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A Descriptive Study to Assess the Knowledge, Attitude and Compliance towards the Management of Hypertension among Patients with Hypertension in Medicine OPD at a selected Hospital of Delhi with a view to provide Health Education for Management of Hypertension.

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Abstract:*A descriptive study was conducted to assess the Knowledge, Attitude and Compliance towards the management of Hypertension among patients with hypertension in Medicine OPD at a selected hospital of Delhi with a view to provide Health Education for management of Hypertension. Objectives of the study were: To assess the patient's knowledge, attitude and compliance towards the management of hypertension among hypertensive patients attending medicine OPD, to determine the association between knowledge and selected demographic variables among hypertensive patients attending medicine OPD, to determine the association between attitude and selected demographic variables among hypertensive patients attending medicine OPD, to determine the association between compliance and selected demographic variables among hypertensive patients attending medicine OPD. A total of 200 samples were obtained through non-probability purposive sampling technique. Structured knowledge questionnaire, structured attitude rating scale and structured compliance checklist were administered followed by health education provided to them in groups on management of hypertension. After compilation and analysis of data, findings revealed that the mean knowledge score of hypertensive patients on management of hypertension with the standard deviation was 9.71±3.15, the mean attitude score of hypertensive patients on management of hypertension with the standard deviation was 25.125± 4.86 and the mean compliance score of hypertensive patients on management of hypertension with the standard deviation was 5.9±1.559. Findings also revealed that there exist significant association between knowledge of patients with selected demographic variable such as education, type of family, duration of illness and health habits at the 0.05 level of significance, there exist a significant association between attitude of patients with selected demographic variable such as addictions at the 0.05 level of significance. There exist a significant association between compliance score of patients with selected demographic variable such as educational status and monthly family income at the 0.05 level of significance. Out of all the demographic variables; age, gender, occupation and family history were not associated with any of these research variables such as knowledge, attitude and compliance.*

Background:*Hypertension has attained epidemic proportions worldwide and significantly participates to the burden of heart disease, stroke, kidney failure, disability, and premature death. It is evaluated that about 17 million deaths occur worldwide because of cardiovascular diseases (CVDs) every year, of which complications of hypertension alone account for 9.4 million deaths. In spite of the fact that the rate of hypertension is rising in the developed countries such in the USA, the rate of increase is faster in many low and middle-income countries.[1]Hypertension is called a "silent killer". Most people with hypertension are ignorant of the problem as it may have no warning signs or symptoms.[2]*

Materials and Methods: *In this descriptive survey design study, 200 patients suffering from hypertension belonging to age group ≥21 years, on antihypertensive medicationattending the OPD of a government hospital is selected. Tool consisting of consent form, demographic variables, structured knowledge questionnaire, structured attitude rating scale and structured compliance checklist was administered to the subjects and got filled by paper pencil method.Knowledge scores, attitude scores and compliance scores were compared and association of knowledge attitude and compliance with the selected demographic variables was determined.*

Results:*The Mean knowledge Score of hypertensive patients on management of hypertension was 9.71 with the Standard Deviation of 3.15 and Median was 9, indicating the poor knowledge level among patients on management of hypertension.The Mean attitude Score of hypertensive patients on management of hypertension*

was 25.125 with the Standard Deviation of 4.86 and Median was 25, indicating the neutral attitude among patients towards management of hypertension.The mean compliance score of hypertensive patients on management of hypertension was 5.9 with the standard deviation of 1.559 and median was 6, indicating the moderate level of compliance among patients towards management of hypertension.
There exist significant association between knowledge of patients with selected demographic variable such as education, type of family, duration of illness and health habits at 0.05 level of significance as the calculated chi square value was greater than the table value.There exist significant association between attitude of patients with selected demographic variable such as addictions at 0.05 level of significance as the calculated chi square value was greater than the table value.There exist significant association between compliance of patients with selected demographic variable such as educational status and monthly family income at 0.05 level of significance as the calculated chi square value was greater than the table value.
Conclusion: *The findings revealed that the hypertensive patients had poor level of knowledge regarding management of hypertension. There was neutral attitude and moderate level of compliance in hypertensive patients. If the knowledge regarding hypertension will be improved, it will have positive effects on attitude and compliance. Educational status turned out to be the most influential factor among all as it shows association with knowledge and compliance both. Educational status and monthly family income have association with the compliance of hypertensive patients. Addiction is also an important factor in shaping the attitude of a hypertensive patient regarding its management.*
Key Word: *Hypertension; Knowledge; Attitude; Compliance.*

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My acknowledgement would be incomplete without thanking the biggest source of my strength, my father, mother and brother. Their precious time and consistent support helped me to complete this project.
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I. Introduction

