LEVEL OF DASH DIET ADHERENCE AMONG HYPERTENSIVE ADULTS

Mrs .A.Viji[1], Mrs .Rajeswari[2], Mrs .Aruna.G[3], Dr. Indira.A[4]

Article History: Received: 20.03.2023 **Revised:** 26.04.2023 **Accepted:** 03.06.2023

Abstract

INTRODUCTION: Hypertension is a serious medical condition and can increase the risk of heart, brain, kidney and other diseases. It is a major cause of premature death worldwide, with upwards of 1 in 4 men and 1 in 5 women – over a billion people – having the condition. DASH eating plan is known as dietary approaches to stop hypertension (DASH) diet,includes more fruits, vegetables and low fat dairy foods. Limit sodium, sweets, sugary drinks and red meats.

OBJECTIVES: To assess the level of DASH diet adherence among hypertension adults and find out the association between the level of DASH diet adherence among hypertensive adults with their selected socio demographic variables

MATERIALS AND METHODS - A quantitative research approach and descriptive research design was adopted.50 participants in the age group of 20-60 years who fulfill the inclusion criteria were selected by non probability convenient sampling technique **.**DASH adherence score were used to collect data. The data was analyzed in terms of objectives of the study using descriptive and inferential statistics.

RESULTS : 9(18%) are having high adherence, 35(70%) are having medium adherence and 6(12%) are having low adherence to DASH diet : notably a significant association with like marital status, education, occupation, type of family and diet and no significant association with age, gender, family income

CONCLUSION : Very few hypertensive adults, according to the current study, are aware of the DASH diet. DASH diet is quite efficient at controlling blood pressure and blood sugar, but adults must be educated to understand the significance of compliance of DASH diet.

Key words : **Hypertension , DASH diet and adults**

[1]Assistant professor, Department of OBG Nursing, SRM College of Nursing, Potheri, Tamilnadu
[2]Associate professor, Department of Community Health Nursing, SRM College of Nursing, Potheri, Tamilnadu
[3]Assistant professor, Department of OBG Nursing, Sree Narayana Nursing College, Nellore
[4]Principal, Narayana College of Nursing, Nellore

Corresponding author: Mrs .A.Viji Assistant professor, Department of OBG Nursing , SRM College of Nursing, Potheri, Tamilnadu

DOI: 10.31838/ecb/2023.12.s2.351

1. INTRODUCTION

Hypertension, also known as high or raised blood pressure, is a condition in which the blood vessels have persistently raised pressure. Blood is carried from the heart to all parts of the body in the vessels. Each time the heart beats, it pumps blood into the vessels. Blood pressure is created by the force of blood pushing against the walls of blood vessels (arteries) as it is pumped by the heart. The higher the pressure, the harder the heart has to pump.[1]

Hypertension is a serious medical condition and can increase the risk of heart, brain, kidney and other diseases. It is a major cause of premature death worldwide, with upwards of 1 in 4 men and 1 in 5 women – over a billion people – having the condition[2]

Eating a diet that is rich in whole grains, fruits, vegetables and low fat dairy products and skimps on saturated fat and cholesterol can lower blood pressure by up to 11mmHg if high blood pressure is present. This eating plan is known as dietary approaches to stop hypertension (DASH) diet.[5]

The diet is simple eat more fruits, vegetables and low fat dairy foods. Limit sodium, sweets, sugary drinks and red meats. In research study people who were on the DASH diet lowered than blood pressure within 2 weeks[3]

NEED FOR STUDY:

Globally, an estimated 26% of the world's population has hypertension and the prevalence's is expected to increase of 29% by 2015, driven largely by increase in economically developing nations. The high prevent of hypertension exacts a tremendous public health burden currently, estimates put the incidence of hypertension is 20 to 40% in urban areas and 12 to 17% in rural areas of India[8]

A whopping 36.2% of men and 28.2% of women in Andhra Pradesh and Telengana suffer from higher blood pressure. According to the report, the overall prevalence of hypertension among men and women is 38.5% and 29% respectively. Hypertension is responsible from 57% of stroke deaths and 24% of coronary heart disease deaths in India. In the study, the prevalence of pre hypertension was 42.63%, stage – I hypertension was 26.15% and stage – II hypertension was 10.35% in Nellore[4]

STATEMENT OF THE PROBLEM:

A STUDY TO ASSESS THE LEVEL OF DASH DIET ADHERENCE AMONG HYPERTENSIVE ADULTS AT SELECTED RURAL AREAS, NELLORE.

