# Assessment of Knowledge, Attitudes and Practice of General Public Attending El Shohada Primary Health Care Unit Regarding Hypertension

Abdelrahman Essam Abdelraziq (corresponding author) blackstars255@ymail.com

> Mohammed Ibrahim (corresponding author) galeleo2010@yahoo.com

Abdullah Fathi Abdelhamed (corresponding author) Abdallah\_first@yahoo.com

Ahmed Aymen (corresponding author) ahmedayman55@yahoo.com Hasan sleem (corresponding author) Hassanja1994@hotmail.com

> Heba Osama (corresponding author) o.heba44@yahoo.com

Shimaa Abd Elraziq (corresponding author) D.shimaa2013@yahoo.com

Rhaf Sleem

Abstract: Hypertension a silent killer is a major risk factor for cardiovascular disease worldwide and is one of the most important reasons to visit to physician. Hypertension leads to various complications as increased risk of stroke. Good control of blood pressure will result in prolonged survival. Increasing the knowledge, awareness, and control of hypertension will reduce morbidity and mortality. Studies show that many patients did not have appropriate knowledge about hypertension. Hypertension, referred to as high blood pressure, is a condition in which the arteries have persistently elevated blood pressure. The normal level for blood pressure is below 120/80, where 120 represent the systolic measurements and 80 represent the diastolic measurement. Blood pressure of 140/90 or above is considered hypertension. Though the exact causes of hypertension are usually unknown, there are several factors that have been highly associated with the condition. These include smoking, obesity or being overweight, being obese as a child, diabetes, lack of physical activity, aging, socioeconomic changes favoring sedentary habits, alcohol consumption, and high levels of salt intake. There is no guarantee that a person with hypertension will present any symptoms of the condition. About 33% of people actually do not know that they have high blood pressure, and this ignorance can last for years. For this reason, it is advisable to undergo periodic blood pressure screenings even when no symptoms are present. Hypertension speeds up brain aging!! As young and middle aged people with high blood pressure have a higher risk of accelerated brain aging, scientists from the University of California Davis reported in The lancet (November 2, 2012 issue). To achieve the good control of blood pressure, the programs like national public health programs and initiatives such as the National High Blood Pressure Education Programs as in U.S are required15. Considering the high morbidity and mortality due to hypertension, and knowing that if a patient has knowledge about the disease, patient will be more careful about the management, and a better control can be achieved.

Key Words: Hypertension, Knowledge, Attitude, Practice, Awareness.

### I. AIM OF THE STUDY

To contribute to reduction of prevalence and complications of hypertension through assessing the public knowledge about the disease.

#### II. METHODOLOGY

The descriptive cross sectional study was carried out on 119 persons all of them are above 20 years old in the months of November 2014 to April 2015. The study is conducted to assess knowledge, attitudes and practice of general public attending el shohada primary health care unit in Ismailia towards hypertension.

### III. RESULTS

119 person were enrolled in this study 70 (58.82%) of them are females and 49 (41.18%) are males. Their ages ranged from 20 years to 75 years. (8.4%) of population sample are illiterate, (2.5%) had primary education, (36.1%) had secondary education and (52.9%) had higher education . (20.2%) of the sample size are single, (78.2%) are married and 1.7% are widowed. The sample reveals that 99 persons (83.2%) of population sample know what the hypertension is while 20 persons (16.8%) of population sample didn't know the hypertension!(10.9%) of the population sample said that they were suffering from Hypertension, (53.8%) of them said that they weren't suffering from Hypertension and (35.3) didn't know if they are suffering from hypertension or not. 64 persons (53.78%) of the sample size thought that high hypertension is genetic disease and 55(46.22%) not. 62 persons( 52.1% ) of the sample size thought that Young