Hypertension is one of the most pressing public health challenges. It is recognized as the biggest contributor to the global burden of disease. World-wide, in 2015, 1.13 billion adults had elevated blood pressure (defined as systolic blood pressure [SBP] of 140 mm Hg or higher or diastolic blood pressure of 90 mm Hg or higher). In 2015, more than 19% of all deaths were linked to raised SBP (>115 mm Hg).[3]Hypertension is currently the biggest single contributor to death around the world. Raised BP represents a significant risk factor for CV disorders, such as coronary heart disease, heart failure, stroke, peripheral artery disease and renal failure, in adults. Worldwide, 7.6 million premature deaths (13.5 % of all premature deaths) have been attributed to high BP.[4]The global burden of hypertension has been growing over time, largely driven by population growth, changes in lifestyle, and aging. The number of adults with raised blood pressure (defined as SBP of 140 mm Hg or higher or diastolic blood pressure of 90 mm Hg or higher) expanded from 594 million in 1975 to 1.13 billion in 2015, with the rise mostly in low- and middle-income countries. Approximately 75% of people with hypertension (1.04 billion) reside in low- and middle-income countries. Likewise, deaths from elevated SBP grew by an average of 1.6% per year between 1990 and 2015. When stratified by developmental status as measured by the socio-demographic index, countries with lower developmental status showed greater increases in the number of deaths linked to elevated SBP than the most developed countries. The highest percent increase mortality related to raised SBP between 1990 and 2015 happened in low-middle countries (107%).[3]

II. Materials and Methods:

This descriptive survey design study was carried out on patients of Department of General Medicine at Aruna Asaf Ali Government Hospital, Civil Lines, New Delhi from 19 February 2020 to 29 February 2020. A total of 200 adult subjects(both male and females), taking antihypertensive medications, of aged ≥21 years were included in the study.

Study Design: Descriptive Survey Design
Study Location: This study was performed in the Medicine OPD of a tertiary care providing hospital functioning under government of Delhi, Aruna Asaf Ali Government Hospital.
Study Duration:19 February 2020 to 29 February 2020
Sample Size:200 Hypertensive patients

Sample Size Calculation:200 study subjects were included in the study considering the estimated population of 1000 with the margin of error 5% and confidence interval 95%.

Subject and Selection Method: The sample of the present study consisted of hypertensive patients attending Medicine OPD of a selected hospital of Delhi. Sampling technique adopted for the present study was non probability purposive sampling.

Inclusion criteria:

1. Patients diagnosed with hypertension.
2. Patients aged more than 21 years.
3. Patients prescribed with anti-hypertensive drugs.

Exclusion criteria:

1. Mentally challenged patients and pregnant women.
2. Patients who were not willing to participate.

Procedure methodology

After written informed consent was obtained, a well-designed tool was used to collect the demographic as well as the knowledge, attitude and compliance of hypertensive patients regarding the management of hypertension of the study subjects.The tool was developed with the help ofReview of literature, Opinion of experts, Informal discussions with experts and peer groups, Discussions with guide and co- guide and Personal experience of the researcher.

The tool included the sociodemographic characteristics such as age, gender, educational status, occupation, family type, duration of illness, health habits, addictions, family history of illness and family income.

The patients were handed out the tool. The demographic characteristics were being entered by the patients

The knowledge of patients was assessed using the structured knowledge questionnaire in which each item had one correct answer and score of one (1) was awarded to correct response and zero (0) was given to each incorrect response. Total score of knowledge questionnaire was 30.Scoring: 0-10 (Poor),11-20 (Average),21-30 (Good).

Structured attitude rating scale was prepared to assess the attitude of hypertensive patients towards the hypertension management. Each item had five responses which had markings from 0 to 4 i.e. 0, 1, 2, 3, 4

In negative statements questions like **1, 4, 5, 7** reverse the scores like **0 = 4, 1 = 3, 2 = 2, 4 = 0**. Addition of scores is required for each item to get total.Individual scores on this scale can range from 0 to 40, with higher scores indicating positive attitude regarding hypertension management.

- Scores ranging from **0 to 13** would be considered **negative attitude**
- Scores ranging from **14 to 26** would be considered **neutral attitude**
- Scores ranging from **27 to 40** would be considered **positive attitude**

Structured compliance checklist was prepared to assess the compliance of hypertensive patients towards hypertension management.Compliance testing checklist was made from researcher's personal experience, review of literature, opinions of experts and help of guides.

It consisted of 10 items. All the items are formed by the help of medication adherence rating scale and self-experience of researcher. For every correct response score of one (1) and for every incorrect response score of zero (0) was given.

Scoring:

- 0-3: Low Compliance
- 4-7: Moderate Compliance
- 8-10: Good Compliance

Statistical analysis

Data was analysed manually. The data analysis was done using both descriptive and inferential statistics. The frequency and percentage distribution of socio-demographic characteristics were analysed. TheFrequency and Percentage distribution of hypertensive patients according to level of knowledge, attitude and level of compliance was calculated. Mean, Median and Standard Deviation ofknowledge scores, attitude scores and compliance scores were calculated of hypertensive patients.

Contingency tables were made. Chi square was used to establish the association between the knowledge, attitude and compliance of hypertensive patients on management of hypertension with selected demographic variables. Chi square is a non-parametric test designed to analyze the association between independent and dependent variables as chi square is robust with respect to the distribution of data. The level $p \leq 0.05$ was considered as the cutoff value or significance.

