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Prevalence of hypertension among the adults in Kothakoduru Vs Vidavaluru 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 Kothakoduru (coastal area) and Vidavaluru (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 Kothakoduru, Out of 250 samples, With regard to the category of the blood pressure 96(36%) had stage-I hypertension, 14(5.6%) had stage-II hypertension, 2(0.8%) had stage-III hypertension, 23(9.2%) had grade-I isolated systolic hypertension, and 8(3.2%) had grade-II isolated systolic hypertension. Known Hypertensive cases are 60(24%), Newly diagnosed cases are 83(33.2%). With regard to BMI, among 250 samples 48(19.2%) were overweight and 12(4.8%) were obese. in Vidavaluru, among 250 samples, 92(36.8%) had stage-I hypertension, 11(4.4%) had stage-II hypertension, 2(0.8%) had stage-III hypertension, 54(21.6%) had grade-I hypertension, and 14(5.6%) had grade-II hypertension. Known Hypertensive cases are 146(58.4%). Newly diagnosed cases are 27(10.8%). With regard to BMI among 250 samples 45(18%) were overweight and 21(8.4%) were obese.
Conclusion: The above results shown that blood pressure values are high in the Vidavaluru (non coastal area) than kothakoduru (coastal area).

Keywords: 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 morbidities [1].
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 areas [2].
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 necessary [3].
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 Kothakoduru (coastal area) and Vidavaluru (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 Kothakoduru (coastal area) and 250 samples belongs to Vidavaluru (non coastal area).

4. Results and Discussion

Comparison of Blood Pressure in Kothakoduru and Vidavaluru.

Table 1: Comparison of Blood Pressure in Kothakoduru and Vidavaluru.

(N=250)

Blood Pressure Category	Kothakoduru		Vidavaluru		Correlation coefficient	Standard deviation
	(f)	(%)	(f)	(%)		
Optimal	6	2.4%	4	1.6%	0.9	35.15
Norma	11	4.4%	9	3.6%		
High Normal	90	36%	64	25.6%		
Stage-I	96	38.4%	92	36.8%		
Stage-II	14	5.6%	11	4.4%		
Stage-III	2	0.8%	2	0.8%		
Grade-I	23	9.2%	54	21.6%		
Grade-II	8	3.2%	14	5.6%		

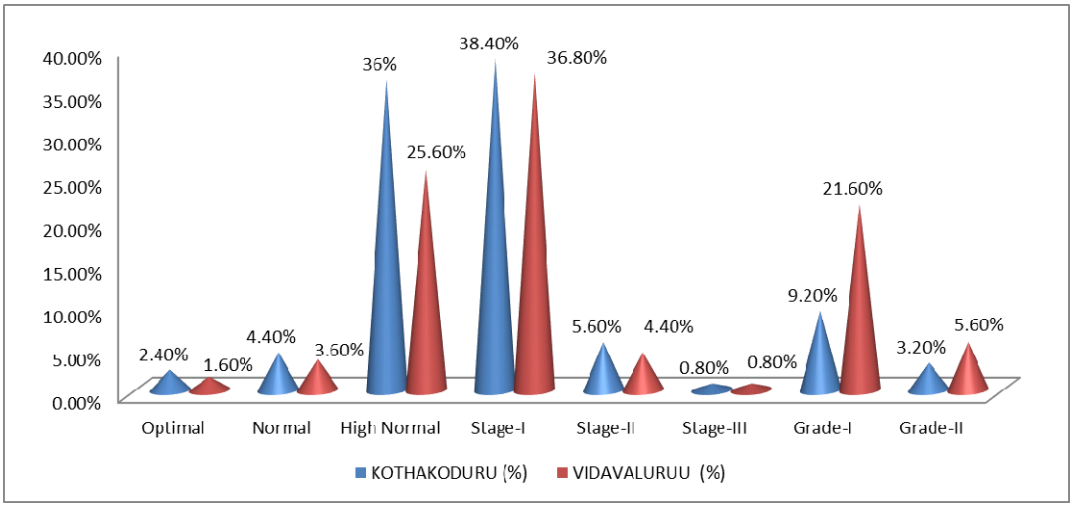

Fig 1: Comparison of Blood Pressure in Kothakoduru and Vidavaluru

The prevalence of stage-I BP in coastal area is 96(38.40%) but in non coastal areas it is 92(36.8%). The correlation coefficient value is highly significant (0.9) and the standard deviation is 35.15.

Comparison of Body Mass Index in Kothakoduru and Vidavaluru

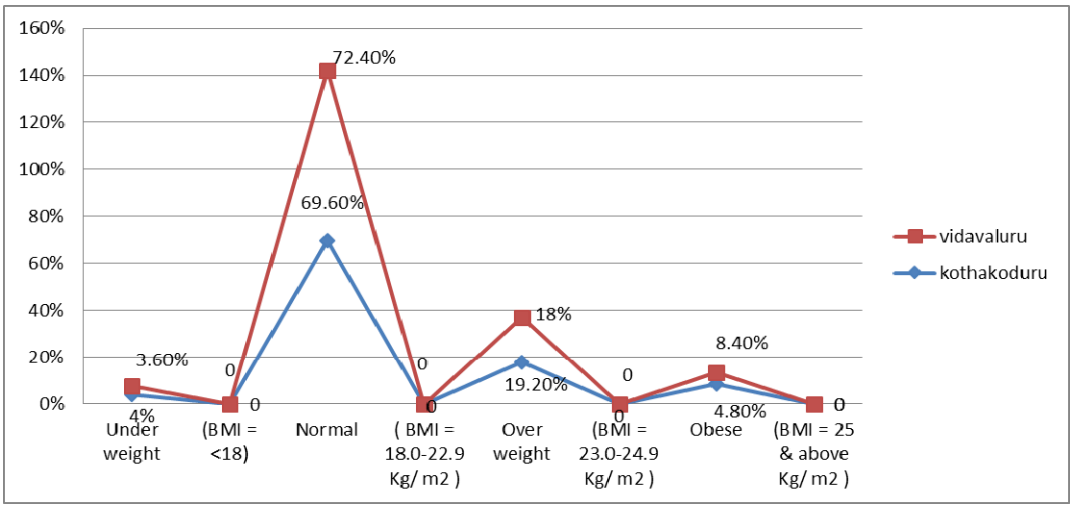

Fig 2: Comparison of Body Mass Index in Kothakoduru and Vidavaluru

The prevalence of overweight samples in coastal area is 48 (19.2%), obesity is 12(4.8%) but in non coastal areas it is 45(18%) and 21(8.4%). The correlation coefficient value is highly significant (0.99) and the standard deviation is 74.58.

Association of Socio Demographic Data with the Blood Pressure in Vidavaluru

There is a significant association of demographic variables with sleeping pattern, exercise, hotel food, worship of god, are you a known hypertensive and remaining are non significant.

5. Conclusion

- The above results shown that grade-1 and grade-2 isolated systolic hypertension values are higher in the Vidavaluru (non coastal area) than in the Kothakoduru (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.

6. References

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