CHAPTER 1

INTRODUCTION

To

AIMS AND OBJECTIVES
Introduction

In recent years, there have been significant transitions in the lifestyle of people across continents and especially in the developing countries like India due to accelerated industrialization and globalization. However, an alarming consequence of these transitions is the rise in the prevalence of cardiovascular risk factors like sedentary lifestyle and obesity amongst the children and adolescents. (1, 2, 3)

Studies from various communities across India indicate increasing prevalence of hypertension amongst the children and adolescents. (2) An increase body weight and sedentary lifestyle show strong associations with hypertension amongst the children and adolescents. (3, 4, 5, 6)

Health professionals across the globe have been involved in understanding the pathophysiology of high blood pressure amongst children and adolescents with sedentary lifestyle and increase body weight or adiposity. A number of pathophysiological changes like increase sympathetic activity, decrease arterial elasticity and hyperinsulinaemia associated with increase body mass and unhealthy lifestyle have been implicated in the pathogenesis of hypertension. (1, 7, 8)

However, not much is reported about the causal relationship of lifestyle and body composition with blood pressure in the Indian children and adolescents. Studies also report that differences exist in the etiopathogenesis of disease across varied ethnic populations and age groups. (9, 10, 11, 12)
Therefore, it becomes essential to determine the etiology and pathogenesis of elevated blood pressure among Indian adolescents.

**Aim of the Study**

To determine the effect of meal frequency, physical activity status, sleep duration at night and body composition on the cardiovascular determinants of arterial blood pressure (viz., cardiac sympathetic activity, left ventricle mass, vascular distensibility, vascular sympathetic tone and cardiovascular reactivity to sympathetic stress) in Gujarati Indian adolescents.

**Objective of the Study**

The study will help in learning the etiopathogenesis of high blood pressure amongst Gujarati Indian adolescents. This would help in formulation of rationale and effective strategies for preventing and managing high blood pressure in Gujarati Indian adolescents.