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Research Article

Knowledge regarding DASH diet among hypertensive patients visiting Medical indoor and outdoor departments of D. Y. Patil Hospital and research centre, Nerul, Navi Mumbai

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Abstract:

Aim: A study to assess the knowledge regarding DASH diet among hypertensive patients visiting Medical indoor and outdoor department of D. Y. Patil Hospital and research center, Nerul, Navi Mumbai.
Material and methods: The study was done in a natural setting i.e. IPD and OPD Basis of Medical wards from D.Y. Patil Hospital and Research Centre, Nerul, Navi Mumbai, a multispecialty hospital with 1500 beds. The target population were all the hypertensive patients of Navi Mumbai. Sampling technique used in this study is non-probability purposive sampling. The researchers used a self prepared "semi-structured questionnaire" for finding the knowledge of hypertensive patients regarding DASH diet.
Result: Major findings of the study are that majority of the patients affected with hypertension were between 51-60 years. Patients who are graduates were more knowledgeable than illiterates. Patients who stay in urban area were more knowledgeable than those staying in rural areas. Majority of the hypertensive patients had an average knowledge on DASH diet. But awareness regarding the amount of sodium intake and complications of hypertension was not adequate.
Conclusion: In present study we found that almost all patients had an average knowledge regarding DASH diet, findings were similar to study done by Aysha Almas, Saniya Siraj where knowledge about hypertension is linked to better control of hypertension and they have concluded that knowledge about hypertension in patients was not adequate.

Key words: DASH diet, hypertensive patients, IPD and OPD

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1. Introduction

"According to Lewis Hypertension is a common disorder characterized by sustained elevation of BP" Hypertension, also known as high blood pressure, is a long-term medical condition in which the blood pressure in the arteries is persistently elevated. High blood pressure usually does not cause symptoms. Long term high blood pressure; however is a major risk factor for coronary artery disease, stroke, heart failure, peripheral vascular disease, vision loss and chronic kidney disease.[1] The healthy Dietary Approach to Stop Hypertension (DASH) diet plan was developed to lower blood pressure without medication in research sponsored by the US National Institute of health; the first DASH diet research found that it could lower blood pressure as well as the first line blood pressure medication even with sodium intake of 3300mg/day.[2] Hypertension places stress on several organs (called target organs) including the kidney, eyes and heart causing them to deteriorate overtime, high blood pressure contributes to 75% of all strokes and heart attacks. Risk of complication or rapid progression of hypertension occur more likely in the presence of other risk factors, including significant elevation of blood pressure, increasing

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age, smoking, abnormal cholesterol, obesity, diabetes, coronary artery disease and other evidence of vascular disease. [3]

Problem statement

A study to assess the knowledge regarding DASH diet among hypertensive patients visiting the medical indoor and outdoor departments of D.Y. Patil Hospital and research Centre, Nerul, Navi Mumbai.

Assumption

1. Patients may or may not have knowledge regarding hypertension, etiological factors of hypertension, DASH diet, or food stuffs to be restricted in DASH diet and effect of DASH diet on the control of hypertension.
2. There may or may not be any association between the knowledge and selected demographics variables on patients with hypertension.

Operational definitions

Assess:

Assess refers to response of hypertensive patients on knowledge related to therapeutic diet.

Knowledge:

Knowledge refers to the awareness of the patients with hypertension in relation to foodstuff to be included, avoided and restricted.

Dash diet:

DASH diet is an eating plan designed to control the blood pressure. DASH is an acronym for "Dietary Approaches to Stop Hypertension." It is a combination of fruits, vegetables, low fat dairy products and low in saturated and total fat. It is low in cholesterol, high in dietary fiber, potassium, calcium and magnesium, and moderately high in protein.

Hypertension:

In this study the meaning of hypertension is when the blood pressure is higher than its normal range (120/80mmHg).

2. Materials and method

Research approach

The research approach is Descriptive.

Research design

Non –Experimental Interview method of exploratory nature.

Setting of study

The study was done in a natural setting i.e. IPD's and OPD's of Medical wards of D.Y.Patil Hospital and Research Centre, Nerul, Navi Mumbai, a multispecialty hospital with 1500 beds.

Population of the study

Target population:

The target populations were all the hypertensive patients of Navi Mumbai.

Accessible population:

The accessible populations were hypertensive patients admitted in the medical IPD and visiting the OPD's of D. Y. Patil Hospital and Research Centre, Nerul, Navi Mumbai

Sampling

Sampling technique:

Sampling technique used in this study is non-probability purposive sampling.

