

## ASSESSMENT OF KNOWLEDGE AND RISK FACTORS OF HYPERTENSION AMONG HYPERTENSIVE SCHOOL TEACHERS IN A SELECTED EDUCATIONAL DIVISION IN ANURADHAPURA DISTRICT

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### Introduction

Non communicable diseases (NCDs) are the leading cause of death globally, killing more people each year than all other causes. Cardiovascular diseases (including heart disease and stroke), diabetes, cancer and chronic respiratory diseases (including chronic obstructive pulmonary disease and asthma) are the leading NCDs in the world. Hypertension is one of the most important modifiable risk factors of cardiovascular diseases which has a high mortality in the world. Hypertension is rapidly becoming a major public health problem and a burden to the world. According to the latest statistics of WHO, prevalence of hypertension in Sri Lanka (2014) is around 21.2%.

Therefore, it is vital to study about preventable risk factors of NCDs such as hypertension in different populations in the society to improve the quality of life of the present as well as future generations. Several studies have shown that school teachers are vulnerable to develop hypertension due to their work related risk factors such as unhealthy dietary habits, overweight, obesity and sedentary life style. In spite of them being an educated group in the society, their lack of knowledge about the prevention of hypertension, lack of motivation to reduce the incidence or to prevent from worsening the health condition might be responsible for these reported data.

Thus, it is very pertinent to study the knowledge about hypertension and the awareness about the risk factors of teachers that might lead to the development of hypertension among school teachers as their physical and mental status will affect the quality of education of the students they are handling. Teachers with good knowledge about risk factors will be able to influence the lives of their students in a positive way as well as pass these health messages to the society as they are the role models of the students.

The aim of this study was to estimate the proportion of school teachers with diagnosed hypertension, assess knowledge about hypertension and risk factors that might worsen hypertension among them in Nuwaragam Palatha - East educational division, Anuradhapura district. This particular area was selected as it includes the highest number of school teachers in Anuradhapura district. The findings of this research will help the stake holders to improve the health of teachers by organizing educational programs.

### Methodology

School teachers were employed for this descriptive cross-sectional study. Cluster sampling technique was used to recruit 384 school teachers (Females - 316, Males - 81) from 10 selected schools in Nuwaragam Palatha - East educational division in Anuradhapura district. Pre tested, self-administered, questionnaires were distributed to the participants to collect data on three categories; Part 1: Socio-demographic data - age, gender, religion, ethnicity, marital states, education etc., Part 2: Knowledge on Hypertension - disease

conditions, sign and symptoms, risk factors. One mark was given per one correct answer for the questions in part 2 (total marks 20) and then their level of knowledge was assessed in 3 different categories; poor, fair and good as follows; poor (0-12), fair (13-17), good (18-20), Part 3: Life style factors – food habits, alcohol intake, smoking, physical activity, stress, family history.

Ethical approval was obtained from the Ethical Review Committee of the Faculty of Medical Sciences, University of Sri Jayewardenepura. Permission was obtained from the Director of Anuradhapura educational zone, and also from the principals of selected schools in the study area. A convenient time and venue for teachers was used to give the questionnaire to them (Interval time at staff room) and a labeled box was kept in the staff room to drop the questionnaire. Written informed consent was taken after explaining study by using information sheet and consent form. Data were analyzed using descriptive statistics with SPSS version 16.0. Results are presented by percentages.

### **Results and Discussion**

The proportion of teachers with diagnosed hypertension among surveyed school teachers (during the study period) was 21.9% and it was almost same as the prevalence of hypertension of general population in Sri Lanka (21.2%). In addition, it is comparable to the results of another few studies conducted with school teachers in other countries. One research revealed that 23.26% of teachers in Alexandria, Egypt were diagnosed with hypertension (Kamel, 1992) and 21.3% among secondary school female teachers in Bsrroh, Iraq were hypertensive (Ali & Asadi, 2009).

Majority of the hypertensive subjects (93.1%) were under treatment for hypertension while 4.9% had given up medication due to their personal preference without any medical advice. Although they are educated individuals, they have neglected their personal health concerns by not paying much attention on their medication regime for hypertension. Nearly half of the teachers who have hypertension (47.1%) have been diagnosed within 1-5 years range. However, 57.5% of the respondents reported that they were diagnosed as having hypertension from government hospitals and reason for the diagnosis for majority (70.1%) was having headache and faintishness.

When considering the characteristics of participants who have been diagnosed with hypertension, 88.5% respondents were more than 40 years of age and 80.5% respondents were females. Among the respondents with hypertension, 66.7% of teachers had been working as a teacher for more than 20 years. More than half (56.3%) of teachers with hypertension were teaching in grade 6 -11 section. Although these subjects were hypertensive, when considering the level of knowledge regarding hypertension, more than half of the participants (60.9%) had poor knowledge & only 1.1% subjects had good knowledge on hypertension. Majority possessed poor knowledge on hypertension possibly because the awareness on hypertension is very minimal. It might lead to poor control of hypertension among these subjects. This may ultimately affect their ability to lead a normal life as well as deliver a proper education in school.

When inquired about the available sources of information on hypertension, 42% of participants mentioned that they gained information about high blood pressure and its complications from media (newspapers, television, and radio) while 32.7% from health care workers such as doctors and nurses. Few of them 11.4% and 11.2% participants have obtained information from their relatives and friends, respectively. Only 2.7% of them

have had their information on hypertension from their different levels of education. This further indicates that the mass media can expand their role in educating the general public regarding hypertension as well as other NCD related health matters and enlighten the public on the prevention aspects of these health issues to reduce these becoming a major threat and affecting the development of the nation and the country.

When considering the prevalence of risk factors among the study population who have been diagnosed with hypertension, more than half of the participants (62.1%) reported that their family had history of hypertension while 5.7% of them didn't know whether they have family history or not. The ignorance about the health issues present in the family is a problem that needs to be addressed as this will prevent the present and future generation taking preventive measures in diagnosing the diseases that run in the family early. The prevalence of other lifestyle risk factors among them are as follows; physical inactivity (68.3%), overweight (53.2%), obesity (23.4%), extra salt intake more than the recommended amount for one person per day [ $>5$  g] (49.4%), intake of less types (2-3) of vegetables per day (61.6%), intake of less than 2 type of fruits per day (89%), intake of Non-Steroidal Anti Inflammatory drugs (18.7%) and alcohol intake by males (53.9%). When considering the satisfaction level about their career, personal life and day to day activities, they were moderately satisfied. Since the majority of the teachers of this study usually travel by their personal vehicle or by bus (94.6%) and no longer have regular physical activities such as walking and cycling, it is reasonable to think that it might also be a risk factor for hypertension. Hence, public health initiatives should encourage healthier lifestyles with emphasis on preventing obesity and increasing physical activity.

#### **Conclusions and Recommendations**

This study identified that the proportion of teachers with diagnosed hypertension among surveyed school teachers in Nuwaragam Palatha – East educational division, Anuradhapura district was 21.9%.

According to the findings of this study, there is a deficiency in their knowledge on hypertension and prevention strategies. In addition, most of them had risk factors that might worsen their condition such as sedentary life style, extra salt intake, immediate family history of hypertension, increasing Body Mass Index, consumption of alcohol, Non-Steroidal Anti Inflammatory Drugs intake, stress and lack of eating vegetables and fruits.

Therefore, the health care providers and authorities of education sectors must take responsibility to educate, motivate school teachers and provide full support to those who wish to modify their lifestyles. Due to lack of time to speak to public & patients on diseases by health care workers, it's important to enhance knowledge on diseases by regular media advertisements & programs as well.

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