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Research Article

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A prevalence of common risk factors of hypertension among young generation living in Dhaka city: a cross-sectional study

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ABSTRACT

Hypertension is one of the upward health related challenge in Bangladesh and hypertension in young generation is increasing but there is a shortage of data about the risk factors in this age group. The aim was to evaluate and approximation the frequency of some common risk factors of hypertension among young generation living in Dhaka city. It was a cross-sectional study; conducted during March 2016 to June 2016 in Dhaka city. Data were collected by face-to-face interview after verbal informed consent by a survey questionnaire and stress was measured by Perceived Stress Scale and analyzed by SPSS version 16. The study was conducted on 150 (n=150) young adults where 76% were male and 24% were female and their mean age was 22.13 and 23.33% of them were overweight and only 1(n=1) was obese and 44% of them took average amount of junk food while 14% took huge amounts and 59.33% of them had family history of hypertension and 70.66% of them were in high stress. The mentioned age range shows a good amount of predominance of hypertension probably indicating a hidden epidemic. It is needed to improve the measures of key anticipation and early detection of hypertension among young generation.

Keywords: Hypertension, Risk factors, Young generation, Prevalence, Survey

INTRODUCTION

Hypertension is now a key contributor to the global disease trouble. It demonstrates a public health evaluation for both developing and industrial countries economically most importantly in Asia [1]. The pace of analysis of hypertension in children and young adults is increasing day by day. Hypertension grants the maximum risk to deaths especially from cardiovascular disease (CD) and the risk of cardiovascular disease connected to blood

pressure (BP) is scored and unremitting [2]. The risk is also applicable even in childhood and young generation; with prominent blood pressure (BP) forecasting hypertension in middle age [4]. Lessening of blood pressure decreases the high risk in people with and without hypertension and is a desired goal in children and young adults. The growing problem of hypertension global, there is an alarm that hypertension in young adults may also exist on the increase and that are not detected

properly because of insufficient test in this age range [6].

The demographic evolution of epidemiology tells a long-term shift occurs in death and disease patterns also, where we see communicable diseases are progressively displaced by the degenerative and artificial diseases in the form of morbidity and death [10]. Facts of the inclining risk factors are fundamental in the alteration of lifestyle behaviors favorable to most favorable cardiovascular health (CD). Body Mass index or BMI, stress, food habits are considered some key risk factors for developing hypertension [11].

Policies to get even a modest lowering of the levels of blood pressure (BP) in the population of young adults are consequently essential public health objective. In the present study the target was to evaluate some common risk factors of hypertension among young adults [9]. Though there were some research conducted on risk factors of hypertension among Bangladeshi people but for specific population like young generation did not held yet. This study was conducted for that reason.

OBJECTIVE

The overall objective of the study was to assess and estimate the frequency of some common risk factors of hypertension among young generation living in Dhaka city and to correlate with various characteristics.

METHOD AND MATERIALS

It was a community based cross-sectional study which was held in Dhaka city, Bangladesh. it was started in March 2016 and end in June 2016. The age range of the participants was between 18 to 28 years. Data were collected by face-to-face interview after verbal informed consent by a self made survey questionnaire (see **annexure-1**) and stress which is one of the major risk factors was measured by Perceived Stress Scale. Data were collected through survey sheets and then transferred into the Microsoft Excel Spreadsheet 2010 (Microsoft Corp., USA). The analysis was done using SPSS software version 16. The statistical analysis and graphical presentations were performed. Representation of the data was performed as percentage, frequency, mean, and ratio.

RESULTS AND DISCUSSION

The study was conducted on 150 (n=150) young adults those are living in Dhaka city. It is also found that 114(76%) were male and 36(24%) was female and their mean age was 22.13 and it is also demonstrating that most of them (n=54) had B+ blood group and less number of them had A- blood group. See the demographic variables in **figure-1** for details. Among them 5% (7) of them were already in hypertension while others (n=143) are free of hypertension.

