International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 05, 2020
ISSN: 1475-7192

A Study to Evaluate the Effectiveness of Health Education Regarding Knowledge of Lifestyle Modification during Hypertension among Teaching Professionals Working at Selected Schools of Vadodara

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Abstract---

Background of the study: *Hypertension is the most common diseases in today's era. In general, high blood pressure related problems are observed due to lack of adequate knowledge, complexity of the diet due to fast lifestyle, more consumption of alcohol and Obesity. The mortality and morbidity rate is also increasing day by day as hypertension can cause many related disorders in the human body. Hence, as hypertension has slowed and silent pathophysiology, it is also known as "Silent killer disease". In such case, health education primitive action to aware people regarding lifestyle modification during hypertension.*

Material and method: *The research design used in this study was - pre experimental one group pre-test post-test design. The sampling techniques used for this study was non probability purposive sampling. The samples were 60 teaching professionals of selected schools of Vadodara city. The tool consists of socio demographic tool and structured knowledge questionnaires about lifestyle modification during hypertension the data analysis was planned on the basis of objectives of the study using descriptive and inferential statistics in consideration with hypothesis of the research study.*

Result: *This study revealed that knowledge regarding lifestyle modification during hypertension was inadequate and after the health education programme, knowledge regarding life style modification was increased. Data analysis was carried out using descriptive and inferential statistics method by using SPSS. It was observed that the mean post-test knowledge is significantly higher than the pre-test knowledge.*

Discussion and conclusion: *Blood pressure is the force that a person's blood exerts against the walls of the blood vessels. This pressure depends on the resistance of the blood vessels and how hard the heart has to work. This study was undertaken to assess the effectiveness of health teaching program regarding lifestyle modification during hypertension, the study involves one group pre- test post-test pre experimental design with no- probability purposive sampling technique, 60 samples.*

Keywords--- *Health Education, Life Style Modification, Hypertension, Teaching Professionals.*

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DOI: 10.37200/IJPR/V24I5/PR2020714
Received: 18 Apr 2020 | Revised: 26 Apr 2020 | Accepted: 16 May 2020

I. INTRODUCTION

"We cannot change our genes but we can definitely modify our lifestyle by protecting our self from hypertension."

The most common cause of the death in the world which kills about 17.3 million people each year is the cardiovascular diseases.[1] as they are the most chronic and life threatening diseases and this disease cause the highest mortality rate.[2] 13% of deaths and 7% of inabilities caused due to hypertension- high blood pressure.[3] Therefore, it is necessary to perform appropriate interventions to control blood pressure, especially in patients undergoing angioplasty. Unfortunately NJC7 did not received proper education about lifestyle modification but based on seven joint national committee criteria they justified that treatment of blood pressure begins with lifestyle modification and ends with medication diets.[4] Modification such as weight loss, exercise, taking DASH diet, low salt consumption reduce the complications of high blood pressure[5,6], especially the rate of morbidity and mortality of hypertensive clients undergoing angioplasty.[7] Despite of the effectiveness of education programmes the study shows that educational intervention has no role in changing the weight loss, blood pressure level and in physical activity.[8-13]Although the another study justifies that health education improved the knowledge of patient and had effect on their blood pressure level. Whereas the corresponding study did not justify it.[14,15] Other study found that no significant relationship is there between weight changes and changes in systolic and diastolic blood pressure.[16]Whereas studies shows ignorance and lack of knowledge and awareness in controlling and preventing hypertension.[17,18]hence it is hypothesized that increase in knowledge would enhance preventive behaviour.[19]Therefore studies have proved that by improving knowledge and awareness, attitude towards hypertension, systolic and diastolic pressure can be reduced marginally along with the control of diseases by itself.[21,22]However, people don't feel it as an important criteria to change and modify their lifestyle.[17,23] Other reasons which are the barriers of hypertension are:- Lack of motivation not taking the treatment and not taking follow up on regular basis, alcohol consumption, using drugs, health care deficiency, complexity of diet for controlling hypertension etc.[24,25,26]

II. METHODOLOGY

The research design used in this study was pre experimental one group pre-test post-test design. The sampling technique used for this study was non probability purposive sampling. The samples were 60 teaching professionals of selected schools of Vadodara city. The tool consists of section A: socio demographic tool. Section B: Structured knowledge questionnaires.

The data analysis was planned on the basis of objectives of the study using descriptive and inferential statistics in consideration with hypothesis of the research study. The data collection tool includes two sections, the first one consist socio demographic characteristics such as Age, Gender, Occupation, Family income, marital status, and dietary pattern of the samples and the second one consists questionnaire to assess the knowledge for measuring the knowledge of life style modification during hypertension.

