

# 1 INTRODUCTION

The Seventh report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure defines blood pressure for adults aged 18 years. Hypertension is defined as systolic blood pressure  $>140$  mmHg or diastolic blood pressure  $>90$  mmHg. The classification of hypertension is based on the mean of two or more properly measured seated blood pressure readings. Normal blood pressure ranges below levels  $<120/80$  mmHg. Systolic blood pressure of  $120 - 139$  mmHg or diastolic blood pressure ~~of 80~~  $80 - 89$  mmHg is classified as prehypertension. These patients are at increased risk of progression to hypertension (Gupta, 2003).

Hypertension can be classified into two stages:

- Stage 1 includes patients with systolic blood pressure ~~of 140~~  $140 - 159$  mmHg or diastolic blood pressure ~~of 90~~  $90 - 99$  mmHg.
- Stage 2 includes patients with systolic blood pressure  $>160$  mmHg or diastolic blood pressure  $>100$  mmHg.

Hypertension is a serious problem throughout the globe due to its high prevalence and its association with increased risk of chronic kidney diseases. High blood pressure may permanently damage the narrow blood vessels in the kidney, ~~which~~ which play a vital role in ~~blood filtration~~ filtration of blood. Over time, this damage will keep the kidney from working properly.

Hypertension plays a vital role in accelerating the progression of experimental renal disease. Chronic kidney disease (CKD) is the most occurring form of secondary hypertension and it also suggests that it is an independent risk factor for cardiovascular morbidity and mortality (Sinclair *et al.*, 2004). The relationship of “benign” (a misnomer) essential hypertension to renal failure is less clear. It was observed that essential hypertension tends to increase in afferent arteriolar resistance, with a lesser increase in efferent resistance, so renal blood flow (RBF) decreases, filtration fraction (FF) increases and glomerular filtration (GFR) tends to be preserved (Birkenhager *et al.*, 1976).

~~There is~~ evidence both clinically and experimentally that “blood pressure goes with the kidney” (Kuster *et al.*, 1990; Adamczak *et al.*, 2002). The association of hypertension and renal disease was the first recognized by Richard Bright. He observed that the extent of heart damage was at pace with kidney damage (Bright *et al.*, 2009). Sodium retention and activation of the renin-angiotensin system ~~are the~~ have been considered the most important mechanisms involved in the elevation of blood pressure in ~~subjects~~ subject with kidney disease (Guyton *et al.*, 1990). High blood pressure is almost always present during all stages of chronic kidney disease. A urinalysis may show protein or ~~other changes~~ other change. These changes may appear 6 months to 10 or more years before symptoms appear. The kidney function tests analyse creatinine clearance and blood urea nitrogen levels.

**Commented [Trinka1]:** Use a specific subject or noun in place of 'There is' and review the sentence structure. Also, make sure the tense is consistent. Avoiding the use of dummy subjects (e.g., there, it) is a mark of well-thought-of and careful writing. Dummy subjects weaken the content by making it vague, fuzzy, and indefinite.

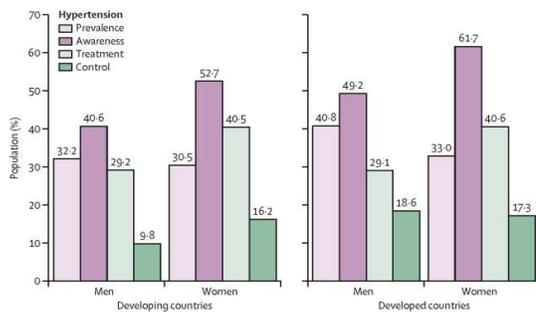


Fig 1. Frequency of Hypertension among developed and developing countries in terms of its attributes (Ibrahim and Damasceno, 2012)

It has been reported that hypertension is the seventh highest contributor to premature death in developing countries (Deepa *et al.*, 2003). The prevalence of hypertension in developed and developing countries is very high and is increasing at an alarming speed (Fig 1). Nearly 26 per cent of the adult population worldwide is affected by hypertension.

Chronic kidney disease affects more than 20 million US adults, while more than 79,812 chronic dialysis patients die each year in the United States, with an annual unadjusted mortality rate of 20 to 25% (Coresh *et al.*, 2007). The prevalence of hypertension in patients with chronic kidney disease is estimated to be more than 60%, and more than 90% in patients with advanced renal failure (Stage IV and V) (Levey *et al.*, 2009; Campese *et al.*, 2006). Based on a national survey of representative samples of non-institutionalized adults in the USA, it is estimated that hypertension occurs in 23.3% of individuals without CKD and 35.8% are in stage 1 CKD, 48.1% of stage 2, 59.9% of stage 3 and 84.1% of stage 4-5 patients (Kearney *et al.* 2005).