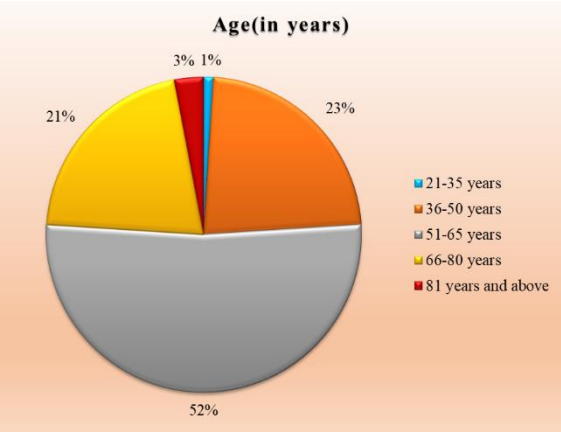
III. Result

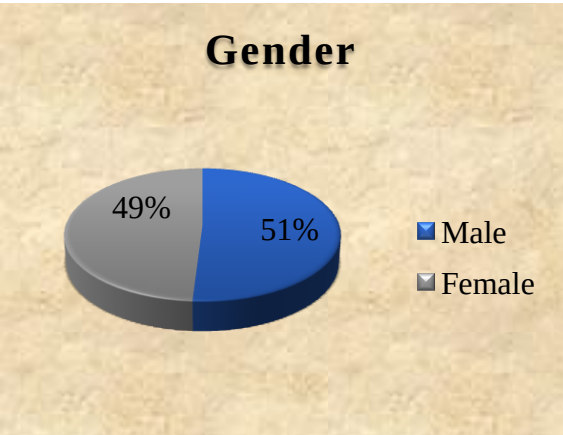
FINDINGS RELATED TO DEMOGRAPHIC CHARACTERISTICS OF SAMPLE

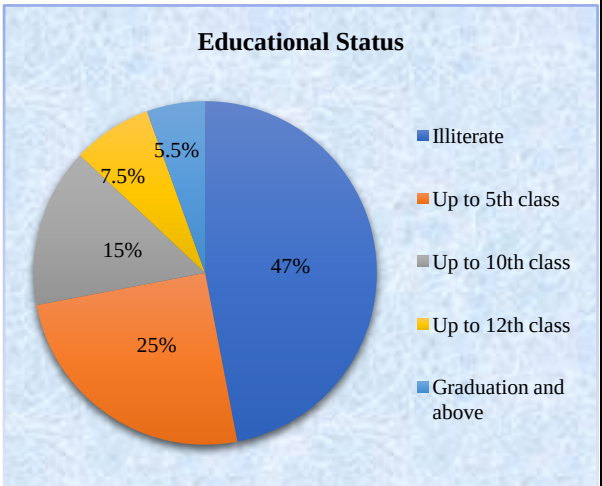
Table no 1(a) depicts the findings related to the frequency distribution of demographic characteristics of the sample.

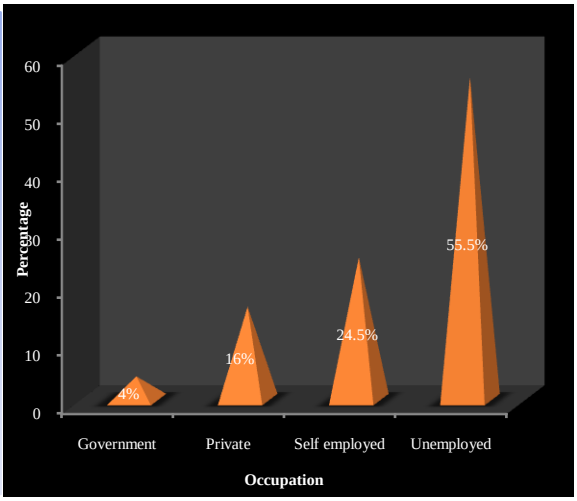
N=200

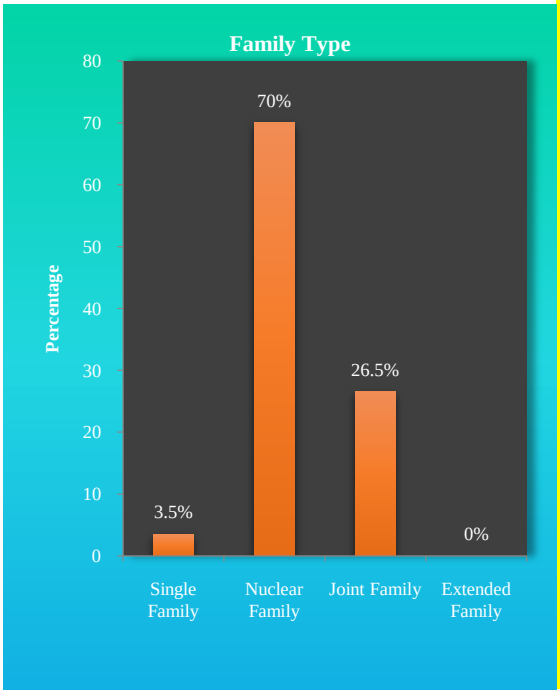
S. No.	Sample Characteristics	Frequency (f)	Percentage (%)
1.	Age (in years)		
	21-35	2	1%
	36-50	46	23%
	51-65	104	52%
	66-80	42	21%
	81 and above	6	3%
2.	Gender		
	Male	102	51%
	Female	98	49%
3.	Educational Status		
	Illiterate	94	47%
	Up to 5^{th} class	50	25%
	Up to 10^{th} class	30	15%
	Up to 12^{th} class	15	7.5%
	Graduation and above	11	5.5%
4.	Occupation		
	Government	8	4%
	Private	32	16%
	Self employed	49	24.5%
	Un-employed	111	55.5%
5.	Family Type		
	Single Family	7	3.5%
	Nuclear Family	140	70%
	Joint Family	53	26.5%
	Extended Family	0	0%
6.	Duration (In Years)		
	<1 year	44	22%
	1-5 years	98	49%
	5-10 years	42	21%
	>10 years	16	8%
7.	Health Habits		
	Exercise	1	0.5%
	Salt-Restricted	167	83.5%
	Both	30	15%
	None	2	1%
8.	Addiction		
	Alcohol	7	3.5%
	Smoking	25	12.5%
	Both	3	1.5%
	Others	24	12%
	Nil	141	70.5%
9.	Family History		
	Parents	22	11%
	Siblings	16	8%
	Both	4	2%
	No History	158	79%
10.	Income (in Rupees)		
	Less than 10000	55	27.5%
	10000-30000	130	65%
	31000-50000	11	5.5%
	51000 and Above	4	2%

