Effectiveness of agitation management strategy on blood pressure among patients with hypertension

Pravin S.Shewale[1], DR. Vaishali R. Mohite[2], Mahesh B. Chendake[3]
Manisha C. Gholap[4], NamrataMohite[5], Dr.Abhijeetshelake[6]
Mahesh B. Chendake[7]

[1,] Final year Nurse Practitioner In Critical Care student, Krishna Institute of Nursing Sciences, Karad.
[2] Professor & Principal, Krishna Institute of Nursing Sciences, Karad.
[3] Associate Professor, Krishna Institute of Nursing Sciences, Karad
[4] Associate Professor, Krishna Institute of Nursing Sciences, Karad
[5] Assistant Professor, Krishna Institute of Nursing Sciences, Karad
[6] Professor, Krishna Hospital and Medical Research Centre, Karad
[7] Associate Professor, Krishna Institute of Nursing Sciences, Karad

ABSTRACT: Background: Hypertension is an invisible killer that rarely causes symptoms but is a significant public health challenge because of its high prevalence and concomitant risk of coronary artery disease, heart failure, cerebrovascular diseases and chronic renal failure. Agitation management strategy is one of the non-pharmacological modality. This strategy consist of two interventional package Autogenic meditation and Guided imaginary; which decrease the effect of stress, decrease sympathetic activity, increase parasympathetic tone and improve physical and mental health that by reducinghypertension.

Objectives: To determinethe level of blood pressure among hypertensive clients before and after Agitation Management strategy. To evaluate the effectiveness of agitation management in reducing blood pressure among hypertensive clients.   To find out the association between hypertensive clients and there selected demographic

Methods: Aquantitative approach.The Pre - experimental research design used in the study. The setting Krishna hospital Karad population comprises hypertension patientsamong the age group of 25 to 70 years. Sample size of one hundred five patients.

Results: In stage I, Post diastolic blood pressure was significantly lower 28 (26.7%) than stage II 55(52.4%) (p=0.05). 54(51.1%) patients were in Hypertension stage I, 51(48.6%) patients were in Hypertension stage II before Agitation Management strategy. 77(73.3%) patients were in Hypertension stage I, 28(26.7%) patients were in Hypertension stage II after Agitation Management strategy. The analysis revealed that there was an association with duration of illness (in years) for hypertensive patients.

Conclusion:It concluded that the agitation management strategy is helpful to reduce hypertension.

KEYWORDS: agitation management strategy,effectiveness,hypertension,autogenic exercise,guided imaginary

I.   INTRODUCTION

The theme for Blood Pressure of 2014 was "Know Your Numbers" Its main aim is to increase the awareness about high blood pressure(BP)in all populations around the world.[1]Is hypertensionasignificant risk factor for cardiovascular diseases? Hence, in 2002,it was named as 'the number one killer' by the World Health Organisation (WHO)in the World Health Report. Also, it said that the risk of myocardial infarction (a heart attack) is two times greater if the blood pressure is high as compared to the normal blood pressure.[2]

May measurement month(MMM) It is a global awareness campaign initiated by the international society of Hypertension (ISH), Which has world's leading scientists, clinicians,health care providers and allied health care workers, all with a common interest in hypertension research. MMS was launched in 2017 to provide knowledge to the people about blood pressure and how to reduce hypertension's adverse effects on health. [3]

Agitation management strategy is one of the non-pharmacological modality. This strategy consists of two interventional packages Autogenic meditation and Guided imaginary; which decrease the effect of stress, decrease

sympathetic activity, increase parasympathetic tone and improve physical and mental health that by reducinghypertension [4]

Autogenic meditation is a technique that reachesthe body to respond to verbal commands. These commands tell the body to relax and control breathing rate, blood pressure, and body temperature. The goal of autogenic meditation to achieve deep rests action and reduces stress **[5]**