DOI: 10.37200/IJPR/V24I5/PR2020714
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III. FINDINGS

Total 60 samples were analysed under study. Identified frequency percentage distribution of sample characteristics, grading and difference between pre and post knowledge score. Detailed data is summarized in tables below:

Table 1: Frequency Percentage Distribution of Sample Characteristics

1	Variables	Frequency	Percentage
	AGE		
	21-25Years	18	30%
	26-55Years	42	70%
2	EDUCATION		
	Graduate	4	6.7%
	Post graduate	38	63.3%
	M.Phil.	15	25%
	PHD	3	5%
3	RELIGION		
	Hindu	37	61.7%
	Christian	13	21.7%
	Muslim	9	15%
	Others	1	1.7%
4	MONTHLY INCOME		
	Below 25000	8	13.3%
	Above 25000	37	61.7%
	Above 45000	15	25%
5	MARITAL STATUS		
	Married	37	61.7%
	Single	14	23.3%
	Divorce	7	11.7%
	Widow/Widower	2	3.3%

Total of 60 teaching professional were included in the final study for analysis. The mean age of study participants was 26-55 years and majority 70% were male, 63.3% belongs to post graduate, and 61.7% participants had monthly income above 25000. Majority of the samples were married (61.7%).and (61.7%) were Hindu.

Table 2: Grading of Pre-test Knowledge Score

SR NO.	LEVEL OF KNOWLEDGE	FREQUENCY	PERCENTAGE
1	Inadequate	19	31.7%
2	Moderate	41	68.3%
3	Adequate	0	0
Total		60	100%

The result pertaining to knowledge revealed that 31.7% of the samples had inadequate, 68.3% had moderate and 0% of them had adequate.

Table 3: Grading of Post-test Knowledge Score

SR.NO.	LEVEL OF KNOWLEDGE	FREQUENCY	PERCENTAGE
1	Inadequate	00	00%
2	Moderate	16	26.7%
3	Adequate	44	73.3%
Total		60	100

The result pertaining to knowledge revealed that 0% of the samples had inadequate, 26.7% had moderate and 73.3% of them had adequate.

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Table 4: Comparison between Pre-test and Post Test Score

Knowledge aspect	Pre-test			Post-test			t-value	Sig
	Mean	Mean%	SD	Mean	Mean %	SD		
Introduction	0.96	48	0.75	1.56	78	0.59	5.02	S
General Information regarding hypertension	8.20	39.04	1.58	14.23	67.76	1.93	23.37	S
Sources & benefits	0.96	32	0.80	2.18	72.66	0.70	8.76	S
General Information regarding lifestyle modification during hypertension.	1.40	35	0.84	3.25	81.25	0.83	14.49	S
Overall score	11.60	38.66	1.75	21.23	70.76	2.12	35.55	S

Above table shows pre-test and post-test score of the knowledge regarding hypertension and lifestyle style changes during hypertension among the teaching professionals. The SD of introduction for pre-test score and post-test score is 0.75 and 5.02 respectively. Rather the pre-test and post-test score of general information regarding hypertension SD is 1.58 and 1.93 respectively. Pre-test and post-test SD for sources and benefits regarding hypertension is 0.80 and 0.70 respectively. Whereas pre-test and post-test SD for general information regarding lifestyle modification during hypertension is 0.84 and 0.83 respectively. In addition, the overall score of pre-test and POST-TEST IS 1.75 AND 2.12.

Table 5: Association between Pre-test Score and Demographic Variable.

Sr no.	Variable	0-10	11-20	Total	X2	Df	Level of Significance
1	**AGE**				3.99	1	3.99>3.84 S
	21-25 Years	9	9	18			
	26-55 Years	10	32	42			
	TOTAL	19	41	60			
2	**EDUCATION**				9.55	3	9.55>7.81 S
	Graduate	2	2	4			
	Post graduate	8	30	38			
	M. Phil.	9	6	15			
	PHD	0	3	3			
	TOTAL	19	41	60			
3	**RELIGION**				10.34	3	10.34>7.81 S
	Hindu	17	20	37			
	Christian	0	13	13			
	Muslim	2	7	9			
	Other	0	1	1			
	TOTAL	19	41	60			
4	**MARITAL STATUS**				1.83	3	1.83<7.81 NS
	Marries	11	26	37			
	Single	6	8	14			
	Divorce	2	5	7			
	Widow/widower	0	2	2			
	TOTAL	19	41	60			
5	**FAMILY INCOME**				8.25	2	8.25>5.99 S
	Below 25000	6	2	8			
	Above 25000	10	27	37			
	Above 45000	3	12	15			
	TOTAL	91	41	60			