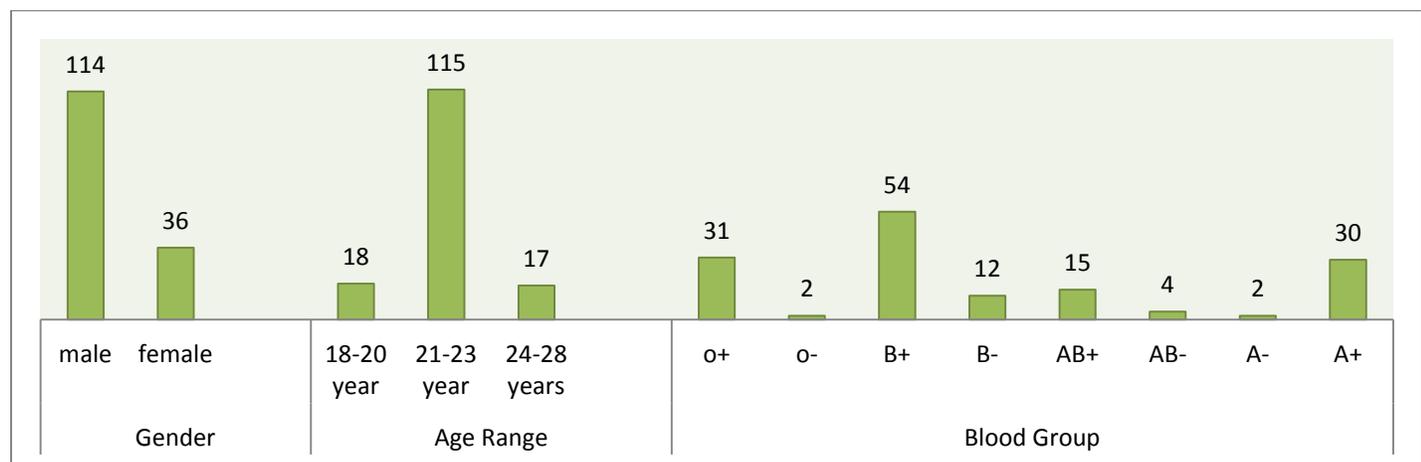


Figure-1: Demographic variables

Body Mass Index (BMI) which is one of the major risk factors; shows that 35(23.33%) of them were overweight and 1(n=1) was obese while 99(66%) were normal (healthy weight) and 15(10%) of young generation were under weight. And this is also initiated that 66(44%) of them took average amount of junk food monthly where 33(22%) of them took low amount and 22(14.66%) took below average and 21 (14%) took huge amounts of junk food. The finding also showed that

89(59.33%) of them had family history of hypertension while 61(40.66%) did not. Among the 150 young adults, 49(32.66%) responded positive that they were use to smoking while 101(67.33%) did not. They also responded that 52 (34.66%) of them were used to take extra salt while 98(65.33%) did not. See **figure-2** for details. It is also found that female young adults were in larger number of having healthy BMI than male young adults and female were used to take more extra salt than male.