 Mind relaxation exercise decrease blood pressure and stress level, this may be due to a normalization of autonomic cardiovascular rhythms as a result of increased vital modulation and decreased sympathetic activity and improved baroreflex sensitivity along with an augmentation of endogenous nitric oxide production. Sympathetic hyperactivity and parasympathetic withdrawal may cause and sustain hypertension. This autonomic imbalance is in turn related to a reduced or reset arterial baroreflex sensitivity and chemoreflex-induced hyperventilation. Slow breathing at six breaths per minute increases baroreflex sensitivity and reduces sympathetic activity and chemoreflex activation, suggesting a potentially beneficial effect in hypertension.[6]

Breathing is not only necessary for living longer but also to have a good mood and keep performing at best. Making deep breathing a part of our daily life helps in detoxifying and releasing toxins, release tension, relaxes both body and mind, relieves emotional problems and pain, increase muscle strength and strengthen the immune system, improves the nervous system, strengthen lungs and heart, enhance digestion and assimilation of food [7]

Guided Imaginary is the use of relaxation and mental visualization to improve mood and physical well-being. Guided imaginary helps in the connection between the mind and physics health has been well document and extensively studied. Positive mental imaginary can promote relaxation and reduce stress, improve mood, control blood pressure, alleviate pain and lower cholesterol [8]

Hypertension (HTN) is a chronic and frequent medical condition people often suffer. A person is diagnosed with HTN when his blood pressure elevated.High blood pressure is present if blood pressures range at or above 140/90 mm Hg.Morbidity and mortality related to cardio cardiovascular disease is more in both developed and developing countries.Hypertension is condition approximately 25% affecting to adult population worldwide.Hypertension is said to be the most common health problem within the world. The occurrence of hypertension in India is 29.8%.[5] 57% in India deaths due to stroke and   24% of deaths related to heart disease due to the cause of hypertension[9]

Various studies have confirmed that the self-care practices areimportant for blood pressure control and reduction of further hypertension complications of cardiovascular and renal diseases. Hypertensive patients many times do not implement self-care practices and in the endthey suffer from uncontrolled blood pressure [10]Health professionals can play a critical role in training the general population about self-care activities [11]In self-care programs, patients become aware ofhealth conation, aware ofwhen they need care, and gain adequate knowledge regarding the mode of treatment. Patients can monitor their symptoms and they do in time routine examinations without needing to refer to their physician [12]Self-care practice regarding hypertension includes medication taking at the proper time, intake of diet having low sodium and fat, regular exercise, no alcohol, not smoking, weight reduction, self-monitoring blood pressure, regular follow-up, and management of stress [13]

II.   METHODOLOGY

Problem Statement: A study to assess the effectiveness of agitation management strategy on blood pressure among patients with hypertension admitted in Krishna Hospital Karad

Objectives:

1.   To assess the level of Blood Pressure among hypertensive patients admitted in Krishna Hospital Karad

2.   To assess level of blood pressure among hypertensive clients before Agitation Management strategy.

3.   To assess level of blood pressure among hypertensive clients after Agitation Management strategy.

4. To determine the effectiveness of agitation management in reducing blood pressure among hypertensive clients.

5. To find out association between hypertensive clients and there selected demographic variables such as age ,sex ,education ,occupation ,habits ,diet ,diet pattern ,family history ,body mass index ,and duration of illness.

Assumptions

Autogenic training may help in reducing blood pressure of hypertensivepatients.

Autogenic training may have no harmful and can be easily performed inregular practice.

Delimitations:

This study is delimited to,

Hypertensive clients between the ages 25 to 70 years attending in Krishna hospital,Karad

Sample size is 105

Research approach: The research approach used for the study was quantitative approach.

Research design: Quasi Experimental: Non-equivalent experimental group pre-test and post-test design.

Variables: Variables of the present study

1) Independent variable: Agitation management strategy.

2) Dependent variables: Blood pressure level.

Population: Target population of the study is hypertensive patients admitted in Krishna Hospital Karad

Accessible population: The accessible population selected for this study is hypertension patientsamong age group of 25 to 70 years in Krishna Hospital Karad

 Sample size: Sample size is 105 patients with hypertension who satisfied the criteria for sample selection.

Sampling technique: Purposive sampling technique was adopted for my study. The sample is selected based on the inclusion and exclusion criteria.

