



## KNOWLEDGE, ATTITUDE AND AWARENESS ABOUT HYPERTENSION AMONG DENTAL STUDENTS IN SAVEETHA DENTAL COLLEGE

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### ABSTRACT

**OBJECTIVE:** Hypertension is a major burden to global health care. It has developing risks in both developed and developing countries. Knowledge on hypertension is not only necessary among the patients but should also be conveyed to the general population as it is vital to realize the seriousness of hypertension as a disease. The purpose of this research study was to evaluate the knowledge about hypertension among dental students working in Saveetha Dental College and Hospitals, Chennai.

**MATERIALS AND METHOD:** The study was a structured, self administrable online questionnaire consisting of eleven multiple choice questions (MCQs), encompassing major aspects of hypertension.

**RESULTS:** The study assessed the knowledge and awareness about the etiology and risk factors of hypertension and its association with 100 entry level students in one dental college. The gap in knowledge regarding both risk factors and prevention was identified and thus demonstrated that comprehensive knowledge is lacking among the dental students.

**CONCLUSION:** Although the awareness among the dental students is satisfactory, the knowledge, attitude and awareness on the risk factors, medications and lifestyle practices provides a need to educate and motivate them on hypertension on a regular basis in the curriculum.

**KEYWORDS :** hypertension, risk factors, stress, knowledge

### INTRODUCTION

Hypertension is a major burden to global health care. It has developing risks in both developed and developing countries<sup>[1]</sup>. The rate of occurrence and diagnosis of hypertension is increasing among adolescents<sup>[2]</sup>. The risk of death is maximum from cardiovascular diseases<sup>[3]</sup>. According to the World Health Organization (WHO), in 2008, an estimated 36 million of the 57 million worldwide deaths were due to non-communicable diseases (NCD). It is estimated that by the year 2025, 1.56 billion people of the world population will be suffering from hypertension<sup>[4]</sup>. Due to its high prevalence, associated economic burden and risk factors; it has become one of the greatest challenges of modern era<sup>[5]</sup>.

Knowledge on hypertension is not only necessary among the patients but should also be conveyed to the general population as it is vital to realize the seriousness of hypertension as a disease<sup>[6]</sup>. Hypertension being a silent killer remains asymptomatic until complications like coronary artery disease, stroke, and renal failure develop. This necessitates the need for appropriate diagnosis followed by treatment along with compliance of the patient<sup>[7-8]</sup>. Population-based studies have shown that hypertension accounts for up to 35% of all atherosclerotic events, including 49% of all cases of heart failure. It increases two- to three times an individual's risk of various cardiovascular consequences<sup>[9]</sup>. Persons with hypertension are three to four times more likely to experience a major cardiovascular event (e.g., myocardial infarction, cerebrovascular accident, congestive heart failure)<sup>[10]</sup>.

Undergraduate trainees assume an imperative role in any health care system, since they are the future health care professionals of any society. The purpose of this research study was to evaluate the knowledge about hypertension among dental students working in Saveetha Dental College and Hospitals, Chennai.

### MATERIALS AND METHODS

This descriptive cross-sectional study was conducted in the month of December 2016 at Saveetha Dental college and hospitals, Chennai amongst 100 dental students.

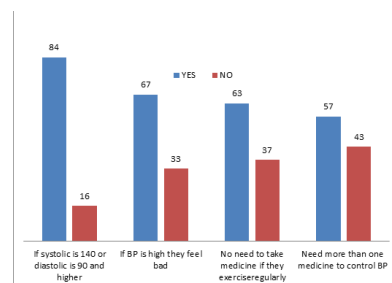
The study was a structured, self administrable online questionnaire consisting of eleven multiple choice questions (MCQs),

encompassing major aspects of hypertension such as the definition, diagnostic modalities, treatment to rule out the underlying end organ damage and risk factors for the development of hypertension. The data was collected, analyzed and subjected to SPSS for final analysis. Incompletely filled questionnaires were eliminated. The data was expressed as percentage of participants correctly responding to each question.