OBJECTIVES:

- To assess the level of DASH diet adherence among hypertension adults
- To find out the association between the level of DASH diet adherence among hypertensive adults with their selected socio demographic variables

OPERATIONAL DEFINITIONS :

Hypertension: Hypertension is a long-term medical condition in which the blood pressure in the arteries is persistently elevated. Blood pressure above 140/80 mmHg is considered as hypertension

DASH diet Dietary Approaches to Stop Hypertension (DASH) is a flexible and effective dietary strategy that aids in developing a lifelong eating pattern that is heart-healthy

Adherence as "the extent to which the person's activity complies with DASH diet

2. MATERIAL AND METHODS

A quantitative research approach and descriptive research design was adopted . The rural section of the study was preceded in Kamakshinagar, it is a small village in Thotapalligudur Mandal in

Nellore district, A.P. The total population is 1295 among them male 660 and females 635[4] and 50 elderlies from Kamakshinagar Nellore district were selected as study participants by nonprobability convenient sampling technique; elderly between the age group of 20-60 years of age were included and excluded those who were mentally and physically sick at the time of data collection Demographic data of the adults such as Age, Gender, Educational status, Occupation, Family Income, Marital status, Type of family, Dietary pattern, use of anti hypertensive medication were collected Dietary adherence was assessed using a scoring scheme adopted from Folsom and col-leagues. A composite DASH adherence score was generated using the sub scores from 10 equally weighted food and nutrient components (ie, grains; fruits; vegetables; nut, seeds, and legumes; dairy; meat; fat; saturated fat; sweets; and sodium). The selection of the individual components and the generation of the scoring criteria were based on nutrient intake estimates and daily serving recommendations previously established for the DASH diet plan. A score of 0 to 1 was assigned for each dietary component and summed across the 10 components to yield the total DASH diet adherence score. Individuals consuming at or above the recommended number of servings for a particular food group received a component score of 1; partial credit (0.5 points) was given for intake levels approaching the recommended level; and 0 points were awarded for intake levels below the minimum target intake recommendation. For example, 1 full point was awarded to an individual consuming four or more servings of vegetables on a typical day; 0.5 points was awarded for consuming two to three servings per day; and 0 points were awarded for any-thing less than two servings of vegetables per day. Individual component sub scores were summed to yield a composite DASH adherence score ranging from 0 to 10. A score of 10 represented full adherence to the DASH diet, with a score of 0 reflecting complete nonadherence.

Data Analysis :

SPSS v18 was used to analyze the data, which was entered into an MS Excel sheet. The average and standard deviation of the scores have been calculated (SD). The significance of the median score was tested ,. *P* value of $P=0.001$ has been considered for statistical significance

