

Awareness of Significance Blood Pressure Measurements in First MBBS Students in our Institute

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Abstract

Background: High blood pressure follows the Iceberg phenomenon as it is one of the major causes of morbidity and mortality worldwide. Though hypertension is a problem of adults the etiologic process and risk behaviors start early in life³.

Methods: An interventional study conducted on college students of DVVPF medical college. (table 2) Written informed consent was obtained from the participants who were the students of the age group 17-19 yrs and were included in the study. given in (table 1) Assessment of knowledge of students about hypertension and also its preventive measures was assessed by a pre-designed, and semi-structured questionnaire. Now after the study knowledge of students was checked.

Results: Educational intervention helped increase the base knowledge of students about the normal range of blood pressure, Hypertension as a disease, its risk factors, and signs and symptoms. General awareness of the students about preventive measures of hypertension like avoiding junk food/ healthy diet, exercise, and meditation was 26%, 29%, and 6% respectively which was significantly increased after the educational intervention.(table 3)

Conclusions: Attempts should be made towards educating college students about hypertension so that they change their lifestyles and reduce the incidence of hypertension in later life.

Keywords: Blood Pressure; Adolescents; Hypertension; Prehypertension.

Introduction

Systemic hypertension is the leading cause of death and disability worldwide. Although HTN is a problem of adults the etiological process and risk behaviors start early in life. Systemic HTN is estimated to cause 7.5 million deaths, about 12.8%

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of all deaths worldwide. Raised blood pressure among children and adolescents has shown track to adulthood. This tracking phenomenon appears strongest for systolic blood pressure (BP) but is also noted in diastolic BP. The prevalence of childhood HTN varies from 1% to 16.2% and seems to be increasing. This rise is partly because of the increasing prevalence of obesity among children and adolescents. With globalization bringing more and more lifestyle modifications, adolescents are exposed to multiple risk factors, including obesity, diet, academic stress, and lack of physical work apart from hereditary risk factors. The combined effect of these factors is making children prone to developing HTN. In children measurement of BP is a neglected part of physical examination as most of the prevention and control strategies target adults. Early diagnosis of HTN is an important strategy in its control, effective treatment, and prevention of complications. As per new recommendations of the 4th report from national BP program working group, it is important to measure BP during the routine physical examination of all children above 3 years of age. Primary or essential HTN is more common in adolescents and has multiple risk factors, including obesity and a family history of HTN. Secondary HTN is more common in preadolescent children, with most cases caused by renal disease. [Since the risk factors for the development of HTN starts in childhood, pediatricians should be encouraged to include routine BP measurement in children¹

Hypertension is known as one of the most significant risk factors for atherosclerosis and cardiovascular diseases. HT prevalence in the worldwide adult population is estimated at 26%. HT is also one of the most urgent health problems among children and adolescents. It has been assessed that HT is common in 3.5% of the population at a developmental age. The highest HT frequency is observed among older children, and boys are more prone to it than girls. Puberty, obesity, and coexisting metabolic disorders lead to the fact that primary hypertension (PHT) becomes a dominant form of hypertension among adolescents. PHT is more and more often recognized

without any clinical symptoms. Similarly to adults, primary hypertension among children corresponds to obesity and a family history of this disease. Obesity, hypercholesterolemia, hypertension, and habits contributing to the risk of cardiovascular diseases which have their roots in childhood, tend to continue into adulthood. Hence, any preventive actions against these diseases in adulthood will be far too late. This is why, from an early age, programs promoting physical activity, healthy eating habits, and a non-smoking policy should be undertaken to prevent the aforementioned diseases, especially when because more than 40% of children have complications connected with organ damage at the moment of PHT diagnosis. Any preventive education program should be tailored introduced to its recipients and their knowledge of the program's subject. It should also correspond to the recipients' value systems.²

Adolescence (10-19 years) is an important period of growth and maturation and most of the changes that occur during this period are continued into adulthood.⁴ (Table 7) Raised blood pressure in childhood has been recognized ABSTRACT Background: Raised blood pressure is the leading cause of death and disability worldwide. Though hypertension is a problem of adults the etiologic process and risk behaviors start early in life³