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Above table reveals the association between pre- test knowledge of teaching professionals and demographic variable. Significant demographic variable are age of teachers, with χ^2 value 3.99 (1df=3.84), Education of teaching professionals with χ^2 value 9.55 (3df= 7.81) and religion χ^2 value 10.34 (3df=7.81), family income with χ^2 value (2df=5.99) So, for this variable hypothesis is accepted. The non- significant demographic variable was the marital status of teaching professionals.

Hence, the research hypothesis H_2 is accepted.

IV. DISCUSSION

The present study was conducted to evaluate the effectiveness of health teaching program on knowledge regarding lifestyle modification during hypertension among teaching professionals of selected schools of Vadodara. After surfing many articles, we came to know that hypertensive cases are increasing day by day because majority of the people are not aware about the life style modification during the hypertension and this can increase chances for cardiovascular disease, including stroke, heart attack, heart failure, and aneurysm. Majority of deaths are increasing day by day because of cardiovascular diseases and its very important aspect as a healthcare professional that to make aware people about lifestyle modification during hypertension which can control further complications. [27-32]In this study we have taken reviews of literature regarding knowledge about hypertension, attitude toward this disease condition, risk factors related to metabolic disorders, practice related health behaviour.[33-35]

V. CONCLUSION

This study shown effective outcome of health education program on lifestyle modification during hypertension among teaching professional. Blood pressure is the force that a person's blood exerts against the walls of their blood vessels. This pressure depends on the resistance of the blood vessels and how hard the heart has to work. Hypertension is a primary risk factor for cardiovascular disease, including stroke, heart attack, heart failure, and aneurysm. Keeping blood pressure under control is vital for preserving health and reducing the risk of these dangerous conditions hence, In the Health education programme on lifestyle modification during hypertension we have explained why blood pressure can increase, how to monitor it, and ways to keep it within a normal range.

Conflict of Interest

There was no conflict of interest.

Source of Funding

The study is not funded by any external sources as it is self-funded research project.

Ethical Clearance

Ethical clearance has been obtained from the Sumandeep Vidyapeeth institutional ethical committee and willingness has been obtained from participants before data collection.

REFERENCES

[1] Quan H, Chen G, Walker RL, et al. Incidence, cardiovascular complications and mortality of hypertension by sex and ethnicity. *Heart*. 2013;99:715–21.