3. RESULTS AND DISCUSSION

Demographic characteristics distribution of adults

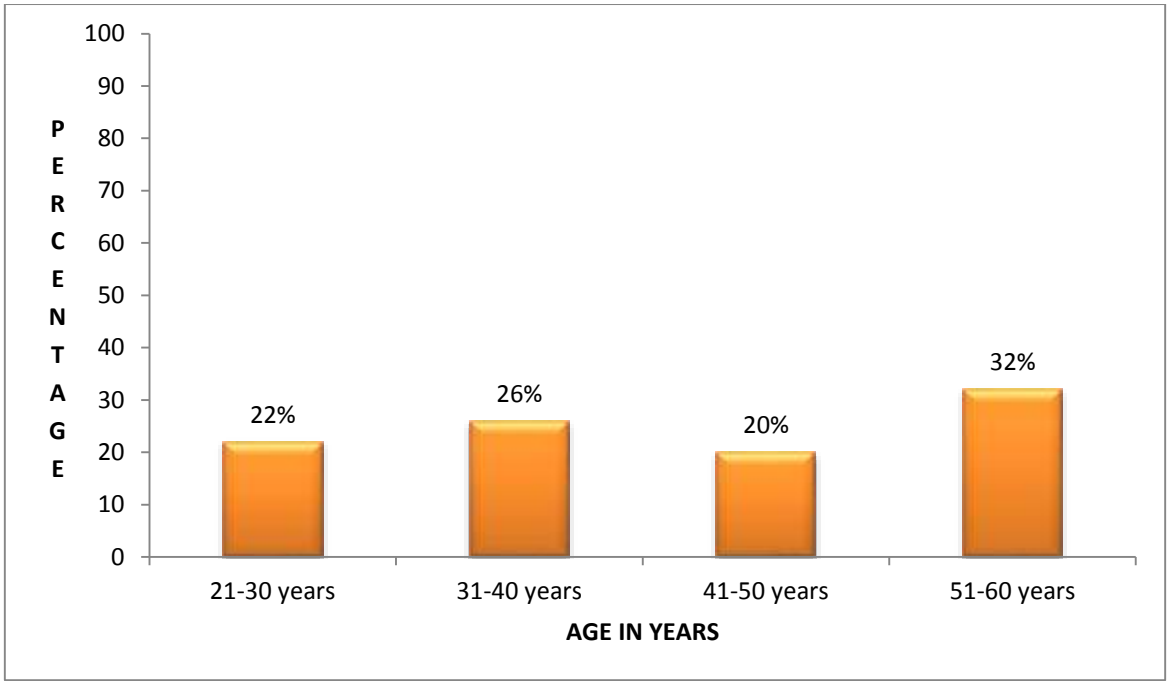

Fig no.1 : Percentage distribution among adults based on age

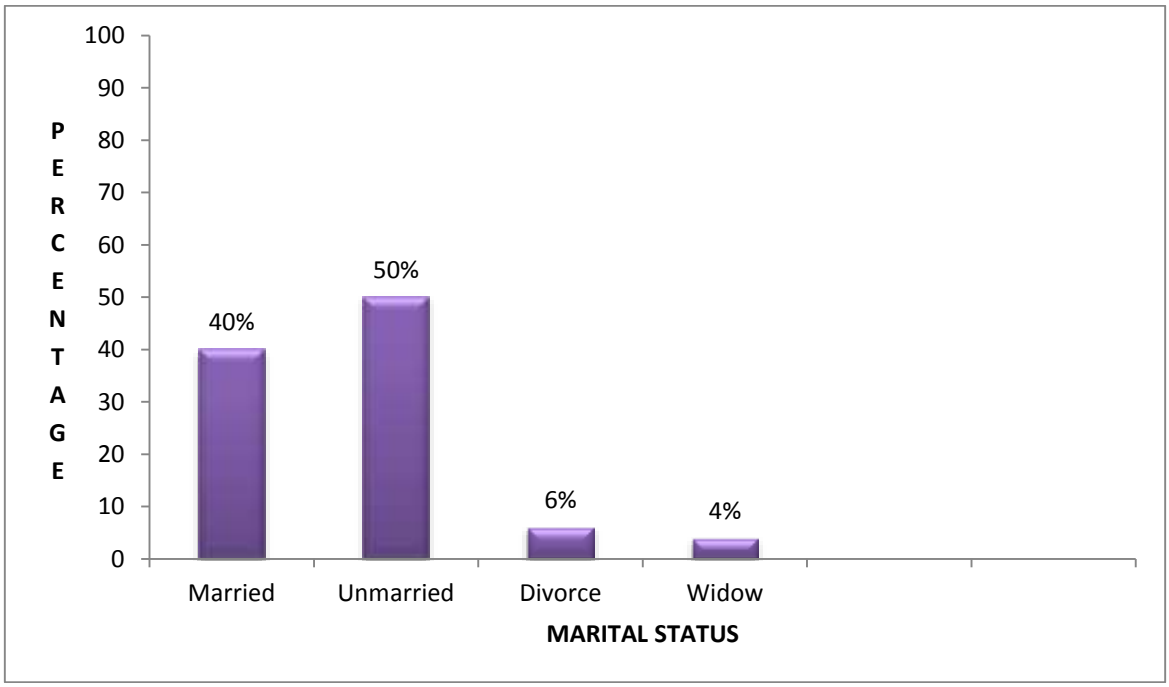

Fig no.2: Percentage distribution among adults based on marital status.

Table 1 : Frequency and percentage distribution of adults based on diet. (n=50)

Diet	**Frequency**	**Percentage**
Vegetarian	19	38
Non vegetarian	24	48
Ova vegetarian	3	6
Lacto vegetarian	4	8
Total	**50**	**100**

Table 1 : reveals that diet regarding , 19(38%) adults are vegetarian, 24(48%) are non vegetarians, 3(6%) are ova vegetarians and 4(8%) are lacto vegetarians.