Sample size:

The sample size consists of 100 hypertensive patients admitted in the medical IPD and visiting OPD 's of D.Y. Patil hospital, Nerul.

Criteria for sample selection

Inclusion criteria:

a) Hypertensive patients admitted in the medical IPD or visiting OPD 's of D.Y. Patil hospital, Nerul.
b) Patients only with hypertension.
c) Patients between the age group of 25-75years.
d) Both male and female patients were included

Exclusion criteria:

a) Patients below 25 and above 75years.
b) Pregnant women.
c) Patients who are not willing to participate in this study.
d) Patients with diabetes or other diseases.

Tools for data collection

The researchers used a self prepared "semi-structured questionnaire" to find the knowledge of hypertensive patients regarding DASH diet.

The semi-structured questionnaire was divided into:

- Section 1: Demographic data
- Section 2: Knowledge regarding hypertension
- Section 3: Knowledge regarding DASH diet

All questions were compulsory. Each question carries 1 mark. Maximum marks are 19. According to qualitative scale the marks were divided into following categories:

- 0-5=poor
- 6-10=average
- 11-15=good

- 16-19=very good

Validation process
Content validity:

The face validity and content validity of tool was done by 10 experts in the field. Certain changes were made on the questionnaire based on the suggestions and recommendations of the experts.

Pilot study
Pilot study was done on 10 hypertensive patients of IPD and OPD of Medical Department from D.Y. Patil Hospital, Nerul to assess the feasibility of the study. No modifications were made after the pilot study. The data collection was done in March 2016. Analysis and interpretation of data was done by using frequency and percentage.

3. **Result**
Data analysis and interpretation
The data was analysed and the findings were summarized to draw conclusions about the findings. According to the section from the questionnaire, the data was analysed and interpreted with the help of frequency and percentage.

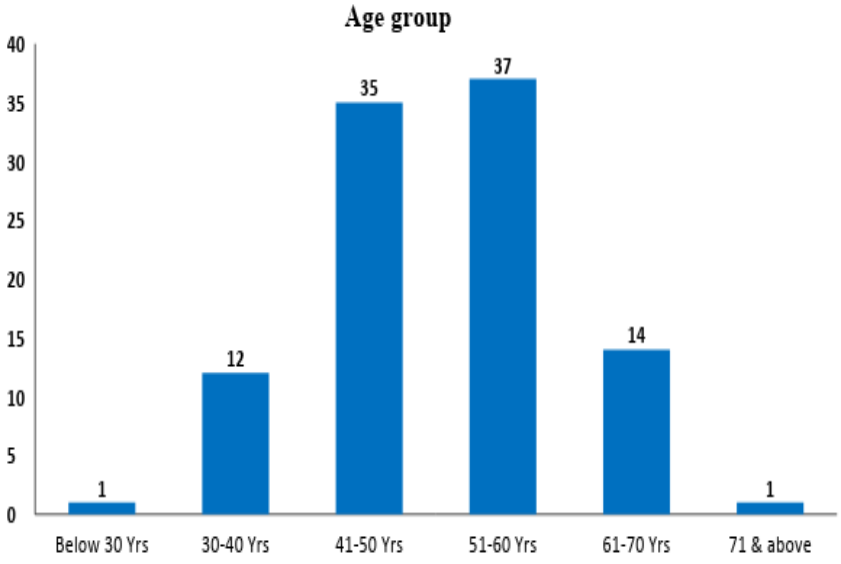


Figure: 1 Age group of patients.

Interpretation: Out of 100 patients 37% were between the age group of 51-60 years, 35% were between the age group of 41-50 years, 14% were between the age group of 61-70 years, 12% were between the age group of 30-40 years and 1% belonged to the age group of below 30 years and above 71 years respectively.

Gender

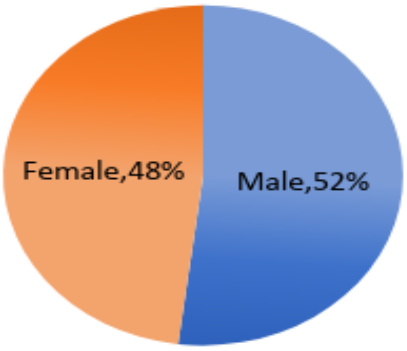
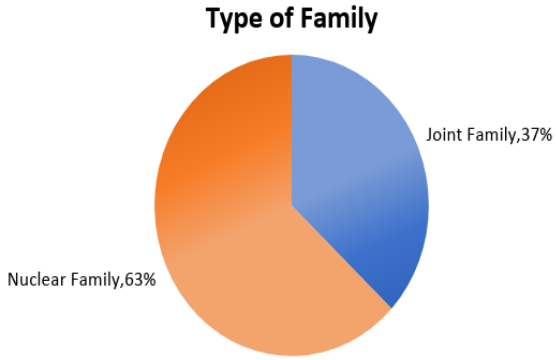


Figure: 2 Gender of the patients.