[2] De Luca G, Dirksen MT, Spaulding C, et al. Impact of hypertension on clinical outcome in STEMI patients undergoing primary angioplasty with BMS or DES Insights from the DESERT cooperation. *International Journal of Cardiology*. 2014; 175:50–4.
[3] James PA, Oparil S, Carter BL, et al. 2014 Evidence-Based Guideline for the Management of High Blood Pressure in Adults: Report From the Panel Members Appointed to the Eighth Joint National Committee (JNC 8) *Journal of American Medical Association (JAMA)*2014;311:507–20.
[4] Chiazor IE, Oparah A. Assessment of Hypertension Care in a Nigerian Hospital. *Tropical Journal of Pharmaceutical Research.*2012; 11:137–45.
[5] Ariff F, Suthahar A, Ramli M. Coping styles and lifestyle factors among hypertensive and non-hypertensive subjects. *Singapore Medical Journal.*2011; 52:29–34.
[6] Svetkey LP, Pollak KI, Yancy WS Jr, et al. Hypertension Improvement Project Randomized Trial of Quality Improvement for Physicians and Lifestyle Modification for Patients. *Hypertension.*2009;54:1226–
[7] Sadeghzadeh V, Raoufi Kelachayeh S, Naserian J, et al. The effect of self-care documented program on performance of patients undergoing coronary angioplasty. *International Research Journal of Applied and Basic Sciences.* 2013; 4: 86–90.
[8] Babu A. Effectiveness of structured teaching program on knowledge of hypertensive patients regarding dash diet at selected community area, Bangalore. *Bangalore, Karnataka (India): Rajiv Gandhi University of Health Science;* 2013.
[9] WebberJ.Theeffectofalifestylemodificationadherencetoolonriskfactorsinpatientswith chronic hypertension compared to usual management. *Johannesburg (South Africa): The Faculty of Health Sciences, University of the Witwatersrand;* 2011.
[10] Dawes MG, Kaczorowski J, Swanson G, et al. The effect of a patient education booklet and BP 'tracker' on knowledge about hypertension. Arandomized controlled trial. *Family Practice* 2010; 27:472–8.
[11] Mahajan H, Kazi Y, Sharma B, Velhal GD. Health Education: An Effective Intervention in Hypertensive Patients. *International Journal of Recent Trends in Science and Technology.* 2012; 4:77–82.
[12] Li J, Zheng H, Du Hb, et al. The multiple lifestyle modification for patients with prehypertension and hypertension patients: a systematic review protocol. *BMJ Open.* 2014;4: e004920.
[13] Dekkers JC, van Wier MF, Ariëns GA, et al. Comparative effectiveness of lifestyle interventions on cardiovascular risk factors among a dutch over weight working population: A randomized controlled trial. *BMC Public Health*, 2011; 11:49.
[14] Pandit AU, Tang JW, Bailey SC, et al. Education, literacy, and health: Mediating effects on hypertension knowledge and control. *Journal of Patient Educ Couns.* 2009; 75: 381–5.
[15] Reuther L, Paulsen MS, Anderson M, et al. Is a targeted intensive intervention effective for improvements in hypertension control? A randomized controlled trial. *Family Practice* 2012; 29: 626–32.
[16] Aucott L, Rothnie H, McIntyre L, et al. Long-Term Weight Loss From Lifestyle Intervention Benefits Blood Pressure? a systematic review. *Hypertension.* 2009; 54: 756–62.
[17] RAMAIAH, PUSHPAMALA. "A study to assess the effectiveness of structured teaching program on the knowledge of lifestyle modification of hypertension among the patients with hypertension in a selected private hospital at Dharmapuri district." *Int J Educ Sci Res (IJESR)* 5.1 (2015): 35-38.
[18] Demaio AR, Otgontuya D, Courten M, et al. Hypertension and hypertension-related disease in Mongolia; findings of a national knowledge, attitudes and practices study. *BMC Public Health.*2013; 13:194.
[19] Kamran A, Azadbakht L, Sharifirad G, et al. Sodium Intake, Dietary Knowledge, and Illness PerceptionsofControlledandUncontrolledRuralHypertensivePatients. *International Journal of Hypertension.* 2014;2014:245480.
[20] Lyalomhe GBS, Lyalomhe SI. Hypertension-related knowledge, attitudes and life-style practices among hypertensive patients in a sub-urban Nigerian community. *Journal of Public Health and Epidemiology.* 2010;2:71–7.
[21] Naeimi E, Malekzadeh J, Hadinia A, et al. Assessment of Knowledge and Practice of Hypertensive Patients in Boyer Ahmad Township in 2008. *Armaghan Danesh.* 2010; 16:489– 97.
[22] Newell M, Modeste N, Marshak HH, Wilson C. Health beliefs and the prevention of hypertension in a black population living in London. *Etnicity and Disease.* 2009; 19:35–41.
[23] Alam, M. SHABBIR, et al. "Effect of khat (Catha edulis) consumption on the functions of liver, kidney and lipid profile in male population of Jazan Region of Kingdom of Saudi Arabia." *Inter J Applied Natural Sci* 3.2 (2014): 9-14.
[24] Rakumakoe M. To determine the knowledge, attitude & perceptions of hypertensive patients towards lifestyle modification in controlling hypertension. *Johannesburg: University of Witwatersrand;* 2011.

DOI: 10.37200/IJPR/V24I5/PR2020714
Received: 18 Apr 2020 | Revised: 26 Apr 2020 | Accepted: 16 May 2020

