

Hypertension among the Adults in Leguntapadu Vs Vavilla, Nellore

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ABSTRACT

Background: Elevated blood pressure is rising nearly 30 percent in teens, and by 2025, hypertension will affect 1.56 billion adults worldwide. This is a growing health concern; untreated high blood pressure may damage organs in the body and increase the risk of heart attack, stroke, and brain hemorrhage.

Aim: to assess the prevalence of hypertension

Setting and Design: The study was conducted in Leguntapadu (coastal area) and Vavilla (non coastal area) by using a descriptive design.

Materials and Methods: A total of 500 samples were included in this study. Among this, 250 samples belongs to coastal area and 250 samples belongs to non coastal area by using convenience sampling technique.

Statistical Analysis Used: The collected data was organized, tabulated, analyzed and interpreted by using descriptive and inferential statistics based on the objectives of the study.

Results: In Leguntapadu, Out of 250 samples, With regard to the category of the blood pressure 55(22%) are stage-I, 10(4%) are stage-II, 1(0.4%) was stage-III, 45(18%) are grade-I, and 4(1.6%) are grade-II isolated systolic hypertension. Known Hypertensive cases are 46(18.6%), Newly diagnosed cases are 69(27.6%). With regard to BMI, among 250 samples 21(8.4%) were overweight and 3(1.2%) were obese. in Vavilla, among 250 samples, 89(35.6%) are stage-I, 1(0.4%) are stage-III, 70(2.8%) are grade-I, and 24(9.6%) are grade-II hypertension. Known Hypertensive cases are 135(54%). Newly diagnosed cases are 49(19.6%). With regard to BMI among 250 samples 24(9.6%) were overweight and 20(8%) were obese.

Conclusion: The above results shown that blood pressure values are high in the Vavilla (noncoastal area) than Leguntapadu (coastal area).

Key words: hypertension, non coastal area, coastal area, heart attack, stroke.

1. INTRODUCTION

One in three adults worldwide has high blood pressure. Hypertension increases the risk of heart attack, stroke, kidney failure and much other associated co morbidity. Treating raised blood pressure and maintaining it below 140/90 mmHg is associated with a reduction in cardiovascular complication. The theme for World Health Day (WHD) 2013 is "high blood pressure". The goal of WHD 2013 is to reduce heart attacks and strokes. Keeping in line with the WHO, Government of India, Country Cooperation Strategy, the WHO 2013 events in India are aimed at raising the awareness amongst national policymakers, program managers and other stakeholders on the need to strengthen the Indian health system to make it competent enough to respond to hypertension and related co morbidities¹.

Kantha, K and Indira, A. (2015) conducted a cross sectional study on prevalence of hypertension among the adults in coastal and non coastal areas. A total of 5000 samples were included in the study. In that 2500 samples belongs to coastal areas and 2500 samples belongs to non coastal areas. The prevalence of stage-I hypertension in coastal areas is 460(18.4%) but in non coastal areas it is 1413(56.50%). The results indicate that there is high prevalence of hypertension in non coastal areas than coastal areas² and the other studies from the same authors also had proved that the blood pressure values are higher in the non coastal areas than the coastal areas^{3,4,5,6&7}.

Arumugam Indira et.al. (2015) conducted a study on prevalence of prehypertension among the adults in coastal and non coastal areas. The study results shown that regarding prehypertension in SBP, in coastal areas 1129(45.16%) and in non coastal areas 971(38.84%). The results indicate that there is high prevalence of pre hypertension in coastal areas than non coastal areas. Further studies are needed to find out the reasons and measures to control high blood pressure is necessary⁸.

Even today there is scarcity of the studies in coastal and non coastal areas of India. With this background, present study has been undertaken to study the prevalence of hypertension.

2. Objectives of the Study

- ✓ To assess the prevalence of hypertension among adults of coastal and non coastal areas.
- ✓ To identify the risk factors of hypertension among adults of coastal and non coastal areas.
- ✓ To compare the prevalence of hypertension between coastal and non coastal areas.
- ✓ To find association between the prevalence of hypertension with selected socio demographic variables.