Interpretation: Among 100 patients 52% were male and 48% were female.



Residence

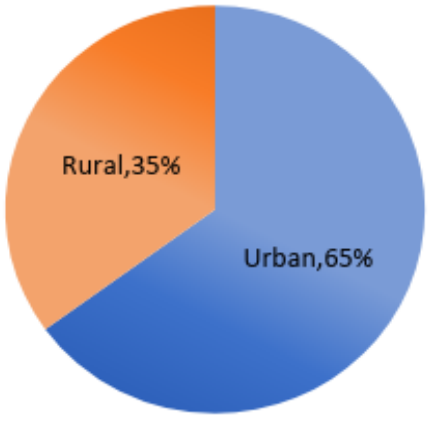


Figure: 4 Area of residence of patients.

Interpretation: Among 100 patients who participated in the study 65% resided in urban area and 35% resided in the rural area.

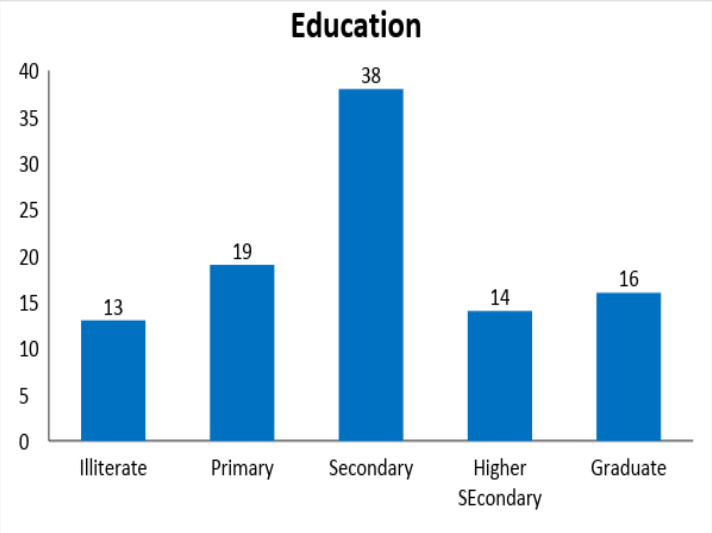


Figure: 5 Educational qualification of the patients.

Interpretation: Among 100 patients 38% completed secondary education, 19% completed primary education, 16% patients were graduates, 14% have done higher secondary education and 13% of patients were illiterates.

Employment status

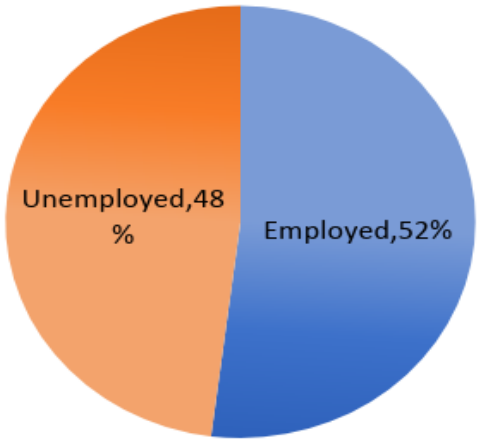


Figure: 6 Occupation of patients.

Interpretation: Among 100 patients 52% were employed and 48% were unemployed.

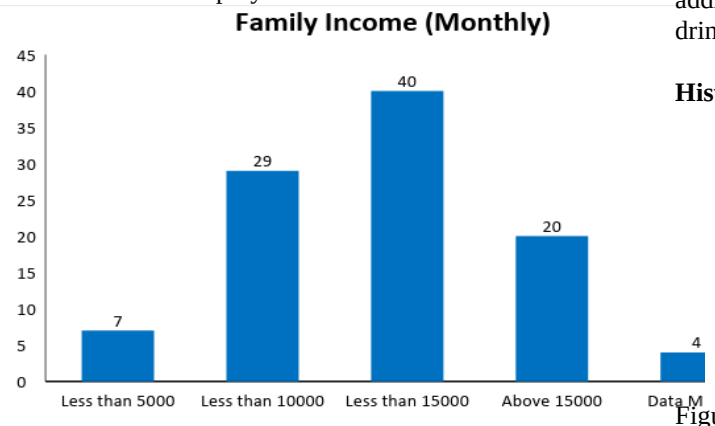


Figure: 7 Monthly family income of the patients.