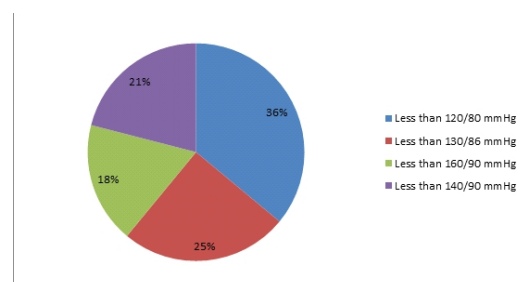
### RESULTS

The study assessed the knowledge and awareness about the etiology and risk factors of hypertension and its association with 100 entry level students in one dental college.

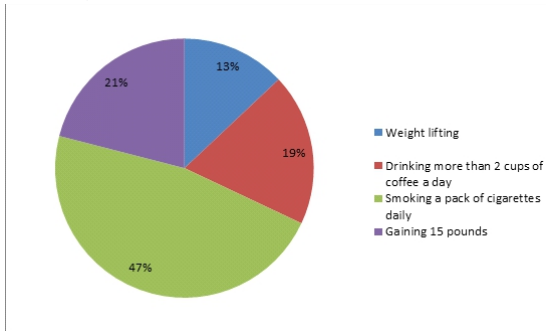
**FIGURE I Knowledge about hypertension among dental students is shown in table 1.**



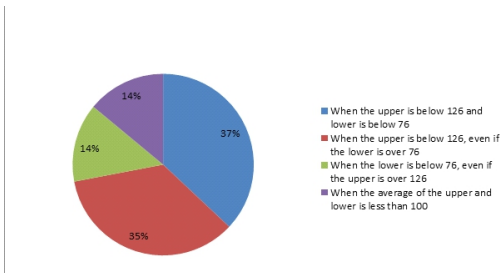
**FIGURE II Knowledge of dental surgeon on the goal blood pressure of a 70-year old man who is taking medicine for hypertension**



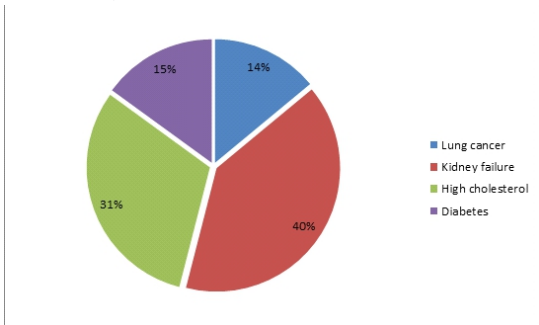
**FIGURE III Knowledge of dental surgeons on factors increasing the risk of hypertension**



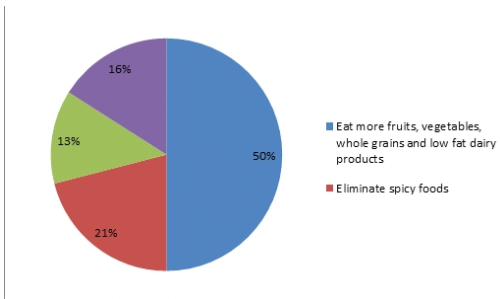
**FIGURE IV Knowledge of dental surgeons to reach goal blood pressure of 126/76**



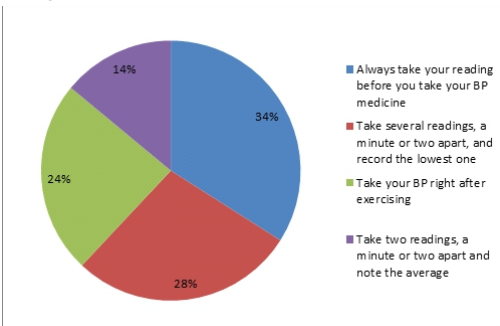
**FIGURE V Knowledge of dental surgeons on the effects of uncontrolled hypertension**