Inclusion criteria:

1. Patients who are clinically diagnosed as hypertensive

2. Patients in the age group of 25-70 years

Exclusive criteria:

1. Patient who are bedridden

2. Seizure patients

3. Hypertensive patients who have fracture, spinal cord injury and stroke

4. Hypertensive patient who is mentally ill.

 Data collection tool:

Data collection tool used for this study was demographic variables, and bloodpressure chart.

Description of tool

The data collection tool consists of two parts. It consist of section A and section B

Section A

Demographic variables such as age, sex, education, occupation, marital status, habits, diet, hereditary, body mass index, duration of illness

Section B

Blood pressure chart by using Vaughn's blood pressure scale

The blood pressure chart consists of two separate scales for measuring the blood pressure.

1. Systolic blood pressure ranging from 80 to 220 mmHg.

2. Diastolic blood pressure ranging from 10 to 110 mmHg.

The blood pressure chart is used to make the reading of blood pressure of the patient on day 1 and 3rd day.

Reliability of the tool: Reliability of the research instrument id defined as the extent to which the instrument yield the same result on repeated measures.On completion of the pilot study, the knowledge questionnaire and practice checklist was tested for reliability.

Data collection procedure

The data was collection was carried out from 10th Dec. 2019 to 12th Jan 2020.

The data collection procedure is been done by the following procedures;

Ethical consideration: Ethical letter obtained from ethical committee of KIMSDU, Karad

The written permission from the authorities of the institution has been obtained prior to data collection.   Formal permission was obtained to conduct the study from, Dean/Principal Krishna Institute of Nursing Sciences Karad. Director of Nursing Services Krishna Hospital and Medical Research Centre, Karad and the   Medical   Director of Krishna Institute of Medical Sciences Deemed To Be University   Karad, to collect the data from the patients.

Written consent from participant is taken after explaining purpose of the study and assuring them anonymity of their responses to get maximum appropriate responses.

Data collection period was one month, the study was conducted in Krishna hospital Karad. 105 samples were taken for the study. Before starting the study, the investigator obtained permission from hospital authorities for conducting the study. The subject was explained about the study and oral consent was taken.After pre test, a small introduction about agitation management strategy and its role in reduction of blood pressure was given to the experimental group. The investigator demonstrated autogenic meditation [slow breathing exercise] and guided imaginary [5- 8 sets of pleasant images for visualization], guided them to practice 15- 20 minutes two times a day. Post test was conducted after the 3rd day. Day 3rd blood pressure was checked for analysis.

Plan for data analysis

The data analysis was done by using inferential and descriptive statistics. Descriptive statistical methods like percentage, mean and standard deviation were used, inferential statistical method like paired t test was used to find

out the effectiveness of agitation management strategy on reduction of blood pressure and chi-square test was used to find out the association between variables.

Organisation and presentation of data

Raw data was collected and entered in master sheet for the statistical analysis. It was interpreted using descriptive and inferential statistics. The data findings have been organized and presented under following sections:

Section A: Frequency and Percentage distribution of demographic variables of patients with hypertension admitted in K. H. Karad

Section B: Findings related to the level of blood pressure among hypertensive clients before Agitation Management strategy.

Section C: Findings related to the level of blood pressure among hypertensive clients after Agitation Management strategy.

Section D: Findings related to the effectiveness of agitation management in reducing blood pressure among hypertensive clients.

Section E: Findings related to the association between hypertensive clients and there selected demographic variables such as age ,sex ,education ,occupation ,habits ,diet ,diet pattern ,family history ,body mass index ,and duration of illness.