Interpretation: Among 100 patients about 40 % patients have a monthly income of <=15000/- and 7% patients have a monthly income of <= 5000/-.

Type of Diet

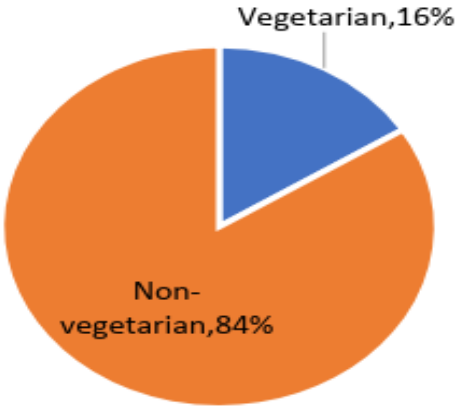


Figure: 8 Food habits of patients.

Interpretation: Out of 100 patients 84% were non-vegetarian and 16% were vegetarian.

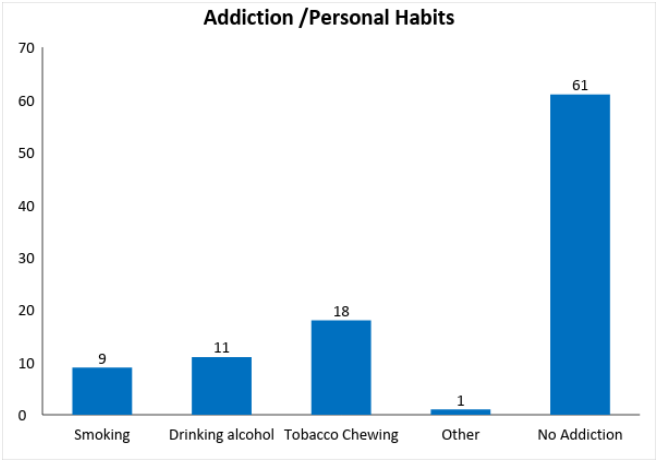


Figure: 9 Personal habits of the patients.

Interpretation: Among 100 patients' majority (61%) of the patients were not addicted to any substance, 18% were addicted to tobacco, 11% were addicted to habits of alcohol drinking, 9% of patients had the habit of smoking.

History of Hypertension in Family

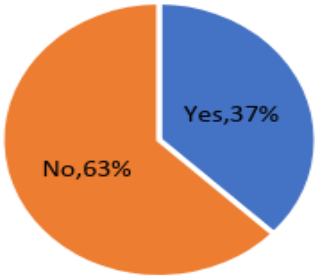


Figure: 10 Family history of hypertension.

Interpretation: Out of 100 patients 63% patients did not have a family history of hypertension, whereas 37% patients had a family history of hypertension.

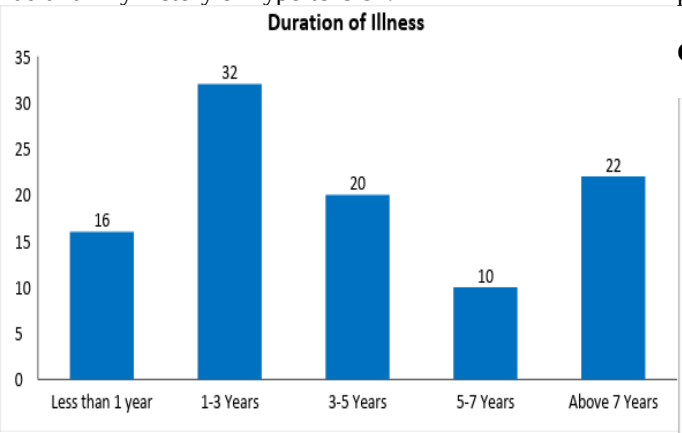


Figure: 11 Duration of illness of patients.

Interpretation: -Among the 100 patients assessed 32% had hypertension for 1-3 years, 22% had hypertension for more than 7 years and 16% had hypertension for less than 1 year.