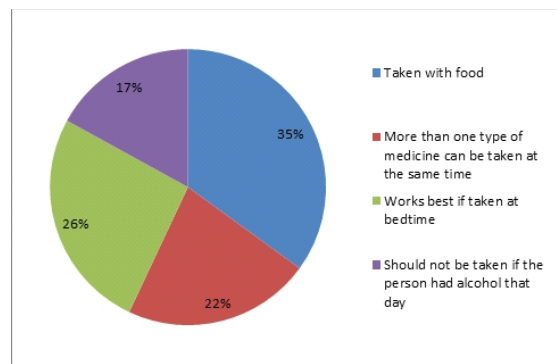
**FIGURE VI Knowledge of dental surgeons on diet changes which most likely lower BP**



**FIGURE VII Attitude of dental surgeon on protocol for measuring BP at home**



**FIGURE VIII Knowledge among dental surgeons about blood pressure medicine**



**DISCUSSION**

Hypertension is also known as high blood pressure is a long term medical condition in which the blood pressure in the arteries is persistently elevated. Normal blood pressure at rest is within the range of 100–140 millimeters mercury (mmHg) systolic and 60–90 mmHg diastolic. Common hereditary and physical risk factors for high blood pressure include family history, age, gender and race. Risk factors pertaining to lifestyle changes are lack of physical activity, unhealthy diet, overweight and alcohol consumption. The clinical effects of hypertension include aneurysm, coronary artery disease, stroke, dementia and kidney failure. As dentists play a vital role in the diagnosis and assessment of hypertension so that better treatment modalities can be given to the patients.

In this study the knowledge responses on hypertension were moderate with the responses varying between 57%-84% which was similar in a study which assessed the knowledge of risk factors of hypertension among entry level students in a medical university and associated with the blood pressure, physical activity, family history of CVD, and sociodemographic variables done by Shaikh et al in 2011<sup>[1]</sup>. A recent study on knowledge and perceptions about hypertension among neo- and settled-migrants in Delhi, India, demonstrated that knowledge about hypertension was only moderate and comprehensive knowledge was lacking<sup>[12]</sup>.

Smoking a pack of cigarettes daily was considered to a major risk factor of hypertension. In this study, 47% of the respondents opted for it which is in accordance to a study done by Lopez et al in 2001 in which global and regional burden of cigarette smoking was assessed<sup>[3]</sup>. An effort to reverse the major risk factors of hypertension is the key aspect of suggested lifestyle changes. Primary prevention aims to reduce or modify hypertension risk factors through the implementation of appropriate policies and educative programs, in order to avoid or delay the development of cardiovascular disorders<sup>[13]</sup>.

Due to the lack of awareness, the respondents chose that by the intake of blood pressure tablets, the goal BP can be attained, which needs to be brought to their knowledge through awareness programs. Zafar et al showed the presenting risk factors and complications of hypertension in their study based on an interview based questionnaire done among the hypertensive and normotensives<sup>[5]</sup>.

In the effects of uncontrolled hypertension, diabetes and lung cancer received the least responses whereas kidney failure was chosen by 40% of the respondents which shows that there is adequate knowledge prevailing among the people.

Half of the respondents chose eating fruits and vegetables in dietary changes can lower the BP which also needs to be made aware of. Yoga and exercise can have an effective dose in the treatment of hypertension by reduction of the stress and anxiety levels in a study shown by Deepa et al<sup>[9]</sup>. In a review by Lakshmi et al, it is quoted that

herbal intervention can also be used for the management of hypertension<sup>[10]</sup>

So this study was done to assess the levels of knowledge, attitude and practice among the undergraduates about hypertension and its prevailing complications. The gap in knowledge regarding both risk factors and prevention was identified and thus demonstrated that comprehensive knowledge is lacking among the dental students.

## CONCLUSION

Although the awareness among the dental students is satisfactory, the knowledge, attitude and awareness on the risk factors, medications and lifestyle practices provides a need to educate and motivate them on hypertension on a regular basis in the curriculum.

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