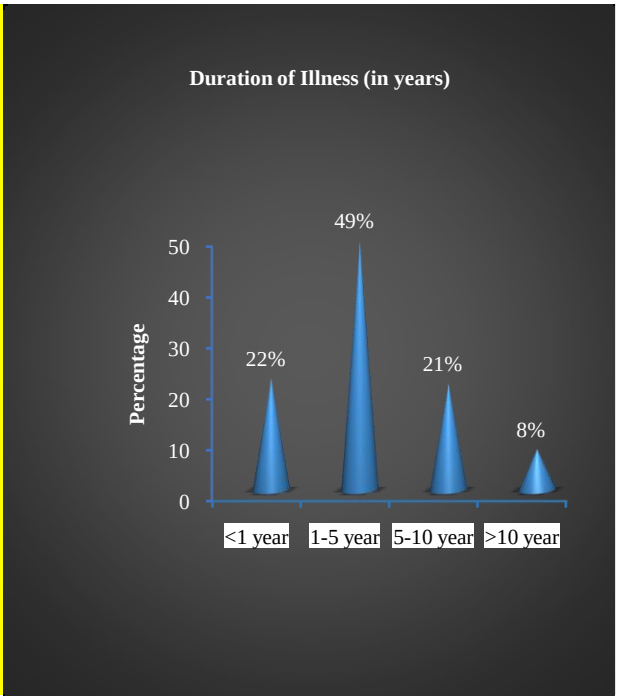

Age(in years)
3%
1%
21%
23%
52%
21-35 years
36-50 years
51-65 years
66-80 years
81 years and above

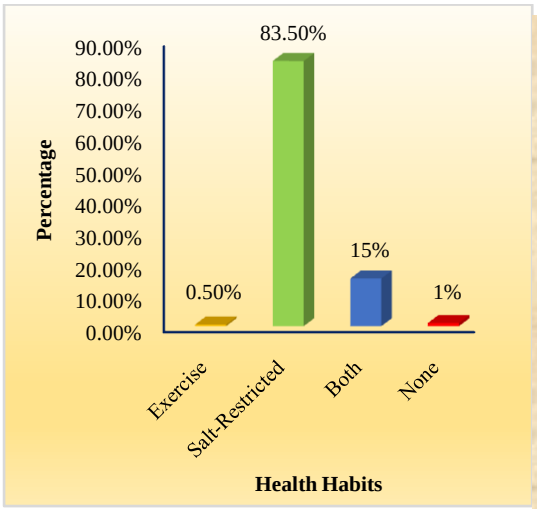

Gender
49%
51%
Male
Female

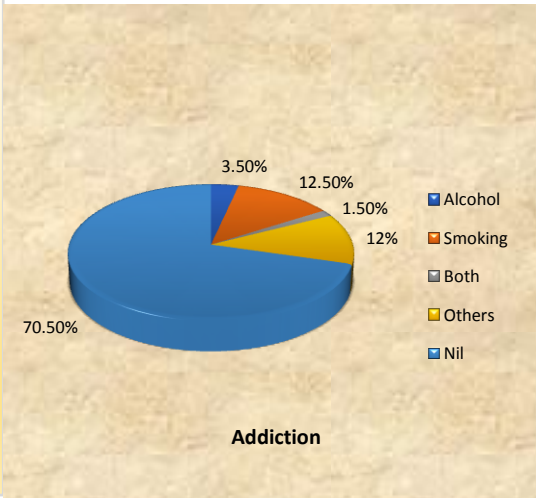

Educational Status
5.5%
7.5%
15%
47%
25%
Illiterate
Up to 5th class
Up to 10th class
Up to 12th class
Graduation and above

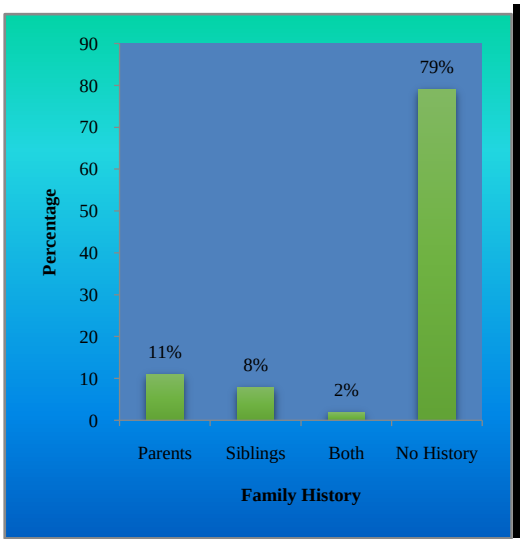

Percentage
60
50
40
30
20
10
0
4%
16%
24.5%
55.5%
Government
Private
Self employed
Unemployed
Occupation

