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## Research Article

### NON - SYMPTOMATIC HYPERTENSION IN RURAL AREA OF RAYALASEEMA (A.P)AMONGST RANDOM POPULATION

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#### ABSTRACT

In India Hypertension is currently becoming a major health concern in the coming years. According to the World Health Statistics 2012 report, India has low rates of hypertension compared to world figures. In India, 23.10 per cent men and 22.60 per cent women above 25 years suffer from hypertension. India also fares better than the global average of 29.20 in men and 24.80 in women respectively.

Hypertension is defined as a repeatedly elevated blood pressure exceeding 140 over 90 mmHg - a systolic pressure above 140 with a diastolic pressure above 90.

India is exploring the possibility of having a national monitoring framework to help check hypertension cases, according to a WHO official.

The aim of this study is to assess the prevalence of hypertension in rural areas of Kurnool and Kadapa district of Rayalaseema region, Andhra Pradesh. A community-based cross-sectional survey was conducted in the villages of rural areas of district Kurnool and Cudappah were selected from Rural Health Centers (RHCs) of these villages. In our study of 1637 subjects, 229 were hypertensive giving the prevalence although prevalence of hypertension in general public is very high, major bulk is still undiagnosed. A screening and preventive program needs to be established on national and international level.

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#### INTRODUCTION

Hypertension (HTN) is a definite public health problem in developing nations <sup>[1]</sup>. As per World Health Organization, approximately 40% of people above 25 years had hypertension in 2008 <sup>[2]</sup>. The age-related Hypertension was highest in low-income and middle-income countries. This may be due to the growth and aging of the population around the developing nations, the number of people with uncontrolled hypertension was reported to have increased between 1980 and 2008 <sup>[3]</sup>.

Worldwide, 7.6 million deaths were estimated due to high blood pressure. About 54% of stroke and 47% of ischemic heart disease worldwide were thought to be due to high blood pressure <sup>[4]</sup>. Hypertension usually is associated with increased risk of coronary artery disease and is a well known risk factor for cardiovascular and cerebrovascular diseases <sup>[5, 6]</sup>. A meta-analysis also reported that lower values of blood pressure are

associated with higher risk of cardiovascular disease and also with chronic kidney diseases <sup>[7, 8]</sup>. The Southeast Asian region showed studies reporting HTN as an important risk factor for bulk burden of disease in the region <sup>[9, 10]</sup>. An alarming increase rate of HTN pointed by Global Burden of Hypertension 2005 study and the 2010 study shows a discouraging scenario for the Indian population <sup>[2, 9]</sup>. Despite of programs done for the prevention of hypertension, treatment of hypertension remains a challenge in many parts of the world. Because of the grave situation which affects our population's health, Indian Government has launched the National Program for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke for prevention and control of disease at community level <sup>[11]</sup>.

Studies about the prevalence of hypertension is essential to the development of national and local level health policies for prevention and control of hypertension. Community level data

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for hypertension and its risk factors is not adequate yet to address this situation. Thus, this study was conducted with the aim of finding prevalence of hypertension and few common risk factors in a rural areas of Andhra Pradesh.

### AIMS AND OBJECTIVES

To assess the prevalence of hypertension in rural areas of Kurnool and Kadapa district of Rayalaseema region, Andhra Pradesh.

### MATERIAL AND METHODS

This cross-sectional study with a random sample size of 1637 people covered in age group above 25 was conducted in rural areas of districts of Hyderabad and Kurnool. Blood pressure was measured manually.

Subjects with systolic blood pressure more than 140 and diastolic blood pressure more than 90 mm of Hg and signs & were considered as hypertensive. Data was collected on clinical measurement by qualified medical personnel.

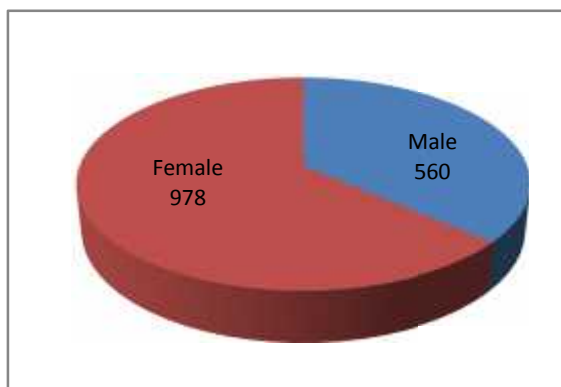
A community-based cross-sectional survey was conducted in the villages of rural areas of district Kurnool and Cudappah were selected from Rural HealthCenters (RHCs) of these villages. The survey was conducted on all the subjects aging above 25 years present in RHCs during the time of survey. An informed verbal consent was obtained before measuring the blood pressure. 1637 subjects formed the study sample. Blood pressure was measured by auscultatory method using the standardized sphygmomanometer. All the participants were requested to take rest for five to ten minutes. Blood pressure was measured in the sitting posture with an appropriate-sized cuff encircling the upper arm. Two separate readings were taken at an interval of three to five minutes. Cut off value for systolic BP was 140mm Hg while for diastolic it was 90 mm Hg. History for signs and symptoms as well as any medication was taken. Those who were on medication were excluded from the study. Information so obtained was analysed using statistical tools SPSS V. 18.