As with CKD, awareness of hypertension is low. Hence approaches to control hypertension will play a major role in modification or prevention of chronic kidney diseases. A combination of population-wide and individual health-care interventions must be required to make control of the growing epidemiology of hypertension. With this background, this the present study has been undertaken to study the prevalence of hypertension, its associated factors and as well as to increase awareness on the importance of lifestyle modifications among rural dwellers of south India. Studies targeting low socio-economic groups would provide an estimate of the future magnitude of the problem and assist in developing strategies for the control of hypertension and chronic kidney diseases (CKD).

### 1.1 Present Study

To estimate the prevalence of pre-hypertension and hypertension in a rural population from Kancheepuram district of Tamil Nadu, India & their association with risk factors of chronic kidney diseases (CKD)

### 1.2 Objectives

**Commented [Trinka2]:** Passive voice: This action (is affected) seems to have a 'doer' or 'agent' (hypertension). Consider using the active voice. For example, 'The guitar was strummed by the singer' is in the passive voice; it can be changed to the active voice like this: 'The singer strummed the guitar.'

**Commented [Trinka3]:** Consider reviewing or deleting this word, depending on the context. Such words are called booster words as they are used to emphasize the certainty of an argument. If used unnecessarily, it makes your writing sound pompous. Use such words selectively.

Until recently, ~~hypertension~~ hypertension was ~~considered one~~ ~~considered to be one~~ of the important public health ~~problems~~ ~~problem~~ ~~problems~~ in the developed and industrialized countries only. In ~~developing~~ ~~the developing~~ countries, its impact was not fully felt due to ~~the presence~~ ~~presene~~ of rampant communicable diseases. However, ~~with~~ ~~with~~ control of communicable disease and increased life expectancy with ~~lifestyle~~ ~~life-style~~ changes, hypertension is becoming one of the emerging problems with its implications for ~~the concomitant~~ ~~concomitant~~ increase in risk of cardiovascular and renal disease.

### 1.3 Specific Objectives

- To estimate the prevalence of pre-hypertension and hypertension in a rural population from Kancheepuram district of Tamil Nadu.
- To investigate the association of study variables such as age, gender, BMI, waist hip ratio, family history, intake of salts, smoking, alcohol intake, education, social and economic status with the development of pre-hypertension and hypertension in the study population.
- To determine the level of serum electrolytes, ~~as~~ ~~as~~ well as the status of serum urea, uric acid, creatinine, glucose, triglycerides, cholesterol, HDL ~~and LDL~~ ~~and~~ ~~LDL~~ in the study population of pre-hypertensive and hypertensive patients.
- To screen and identify polymorphic or mutational changes at the homocysteine gene loci and its association as a risk factor for chronic kidney diseases in the study population of pre-hypertensive and hypertensive patients by PCR-SSCP-RFLP
- To reduce the incidence of hypertensive diseases through appropriate health awareness and individual health-care interventions.



## REVISION SUMMARY

File name: AutoEdit\_sample.docx  
(Run on 25 Jun 2021, 06:03:30 AM GMT)

Trinka scanned and edited your text for language errors and identified the areas of improvement. Here are the details.

This file had 999 words and 35 revisions. Our initial assessment showed 72% as the language score for your uploaded file. The distribution of errors and improvements is shown below. A total of 3 suggestions have been added as comments in the document.

Category	Revisions
Abbreviations	0
Adjectives/Adverbs	1
Articles	6
Capitalization & Spacing	3
Conjunctions	0
Difficult-to-read Sentence	0
Enhancement	8
Fragment	0
Idioms	0
Number Style	0
Plain Language	0
Prepositions	3
Pronouns & Determiners	0
Punctuation	5
Redundancy & Conciseness	0
Run-on Sentence	0
Sensitive Language	0
Singular-Plural nouns	3
Spelling & Typos	0
Style	0
Subject-Verb Agreement	0
Symbols/Notations	0
Syntax	1
Tense	1

Verbs	0
Word Form	0
Word Order	1
Word/Phrase Choice	0
Writing Advisor	3
Other	0
<b>Total</b>	<b>35</b>