3. Detailed Research Plan

Research Approach: Quantitative Approach.

Research Design: Descriptive design.

Research Setting: The study was conducted in Leguntapadu (coastal area) and Vavilla (non coastal area) by using a descriptive design.

Coastal area means areas within 2km from mean low water mark (MLWM) or mean high water mark (MHWM).

Non coastal area means areas far 2km from mean low water mark (MLWM) or mean high water mark (MHWM).

Sampling Technique: Convenience sampling technique

Sample Size: A total of 500 samples were included in this study. Among this, 250 samples belongs to Leguntapadu (coastal area) and 250 samples belongs to Vavilla (non coastal area).

4. Results and discussion:

Comparison of Blood Pressure in Leguntapadu and Vavilla.

Table 1. Comparison of Blood Pressure in Leguntapadu and Vavilla (N=250)

Blood Pressure Category	LEGUNTAPADU		VAVILLA		Correlation coefficient	Standard deviation
	(f)	(%)	(f)	(%)		
Optimal	15	6%	0	0.00%	0.74	31.32
Norma	41	16.4%	6	2.4%		
High Normal	79	31.6%	60	24%		
Stage-I	55	22%	89	35.6%		
Stage-II	10	4%	0	0.00%		
Stage-III	1	0.4%	1	0.4%		
Grade-I	45	18%	70	28%		
Grade-II	4	1.6%	24	9.6%		

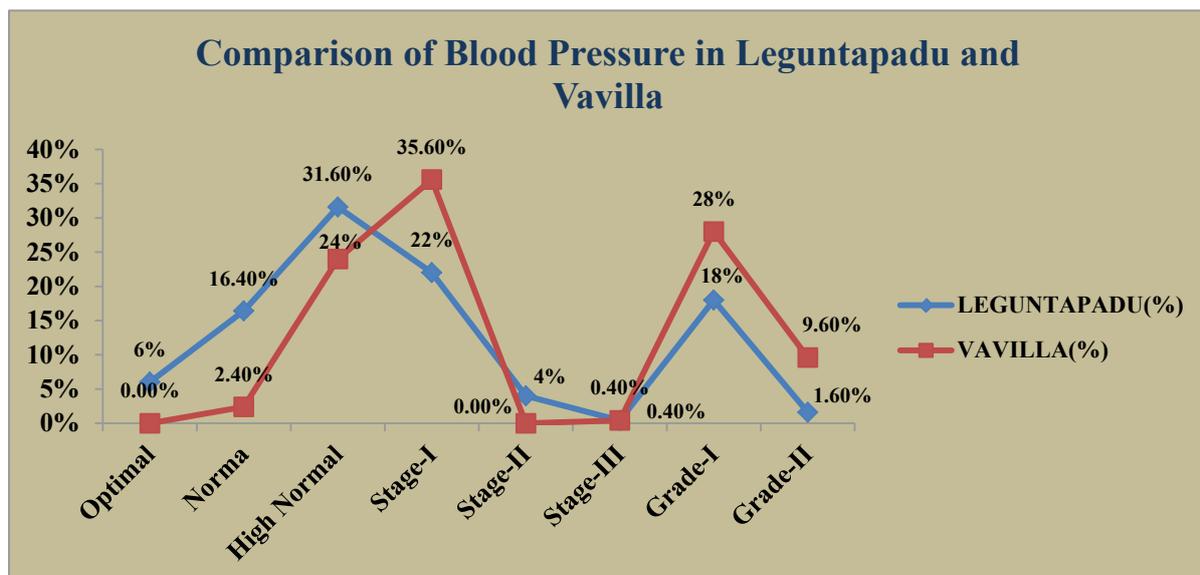


Fig. 1: Comparison of Blood Pressure in Leguntapadu and Vavilla

The prevalence of stage-I BP in coastal area is 55(22%) but in non coastal areas it is 39(35.6%). The correlation coefficient value is highly significant (0.74) and the standard deviation is 31.15.