ANALYSIS AND INTERPRETATION OF DATA: Section A: Frequency and Percentage distribution of demographic variables of patients with hypertension admitted in K. H. Karad

Table 1: Frequency and Percentage distribution of demographic variables of patients with hypertension admitted in K. H. Karad

(n=105)

Sr. No.	Demographic variables	Frequency	Percentage
1	**Age**		
	25-35 years	12	11.4
	36-45 years	24	22.9
	46-55 years	27	25.7
	56-70 years	42	40.0
2	**Sex**		
	Males	59	56.2
	Females	46	43.8
3	**Education**		
	Illiterate	30	28.6

	Primary	16	15.2
	Secondary	22	21
	Graduate	37	35.2
4	**Occupation**		
	Sedentary worker	50	47.6
	Non-sedentary worker	55	52.4
5	**Marital status**		
	Married	101	96.2
	Unmarried	4	3.8
6	**Habit**		
	Smoking	12	11.4
	Alcoholic	13	12.4
	Tobacco chewing	13	12.4
	Mishari user	21	20
	No habit	46	43.8
7	**Diet pattern**		
	Vegetarian	43	41
	Non-vegetarian	62	59
8	**Family history**		
	Present	49	46.7
	Absent	56	53.3
9	**BMI**		
	Below normal	32	30.5
	Normal	39	37.1
	Above normal	34	32.4
10	**Duration of illness (in years)**		
	<1 year	4	3.8
	1-3 years	38	36.2

4-6 years	28	26.7
7-10 years	17	16.2
10 and above	18	17.1

Section B: Findings related to the mean blood pressure among hypertensive clients before Agitation Management strategy.

Table 2: Mean blood pressure among hypertensive clients before Agitation Management strategy.

Blood pressure	N	Mean		Std. Deviation
Pre Systolic	105	141.7		6.3
Pre Diastolic	105	87.1		4.6

Table 3: Relation of Pre Systolic blood pressure and Pre Diastolic blood pressure among hypertensive clients before Agitation Management strategy

Pre Systolic BP	Pre Diastolic BP				Total		Chi square statistic	p value
	Hypertension stage I (80-89)		Hypertension stage II (90 to higher)					
	F	%	F	%	F	%		
Hypertension stage I (130-139)	20	66.7	10	33.3	30	28.6	3.9	0.04
Hypertension stage II (140 or higher)	34	45.3	41	54.7	75	71.4		
Total	54	51.4	51	48.6	105	100.0		

Section C: Findings related to the level of blood pressure among hypertensive clients after Agitation Management strategy.

Table 4: Mean blood pressure among hypertensive clients after Agitation Management strategy.

Blood pressure	N		Mean	Std. Deviation
Post Systolic	105		137.9	5.9

Post Diastolic	105		84.1	4.3

Table 5: Relation of Post Systolic blood pressure and Post Diastolic blood pressure among hypertensive clients after Agitation Management strategy.

Post Systolic BP	Post Diastolic BP				Total		Chi square statistic	p value
	Hypertension stage I (80-89)		Hypertension stage II (90 or higher)					
	F	%	F	%	F	%		
Hypertension stage I (130-139)	41	82.0	9	18.0	50	47.6	3.7	0.05
Hypertension stage II (140 or higher)	36	65.5	19	34.5	55	52.4		
Total	77	73.3	28	26.7	105	100.0		

Section D: Findings related to the effectiveness of agitation management in reducing blood pressure among hypertensive clients.

Table 6: Effectiveness of agitation management in reducing systolic blood pressure among hypertensive clients.

Blood pressure	N	Mean	Std. Deviation	Paired t statistic	p value
Pre Systolic	105	141.7	6.3	17.01	<0.001
Post Systolic	105	137.9	6.0		

Table 7: Relation of Systolic blood pressure among hypertensive clients before and after Agitation Management strategy.

Pre Systolic BP	Post Systolic BP				Total		Chi square statistic	p value
	Hypertension stage I (80-89)		Hypertension stage II (90 or higher)					
	F	%	F	%	F	%		
Hypertension stage I (130-139)	30	100.0	0	0.0	30	28.6	46.2	<0.001

Hypertension stage II (140 or higher)	20	26.7	55	73.3	75	71.4		
Total	50	47.6	55	52.4	105	100.0		

Table No 8: Effectiveness of agitation management in reducing diastolic blood pressure among hypertensive clients.

Blood pressure	N	Mean	Std. Deviation	Paired t statistic	p value
Pre Diastolic	105	87.1	4.6	11.24	<0.001
Post Diastolic	105	84.1	4.3		

Table 9: Relation of Systolic blood pressure among hypertensive clients before and after Agitation Management strategy.