adults don't get Hypertension but 57 (47.9%) don't. 88 Persons (73.95%) thought that Blood Pressure is high when it is at or over 140/90 mm Hg and 31(26.05%) don't. 97 persons (81.51%) thought that there is a relation between the weight and hypertension, they thought that the overweight people are 2 to 6 times more than the normal people to develop hypertension. 100 persons (84.03%) thought that practice exercises regularly is reducing the risk of having high blood pressure. 102 persons (85.71) thought that hypertension is a women's problem while 17 (14.29%) didn't think that. (17.65%) of the population sample thought that the stress is the most serious reason for Hypertension, (10.08%) thought that getting old is the reason to have Hypertension, (7.56%) thought that the salty food is the reason, but (64.71%) thought that all of those reasons cause Hypertension. (32.77%) of the population sample got information about hypertension from TV and radio, and (44.54%) get information about hypertension from health workers, news papers, journals and other sources.(62.2%) of the population sample thought that Diabetes causes which mean that they thought that if the hypertension person had diabetes, he must have hypertension, and (37.8%) didn't think so.(58.82%) of the population sample thought that Hypertension had serious complications, (11.76%) didn't think that, (21.01%) thought that may be hypertension had complications and (8.40%) didn't know that hypertension had complications or not. (53.78%) of the population sample agree that they will take the situation serious when the doctors tell them they have high blood pressure.(87.39%) of the population sample agree that taking medicine regularly is very important in keeping blood pressure under control.(87.39%) thought that Hypertension is a chronic disease while (12.61%) of the population sample didn't think that.(54.6%) of the population sample thought that Hypertension is a curable disease.(84.87%) thought that changing lifestyle helps in decreasing the high blood pressure and also helps in controlling it.(73.95%) of the population sample thought that Hypertension is very common disease among people.(79.83%) of the population sample thought that ceasing smoking helps in decreasing the possibility of being affected by Hypertension.(75.63%) of the population sample thought that reducing drinking caffeine (as tea, coffee& soda) helps in controlling Hypertension.(68.91%) of the population sample thought that following a certain diet in eating helps in keeping blood pressure normal.(84.87%) of the population sample thought that taking low salt helps in reducing blood pressure.13 person from the population sample are smoking (46.15%) of them had history for smoking every day and (53.85%) had ahistory of little smoking.(61.54%) of the population sample said that they practice exercise regularly as a trying to be healthy and to avoid diseases, while (30.77%) said that they don'tpractice any type of exercises.

## IV. DISSCUSSION

Our study was conducted to evaluate the knowledge, attitude & practice of general Public attending El-Shohada Primary Health Care Unit regarding hypertension. About 10.9% of our sample said that they were suffering from Hypertension, 53.8% said that they weren't suffering from Hypertension & 35.3% said that they didn't know if they had hypertension or not. According to statistical reports from medical education and health care ministry in Iran, hypertension prevalence is about 27% & 42%, in people aged 45 to 69 years and those over 70 years of age, respectively. The total hypertension prevalence rate in isfahan is 17.5% (18.6% for women, 16.4% for men). Among them 46.2% of patients are aware of their condition while 33.9% were under treatment, and 12% had controlled hypertension.

Table 1: Study sample regarding patients who eat a lot of salt : (N=13)

Do you eat	Variable	Frequency	Percent	Total
a lot of				
salt?	yes	3	23.07%	100%
	no	2	15.38%	
	sometimes	8	61.53%	
Are you interested	Yes	5	38.46%	100%
in eating fruit and	No	3	23.07%	
vegetable?	Sometimes	5	38.46%	
Do you drink a lot	yes, a lot	5	38.46%	100%
of caffeine ?.	yes, but not a lot	5	38.46%	
	rare	3	23.07%	
Do you measure	Yes	1	7.69%	100%
your blood pressure	No	9	69.23%	
frequently?	Sometimes	3	23.07%	
	Total	13		

Notice in no.(1): 23.08% said that they eat a lot of salt & 61.54% said that they do sometimes.

Notice in no.(2): 38.46% said that they are interested in eating fruit and vegetables & 38.46% said that they eat them sometimes.

Notice in no.(3): 38.46% said that they drink a lot of caffeine, 38.46% said that they drink caffeine but not a lot.

Notice in no.(4): 7.69% said that they measure their blood pressure regular,69.23% said that they don't.

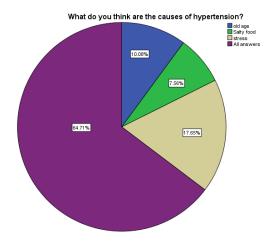
Table 2: Study sample regarding diastolic and systolic blood level for patients: (N=13).

What was	Variable	Frequency	Percent	Total
your				
SYSTOLIC	<140	3	23.07%	100%
blood level at	440	,	20.740/	
the last	140	4	30.76%	
blood	>140	6	46.15%	
pressure	2140	0	40.1370	
measuring?				
What was	90	6	46.15%	100%
your				
DIASTOLIC	>90	7	53.84%	
blood level at				
the last				
blood				
pressure				
measuring?				
	Total	13		

Notice in no. (1): 30.76% that their systolic blood pressure was 140 mmHg at the last measuring & 53.85% said that their systolic blood pressure was greater than 140 mmHg at the last measuring.

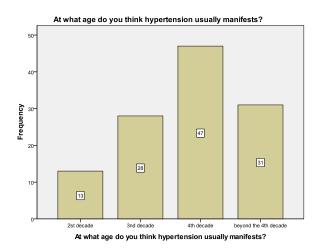
Notice in no. (2): 53.85% said that their diastolic blood pressure was greater than 90 mmHg at the last measuring.