Knowledge gaps are key obstructions in the effective avoidance and treatment of HTN. Knowledge in the form of health literacy allows individuals to progress on their health outcomes. Although this does not rest solely on the capability of skills of the individual, research has shown a positive relationship on the proportion of knowledge, with persons with blood pressure under control. Official education, communication gaps, and unreachability to routine healthcare instruction programs among others have been well-known to impact the knowledge on HTN. The Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents, published as far back in 2004, also established the condition "prehypertension" in parallel with adult hypertension guidelines. The long-term health risks for hypertension in children and adolescents can be extensive. It is estimated that the presence of high blood pressure in children with normal weight is highly overlooked. A proper record of the depth of knowledge and its risks of HTN among a population, which represents the immediate workforce of the country, is necessary to effectively monitor and draw health campaign programs as far as HTN is concerned. This study, therefore, conveys evidence on the prevalence, knowledge as

well as risk factors of HTN in students in Ghana at the Senior High School (SHS) Level who are the representation of the immediate workforce of the country.^{4,5}

Taking all the evidence into consideration, we decided to carry out this study of the knowledge of HT among adolescents as well as of healthy behavior predictors in the developmental age population. (Table 4)

Material and Method

Aim and Objectives-

- To assess the level of knowledge about Hypertension and Prehypertension among adolescents of first-year M.B.B.S. students.
- To determine the relation between factors such as demographic (stage of education, sex, place of living), environmental (school, family), medical (previous blood pressure measurements, a previous diagnosis of high blood pressure, family history of HTN or other chronic diseases) and others with the level of knowledge about HTN among adolescents of first-year M.B.B.S. students.
- Is there any relationship between the level of knowledge about Hypertension and prehypertension among adolescents and factors such as the system of values or personal competence.

Result

Total number -112

Table 1: Sex.

Sex	Number	Percentage
Female	56	50
Male	56	50

Table 2: Area of Residence.

Area	Number	Percentage
Urban	77	68.8
Rural	35	31.3

Table 3: Do you know about Hypertension in adolescent population.

Response	Number	Percentage
Yes	97	87.4
No	9	7.2
May be	6	5.4

Table 4: Are you aware of "Prehypertension" in Adolescents.

Response	Number	Percentage
Yes	65	58
No	36	32.1
May be	11	9.8

Table 5: When you have measured your blood pressure.

Response	Number	Percentage
0-6 mths	59	53.3
6-12 mths	25	22.7
1-2 yrs	10	8.3
2-3 yrs	05	3.7

Table 6: Do you think there is necessity to measure blood pressure regularly.

Response	Number	Percentage
Yes	92	82.1
No	08	7.1
May be	12	10.7
Total	112	

Table 7: What you think of Adolescent life Hypertension and Prehypertension are connected with Adult hypertension.

Response	Number	Percentage
Yes	60	53.2
No	08	7.2
May be	44	39.6
Total	112	

Table 8: Pl. Opine: Prehypertension and Hypertension in Adolescent population is an emerging disease.

Response	Number	Percentage
True	105	94.6
False	07	5.4
Total	112	

Discussion

The present study assessed the knowledge of risk factors of hypertension among first year students in a medical university and associated with the blood pressure, physical activity, family history of CVD, and sociodemographic variables, so as to identify the areas to be emphasized in the health promotion practice related to hypertension.

Risk factors of hypertension are not well studied in young adults and public awareness of hypertension in countries undergoing epidemiological transition is dismal (Table 5). However, the results of the present study indicate that more than 60% of the participants were aware that stress, high cholesterol,

and obesity were the risk factors of hypertension. More than 60% were aware of high salt intake and a high-calorie diet being risk factors. However, a gap in knowledge was seen in two modifiable risk factors, namely, physical activity (52.7%) and oral contraceptives; 86.4 % of the participants were not aware that these were risk factors for hypertension. More than 50% were not aware of the non-modifiable risk factors such as male gender (88.2%), increasing age (60.0%), and positive family history of CVD (50.9%). (Table 6) These findings were similar to that a study done in Germany where the overall knowledge of risk factors was good, but less people could tell the association between physical activity (58%) and hereditary factors (48%) with hypertension.⁶

Conclusions

Knowledge about Hypertension and Prehypertension among adolescents remains unsatisfactory and random, which indicates the necessity for routine education in this field, especially as it applies to Hypertension and Prehypertension symptoms. It seems that the considering elements such as blood pressure measurement and family history of HT in education program canal so improve their efficiency. (Table 8) Particular attention should be paid to the strengthening of "health" as a personal value and to build young people's sense of personal competence for the creation and implementation of healthy behavior. As there is limited evidence evaluating effectiveness of these strategies in the low-income settings, alternate strategies betokening these factors have to be framed.

Competing interests: The authors declare that they have no competing interests.

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