Pre Diastolic BP	Post Diastolic BP				Total		Chi square statistic	p value
	Hypertension stage I (80-89)		Hypertension stage II (90 or higher)					
	F	%	F	%	F	%		
Hypertension stage I (130-139)	54	100.0	0	0.0	54	51.4	40.43	<0.001
Hypertension stage II (140 or higher)	23	45.1	28	54.9	51	48.6		
Total	77	73.3	28	26.7	105	100.0		

Section E: Findings related to the association between hypertensive clients (Blood pressure after agitation management strategy) and there selected demographic variables such as age ,sex ,education ,occupation ,habits ,diet ,diet pattern ,family history ,body mass index ,and duration of illness.

Table-10:Association between demographic variables and hypertensive clients (systolic blood pressure after agitation management strategy)

Sr. no.	Demographic variables	Post systolic blood pressure		Total	Chi square	p value
		Hypertension	Hypertension			

		stage I		stage II				statistic	
		F	%	F	%	F	%		
1	Age groups								
	25-35 years	7	58.3	5	41.7	12	11.4	2.63	0.45
	36-45 years	14	58.3	10	41.7	24	22.9		
	46-55 years	12	44.4	15	55.6	27	25.7		
	56-70 years	17	40.5	25	59.5	42	40.0		
2	Sex								
	Females	20	43.5	26	56.5	46	43.8	0.56	0.45
	Males	30	50.8	29	49.2	59	56.2		
3	Occupation								
	Sedentary worker	22	44.0	28	56.0	50	47.6	0.5	0.48
	Non-sedentary worker	28	50.9	27	49.1	55	52.4		
4	Education								
	Illiterate	12	40.0	18	60.0	30	28.6	7.17	0.06
	Primary	4	25.0	12	75.0	16	15.2		
	Secondary	11	50.0	11	50.0	22	21.0		
	Graduate	23	62.2	14	37.8	37	35.2		
5	Marital status								
	Married	48	47.5	53	52.5	101	96.2	0.009	0.92
	Unmarried	2	50.0	2	50.0	4	3.8		
6	Habit								
	Smoking	7	58.3	5	41.7	12	11.4	3.55	0.47
	Alcoholic	7	53.8	6	46.2	13	12.4		
	Tobacco chewing	8	61.5	5	38.5	13	12.4		
	Mishari user	7	33.3	14	66.7	21	20.0		
	Nil	21	45.7	25	54.3	46	43.8		
7	Diet pattern								

		F	%	F	%	F	%		
	Vegetarian	22	51.2	21	48.8	43	41.0	0.37	0.55
	Non-vegetarian	28	45.2	34	54.8	62	59.0		
8	Family history								
	Present	23	46.9	26	53.1	49	46.7	0.01	0.89
	Absent	27	48.2	29	51.8	56	53.3		
9	BMI								
	Below normal	14	43.8	18	56.3	32	30.5	0.41	0.82
	Normal	20	51.3	19	48.7	39	37.1		
	Above normal	16	47.1	18	52.9	34	32.4		
10	Duration of illness (in years)								
	1-3 years	20	52.6	18	47.4	38	36.2	9.47	0.04
	10 and above	4	22.2	14	77.8	18	17.1		
	4-6 years	13	46.4	15	53.6	28	26.7		
	7-10 years	9	52.9	8	47.1	17	16.2		
	<1 year	4	100.0	0	0.0	4	3.8		
Total		50	47.6	55	52.4	105	100.0		

Table-11:Association between demographic variables and hypertensive clients (Diastolic blood pressure after agitation management strategy)

Sr. no.	Demographic variables	Post diastolic blood pressure				Total		Chi square statistic	p value
		Hypertension stage I		Hypertension stage II					
		F	%	F	%	F	%		
1	Age groups								
	25-35 years	9	75.0	3	25.0	12	11.4	2.38	0.49
	36-45 years	15	62.5	9	37.5	24	22.9		
	46-55 years	22	81.5	5	18.5	27	25.7		
	56-70 years	31	73.8	11	26.2	42	40.0		
2	Sex								