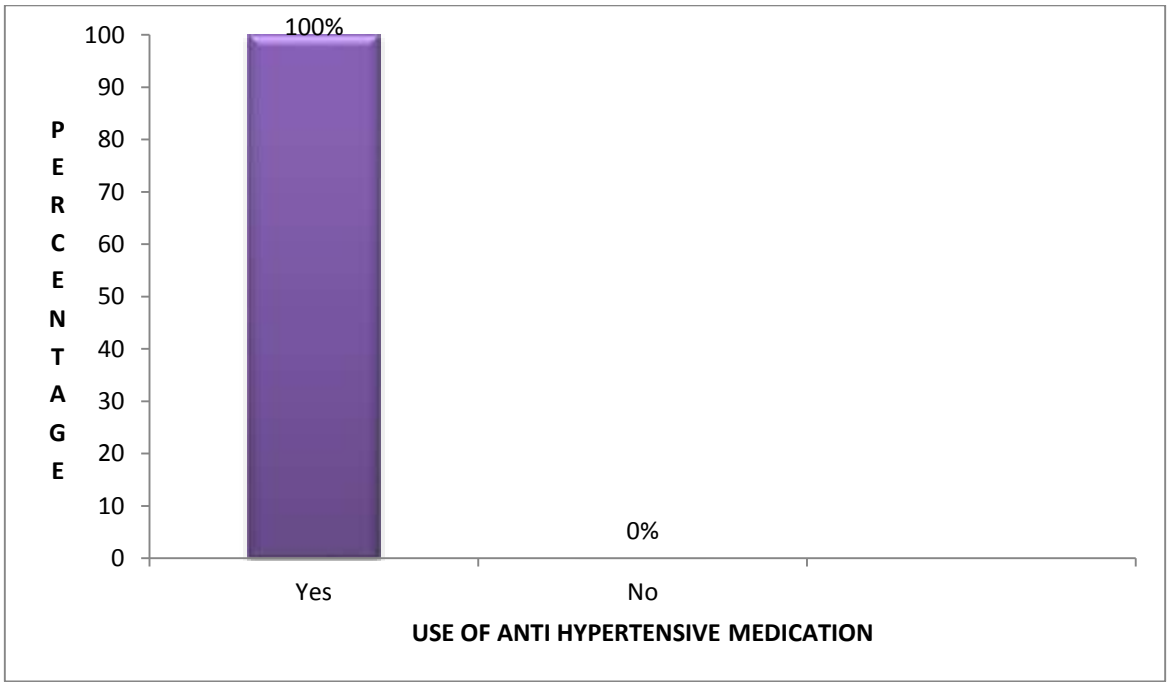

Fig no.3 : Percentage distribution among adults based on use of anti hypertensive medication.

Table 2 : Frequency and percentage distribution of DASH diet adherence among hypertensive adults
(n=50)

Distribution of DASH diet	**Frequency**	**Percentage**
High adherence	9	18
Medium adherence	35	70
Low adherence	6	12
Total	**50**	**100**

Table 2 : In context to distribution of DASH diet adherence , 9(18%) are having high adherence, 35(70%) are having medium adherence and 6(12%) are having low adherence.

Table 3 : Association between the level of DASH diet adherence among hypertensive adults with their selected socio demographic variables.
(N=50)

Sl. No	**Demographic variables**	**High**		**Medium**		**Low**		**Chi square**
		f	%	f	%	f	%	
1	Age							T=5.35
	21-30 years	1	2	9	18	1	2	C=4.17
	31-40 years	3	6	8	16	2	4	Df=6
	41-50 years	2	4	8	16	0	0	P=0.45
	51-60 years	3	6	10	20	3	6	NS

2	Gender Male Female	 5 4	 10 8	 18 17	 36 34	 4 2	 8 4	T=1.39 C=0.468 Df=2 P=0.352 NS
3.	Marital status Married Un married Divorced Widow	 4 4 0 1	 8 8 0 2	 15 18 1 1	 30 36 2 2	 1 3 2 0	 2 6 4 0	T=5.35 C=19.02 Df=6 P=0.001 **S**
4	Education Illiterate Primary school Higher school Intermediate Graduate Post graduate	 4 3 2 0 0 0	 8 6 4 0 0 0	 10 16 6 3 0 0	 20 32 12 6 0 0	 3 1 0 2 0 0	 6 2 0 4 0 0	T=5.35 C=7.29 Df=6 P=0.001 **S**
5	Occupation Un employee Coolie Business Private employee Govt. employee	 4 3 1 0 1	 8 6 2 0 2	 6 3 18 4 4	 12 6 36 8 8	 2 0 3 1 0	 4 0 6 2 0	T=7.34 C=22.36 Df=8 P=0.001 **S**
6	Family Income Rs.<5000/- Rs.5001-7000/- Rs.7001-9000/- Rs.9001-11000/- Rs.>11000/-	 3 4 2 0 0	 6 8 4 0 0	 10 14 9 2 0	 20 28 18 4 0	 4 1 1 0 0	 8 2 2 0 0	T=5.35 C=4.12 Df=6 P=0.43 NS
7	Type of family Nuclear Joint Extended	 5 2 2	 10 4 4	 6 25 4	 12 50 8	 4 2 0	 8 4 0	T=3.36 C=18.07 Df=4 P=0.001 **S**
8	Diet Vegetarian Non vegetarian Ova vegetarian Lacto vegetarian	 3 5 0 1	 6 10 0 2	 14 8 2 1	 28 16 4 2	 2 1 1 2	 4 2 2 4	T=5.35 C=8.24 Df=6 P=0.001 **S**