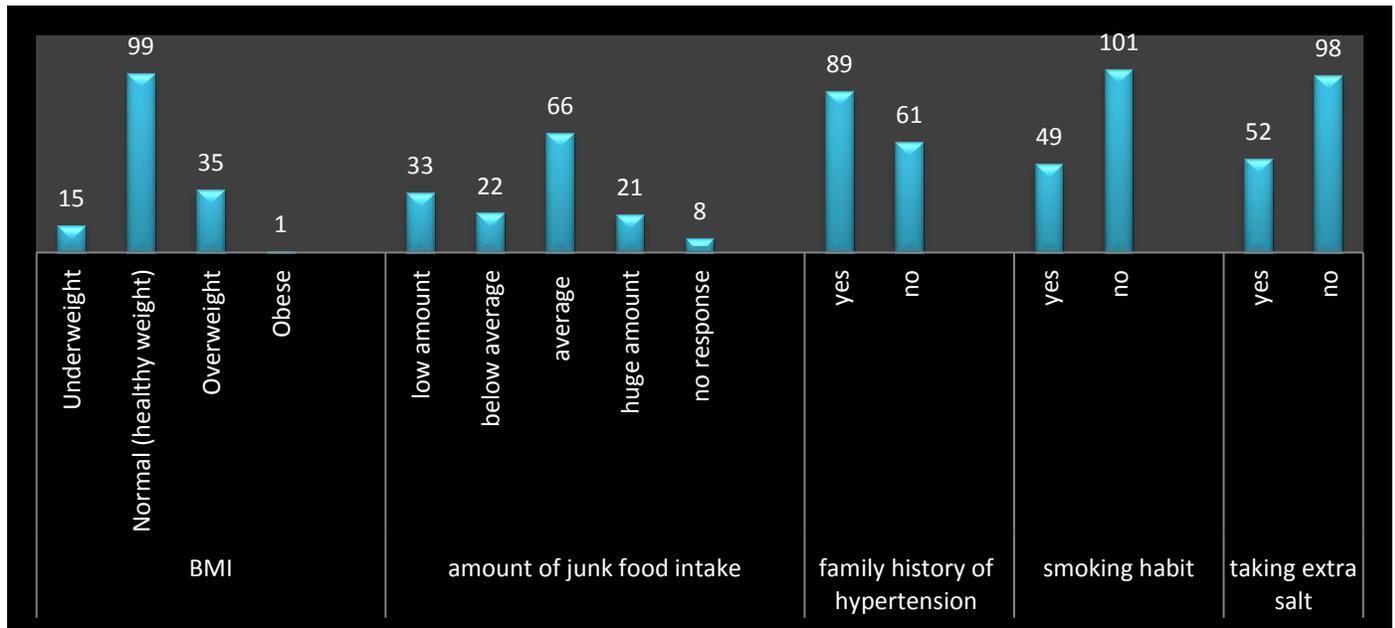


Figure-2: Common Risk Factors of Hypertension

Stress which is one of the important risk factors; Perceived Stress Scale showed that 106(70.66%) of them were in high stress while 17(11.33%) were in low stress and 12(8%) were in moderate. It is also

found that female young were in less stress than male young. See **figure-3** for details. It also showed that female young adults were in less stress than male young adults.

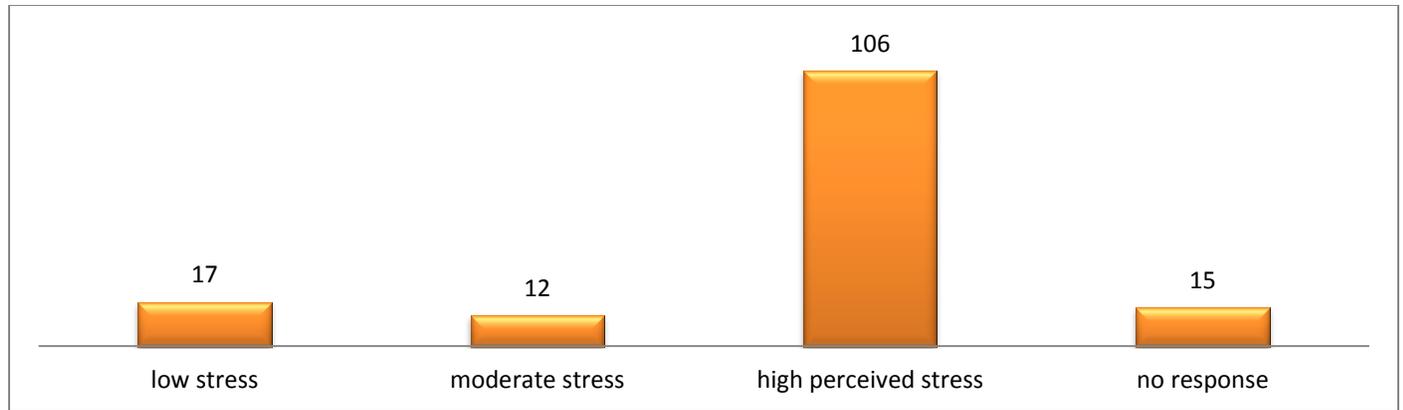


Figure-3: Stress Measurement by Perceived Stress Scale

This investigation used an exclusive design by self made questionnaire with perceived stress scale. Gender, family history of hypertension, age, low level of schooling, BMI, living in rural areas, low level of education are conventional related factors of hypertension [3]. The result demonstrates overall prevalence of risk factors of hypertension among young population in Dhaka city. It is also important to keep in mind that family history is a significant non-modifiable risk factor intended for hypertension where assessment of hypertension involves precisely measuring the patient's blood pressure, performing a listening carefully medical history and physical test, and obtaining results of schedule laboratory studies [7]. Even though hypertension consciousness, management and control have noticeably improved, there were motionless gaps compared by means of those of developed countries [12].

CONCLUSION

The study reveals that young generation exhibited a family history of hypertension and the

REFERENCES

- [1]. Akilew Awoke*, Tadesse Awoke, Shitaye Alemu and Berihun Megabiaw, Prevalence and associated factors of hypertension among adults in Gondar, Northwest Ethiopia: a community based cross-sectional study *BMC Cardiovascular Disorders*, **12**:113 doi: 10.1186/1471-2261-12-113, 2012.
- [2]. Dowse GK, Gareeboo H, Alberti KG, Zimmet P, Tuomilehto J, Purran A, et al. Changes in population cholesterol concentrations and other cardiovascular risk factor levels after five years of the non-communicable disease intervention programme in Mauritius. *Mauritius Non-communicable Disease Study Group. BMJ*; 311, 1255-9. [PMC free article][PubMed]

espousal of risky habits for hypertension development. The age range shows a good amount of predominance of hypertension almost certainly representing a hidden epidemic. It is needed to improve the measures of key expectancy and early detection of hypertension among young generation. More awareness is needed also.

RECOMMENDATION

Further research should be done on this aspect and there should be more health related workshop and seminar in college and university level.