	Females	32	69.6	14	30.4	46	43.8	0.59	0.44
	Males	45	76.3	14	23.7	59	56.2		
3	Occupation								
	Sedentary worker	33	66.0	17	34.0	50	47.6	2.63	0.11
	Non-sedentary worker	44	80.0	11	20.0	55	52.4		
4	Education								
	Illiterate	21	70.0	9	30.0	30	28.6	6.57	0.08
	Primary	8	50.0	8	50.0	16	15.2		
	Secondary	18	81.8	4	18.2	22	21.0		
	Graduate	30	81.1	7	18.9	37	35.2		
5	Marital status								
	Married	73	72.3	28	27.7	101	96.2	1.51	0.22
	Unmarried	4	100.0	0	0.0	4	3.8		
6	Habit								
	Smoking	9	75.0	3	25.0	12	11.4	0.67	0.96
	Alcoholic	10	76.9	3	23.1	13	12.4		
	Tobacco chewing	10	76.9	3	23.1	13	12.4		
	Mishari user	14	66.7	7	33.3	21	20.0		
	Nil	34	73.9	12	26.1	46	43.8		
7	Diet pattern								
	Vegetarian	28	65.1	15	34.9	43	41.0	2.51	0.11
	Non-vegetarian	49	79.0	13	21.0	62	59.0		
8	Family history								
	Present	35	71.4	14	28.6	49	46.7	0.17	0.68
	Absent	42	75.0	14	25.0	56	53.3		
9	BMI								
	Below normal	24	75.0	8	25.0	32	30.5	0.19	0.91
	Normal	29	74.4	10	25.6	39	37.1		

	Above normal	24	70.6	10	29.4	34	32.4		
10	Duration of illness (in years)								
	1-3 years	27	71.1	11	28.9	38	36.2	2.68	0.61
	10 and above	11	61.1	7	38.9	18	17.1		
	4-6 years	23	82.1	5	17.9	28	26.7		
	7-10 years	13	76.5	4	23.5	17	16.2		
	<1 year	3	75.0	1	25.0	4	3.8		
Total		77	73.3	28	26.7	105	100.0		

III.   RESULTS

Major findings were as follows:

Table 1: Frequency and Percentage distribution of demographic variables of patients with hypertension admitted in K. H. Karad

Distribution of patients with hypertension according to age groups

Among 105 patients with hypertension, 12(11.4%) were between age group 25-35 years, 24(22.9%) were between age group 36-45 years, 27(25.7%) were between age group 46-55 years while 42(40%) were between age group 56-70 years.

Distribution of patients with hypertension according to gender

Among 105 patients with hypertension, 59(56.2%) were males while 46(43.8%) were females.

Distribution of patients with hypertension according to education

Among 105 patients with hypertension, 30(28.6%) patients were illiterate, 16(15.2%) patients with hypertension had completed primary education, 22(21%) patients with hypertension had completed secondary education and 37(35.%) nurses had completed graduation.

Distribution of patients with hypertension according to occupation

Among 105 patients with hypertension, 50(47.6%) patients with hypertension were sedentary workers and. 55(52.4%) patients with hypertension were non sedentary workers.

Distribution of patients with hypertension according to marital status

Among 105 patients with hypertension, 101(96.4%) patients with hypertension were married, 4(3.8%) patients with hypertension were unmarried. Among 105 patients with hypertension, 101(96.4%) patients with hypertension were married, 4(3.8%) patients with hypertension were unmarried.

Distribution of patients with hypertension according to habit

Among 105 patients with hypertension, 12(11.4%) patients with hypertension had smoking habit, 13(12.4%) patients were alcoholic, 13(12.4%) patients had habit of tobacco chewing, 21(20%) patients had habit of *mishari* and 46(43.8%) patients had no habits.

Distribution of patients with hypertension according to diet pattern

Among 105 patients with hypertension, 43(41%) patients with hypertension were vegetarian and 62(59%) patients were non- vegetarian.