Fig 1: Study sample regarding causes of hypertension: (N=119)



Notice:17.65% think that stress causes hypertension, 7.56% think that salty food causes hypertension.

Fig 2:Study sample regarding thinking people about age at hypertension usually manifests: (N=119)



Notice: 39.5% think that hypertension usually manifests at  $4^{th}$  decade and 26.05% think that hypertension usually manifests beyond  $4^{th}$  decade.

# V. RECOMMENDATIONS

Increase the health education about HTN through the mass media& developed more specific health education programs, have more programs or articles on the subject.

Do more studies to confirm the findings of the present study, which will help to expand the population knowledge base.

# VI. CONCLUSION

Many people have heard about hypertension but only a few know what hypertension mean is!They also didn't know its risk factors& complications.They don't realize the

ISSN: 2349-7955 016 - 020

importance of knowing the risk factors of hypertension to avoid it so they can protect themselves from HTN. When they protect themselves from HTN they will avoid its complications which are several and in most of times lead to serious disease or death. A lot of people who were smoking did so because it is being a habit for them and they don't stop smoking because they can't or don't want to, and the

#### REFERENCES

- [1] Shaikh, M,A,Yakta,D,Sadia&Kumar,R.(2012)Hypertension Knowledge, Attitude and Practice in Adult Hypertensive Patients at LUMHS. Available at:.http://www.beta.lumhs.edu.pk/jlum.../Vol11No02/.../v11n2oa04.p df [Accessed 13 December 2014].
- [2] Nordqvist,C.(2014)What is hypertension? What causes hypertension? Available at:http://www.medicalnewstoday.com/articles/150109.php[accessed 13 December 2014]
- [3] -Aubert, L,Bovet,P ,Gervasoni, J,Rwebogora,A,Waeber,B&Paccaud ,F.(1998)Knowledge , Attitudes , and Practices on Hypertension in a Country in Epidemiological Transition. Available at :http://hyper.ahajournals.org/content/31/5/1136.full.pdf[accessed 13 December 2014]
- [4] Godfrey,B,S,Sara,I.(2010)'Hypertension-related knowledge, attitudes and life-style practices among hypertensive patients in a sub-urban Nigerian community',Journal of Public Health and Epidemiology,Vol.2(4),pp.71-77, Available at :http://www.academicjournals.org/.../article1379344129\_Iyalomh...[ Accessed 13 December 2014]
- [5] Harrison L. Hypertension ER Visits Surge 25% in Five Years. Medscape [serial online]. Sep 11 2014;Accessed Sep 23 2014. Available at http://www.medscape.com/viewarticle/831531.
- [6] Roger VL, Go AS, Lloyd-Jones DM, et al. Heart disease and stroke statistics--2012 update: a report from the American Heart Association. Circulation. Jan 3 2012;125(1):e2-e220. [Medline].
- [7] Chobanian AV, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL Jr, et al. Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. Hypertension. Dec 2003;42(6):1206-52. [Medline].
- [8] Katakam R, Brukamp K, Townsend RR. What is the proper workup of a patient with hypertension?. Cleve Clin J Med. Sep 2008;75(9):663-72. [Medline].
- [9] Institute for Clinical Systems Improvement (ICSI). Hypertension diagnosis and treatment. Bloomington, Minn: Institute for Clinical Systems Improvement (ICSI); 2010.
- [10] Whelton PK, Appel LJ, Sacco RL, Anderson CA, Antman EM, Campbell N, et al. Sodium, Blood Pressure, and Cardiovascular Disease: Further Evidence Supporting the American Heart Association Sodium Reduction Recommendations. Circulation. Nov 2 2012;[Medline].
- [11] O'Riordan M. New European Hypertension Guidelines Released: Goal Is Less Than 140 mm Hg for All. Medscape [serial online]. Available at http://www.medscape.com/viewarticle/806367. Accessed June 24, 2013.
- [12] Mancia G, Fagard R, Narkiewicz K, et al. 2013 ESH/ESC Guidelines for the management of arterial hypertension. 23rd European Meeting on Hypertension & Cardiovascular Protection. Available athttp://www.esh2013.org/wordpress/wpcontent/uploads/2013/06/ESC-ESH-Guidelines-2013.pdf. Accessed June 24, 2013.
- [13] [Guideline] James PA, Oparil S, Carter BL, et al. 2014 Evidencebased guideline for the management of high blood pressure in adults:

people who didn't smoke they didn't do it because they don't like to smoke, only few people didn't smoke because of the risk of disease. We think that the people who don't smoke they have to do this because it is a risk factor not because they just don' like it. And the same to the people smoking, they need to try to stop smoking to protect themselves.