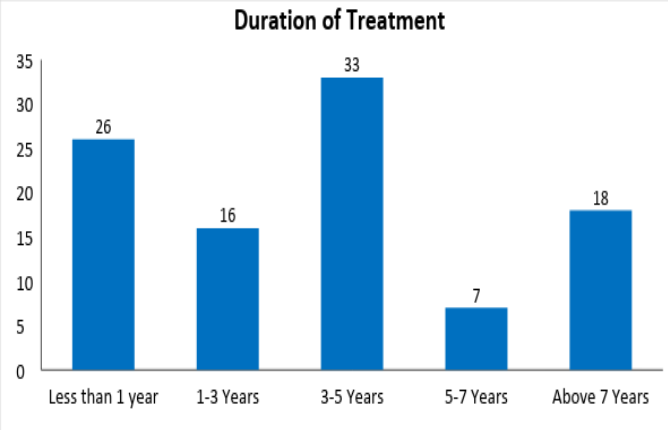


Figure: 12 Duration of treatment of the patients.

Interpretation: Among 100 patients 33% had 3-5 years of treatment for hypertension, 7% had 5-7 years of treatment.

Religion

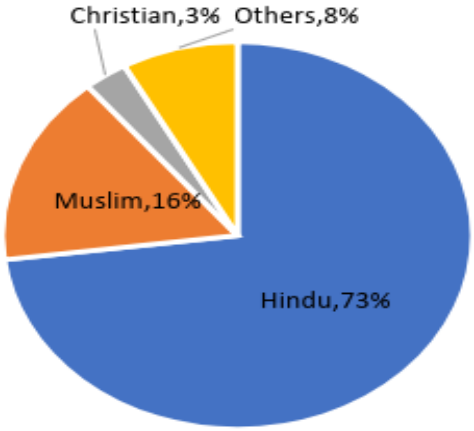


Figure: 13 Religion of the patients.

Interpretation: Out of 100 patients 73% patients were Hindus, 16% were Muslims, 3% were Christians and 8% patients from other religions.

Co-relation of knowledge score with demographic data

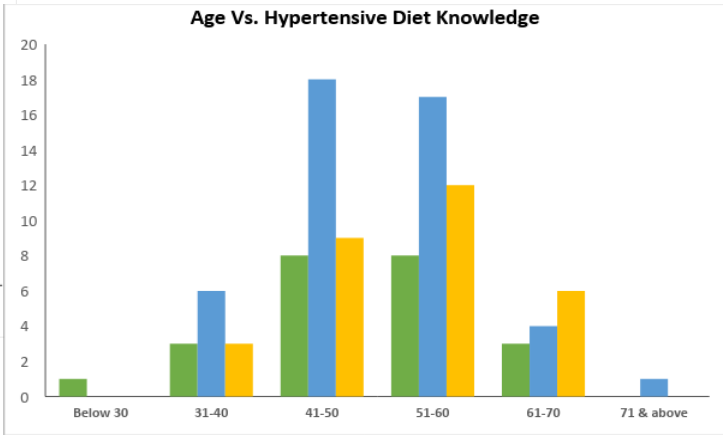


Figure: 14 Co-relation between age and knowledge on DASH diet.

Interpretation: Out of 100 patients 30% patients had good knowledge on diet, 45% patients had an average knowledge on diet and 23% patients had a poor knowledge.

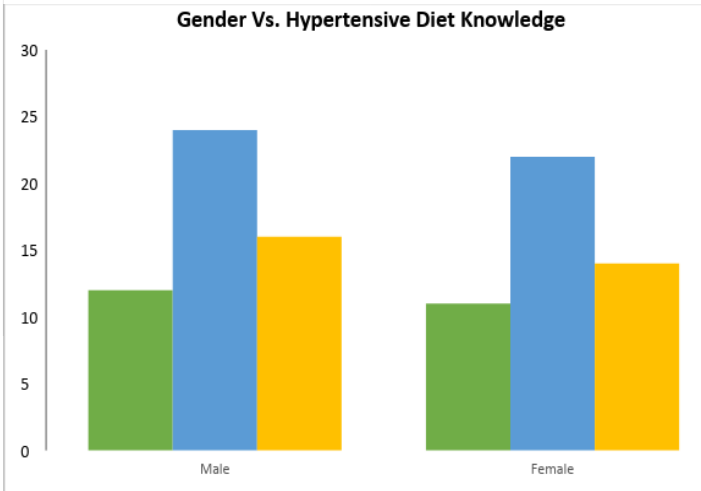


Figure: 15 Co-relation between gender and knowledge on DASH diet.

