

## A study to assess the knowledge regarding prevention of renal failure among hypertension patients in selected hospital, Bangalore.

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### ABSTRACT

**Introduction:** Within the population of India, hypertension is the leading cause of death and the most prevalent cause of sickness. Chronic kidney disease (CKD) is one of the significant consequences that might appear as a result of hypertension. As a result of its high treatment costs and poor outcomes, chronic kidney disease has emerged as a significant worldwide health issue.

**Objective:** To enhance awareness and habits that can help avoid chronic kidney disease in hypertension patients, the current study was carried out.

**Methodology:** Two hundred people were chosen as the sample size. In order to prevent chronic kidney disease, a questionnaire was developed, which had a variety of questions concerning knowledge and practice. Participants received the questionnaire that was emailed to them. The responses of the participants were used to make the data collection process possible.

**Result:** The average knowledge of chronic renal disease was found to be  $5.04 \pm 3.13$  among 120 (60%) of the total 200 participants, while 160 (80%) of the participants had a similar score.

**Conclusion:** This study came to the conclusion that more than half of the population had an average level of knowledge regarding chronic renal disease. This conclusion was reached based on the examination of the results that were gathered. It was discovered that the majority of the participants had successfully implemented the practice for the prevention of chronic kidney disease (CKD).

**Keywords:** Chronic Kidney Disease, Hypertension, Knowledge.

### Introduction

High blood pressure is the leading cause of preventable deaths and diseases in India after smoking. In addition, it was the major risk factor for 23% of all deaths and 32% of deaths among individuals who suffered from cardiovascular diseases during the period of 2010–2013. Long-term tobacco use, improper eating habits, and poor nutrition. The modifiable risk factors of hypertension are physical activity and excessive alcohol intake. On the other hand, the non-modifiable risk factors include a history of hypertension, age, and co-morbid conditions that are already present. Myocardial infarction, vascular and hemorrhagic stroke, heart failure, and renal impairment are the most significant consequences that can arise from hypertension.

### Methodology

Within the population of hypertensive individuals, the purpose of this cross-sectional study was to evaluate the level of awareness and practices concerning chronic kidney disease (CKD). This research was carried out at a particular tertiary hospital in Bangalore for a period of six months. An

uncomplicated random sampling approach was used for the sampling.

### Inclusion Criteria

Those who were suffering from hypertension and were between the ages of 20 and 80 years old were included in the study population. The study population included both males and females.

### Exclusion Criteria

Participants who were either under the age of 20 or over the age of 80, as well as those who were already suffering from chronic kidney disease or had any mental health difficulties or any other serious sickness, were not allowed to participate in this study.

### Sample Size

The sample size was 200.

### Results

For the purpose of evaluating the knowledge and prevention strategies about chronic kidney disease in hypertension patients, this study was conducted. The demographic characteristics of the individuals who signed up to take part in this research are presented in Table 1. The questionnaire was filled out by a total of two hundred individuals. As can be seen in Table 1, there were 148 male subjects (74%) and 52 female subjects (26%) throughout the study. 36.5% of the participants had diabetes, whereas the bulk of individuals (126, 63.0%) were in the age bracket of 41–60 years. diabetes co-morbidity, and seventy-three (41.5%) of them had been experiencing hypertension for less than five years.

There were a total of 200 participants, and 120 of them, which are sixty percent, had an average knowledge of chronic kidney disease (CKD) with a mean score of  $5.04 \pm 3.13$ . Of the overall population, 101 (or 50.5%) stated that they had heard of chronic kidney disease (CKD) previously, 129 (or 64.5%) were aware of the risk factors, and 153 (or 76.5%) were aware that the condition could be identified and then treated (Table 2).

**Table 1. Demographic Variables of the Study Population**

Demographic Variables	Categories	Frequency(n)	Percentage (%)
Age(in years)	20–40	60	30.0
	41–60	126	63.0
	>60	14	7.0
Gender	Male	148	74.0
	Female	52	26.0
Educational status	Cannot read and write	22	11.0
	Can read and write	17	8.5
	Primary education	20	10.0
	Secondary education	68	34.0
	College or university	73	36.5
Marital status	Single	26	13.0
	Married	156	78.0
	Widowed	8	4.0
	Divorced	10	5.0
Residence	Urban	175	87.5
	Rural	25	12.5

Occupation	Private business	29	14.5
	Government employee	33	16.5
	Private employee	26	13.0
	Daily labourer	14	7.0
	Student	56	28.0.
	Unemployed	30	15.0
	Housewife	12	6.0
Diagnosed with any other disease(s) other than hypertension	Diabetes	77	38.5
	Stroke	0	0.0
	Asthma	17	8.5
	HIV/AIDS	0	0.0
	High cholesterol level	35	17.5
	Malaria	0	0.0
	Tuberculosis	0	0.0
Duration of hypertension (years)	None	71	35.5
	<5	83	83.0
	5–15	65	65.0
	>15	52	52.0

**Table2.Knowledge Assessment of CKD in Hypertensive Patients among the Study Population**

Knowledge Assessment	Yes	No
Have you heard of CKD before?	101	99
Do you know the risk factors of CKD?	129	71
Do you know the effect of the use of medication on CKD?	80	120
Do you know the effect of hypertension on CKD?	95	105
Do you know the effect of unprescribed medicines on CKD?	96	104
Do you know that CKD can be detected and cured?	153	47
Do you know the signs and symptoms of CKD?	88	112
Do you know the effect of CKD on other body organs?	98	102
Do you know the effect of regular exercise on hypertension?	136	64
Do you know the effect of smoking/alcohol on CKD?	168	32

**Table3.Association of Responses to Knowledge-based Questions with Socio demographic Variables**

Variables	Category	Knowledge		p Value
		Good	Poor	
Gender	Male	76	72	<0.001
	Female	30	22	
Educational status	Cannot read and write	15	7	<0.001
	Can read and write	9	8	
	Primary education	12	8	
	Secondary education	36	32	

	College or university	38	35	
Residence	Urban	85	90	<0.001
	Rural	12	13	
Duration of hypertension (years)	<5	48	35	<0.001
	5–15	29	36	
	>15	25	27	
Age group (years)	20–40	50	10	<0.001
	41–60	63	63	
	>60	9	5	

## Discussion

The findings of his investigation indicate that the community under examination possesses an average level of knowledge and good preventative behaviours. About sixty percent of the two hundred individuals, or 120, had an average level of expertise. According to Oluyombo et al., Ng et al., and Yusoff et al., these results were significantly higher than the study that was presented. Perhaps the difference is due to the fact that the participants had better access to health education. However, when compared to the findings of the study that was reported by Khalil and Abdalrahim and Asmelash et al., the findings of this investigation were less significant.

Approximately 101 participants, or 50.5%, had prior knowledge of chronic kidney disease. The findings of this investigation were smaller than those of a study conducted by Ngetal. It is 69.5%. Only 88 (44%) of the study subjects identified the signs and symptoms of chronic kidney disease (CKD) in the current study. This was a smaller percentage than in the study conducted by Khalil and Abdalrahim, in which about half of the participants (50%) identified the signs and symptoms of CKD.

## Conclusion

In terms of chronic kidney disease and the risk factors associated with it, more than half of the population possessed an average level of knowledge and good prevention strategies. However, it was shown that the level of preventative activity among the participants was higher than the amount of knowledge for the participants.

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