- report from the panel members appointed to the Eighth Joint National Committee (JNC 8). JAMA. Dec 18 2013;[Medline]. [Full Text].
- [14] Wood S. JNC 8 at last! Guidelines ease up on BP thresholds, drug choices. Heartwire [serial online]. December 18, 2013;Accessed December 30, 2013. Available athttp://www.medscape.com/viewarticle/817991.
- [15] Hajjar I, Kotchen TA. Trends in prevalence, awareness, treatment, and control of hypertension in the United States, 1988-2000. JAMA. Jul 9 2003;290(2):199-206. [Medline].
- [16] Bianchi S, Bigazzi R, Campese VM. Microalbuminuria in essential hypertension: significance, pathophysiology, and therapeutic implications. Am J Kidney Dis. Dec 1999;34(6):973-95. [Medline].
- [17] Shayne PH, Pitts SR. Severely increased blood pressure in the emergency department. Ann Emerg Med. Apr 2003;41(4):513-29. [Medline].
- [18] Rhoades R, Planzer R. Human Physiology. 3rd. Fort Worth, TX: Saunders College Publishing; 1996.
- [19] Gandhi SK, Powers JC, Nomeir AM, Fowle K, Kitzman DW, Rankin KM, et al. The pathogenesis of acute pulmonary edema associated with hypertension. N Engl J Med. Jan 4 2001;344(1):17-22. [Medline].
- [20] Harrison DG, Guzik TJ, Lob HE, et al. Inflammation, immunity, and hypertension. Hypertension. Feb 2011;57(2):132-40. [Medline]. [Full Text].
- [21] G. 3uzik TJ, Hoch NE, Brown KA, et al. Role of the T cell in the genesis of angiotensin II induced hypertension and vascular dysfunction. J Exp Med. Oct 1 2007;204(10):2449-60. [Medline]
- [22] Madhur MS, Lob HE, McCann LA, et al. Interleukin 17 promotes angiotensin II-induced hypertension and vascular dysfunction. Hypertension. Feb 2010;55(2):500-7. [Medline].
- [23] Hamer M, Steptoe A. Cortisol responses to mental stress and incident hypertension in healthy men and women. J ClinEndocrinolMetab. Jan 2012;97(1):E29-34. [Medline].
- [24] Rule AD, Fridley BL, Hunt SC, Asmann Y, Boerwinkle E, Pankow JS, et al. Genome-wide linkage analysis for uric acid in families enriched for hypertension. Nephrol Dial Transplant. Aug 2009;24(8):2414-20.[Medline]. [Full Text].
- [25] Jermendy G, Horvath T, Littvay L, et al. Effect of genetic and environmental influences on cardiometabolic risk factors: a twin study. CardiovascDiabetol. Nov 3 2011;10:96. [Medline]. [Full Text].
- [26] Mitchell GF, DeStefano AL, Larson MG, et al. Heritability and a genome-wide linkage scan for arterial stiffness, wave reflection, and mean arterial pressure: the Framingham Heart Study. Circulation. Jul 12 2005;112(2):194-9. [Medline].
- [27] Levy D, DeStefano AL, Larson MG, et al. Evidence for a gene influencing blood pressure on chromosome 17. Genome scan linkage results for longitudinal blood pressure phenotypes in subjects from the framingham heart study. Hypertension. Oct 2000;36(4):477-83. [Medline].
- [28] Coffman TM. Under pressure: the search for the essential mechanisms of hypertension. Nat Med. Nov 7 2011;17(11):1402-9. [Medline].
- [29] Millis RM. Epigenetics and hypertension. CurrHypertens Rep. Feb 2011;13(1):21-8. [Medline].
- [30] Brown MJ. Hypertension and ethnic group. BMJ. Apr 8 2006;332(7545):833-6. [Medline]. [Full Text].
- [31] Goldblatt H, Lynch J, Hanzal RF, Summerville WW. STUDIES ON EXPERIMENTAL HYPERTENSION: I. THE PRODUCTION OF PERSISTENT ELEVATION OF SYSTOLIC BLOOD PRESSURE