Interpretation:

- Out of 52% male patients 16% of patients had good knowledge, 24% patients had average knowledge and 12% of patients had poor knowledge.
- Out of 48% females 14% had good knowledge, 22% had an average knowledge and remaining 11% had poor knowledge on DASH diet.

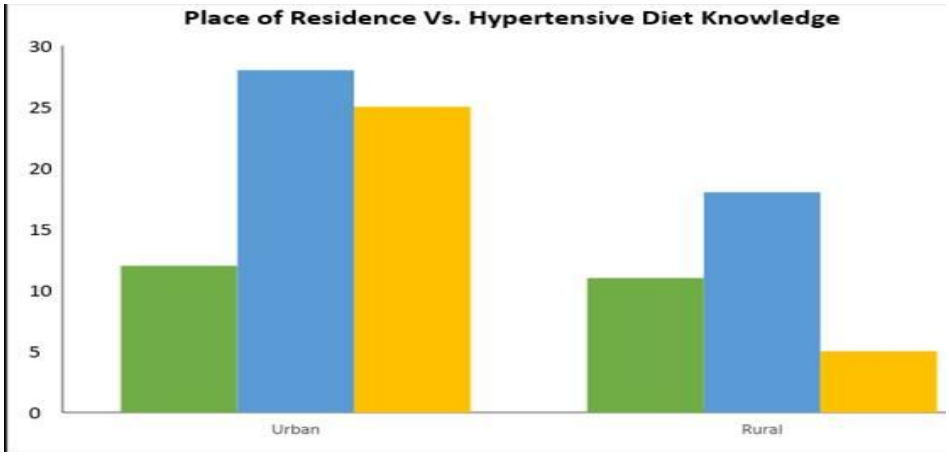


Figure: 16 Co-relation between the place of residence and knowledge on DASH diet.

Interpretation: Patients from urban area: 28% patients had average knowledge, 25% had good knowledge and 12% patients had poor knowledge on DASH diet.

Patients from rural area: 18% patients had average knowledge; 5% patients had good knowledge and 11% patients had poor knowledge on DASH diet.

The patients who are living in urban areas had more knowledge on DASH diet than patients living in rural areas.

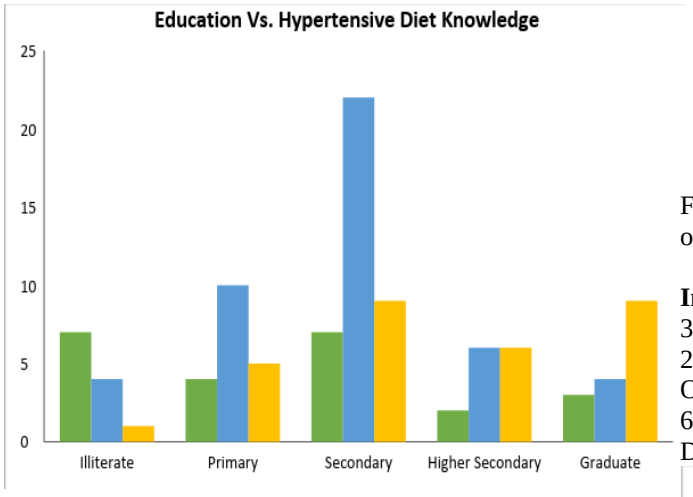


Figure: 17 Co-relation between education and knowledge on DASH diet.

Interpretation: Among the 38% of patients with secondary education, 22% had an average knowledge, 9% had good knowledge and only 7% patients had poor knowledge on DASH diet. Among the 19% of patients with primary education 10% have average knowledge, 5% have good knowledge and 4% have poor knowledge on DASH diet. Among the 19% of graduates 9% had good knowledge, 4% had average knowledge and 3% had poor knowledge on DASH diet.

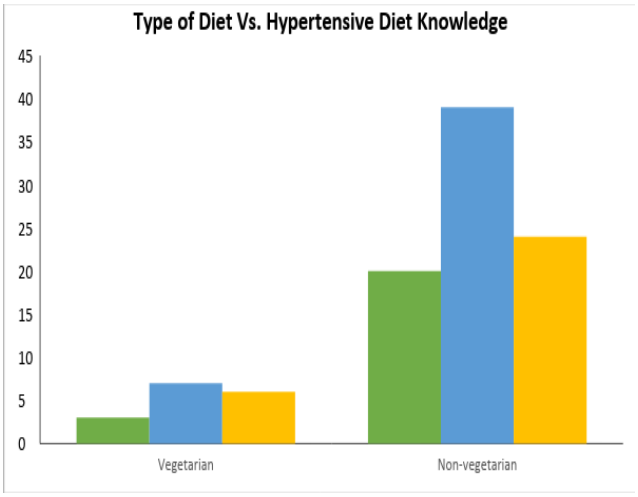


Figure: 18 Co-relation between type of diet and knowledge on DASH diet.