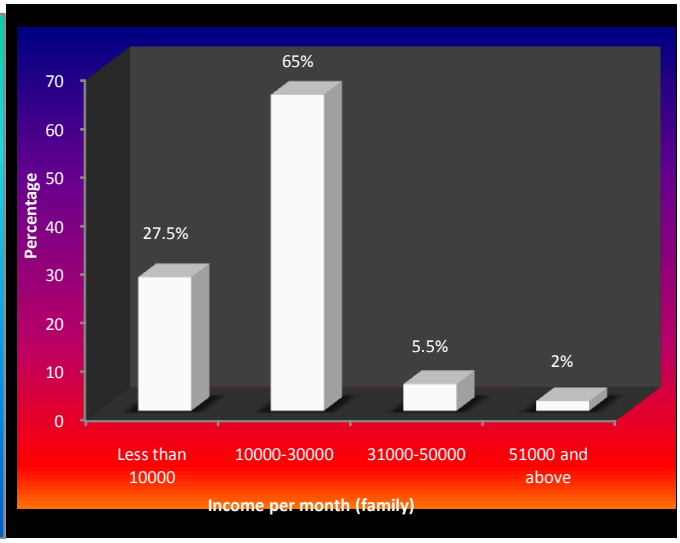

Family Type
Percentage
80
70
60
50
40
30
20
10
0
3.5%
70%
26.5%
0%
Single Family
Nuclear Family
Joint Family
Extended Family


Duration of Illness (in years)
Percentage
50
40
30
20
10
0
22%
49%
21%
8%
<1 year
1-5 year
5-10 year
>10 year





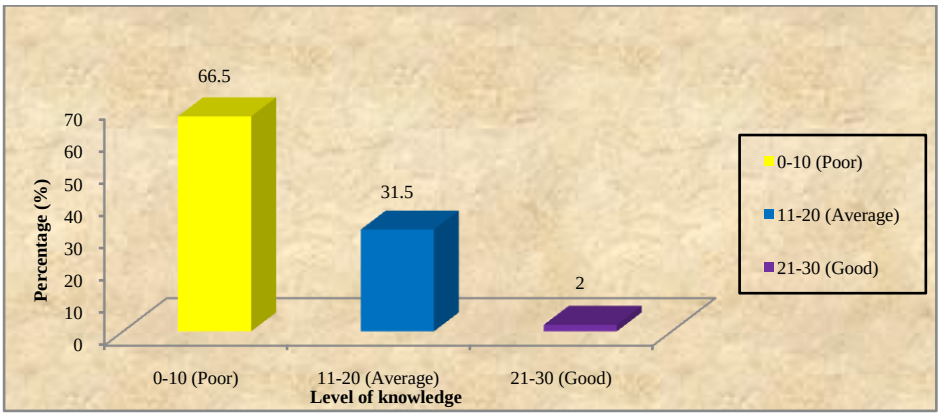




FINDINGS RELATED TO KNOWLEDGE OF PATIENTS ON HYPERTENSION MANAGEMENT

N=200

S. NO.	RANGE OF SCORE	LEVEL OF KNOWLEDGE	FREQUENCY(f)	PERCENTAGE (%)
1.	0-10	Poor	133	66.5%
2.	11-20	Average	63	31.5%
3.	21-30	Good	4	2%



Majority of the samples i.e. 133 (66.5%) had poor knowledge on management of hypertension, 63 (31.5%) had average knowledge and least i.e. 4 (2%) patient had good knowledge on management of hypertension.

Mean, Median and Standard Deviation of Knowledge Score of Hypertensive Patients

N=200

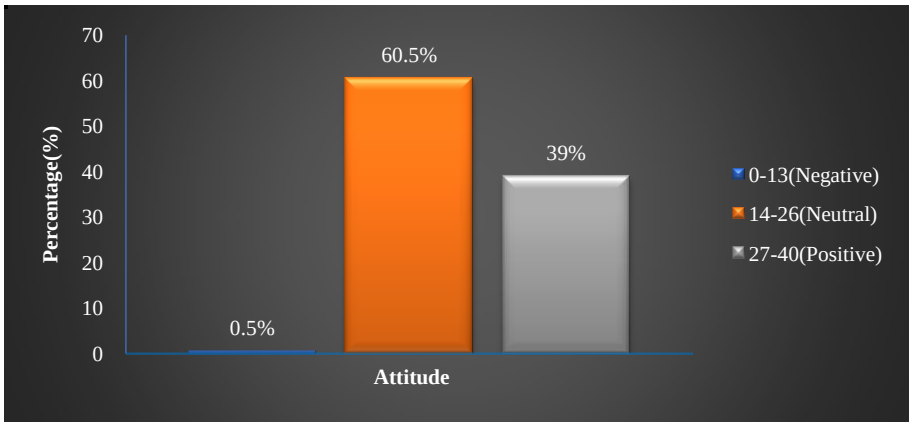
Variable	Mean	Median	Standard deviation
Knowledge	9.71	9	3.15

The Mean knowledge Score of hypertensive patients on management of hypertension was 9.71 with the Standard Deviation of 3.15 and Median was 9, indicating the poor knowledge level among patients on management of hypertension.