LIMITATION

The only limitation of this study is having less number of data sample.

INTEREST

The author declares that they have no competing interest.

- [3]. Ezzati M, Lopez AD, Rodgers A, Hoorn SV, Murray CJL. the Comparative Risk Assessment Collaborating Group, Selected major risk factors and global and regional burden of disease. *Lancet*; 360, 2002, 1347–60.[PubMed]
- [4]. Gan SK, Loh CY, Seet B. Hypertension in young adults- An under estimated problem. *Singapore Med J.*;44:448–52.[PubMed] 2013.
- [5]. Hypertension Detection and Follow-up Program Cooperative Group. Five-year findings of the hypertension detection and follow-up program: I.Reduction in mortality of persons with high blood pressure, including mild hypertension. *JAMA*; 71, 1979, 242:256.[PubMed]
- [6]. Ingelfinger JR. Pediatric antecedents of adult cardiovascular disease–awareness and intervention. *N Engl J Med*;350, 2004, 2123–6.[PubMed]
- [7]. Kearney PM, Whelton M, Reynolds K, Whelton PK, He J. Worldwide prevalence of hypertension: A systematic review. *J Hypertens.*;22, 2004, 11–9.[PubMed]
- [8]. Lopez AD, Mathers CD, Ezzati M, Jamison DT, Murray CJ. Global and regional burden of disease and risk factors, 2001: Systematic analysis of population health data. *Lancet.*;367, 2006, 1747–57.[PubMed]
- [9]. MacMahon S, Peto R, Cutler J, Collins R, Sorlie P, Neaton J, et al. Blood pressure, stroke, and coronary heart disease: Part I.Prolonged differences in blood pressure: Prospective observational studies corrected for the regression dilution bias. *Lancet.*;335, 1990, 765–74.[PubMed]
- [10]. Omran AR. The epidemiologic transition: A theory of the epidemiology of population change. *Milbank Mem Fund Q.*;29, 1971, 509–38.[PubMed]
- [11]. Sorof JM, Lai D, Turner J, Poffenbarger T, Portman RJ. Overweight, ethnicity, and the prevalence of hypertension in school-aged children. *Pediatrics.*;113, 2004, 475–82.[PubMed]
- [12]. Stamler J, Stamler R, Neaton JD. Blood pressure, systolic and diastolic, and cardiovascular risks: US population data. *Arch Intern Med.*;153, 1993, 598–615.[PubMed]
- [13]. The Guidelines Subcommittee of the World Health Organisation - International Society of Hypertension (WHO-ISH) Mild Hypertension Liasison Committee, WHO-ISH Guidelines for the Management of Hypertension. *J Hypertens.*;17, 1999 , 151–83.[PubMed]
- [14]. Vartiainen E, Puska P, Jousilahti P, Korhonen HJ, Tuomilehto J, Nissinen A. Twenty-year trends in coronary risk factors in north Karelia and in other areas of Finland. *Int J Epidemiol.*;23, 1994, 495–504.[PubMed]

ANNEXURE-1

A study on common risk factors of hypertension among young generation living in Dhaka city, Bangladesh

PART-1

Name: _____
Gender: 1.male / 2. female AGE: _____
Height: _____ Wight: _____
Blood group : _____

Question 1.

Do you already have hypertension?

a) yes b) no

Question 2.

Do you have any family history of hypertension?

a) yes b) no

Question 3.

How much junk food do you take monthly?

- a) Low amount b) below average amount
- c) average amount d) huge amount

Question 4.

Do you smoke?

- a) yes b) no

Question 5. Do you take extra salt?

- a) yes b) no

PART-2

Fill up the scale

Question 6.

Perceived Stress Scale

0 = Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very Often

- 1. In the last month, how often have you been upset because of something that happened unexpectedly?..... **0 1 2 3 4**
- 2. In the last month, how often have you felt that you were unable to control the important things in our life? **0 1 2 3 4**
- 3. In the last month, how often have you felt nervous and “stressed”? **0 1 2 3 4**
- 4. In the last month, how often have you felt confident about your ability to handle your personal problems?**0 1 2 3 4**
- 5. In the last month, how often have you felt that things were going your way?..... **0 1 2 3 4**
- 6. In the last month, how often have you found that you could not cope with all the things that you had to do? **0 1 2 3 4**
- 7. In the last month, how often have you been able to control irritations in your life?..... **0 1 2 3 4**
- 8. In the last month, how often have you felt that you were on top of things? **0 1 2 3 4**
- 9. In the last month, how often have you been angered because of things that were outside of your control?..... **0 1 2 3 4**
- 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? **0 1 2 3 4**