Interpretation: Among 83% of non-vegetarian patients 39% had average knowledge, 24% had good knowledge and 20% had poor knowledge on DASH diet.

Out of 16% of vegetarian patients 7 had average knowledge, 6 had a good knowledge and 3 had poor knowledge on DASH diet.

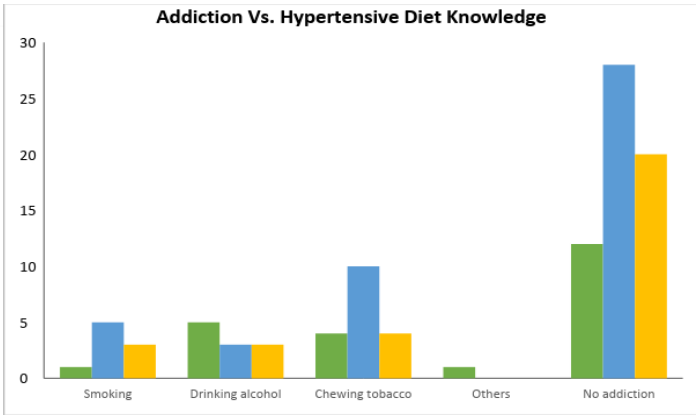


Figure: 19 Co-relation between the addiction and knowledge on DASH diet.

Interpretation: Out of 60 non-addicted patients 28 had an average knowledge, 20 had good knowledge and 12 had poor knowledge on DASH diet.18 patients with habit of tobacco chewing 10 had average knowledge and 4 had good and poor knowledge of DASH diet respectively.

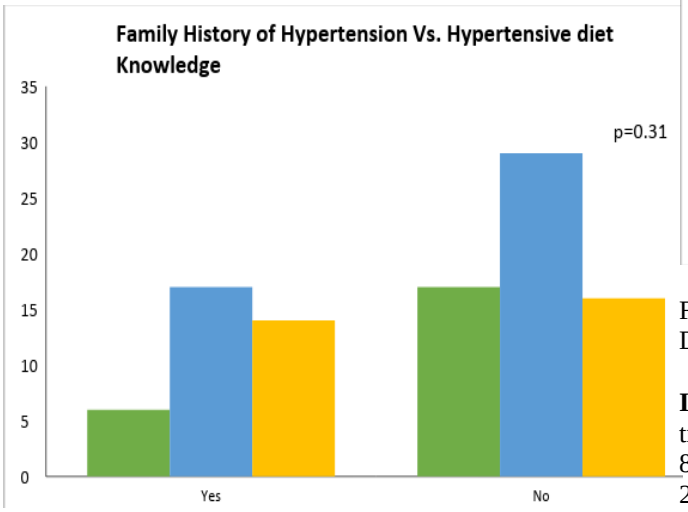


Figure: 20 Co-relation between family history of hypertension and knowledge on DASH diet.

Interpretation: Among 62% patients with no family history of hypertension 29% had an average knowledge, 17% had poor knowledge and 16% had good knowledge on DASH diet.

Out of 37% patient's family history of hypertension 17% had average knowledge, 14% had good knowledge and 6% had poor knowledge on DASH diet.

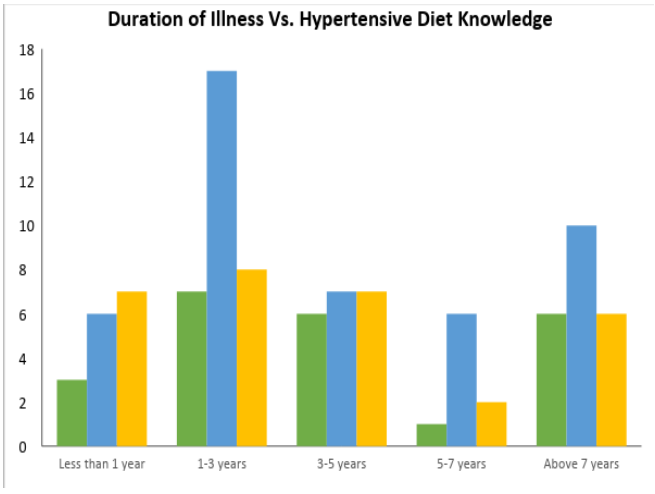


Figure: 21 Co-relation between the duration of illness and knowledge on DASH diet.