FINDINGS RELATED TO ATTITUDE OF HYPERTENSIVE PATIENTS TOWARDS MANAGEMENT OF HYPERTENSION

N=200

S. NO.	RANGE OF SCORE	ATTITUDE	FREQUENCY(f)	PERCENTAGE (%)
1.	0-13	Negative	1	0.5%
2.	14-26	Neutral	121	60.5%
3.	27-40	Positive	78	39%



Majority of the samples i.e. 121 (60.5%) had neutral attitude on management of hypertension, 78 (39%) had positive attitude and least i.e. 1 (0.5%) patient had negative attitude towards management of hypertension.

Mean, Median and Standard Deviation of Attitude Score of Hypertensive Patients

N=200

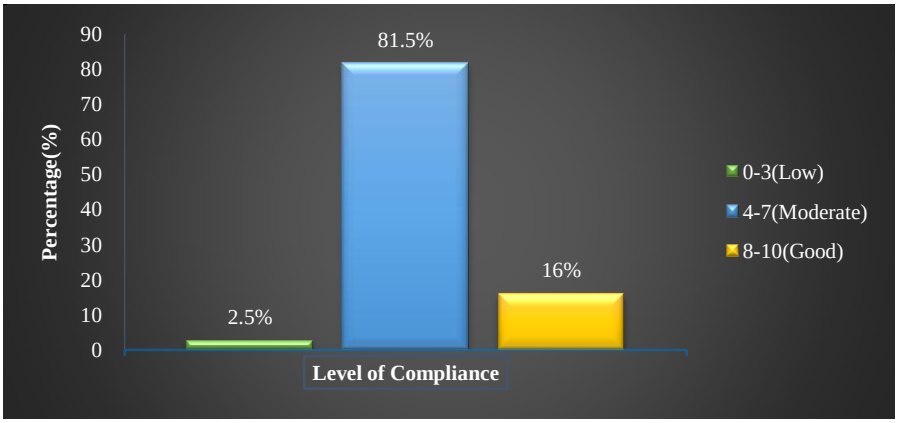
Variable	Mean	Median	Standard deviation
Attitude	25.125	25	4.86

The Mean attitude Score of hypertensive patients on management of hypertension was 25.125 with the Standard Deviation of 4.86 and Median was 25, indicating the neutral attitude among patients towards management of hypertension.

FINDINGS RELATED TO COMPLIANCE OF PATIENTS TOWARDS HYPERTENSION MANAGEMENT

N=200

S. NO.	RANGE OF SCORE	LEVEL OF COMPLIANCE	FREQUENCY(f)	PERCENTAGE (%)
1.	0-3	Low	5	2.5%
2.	4-7	Moderate	163	81.5%
3.	8-10	Good	32	16%



Majority of the samples i.e. 163 (81.5%) had moderate compliance towards management of hypertension, 32 (16%) had good compliance and least i.e. 5 (2.5%) patient had low compliance towards the management of hypertension.

Mean, Median and Standard Deviation of Compliance Score of Hypertensive Patients

N=200

Variable	Mean	Median	Standard deviation
Compliance	5.9	6	1.559

The mean compliance score of hypertensive patients on management of hypertension was 5.9 with the standard deviation of 1.559 and median was 6, indicating the moderate level of compliance among patients towards management of hypertension.

ASSOCIATION OF KNOWLEDGE OF HYPERTENSIVE PATIENTS ON MANAGEMENT OF HYPERTENSION WITH SELECTED DEMOGRAPHIC VARIABLES

In order to determine the association between the Knowledge of hypertensive patients on management of hypertension with selected demographic variables, Chi Square was used.

Association of Knowledge of Hypertensive Patients with Selected Demographic Variables

N=200

S. No.	Variables	Poor	Average	Good	p-Value	Df	Table Value
1	**AGE**				11.30^{NS}	8	15.5
	21-35	2	0	0			
	36-50	27	19	0			
	51-65	74	28	2			
	66-80	27	14	1			
	81 And Above	4	1	1			
2.	**GENDER**				3.78^{NS}	2	5.99
	Male	66	33	3			
	Female	68	29	1			
3.	**EDUCATIONAL STATUS**				23.82*	8	15.51
	Illiterate	65	29	0			
	5^{th} Pass	35	14	1			
	10^{th} Pass	22	7	1			
	12^{th} Pass	6	9	0			
	Graduation or Above	6	3	2			
4.	**OCCUPATION**				9.28^{NS}	6	12.59
	Government	4	3	1			
	Private	18	13	1			
	Self- employed	32	17	0			