- BY MEANS OF RENAL ISCHEMIA. J Exp Med. Feb 28 1934;59(3):347-79. [Medline]. [Full Text].
- [32] Silverberg DS, Iaina A, Oksenberg A. Treating obstructive sleep apnea improves essential hypertension and quality of life. Am Fam Physician. Jan 15 2002;65(2):229-36. [Medline].
- [33] Marik PE, Varon J. Hypertensive crises: challenges and management. Chest. Jun 2007;131(6):1949-62.[Medline].
- [34] Rodriguez MA, Kumar SK, De Caro M. Hypertensive crisis. Cardiol Rev. Mar-Apr 2010;18(2):102-7.[Medline].
- [35] Hollander JE. Cocaine intoxication and hypertension. Ann Emerg Med. Mar 2008;51(3 Suppl):S18-20.[Medline].
- [36] Qureshi AI, Suri MF, Kirmani JF, Divani AA. Prevalence and trends of prehypertension and hypertension in United States: National Health and Nutrition Examination Surveys 1976 to 2000. Med SciMonit. Sep 2005;11(9):CR403-9. [Medline].
- [37] Catalá-López F, Sanfélix-Gimeno G, García-Torres C, Ridao M, Peiró S. Control of arterial hypertension in Spain: a systematic review and meta-analysis of 76 epidemiological studies on 341?632 participants. J Hypertens. Jan 2012;30(1):168-76. [Medline].
- [38] Cornoni-Huntley J, LaCroix AZ, Havlik RJ. Race and sex differentials in the impact of hypertension in the United States. The National Health and Nutrition Examination Survey I Epidemiologic Follow-up Study. Arch Intern Med. Apr 1989;149(4):780-8. [Medline].
- [39] Strong Heart Study Data Book: A Report to American Indian Communities. Bethesda, MD: National Heart, Lung, and Blood Institute, NIH; 2001.
- [40] Ong YT, Wong TY, Klein R, Klein BE, Mitchell P, Sharrett AR, et al. Hypertensive Retinopathy and Risk of Stroke. Hypertension. Aug 12 2013;[Medline].
- [41] Brooks M. Hypertensive Retinopathy Linked to Increased Stroke Risk. Medscape [serial online]. Available athttp://www.medscape.com/viewarticle/809541. Accessed August 20, 2013.
- [42] Huang Y, Cai X, Li Y, et al. Prehypertension and the risk of stroke: a meta-analysis. Neurology. Mar 12 2014; [Medline].
- [43] Hughes S. Even prehypertension increases stroke risk: meta-analysis. Medscape Medical News [serial online]. March 14, 2014;Accessed March 21, 2014. Available athttp://www.medscape.com/viewarticle/821977.
- [44] Webster J, Petrie JC, Jeffers TA, Lovell HG. Accelerated hypertension--patterns of mortality and clinical factors affecting outcome in treated patients. Q J Med. Aug 1993;86(8):485-93. [Medline].
- [45] Culleton BF, Larson MG, Kannel WB, Levy D. Serum uric acid and risk for cardiovascular disease and death: the Framingham Heart Study. Ann Intern Med. Jul 6 1999;131(1):7-13. [Medline].
- [46] Mortality after 10 1/2 years for hypertensive participants in the Multiple Risk Factor Intervention Trial.Circulation. Nov 1990;82(5):1616-28. [Medline].
- [47] Chen G, McAlister FA, Walker RL, Hemmelgarn BR, Campbell NR. Cardiovascular outcomes in framingham participants with diabetes: the importance of blood pressure. Hypertension. May 2011;57(5):891-7.[Medline].
- [48] Ford ES. Trends in mortality from all causes and cardiovascular disease among hypertensive and nonhypertensive adults in the United States. Circulation. Apr 26 2011;123(16):1737-44. [Medline].
- [49] Eshah, N. F., & Al-daken, L. I. (2015). Assessing Publics' Knowledge About Hypertension in a Community-Dwelling Sample. The Journal of cardiovascular nursing.
- [50] Iyalomhe, G. B., &Iyalomhe, S. I. (2010). Hypertension-related knowledge, attitudes and life-style practices among hypertensive patients in a sub-urban Nigerian community. Journal of Public Health and epidemiology, 2(4), 71-77.

- [51] Linda, M. "Knowledge, attitude and practices towards risk factors for hypertension in Kinondoni municipality, Dar es Salaam." Dar Es Salaam Medical Students' Journal 14.2 (2007): 59-62.
- [52] Iyalomhe, G. B., &Iyalomhe, S. I. (2010). Hypertension-related knowledge, attitudes and life-style practices among hypertensive patients in a sub-urban Nigerian community. Journal of Public Health and epidemiology, 2(4), 71-77.
- [53] Sabouhi, Fakhri, et al. "Knowledge, awareness, attitudes and practice about hypertension in hypertensive patients referring to public health care centers in Khoor&Biabanak 2009." Iranian journal of nursing and midwifery research 16.1 (2011): 35.