.Prof, of Zoology, for their help and advice to complete this project.

Finally thanks are also due to K.Neeraja,Asst.Professor of zoology for guiding the team to during period the project.

**Objectives:**

**To Promote interest in research aptitude among students**

**To detect Cardio–Vascular disorders**

**To bring health consciousness among the students and staff**

**To advise to take necessary health chek up by the Medical professional**



## ABSTRACT

Background: Hypertension, or high blood pressure, is a major cause of disability and the leading risk factor for death around the world. Ongoing surveillance is necessary to monitor and assess the population burden of hypertension in India. Survey and analysis estimates average systolic blood pressure (BP), average diastolic BP, and hypertension prevalence, awareness, treatment and control in the population aged 19 to 60 years in the period from December 2021 to July 2022 by sex and age group.. Among 271 adults aged 20 to 60 years, 24% of males and 23% of females had hypertension, defined as measured BP  $\geq 140/90$  mm Hg or past-month use of antihypertensive medication. Hypertension prevalence increased to 40% for males and 32% for females when the BP threshold was lowered to  $\geq 130/80$  mm Hg. Among adults, 84% of people with hypertension were aware of their condition, 80% of hypertensive people were treated for their condition, and 66% had controlled hypertension (measured BP  $< 140/90$  mm Hg), though those aged 20 to 39 were less likely than older age groups to be aware, treated or controlled.. This finding highlights the importance of initiatives to encourage the students and the staff of Dr.BR Government Degree College to have their blood pressure checked and treated.

Key words: Blood Pressure, Hypertension, Hypotension, Systolic and Diastolic pressure Aneroid and Sphygmomanometer and Dr.BRR Government Degree College Jadcherla

## INTRODUCTION

Hypertension, or high blood pressure, is a silent Killer. This has been attributed to several factors, Stress full environment, Anxiety, Lifesyle changes are the reasons behind this problem. In India prevalence of Hypertension among the adult populations is 1 among 4. Ongoing surveillance is necessary to monitor and assess the population burden of hypertension. This study examines systolic blood pressure (SBP), diastolic blood pressure (DBP), and hypertension prevalence, awareness, for adults aged 20 to 60 by age group and sex. Hypertension is defined using two sets of blood pressure thresholds: SBP $\geq 130$  mm Hg or DBP $\geq 90$  mm Hg; and SBP $\geq 130$  mm Hg or DBP $\geq 80$  mm Hg. To assess trends over time, crude and age-standardized estimates of SBP, DBP, and hypertension prevalence, awareness, periodic check ups are also presented for adults.

## MATERIALS AND METHODS:

### 1) Study area:

Dr.BRR Government College is located in Jadcherla Town. Jadcherla town is located 80KMs away from Hyderabad, the capital city of Telangana State. It is located on National Highway 44 south to Hyderabad. The topographical details are Longitude: 78.1442814, Latitude: 16.7629646, Elevation: 548m / 1798feet and Barometric Pressure: 95KPa. Population of Jadcherla in 2021 is 127,430. Dr.BRR Government Degree college is located at Signalgadda landmark with

an area of around 15 Acres of land, this college has good greenery with gardens covering 7 Acres of land.

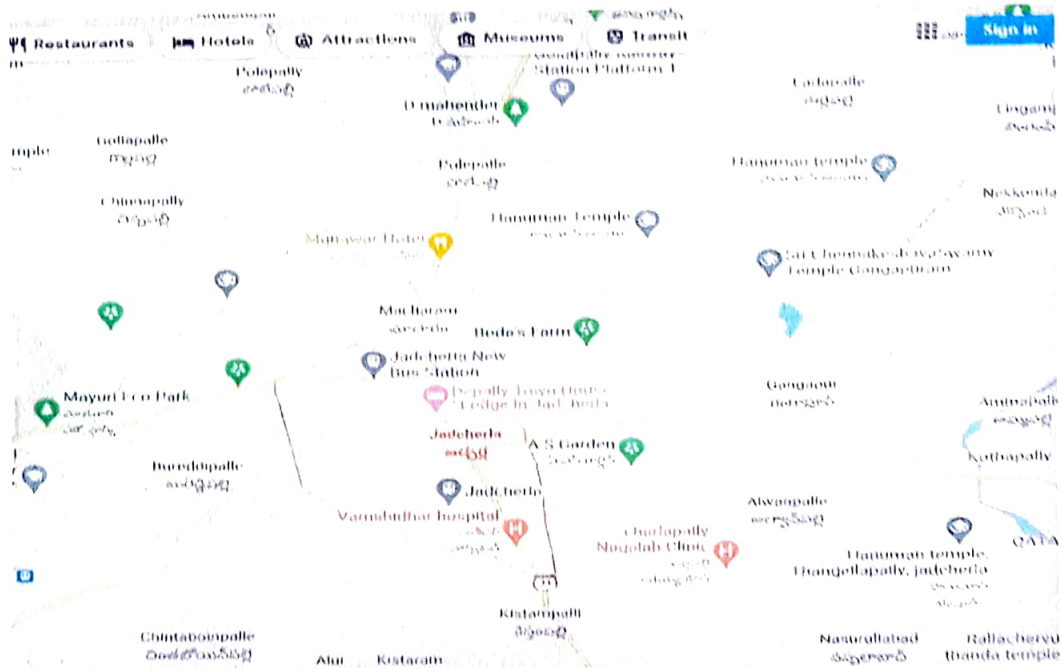


Fig.1: Map of Study area - Jadcherla

## 2) Materials and Methods::

The present study was done for six months from July 2021 to December 2021.. Periodical recording of Blood Pressure is done by the team members using Auscultatory and Oscillometric method. A team of six members divided into three groups and recorded the Blood pressure of the students and staff members on weekly basis with the help of Health club in the college.

**Auscultatory Method:** this method usually employs a mercury column and occlusive cuff and a stethoscope. The cuff is placed around the upper arm of the patient when the cuff is inflated, the circulation in the artery is blocked temporarily. When the cuff is deflated sounds are generated because of blood throbbing inside the artery. These sounds are monitored by stethoscope placed on rachial artery. Firrst sound is listened and verified in the meter is SBP, Second sound disappears is the DBP in the arteries.

**Oscillometric Method:** Electronic pressure monitors are popular nowadays due to their simplicity of use. The principle of measurement using this technique depends on the transmission of Intra arterial pulsations through the occluded arm. Cuff is placed on the upper arm rapidly inflated to



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30mm Hg above the prospective SBP. Occluding the blood flow in the brachial artery, then the cuff is deflated gradually detecting the system by means of pressure sensors.









Fig.1: The team members recording the Blood pressure

#### Results:

Among 271 members of this college, 80 male members and 140 female members are in the Age group of 18-30 years. 17 male members and 112 female members are in the Age group of 31-45 years. 10 male members and 5 female members are in the Age group of 46-60 years. The Hypertension among the age group 18-30 years, is nil. But 10 members are suffering from Hypotension with recordings ranging from 71/66 to 90/60mm Hg. It is interesting to note that only the female members are in this age group are detected with hypotension.

Among 31-45 Age group, only one female member is with hypertension with 142/93 mmHg.

Among 46-60 age group, One female and one male member are with Hypertension with 149/89mmHg.

By the above recordings it can be concluded that 22 % of the staff and students of this college is with Blood pressure abnormalities. 21% of population in the college is with Hypotension and 1% is with Hypertension, the findings are submitted to the Convener of Health club for further necessary suggestions to the persons with blood pressure anomalies.