[25] Dananagowda H. A study to assess the knowledge and attitude regarding lifestyle modificationstopreventhypertensionamongbankemployeesinselectedhypertensionamong bank employees in selected banks at Tumkur. *India: Rajiv Gandhi University of Health Sciences;* 2013.
[26] ALJA'FREH, SARAH M., ALAA ABABNEH, and L. U. B. N. A. ABU-SHAIKHA. "PERCEIVED BARRIERS OF HEALTHCARE PROVIDERS'ADHERENCE TO CLINICAL PRACTICE GUIDELINES OF HYPERTENSIVE DISORDERS OF PREGNANCY IN JORDAN: A DESCRIPTIVE, CROSS-SECTIONAL STUDY." *International Journal of Applied and Natural Sciences (IJANS* (6. 6) Oct - Nov 2017; 9 - 20
[27] Gee ME, Bienek A, Campbell NR, et al. Prevalence of, and Barriers to, Preventive Lifestyle Behaviors in Hypertension (from a National Survey of Canadians with Hypertension) *The American Journal of Cardiology.* 2012; 109:570–5.
[28] AGARWAL, MEENAL, CHAULA DOSHI, and VAISHALI KHOT. "EMERGENCY CESAREAN SECTION IN A PATIENT WITH RHEUMATIC HEART DISEASE WITH GESTATIONAL HTN & NEUROCYSTICERCOSIS: AN ANESTHETIC CHALLENGE." *International Journal of General Medicine and Pharmacy (IJGMP)* (4.1), Jan 2015, 89-92
[29] Gersh BJ, Sliwa K, Mayosi BM, Yusuf S. The epidemic of cardiovascular disease in the developing world: global implications. *European Heart Journal.* 2010; 31:642–8.
[30] Zungu LI, Djumbe FR. Knowledge and lifestyle practices of hypertensive patients attending a primary health care clinic in Botswana. *UNISA.* 2013:1–14.
[31] Appel LJ, Champagne CM, Harsha DW, Cooper LS, Obarzanek E, Elmer PJ, Stevens VJ, Vollmer WM, Lin PH, Svetkey LP, Young DR. Effects of comprehensive lifestyle modification on blood pressure control: main results of the PREMIER clinical trial. *JAMA: Journal of the American Medical Association.* 2003 Apr.
[32] AppelLJ.Lifestylemodificationasameanstopreventandtreathighbloodpressure. Journal of the American Society of Nephrology. 2003 Jul 1; 14(suppl2):S99-102.
[33] Chaturvedi M, Jindal S, Kumar R. Lifestyle modification in hypertension in the Indian context. *J Indian Acad Commun Med.* 2009 Oct; 10:46-51.
[34] Lopez L, Cook EF, Horng MS, Hicks LS. Lifestyle modification counseling for hypertensive patients: results from the National Health and Nutrition Examination Survey 1999–2004. *American journal of hypertension. 2009* Mar1;22(3):325-31.
[35] Ghezelbash S, Ghorbani A. Lifestyle modification and hypertension prevention. *ARYA Atherosclerosis.* 2012 Dec15:202-7.
[36] Elmer PJ, Obarzanek E, Vollmer WM, Simons-Morton D, Stevens VJ, Young DR, Lin PH, Champagne C, Harsha DW, Svetkey LP, Ard J. Effects of comprehensive lifestyle modification on diet, weight, physical fitness, and blood pressure control:18-month results of a randomized trial. Annals of internal medicine. 2006 Apr 4; 144(7):485-95.
[37] Calano BJ, Cacal MJ, Cal CB, Calletor KP, Guce FI, Bongar MV, Macindo JR. Effectiveness of a Community-Based Health Program on the Blood Pressure Control, Adherence, and Knowledge of Adults with Hypertension: APRECEDE-PROCEED Model Approach. *Journal of clinical nursing.* 2019 Jan22.
[38] Verma A, Mehta S, Mehta A, Patyal A. Knowledge, attitude and practices toward health behaviour and cardiovascular disease risk factors among the patients of metabolic syndrome in a teaching hospital in India. *Journal of Family Medicine and Primary Care.* 2019 Jan 1;8(1):178.
[39] Verma A, Mehta S, Mehta A, Patyal A. Knowledge, attitude and practices toward health behavior and cardiovascular disease risk factors among the patients of metabolic syndrome in a teaching hospital in India. *Journal of Family Medicine and Primary Care.* 2019 Jan 1;8(1):178.
[40] Vidhya, K. "The role of serum calcium and zinc in pregnancy induced hypertension." *TJPRC: International Journal of Pharmacology and Physiology* 2.1 (2016): 1-14.
[41] Rampamba EM, Meyer JC, Helberg EA, Godman B. Empowering hypertensive patients on chronic medicines at primary healthcare facilities in South Africa with knowledge to improve disease management. *Journal of Research in Pharmacy Practice.* 2019 Jan22
[42] Shakeel, Mohd, Jamil Mohammad, and Mohammad Khalid Farooqui. "Study of C-Reactive Protein and Fibrinogen in Hypertension and Their Role in Development of Hypertension." *International Journal of Applied, Physical and Bio-Chemistry Research (IJAPBCR)* 4.4 (2014): 1-6.

DOI: 10.37200/IJPR/V24I5/PR2020714
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