Interpretation: Out of 32% patients with duration of illess1-3 years 17% had an average knowledge, 8% had good knowledge and 7% had poor knowledge of DASH diet. 22 patients with duration of illness more than 7 years 10 had average knowledge and 6 had good and poor knowledge of DASH diet respectively.

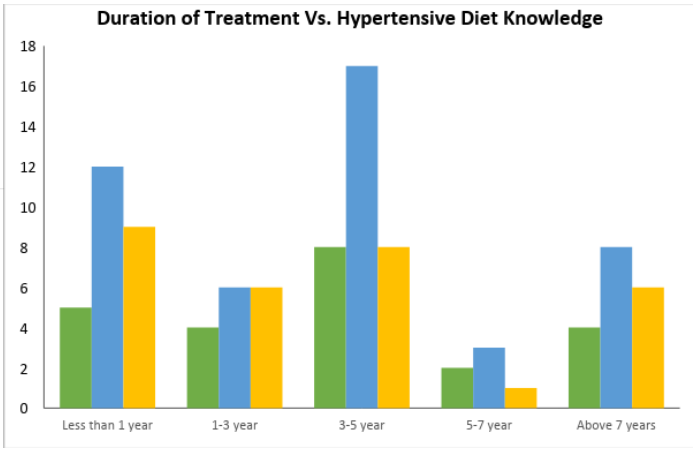


Figure: 22 Co-relation between duration of treatment and DASH diet knowledge.

Interpretation: Among 33% patients with 3-5 years of treatment 17% had an average knowledge, 8% had good and 8% had poor knowledge on DASH diet respectively. Out of 26% patients with treatment less than 1 year 12% had average knowledge, 9% had good knowledge and 5% had poor knowledge.

Out of 18% patients with treatment for more than 7 years 8% had average knowledge, 6% had good knowledge and 4 had poor knowledge.

4. Discussion

Regarding Prevalence and awareness about Hypertension. A study done by Johnston BC, Walsh M and others found that about 33% urban and 25% rural Indians have Hypertensive. Hypertension (HTN) exerts a substantial public health burden on cardiovascular health status and healthcare systems in India [3]. HTN is directly responsible for 57% of all stroke deaths and 24% of all coronary heart disease (CHD) deaths in India [4]. In our study we found that 65% of patients belong to urban area, and remaining 35% of patients are from rural area. The WHO rates HTN as one of the most important causes of premature death worldwide [5] our finding was very similar to the study by Tanu Midha, Bholanath and Ranjeeth Kumari, and others who reported that prevalence of hypertension is significantly higher in the urban population of India compared to the rural. Majority of patients 37% fall in between the age group of 51-60 years of age. This finding was supported by a study Gannar H. Ander Sod Jr. which reported that increased age is associated with a significant increase in the prevalence of hypertension above 50 years of age. About 18% of patients from present study were tobacco chewers and 11% of patients were addicted to alcohol and 9% of patients had the habit of smoking. Study done by L. Kannan and T. S. Satyamoorthi reported that alcohol, smoking, chewing tobacco found to have association. The Global and Regional Burden of Disease and Risk Factors study (2001), in a systematic analysis of population health data for attributable

deaths and attributable disease burden, has ranked HTN in south Asia as second only to child underweight for age [6]. In present study we found that almost all patients had average knowledge regarding DASH diet, findings were similar to study done by Aysha Almas, Saniya Siraj where knowledge about hypertension is linked to better control of hypertension and they have concluded that knowledge about hypertension in patients was not adequate. In present study 52% of male and 48% of females suffered from the hypertension. But the study done by L. Kannan and T. Satyamoorthy found that the prevalence rate of hypertension was higher among the females as compared to males. According to the WHO 2008 estimates, the prevalence of raised BP in Indians was 32.5% (33.2% in men and 31.7% in women) [7]. Patients from the urban area were knowledgeable about the DASH diet as compared to people from the rural area. Study revealed that the Graduate patients have good knowledge regarding DASH diet.

Conclusion

Mass media plays a vital role in providing information the maximum sample in our study had adequate knowledge regarding DASH diet.

Implication of the study

Hypertension has reached epidemic proportions world-wide as we enter the new millennium. Along with rising economy disease of affluence are growing. More studies are needed to bring out an effective preventive intervention. The finding of the present study may be helpful for such future studies. In this context the finding of the study has valuable implication towards nursing education, administration and research.

Reference

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