Table 3: Shows that with regard to the level of DASH diet adherence among hypertensive adults with their selected socio demographic variables

There is significant association between level of DASH diet adherence and socio-demographic variables of adults like marital status, education, occupation, type of family and diet and no significant association with age, gender, family income

4. DISCUSSION

In this study , dash adherence is taken into account, the majority of subjects, 35 (70%) had average adherence. Comparable conclusions were also found in the study was conducted by Mahmoodabad SSM, et al. (2019), who found that among pre-hypertensive people, average DASH diet compliance was 25.24%, and mild DASH diet compliance was 4.7% 9. Ru Guo, Nian (2021) revealed modified DASH diet was associated with a substantial reduction in blood pressure.[10]

5. CONCLUSION

Very few hypertensive adults, according to the current study, are aware of the DASH diet. DASH diet is quite efficient at controlling blood pressure and blood sugar, but adults must be educated to understand the significance of compliance of DASH diet.

ACKNOWLEDGEMENT

The authors would like to acknowledge the elderly participants in this research who came from rural area of Nellore

6. REFERENCES

BOOK REFERENCES

1. Burnner and Suddarth, “Medical and surgical Nursing”, 10t hEdition ,Lippincot tcompany ,Philadelphia (2004) ,pg.530to 550
2. Black.M.Joyee, “Medical and Surgical Nursing”, 7th Edition, WB Saunders company, Missouri, (2005), pg.1347 to 1348.
3. Braunwald.E, etal, “A Text book of cardio vascular medicine” 4th Edition, WB.Saunders company, Philadelphia (1992) pg.1282 to 1290.
4. 14.http://www.onefivenine.com/india /villages/Spsr-Nellore/Thotapalligudur/Kamakshi-Nagar
5. Maddock, J., Ziauddeen, N., Ambrosini, G. L., Wong, A., Hardy, R., & Ray, S. (2018). Adherence to a Dietary Approaches to Stop Hypertension (DASH)-type diet over the life course and associated vascular function: a study based on the MRC 1946 British birth cohort. *The British journal of nutrition*, *119*(5), 581–589. https://doi.org/10.1017/S0007114517003877
6. Joshi, S. R., Saboo, B., Vadivale, M., Dani, S. I., Mithal, A., Kaul, U., Badgandi, M., Iyengar, S. S., Viswanathan, V., Sivakadaksham, N., Chattopadhyaya, P. S., Biswas, A. D., Jindal, S., Khan, I. A., Sethi, B. K., Rao, V. D., Dalal, J. J., & SITE Investigators (2012). Prevalence of diagnosed and undiagnosed diabetes and hypertension in India--results from the Screening India's Twin Epidemic (SITE) study. *Diabetes technology & therapeutics*, *14*(1), 8–15. https://doi.org/10.1089/dia.2011.0243
7. Seyed Reza, S. R., Bayani, M., Zabihi, A., Shakerian, M., Habibian, T., & Bijani, A. (2019). Undiagnosed hypertension and diabetes among the elderly in Amirkola, North of Iran. *Caspian journal of internal medicine*, *10*(3), 303–308. https://doi.org/10.22088/cjim.10.3.303
8. Han, K., Yang, Y. J., Kim, H., & Kwon, O. (2020). A Modified Recommended Food Score Is Inversely Associated with High Blood Pressure in Korean Adults. *Nutrients*, *12*(11), 3479. https://doi.org/10.3390/nu12113479
9. Mahmoodabad SSM, et al. The Rate of Compliance of Prehypertension Individuals from Dietary Approaches to Stop Hypertension (DASH): An

Application of the Theory of Planned Behavior. Ann Med Health Sci Res. 2019;9:448-452

10. Ru Guo, Nian Li, Rong Yang, Xiao-Yang Liao, Yu Zhang, Ben-Fu Zhu, Qian Zhao, Lingmin Chen, Yong-Gang Zhang and Yi Lei,Corrigendum: Effects of the Modified DASH Diet on Adults With Elevated Blood Pressure or Hypertension: A Systematic Review and Meta-Analysis, Front. Nutr., 07 September 2021 | https://doi.org/10.3389/fnut.2021.725020