	Unemployed	80	29	2			
5.	**FAMILY TYPE**				27.336*	6	12.59
	Single Person	3	2	2			
	Nuclear	92	46	2			
	Joint	39	14	0			
	Extended	0	0	0			
6.	**DURATION OF ILLNESS**				12.597*	6	12.59
	Less Than 1 Year		17	1			
	1-5 Years		28	1			
	5-10 Years		14	0			
	More Than 10 Years		3	2			
7.	**HEALTH HABITS**				52.918*	6	12.59
	Exercise	0	0	1			
	Salt-Restricted	115	50	2			
	Both	17	12	1			
	None	2	0	0			
8.	**ADDICTIONS**				5.549^{NS}	8	15.51
	Alcohol	3	4	0			
	Smoking	16	8	1			
	Both	1	2	0			
	Others	16	8	0			
	Nil	98	40	3			
9.	**HISTORY**				3.269^{NS}	6	12.59
	Parents	13	8	1			
	Siblings	10	5	1			
	Both	3	1	0			
	No history	108	48	2			
10.	**MONTHLY FAMILY INCOME (in Rupees)**				2.532^{NS}	6	12.59
	Less than 10000	37	18	0			
	10000-30000	86	40	4			
	31000-50000	8	3	0			
	51000	3	1	0			

NS- Non significant, * - Significant at p≤0.05

There exist significant association between knowledge of patients with selected demographic variable such as education, type of family, duration of illness and health habits at 0.05 level of significance as the calculated chi square value was greater than the table value.No significant association exist between knowledge of patients with age, gender, occupation, addiction, family history and monthly income at 0.05 level of significance as the calculated chi square value was less than the table value.

ASSOCIATION OF ATTITUDE OF HYPERTENSIVE PATIENTS TOWARDS MANAGEMENT OF HYPERTENSION WITH SELECTED DEMOGRAPHIC VARIABLES

In order to determine the association between the attitude of hypertensive patients on management of hypertension with selected demographic variables, Chi Square test was used.

Association of Attitude of Hypertensive Patients with Selected Demographic Variables

N=200

S. No.	Variables	Negative	Neutral	Positive	p-Value	df	Table Value
1	AGE				6.789^{NS}	8	15.51
	21-35	0	0	2			
	36-50	0	30	16			
	51-65	1	63	40			
	66-80	0	26	16			
	81 And Above	0	2	4			
2.	GENDER				5.45^{NS}	2	5.99
	Male	1	57	49			
	Female	0	64	29			
3.	EDUCATIONAL STATUS				4.423^{NS}	8	15.51

	Illiterate	0	61	34			
	5th Pass	1	29	20			
	10th Pass	0	16	14			
	12th Pass	0	9	5			
	Graduation or Above	0	6	5			
4.	OCCUPATION				6.370^{NS}	6	12.59
	Government	0	6	2			
	Private	1	20	11			
	Self- employed	0	30	19			
	Unemployed	0	65	46			
5.	FAMILY TYPE				6.434^{NS}	6	12.59
	Single Person	0	3	4			
	Nuclear	0	82	58			
	Joint	1	36	16			
6.	DURATION OF ILLNESS						
	Less Than 1 Year	0	29	15	9.304^{NS}	6	12.59
	1-5 Years	1	52	45			
	5-10 Years	0	32	10			
	More Than 10 Years	0	8	8			
7.	HEALTH HABITS				6.426^{NS}	6	12.59
	Exercise	0	0	1			
	Salt-Restricted	1	97	70			
	Both	0	22	7			
	None	0	2	0			
8.	ADDICTIONS				19.342*	8	15.51
	Alcohol	0	4	3			
	Smoking	0	18	7			
	Both	0	1	2			
	Others	0	23	1			
	Nil	1	75	65			
9.	HISTORY				4.30^{NS}	6	12.59
	Parents	0	15	7			
	Siblings	0	11	5			
	Both	0	4	0			
	No history	1	91	66			
10.	MONTHLY FAMILY INCOME (in Rupees)				8.076^{NS}	6	12.59
	Less than 10000	0	38	17			
	10000-30000	1	78	51			
	31000-50000	0	3	8			
	51000	0	2	2			

NS- Non significant, * - Significant at $p \leq 0.05$

There exist significant association between attitude of patients with selected demographic variable such as addictions at 0.05 level of significance as the calculated chi square value was greater than the table value.No significant association exist between attitude of patients with age, gender, occupation, type of family, duration of illness, monthly income, health habits and family history at 0.05 level of significance as the calculated chi square value was less than the table value.

ASSOCIATION OF COMPLIANCE OF HYPERTENSIVE PATIENTS TOWARDS MANAGEMENT OF HYPERTENSION WITH SELECTED DEMOGRAPHIC VARIABLES

In order to determine the association between the compliance of hypertensive patients on management of hypertension with selected demographic variables, Chi Square was used.

Association of Compliance of Hypertensive Patients with Selected Demographic Variables

