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Prevalence of hypertension among the adults in Pallepalem Nellore

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Abstract
Background: Hypertension is an important public health challenge in both economically developing and developed countries. It is one of the risk factors for cardiovascular mortality.
Aim: to assess the prevalence of hypertension.
Setting and Design: The study was conducted in Pallepalem (coastal area) by using a descriptive design.
Materials and Methods: A total of 250 samples were included in this study.
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: Out of 250 samples, With regard to the category of the blood pressure 106(42.4%) had stage-I hypertension, 19(7.6%) had stage-II hypertension, 3(1.2%) had stage-III hypertension, 57(22.8%) had grade-I isolated systolic hypertension, and 4(1.6%) had grade-II isolated systolic hypertension. Known Hypertensive cases are 105(45%), newly diagnosed cases are 84(33.6%). With regard to BMI, among 250 samples 21(8.4%) were overweight and 21(8.4%) were obese.
Conclusion: The above results shown that blood pressure values are high (known and newly diagnosed) in the Pallepalem.

Keywords: Hypertension, coastal area, heart attack, stroke

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 areas of India. With this background, present study has been undertaken to study the prevalence of hypertension.

Objectives of the study

- To assess the prevalence of hypertension among adults.
- To identify the risk factors of hypertension among adults.
- To find association between the prevalence of hypertension with selected socio demographic variables.

Detailed Research Plan

Research Approach: Quantitative Approach.

Research Design: Descriptive design.

Research Setting: The study was conducted in Pallepalem (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).

Sampling Technique: Convenience sampling technique

Sample Size: A total of 250 samples were included in this study. Among this, 250 samples belongs to Pallepalem (coastal area).

Results and discussion

Table 1: Frequency and percentage distribution of demographic data in Pallepalem. N=250

S. no	Demographic Variable	Frequency	Percentage
1	**Age**		
	a. 20-30 years	0	0.00%
	b. 31-40 years	34	13.6%
	c. 41-50 years	142	56.8%
	d. 51-60 years	74	29.6%
2.	**Gender**		
	a. Male	114	45.6%
	b. Female	136	54.4%
03.	**Education**		
	a. Illiterate	201	80.4%
	b. Inter/SSLC	44	17.6%
	c. Under Graduate	4	1.6%
	d. Post Graduate	1	0.4%
4.	**Family**		
	a. Extended Family	3	1.2%
	b. Joint Family	69	27.6%
	c. Nuclear Family	178	71.2%
5	**Occupation**		
	a. Farmer	124	49.6%
	b. Coolie	87	34.8%
	c. Managerial job	3	1.2%
	d. Teaching job	9	3.6%
	e. Others	27	10.8%
	f. House wife	0	0.00%
6	**Income**		
	a. Rs. 2000 – 4000/-	132	52.8%
	b. Rs. 4001 – 6000/-	87	34.8%
	c. Rs. 6001 – 8000/-	22	8.8%
	d. Rs. 8000 & above	9	3.6%
7	**Working members in family**		
	a. All members	41	16.4%
	b. Husband & wife	117	46.8%
	c. Father & children	56	22.4%
	d. Mother & children	10	4%
	e. Children	26	10.4%
8	**Type of house**		
	a. Rental house	17	6.8%
	b. Own house	233	93.2%
9	**Type of ventilation**		
	a. Natural	14	5.6%
	b. Fan	230	92%
	c. AC	6	2.4%
10	**Sleeping Hours**		
	a. < 6 hrs	21	8.4%
	b. 6 – 8 hrs	189	75.6%
	c. 8 – 10 hrs	39	15.6%
	d. >10 hrs	1	0.4%
11	**Sleeping Pattern**		
	a. Without dream	47	18.8%
	b. With dream	171	68.4%
	c. Disturbed for urination	26	10.4%
	d. Disturbed by other causes	6	2.4%
12	**Exercise**		
	a. Aerobic	12	4.8%
	b. Anaerobic	2	0.8%
	c. Walking	227	90.8%
	d. Yoga	9	3.6%
	e. No	0	0.00%
13	**Food Pattern**		
	a. Vegetarian	14	5.6%
	b. Non – vegetarian	36	14.4%
	c. Mixed	200	80%
	d. Ova-vegetarian	0	0.00%
14	**Type of oil used**		
	a. Palm oil	201	80.4%
	b. Coconut oil	7	2.8%
	c. Mustard oil	5	2%
	d. Sunflower oil	35	14%
	e. Ground nut oil	2	0.8%
15	**Amount of oil used for per day**		
	a. < 30 ml	94	37.6%
	b. 30 – 40 ml	100	40%
	c. 40 – 50 ml	52	20.8%
	d. >50 ml	4	1.6%
16	**Type of salt**		
	a. Rock salt	148	59.2%
	b. Salt	89	35.6%
	c. Iodized	12	4.8%
	d. Non-Iodized	1	0.4%
17	**Amount of vegetables per day**		
	a. 30 gm	61	24.4%
	b. 40 gm	136	54.4%
	c. 50 gm	44	17.6%
	d. 60 gm	9	3.6%
18	**Habits**		
	a. Smoking	30	3.6%
	b. Alcohol	15	6%
	c. Tobacco	13	5.2%
	d. Drug abuse	2	0.8%
	e. None	190	76%
19	**Entertainment**		
	a. T.V	212	84.8%
	b. Books	6	2.4%
	c. Music	11	4.4%
	d. Others	21	8.4%
20	**Use of fast food**		
	a. Daily	10	4%
	b. Weekly	12	4.8%
	c. Bi-weekly	38	15.2%
	d. Monthly	121	48.4%
	e. No	69	27.6%
21.	**Use of Biriyani**		
	a. Daily	4	1.6%
	b. Weekly	5	2%
	c. Bi-weekly	46	18.4%
	d. Monthly	138	55.2%