Comparison of Body Mass Index in Leguntapadu and Vavilla

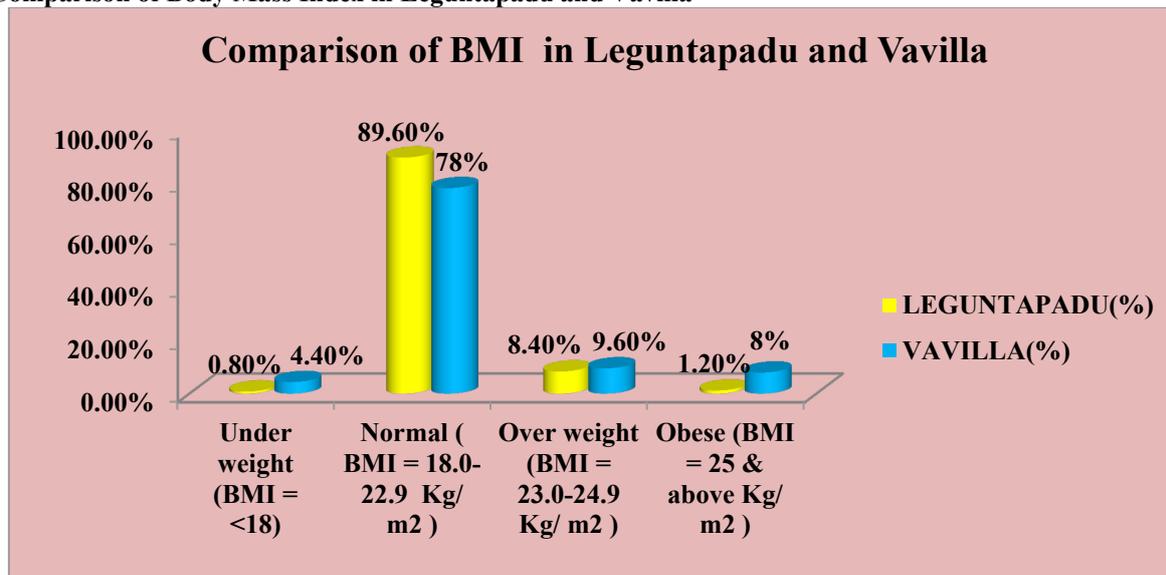


Fig. 2: Comparison of Body Mass Index in Leguntapadu and Vavilla

The prevalence of overweight samples in coastal area is 21 (8.4%), obesity is 3(1.4%) but in non coastal areas it is 24(9.6%) and 20(8%). The correlation coefficient value is highly significant (0.99) and the standard deviation is 91.41.

Association of Socio Demographic Data with the Blood Pressure in Leguntapadu:

There is a significant association of demographic variables with age, Family, working members in family, Type of ventilation, Sleeping hours, Use of fast food, are you having stress, and Are you known hypertensive and remaining are non significant.

Association of Socio Demographic Data with the Blood Pressure in Vavilla:

There is a significant association of demographic variables with Type of ventilation, amount of oil used for per day, Type of salt used, worship of god, intake of fish ,are you a known hypertensive and remaining are non significant.

Good eating practices, Spirulina the future food supplementation and alternative practices helps the individuals to keep their blood pressure in track 11,12,13,&14

5. Conclusion

- The above results shown that stage-1 HTN , grade-1 and grade-2 isolated systolic hypertension values are higher in the Vavilla (non coastal area) than in the Leguntapadu (coastal area).
- Among hypertension cases the prevalence of obesity is more in non coastal area than coastal area.

- The variables like Age, exercise, Type of oil used for cooking, Type of salt used, habits, intake of fish, are you having stress and are you a known hypertensive are the influencing risk factors for the development of hypertension among the adults.

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