N=200

S. No.	Variables	Low	Moderate	Good	p-Value	df	Table Value
1	AGE				7.8255^{NS}	8	15.51
	21-35	0	2	2			
	36-50	1	40	46			
	51-65	3	82	104			
	66-80	1	35	42			
	81 And Above	0	6	6			
2.	GENDER				4.412^{NS}	2	5.99
	Male	2	86	13			
	Female	3	77	19			
3.	EDUCATIONAL STATUS				35.974*	8	15.51
	Illiterate	3	76	16			
	5^{th} Pass	2	43	5			
	10^{th} Pass	0	26	4			
	12^{th} Pass	0	11	3			
	Graduation or Above	0	7	4			
4.	OCCUPATION				4.667^{NS}	6	12.59
	Government	0	5	3			
	Private	1	26	5			
	Self- employed	1	44	4			
	Unemployed	3	88	20			
5.	FAMILY TYPE				3.217^{NS}	6	12.59
	Single Person	0	5	3			
	Nuclear	4	114	23			
	Joint	1	44	6			
	Extended	0	0	0			
6.	DURATION OF ILLNESS				11.369^{NS}	6	12.59
	Less Than 1 Year	0	42	2			
	1-5 Years	4	71	14			
	5-10 Years	1	31	10			
	More Than 10 Years	1	22	3			
7.	HEALTH HABITS				11.289^{NS}	6	12.59
	Exercise	0	0	1			
	Salt-Restricted	4	139	21			
	Both	1	21	8			
	None	0	3	0			
8.	ADDICTIONS				4.821^{NS}	8	15.51
	Alcohol	0	7	0			
	Smoking	0	22	3			
	Both	0	3	0			
	Others	0	19	4			
	Nil	5	112	25			
9.	HISTORY				6.813^{NS}	6	12.59
	Parents	0	19	3			
	Siblings	1	11	4			
	Both	0	4	0			
	No history	4	129	25			
10.	MONTHLY FAMILY INCOME (in Rupees)				39.265*	6	12.59
	Less than 10000	1	44	9			
	10000-30000	4	112	15			
	31000-50000	0	4	7			
	51000	0	3	1			

NS- Non significant, * - Significant at $p \leq 0.05$

There exist significant association between compliance of patients with selected demographic variable such as educational status and monthly family income at 0.05 level of significance as the calculated chi square value was greater than the table value. No significant association exist between compliance of patients with age,

gender, occupation, type of family, duration of illness, health habits and family history at 0.05 level of significance as the calculated chi square value was less than the table value.

IV. Discussion

The present study aimed to assess the knowledge, attitude and compliance of hypertensive patients regarding management of hypertension with a view to provide health education. The findings of the present study have been discussed in relation to the observation made by other studies which the investigator reviewed.

The present study found that hypertensive patients possess poor knowledge regarding management of hypertension. Out of 200 samples 133 (66.5%) have poor knowledge regarding management of hypertension, 63 (31.5%) possesses average knowledge regarding management of hypertension and 4 (2%) possesses good knowledge regarding management of hypertension.

These findings were similar to a descriptive cross-sectional study conducted by Chimberengwa PT, Naidoo M, Maphosa P, Ncube S, Ncube J, Dube B et al[5], they concluded that the members of the community had poor knowledge on hypertension. 304 respondents were enrolled into the study, and a majority were women (65.4%). The remedial failure rate was 30.9%, and 25% of respondents on medication did not have knowledge regarding their blood pressure control level. Knowledge regarding hypertension was poor, with 64.8% of respondents stating that stress was its main cause, 85.9% stated that palpitations were a symptom of hypertension and 59.8% of respondents added salt on the table.

The present study found that there exists significant relationship between knowledge score and educational status of the hypertensive patients at the 0.05 level of significance. These findings were similar to the study of Rashidi Y, Manaflouyan H, Azar FP, Nikniaz Z, Nikniaz L, Ghaffari S[6], a cross-sectional study in Iran. They found significant association between knowledge and educational level of the participants at the 0.01 level of significance. In present study the knowledge, attitude and compliance scores were poor (66.5%), neutral (60.5%) and moderate (81.5%) respectively.

These findings were inconsistent with the study performed by Hemant Mahajan, Kazi Y, Sharma B, Velhal GD[7], a cross-sectional study at Mumbai and found that knowledge, attitude and practice regarding hypertension was poor (83.72%), poor (69.11%) and poor (73.24%) respectively.

There was another study performed by ManasaBollampally, Chandershekhar P, Kumar KP, Surakasula A, Srikanth S, Reddy TRM[8] in 2016. They observed good scores towards knowledge and attitude and poor scores towards practice. They found that patients had profound perception and positive attitude regarding the disease and its influential factors. 89% of patients thought, regular medications will improve the condition and 66% thought, taking less salt will control the blood pressure. 83% of patients were not doing any physical activity. They also found that 50% of study population doesn't practice regular measurement of hypertension and in the remaining 50% of study population practice regular measurement of hypertension.

In present study the compliance was found to be moderate (81.5%). The study findings were similar with the study performed by Rao CR, Kamath VG, Shetty A, Kamath A[9]. shows compliance was found to be moderate (82.2%). In present study the knowledge, attitude and compliance scores were poor (66.5%), neutral (60.5%) and moderate (81.5%) respectively. And there exist significant association between knowledge score of patients with selected demographic variable such as education, type of family, duration of illness and health habits at the 0.05 level of significance. There exist a significant association between attitude score of patients with selected demographic variable such as addictions at the 0.05 level of significance. There exist a significant association between compliance score of patients with selected demographic variable such as educational status and monthly family income at the 0.05 level of significance.

V. Conclusion

On the basis of the findings of the study the following conclusions were drawn:

- The findings revealed that the hypertensive patients had poor level of knowledge regarding management of hypertension. There was neutral attitude and moderate level of compliance in hypertensive patients.
- If the knowledge regarding hypertension will be improved, it will have positive effects on attitude and compliance.
- Educational status turned out to be the most influential factor among all as it shows association with knowledge and compliance both.
- Educational status and monthly family income have association with the compliance of hypertensive patients.
- Addiction is also an important factor in shaping the attitude of a hypertensive patient regarding its management.

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