	e. No	57	22.8%
22.	**Hotel Food** a. Daily b. Weekly c. Bi-weekly d. Monthly e. No	 3 12 17 157 61	 1.2% 4.8% 6.8% 62.8% 24.4%
23.	**Worship of God** a. Daily b. Weekly c. Bi-weekly d. Not much	 161 21 23 45	 64.4% 8.4% 9.2% 18%
24	**Intake of fish** a. Daily b. Weekly c. Bi weekly d. Monthly e. Not much	 6 75 58 100 11	 2.4% 30% 23.2% 40% 4.4%
25	**Are you having stress** a. Yes b. No	89 161	35.6% 64.4%
26	**Are you a known hypertensive** a. Yes b. No	105 145	42% 58%

Blood Pressure values in Pallepalem.

Table 2: Blood Pressure values in Pallepalem.

(N=250)

Blood Pressure Category	Pallepalem	
	(f)	(%)
Optimal	5	2%
Normal	3	1.2%
High Normal	53	21.2%
Stage-I	106	42.4%
Stage-II	19	7.6%
Stage-III	3	1.2%
Grade-I	57	22.8%
Grade-II	4	1.6%

The levels of blood pressure in pallepalem shows that, 5(2%) are having optimal B.P, 3(1.2%) are having normal B.P, 53(21.2%) are having high normal, 106(42.4%) are having stage-I hypertension, 19(7.6%) are having stage-II hypertension, 3(1.2%) are having stage-III hypertension, 57(22.8%) are having grade –I isolated systolic hypertension, 4(1.6%) are having grade-II isolated systolic hypertension.

*Known Hypertensive cases are 105(45%)

