

ASSESSMENT OF RELATIONSHIP BETWEEN LIFESTYLE RISK FACTORS AND HYPERTENSION IN DOCTORS IN A MEDICAL COLLEGE OF SRI GANGANAGAR, RAJASTHAN

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Abstract

Background: Hypertension is the most common cardio vascular disorder and being widely prevalent in India. **Aim & Objectives:** To find the prevalence of hypertension among doctors and to know various factors related to the occurrence of hypertension. **Materials and Methods:** Doctors, specialists & graduates were included in the study after obtaining consent. BP was recorded along with certain other related factors like sociodemography, personal habits and lifestyle. **Result:** Hypertension and pre hypertension was found among a large number of participants. Further evaluation was done with logistic regression which proved age, BMI, Family type and gender to be significant predictors of hypertension. **Conclusion:** Hypertension being a silent killer must be recognized as early as possible. The modifiable factors found associated with the disease must be taken into account and appropriate diagnostic and control measures be taken in early stages to avoid it. Doctors being in a profession involving sedentary lifestyle are at more risk of developing.

INTRODUCTION

A global pandemic, hypertension is becoming worse every year. Although hypertension is one of the main causes of disorders including chronic renal disease, stroke, and heart failure, its detection is crucial. Yet, there are few research on doctors and various other professional groups in India that have looked at the prevalence of hypertension.^[1]

Overweight, obesity, physical inactivity, poor diet, and many other modifiable risk factors for hypertension have been found.^[2-8] In recent years, several new and modifiable risk factors for the development of hypertension in women have been identified, including excessive alcohol use, non-narcotic analgesic usage and inadequate folate intake.^[9-14]

The early detection of hypertension doctors is crucial since it is a major risk factor for conditions including chronic renal disease, stroke, and heart failure, which can severely impede the already low patient to doctor ratio. Additionally, doctors frequently have busy schedules in their daily practises and neglect to adequately care for their own health. This is more common in doctors associated with clinical departments than it is in doctors associated with other departments who typically do not need to attend emergency duties.

Aim & Objectives

To study the magnitude of hypertension among doctors and to assess the life style factors and its association to the prevalence of hypertension in study population

MATERIALS AND METHODS

Study design comprised of a Cross sectional study design. Study period was from April 2022 to June 2022 and we used a Predesigned pretested semi structured Questionnaire. It was conducted in District Sri Ganganagar among the Doctors willing to participate working in Dr. SS Tania Medical College, Hospital and Research Centre.

The prevalence of hypertension is 35.6%, according to a study by Ramachandran et al on young physicians in India. Absolute error was set at 10%, and a standard formula was used to determine the sample size.

$$\text{Sample size } N = \frac{z_{\alpha}^2 pq}{l^2}$$

$$\text{Sample size} = \frac{3.84 \times 35.6 \times 64.4}{10 \times 10} = \frac{8803}{100} = 89$$

A total of 195 doctors were included in the study. Response rate was 96%.

Following data collection and compilation, analysis was carried out using Microsoft Excel 2015 and the

RESULTS

According to JNC -7 criteria, Table 2 displays the distribution of study participants by blood pressure measurement. It was discovered that 47.18 % of participants had blood pressure that was considered normal, while the remaining participants (52.82%) had abnormal blood pressure (pre-hypertensive and hypertensive). Prehypertension prevalence was 44.1%, while hypertension prevalence was 8.63% (stages 1- 7.6% and 2- 1.03%). Males and females were found to have considerably differing prevalence rates of hypertension (p value 0.05). The most people with hypertension were individuals who were 50 or older (p value 0.001). Married personnel were the majority, and those who had high blood pressure were more likely to have it (p value 0.001). 54.35% of the subjects were post graduate while the rest were graduates. The difference in hypertension percentage was significant (p value 0.001). Smoking was more widespread (31%) than alcohol consumption (26%), which was equally common. The difference was insignificant. After performing the logistic regression analysis for the factors adjusted the known confounders it was found that gender, family type, BMI, Age showed up to be significant predictors of Hypertension in the current study. (p value <0.000) [Table: 3]

The present study showed the association of hypertension among doctors with BMI. A chi-square test was used, and the p-values for was found to be significant. These results are similar to those of the Mufunda et al.^[14] study from 2006, which found that the risk of diseases like high blood pressure and obesity (BMI > 30) was on the rise in Eritrea, Africa. A study on the incidence of obesity in China and its correlation with hypertension and hypercholesterolemia in persons aged 48 to 56 was published by Liu et al.^[15] in 2004.

Age was discovered to be a major risk factor in the logistic regression study, as previously noted. Males had a greater prevalence of hypertension than females did. In studies done in Greece, Brazil, and India, the prevalence of hypertension was likewise greater among men, supporting our findings.^[16] In our study, it was discovered that women were more likely than males to have hypertension and that this incidence increased with age. This is believed to be connected to variations in progesterone and oestrogen levels following menopause.^[17]

The study does have certain restrictions. First, a single day recording was used to measure blood pressure. Due to increased blood pressure at the time of testing, the prevalence of hypertension may therefore be overstated. Nevertheless, a lot of these studies rarely take multiple readings of blood pressure. The likelihood that the diagnosis of persons with hypertension may be incorrect is a second constraint. Lastly the present study was a part of a larger study and all the factors and variables could not be incorporated.

Table 1: Prevalence of Hypertension in study participants as per JNC- 7 criteria

Normal	92	47.18
Prehypertension	86	44.1
Hypertension Stage 1	15	7.6
Hypertension Stage 2	2	1.03
Total	195	100

Table 2: Association of Sociodemographic characteristics with Hypertension including pre hypertensive stage

Socio-demographic variables		Total		P value
Age Range	20-30	43	15	<0.05
	30-40	92	48	
	40-50	36	21	
	>50	24	19	
	Nuclear	110	70	<0.05
	Joint	85	33	
Gender	Male	130	61	<0.05
	Female	65	42	
Religion	Hindu	169	97	>0.05
	Muslim	10	4	
	Sikh	15	2	
	Others	1	0	
Caste	General	115	87	>0.05
	OBC	62	14	
	SC	16	1	
	ST	2	1	
Educational status				>0.05
	Graduate	89	28	
	Postgraduate	106	75	

Table 3: Logistic regression analysis of the risk factors for hypertension

Risk Factors	Estimated Parameter	Standard Error	Odds Ratio	p value
Gender				
Male	0.351	0.133	1.73	<0.000
Family Type Joint	0.526	0.255	1.23	<0.000
BMI				
24.99-29.33	0.639	0.166	1.922	<0.000
≥30	1.485	0.164	5.125	<0.000
Age	0.88	0.12	1.111	<0.000

CONCLUSION

Current findings point to a critical healthcare problem affecting doctors working in a sedentary lifestyle environment. It is obvious that the prevalence of hypertension is rising alarmingly, especially among special groups. Our findings support immediate primary and secondary prevention efforts that might have an impact on how policymakers establish policies and interventions.

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