### OBSERVATIONS AND RESULTS

Out of 1637 subjects, 229 were hypertensive giving the prevalence ratio of 13.98%. (Table-1). Out of hypertensive subjects 126 were female while 103 were males.(Table-2)

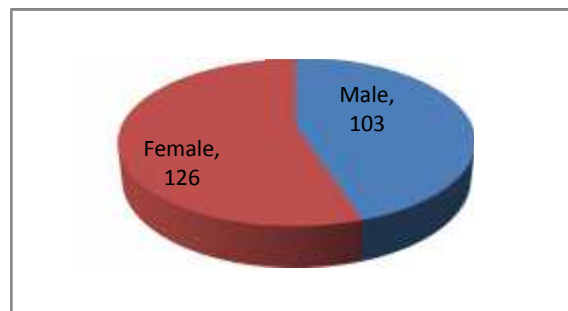
**Table-1** Sex ratio of subjects included in the study

S.No	Male	Female
1	560	978



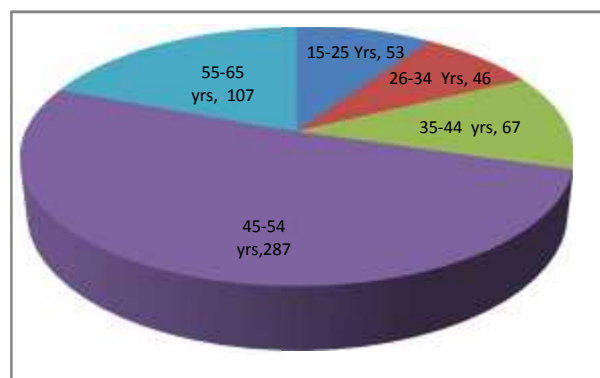
**Table-2** Prevalence of Hypertension in asymptomatic rural population

Total	Male	Female
229	103	126



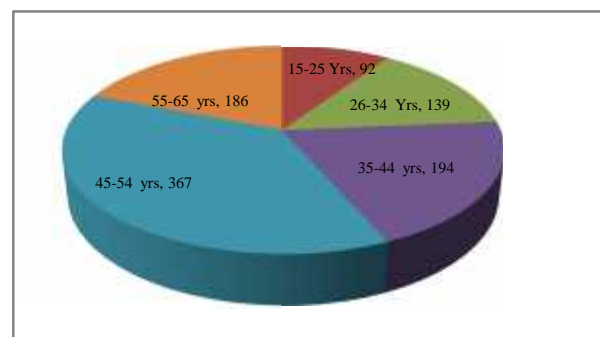
**Table-3** Age Incidence of Hypertension in asymptomatic rural population (Male)

S.No	Age(Yrs)	Number
1	15 – 25	53
2	26 – 34	46
3	35 – 44	67
4	45 – 54	287
5	55 – 65	107



**Table-4** Age Incidence of Hypertension in asymptomatic rural population (Female)

S.No	Age(Yrs)	Number
1	15 – 25	92
2	26 – 34	139
3	35 – 44	194
4	45 – 54	367
5	55 – 65	186



### DISCUSSION

Hypertension is considered as the major risk factor for the development of Cardiovascular diseases and Cerebral stroke worldwide. However, there are no symptoms to any of them, so

more necessary to detect it at the earliest to prevent morbidity and mortality with earlier therapeutic interventions. HTN can be dangerous, as people remain unaware of their high BP as evident in our study and some international studies. Even in the presence of efficacious anti-hypertensive medication, High blood pressure remains uncontrolled in most of the cases. In our study the prevalence of hypertension in rural areas of Rayalaseema was 13.9 % with female predominance which is compatible with international results. Studies indicate that control rates vary according to various countries and geographic regions. Even though, the rate of awareness of hypertension is quite prominent from 62% in Australia to 72% in U.S<sup>15</sup>. In the South Asian region, the scenario is more alarming due to illiteracy. At present, it is estimated that about 1 billion people worldwide have hypertension (>140/90 mmHg), and this number is expected to increase to 1.56 billion by 2025. People tend to ignore the health risks involved with this danger disease due to unawareness.

According to National Health Survey of India more than 70 percent of all hypertensive patients in the country are unaware of their disease. On the other hand, general physicians tend to under diagnose and under treat high blood pressure.<sup>7,2</sup> The National Health Survey of India estimated that hypertension affects 18% of adults and 33% of adults above 45 years old. In another report, it was shown that 18% of people in suffer from hypertension with every third person over the age of 40 becoming increasingly vulnerable to a wide range of diseases. It was also mentioned that only 50% of the people with hypertension were diagnosed and that only half of those diagnosed were ever treated. Thus, only 12.5% of hypertension cases were adequately controlled. In our study the scenario was not much different from other areas of A.P. The prevalence was higher in rural areas of (38%) with more prevalence in people above 40 years of age. Attributing factors of such high prevalence were lack of education. Sedentary lifestyles, poor health facilities, lack of exercise and nutritional factors like obesity and fatty meals.

## CONCLUSIONS

Hypertension is more prone for cardio-vascular and cerebral stroke. Although prevalence of hypertension in general public is very high, major bulk is still undiagnosed. A screening and preventive program needs to be established on national and international level.

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