**Newly diagnosed cases are 84(33.6%)

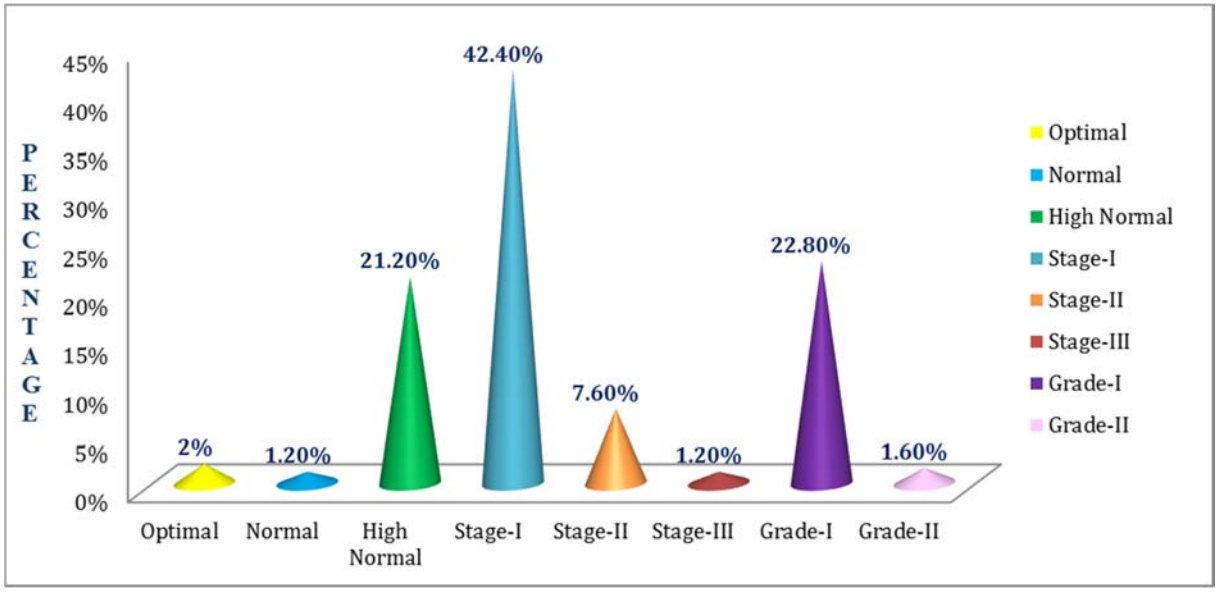

Fig 1: The Percentage Distribution of Blood Pressure in Pallepalem.

Table 3: The Frequency and Percentage Distribution of Body Mass Index in Pallepalem.

N=250

Criteria	Frequency	Percentage
Under weight (BMI = <18)	31	12.4%
Normal (BMI = 18.0-22.9 Kg/ m^2)	177	70.8%
Over weight (BMI = 23.0-24.9 Kg/ m^2)	21	8.4%
Obese (BMI = 25 & above Kg/ m^2)	21	8.4%

Among 250 samples the body mass index is 31(12.4%), were under weight, 177(70.8%) were normal, 21(8.4) were overweight and 21(8.4%) were obese.

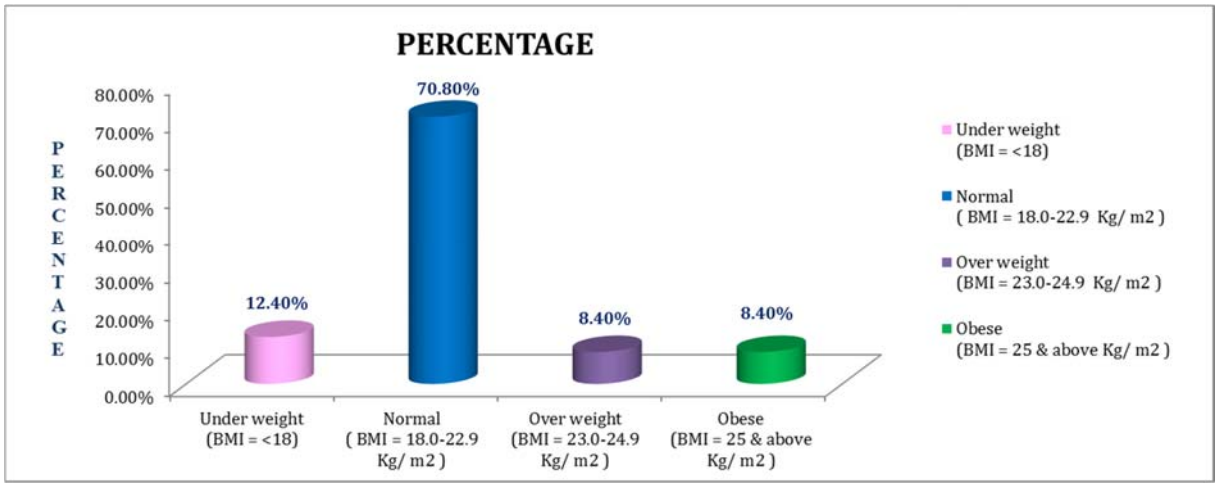

Fig 2: The Percentage Distribution of Body Mass Index in Pallepalem.

Association of Socio Demographic Data with the Blood Pressure in Pallepalem

There is a significant association of demographic variables with Age, Use of biriyani and are you a known hypertensive and remaining are not significant.

Conclusion

- The above results shown that blood pressure values are high (known and newly diagnosed) in the Pallepalem.
- The variables like Age, Use of biriyani and are you a known hypertensive are the influencing risk factors for the development of hypertension among the adults.

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