Distribution of patients with hypertension according to family history

Among 105 patients with hypertension, 49(46.7%) patients with hypertension had family history present and 56(53.3%) patients had family history absent.

Distribution of patients with hypertension according to BMI

Among 105 patients with hypertension, 32(30.5%) patients with hypertension had BMI level below normal, 39(37.1%) patients had BMI level at normal and 34(32.4%) patients were above normal.

Distribution of patients with hypertension according to duration of illness (in years) Among 105 patients with hypertension, 4(3.8%) patients with hypertension with there duration group <1 year, 38(36.2%) had 1-3 years of duration of illness, 28(26.7%) with 4-6 years of duration of illness, 17(16.2%) with 7-10 years of duration of illness and 18(17.1%) with 10 and above years of duration of illness.

Section B:Findings related to the mean blood pressure among hypertensive clients before Agitation Management strategy.

Table 2: Mean blood pressure among hypertensive clients before Agitation Management strategy depicts that mean pre systolic blood pressure of hypertensive patients was 141.7 and mean diastolic blood pressure was 87.1.

Table 3 represents relation of Pre Systolic blood pressure and Pre Diastolic blood pressure among hypertensive clients before Agitation Management strategy. It was found that, out of 105 patients with hypertension, according to pre systolic BP, 30(28.6%) patients were in Hypertension stage I and 75(71.4%) patients were in Hypertension stage II.But according to pre diastolic patients, it was found that, out of 105 patients with hypertension54(51.4%) patients were in Hypertension stage I and 51(48.6%) patients were in Hypertension stage II.Chi square test for association was performed to check relation of Pre Systolic blood pressure and Pre Diastolic blood pressure among hypertensive clients before Agitation Management strategy. It was seen that, no. of patients inHypertension stage I according to pre diastolic blood pressure were significantly higher 54(51.4%) than no. of patients inHypertension stage I according to pre systolic blood pressure 30(28.6%) (p=0.04).

Section C: **Findings related to the level of blood pressure among hypertensive clients after Agitation Management strategy.**

Table 4: Mean blood pressure among hypertensive clients after Agitation Management strategy.Table 4 depicts that mean post systolic blood pressure of hypertensive patients was 137.9 and mean diastolic blood pressure was 84.1.

Table 5 represents relation of Post Systolic blood pressure and Post Diastolic blood pressure among hypertensive clients after Agitation Management strategy. It was found that, out of 105 patients with hypertension, according to post systolic BP, 50(47.6%) patients were in Hypertension stage I and 55(52.4%) patients were in Hypertension stage II.But according to pre diastolic patients, it was found that, out of 105 patients with hypertension77(73.3%) patients were in Hypertension stage I and 28(26.7%) patients were in Hypertension stage II.Chi square test for association was performed to check relation of Post Systolic blood pressure and Post Diastolic blood pressure among hypertensive clients after Agitation Management strategy. It was seen that, no. of patients inHypertension stage II according to post diastolic blood pressure were significantly lower 28(26.7%) than no. of patients inHypertension stage II according to post systolic blood pressure 55(52.4%) (p=0.05).

Section D: Findings related to the effectiveness of agitation management in reducing blood pressure among hypertensive clients.

Table 6: Effectiveness of agitation management in reducing systolic blood pressure among hypertensive clients

Representing mean systolic blood pressure among hypertensive clients before and after Agitation Management strategy depicts that mean pre systolic blood pressure of hypertensive patients were 141.7 which was reduced after Agitation Management strategy as mean post systolic blood pressure was 137.9. The paired t test was used to test the hypothesis and significant difference in the level of systolic blood pressure between pre-test and post-test of patients with Hypertension Agitation Management strategy and is significant (p<0.001).The above table depicts the mean and standard deviation of mean systolic blood pressure score obtained before and after the Agitation Management strategy among patients with hypertension.

Table 7 represents relation of Systolic blood pressure among hypertensive clients before and after Agitation Management strategy. It was found that, out of 105 patients with hypertension, 30(28.6%) patients were in Hypertension stage I and 75(71.4%) patients were in Hypertension stage II before Agitation Management strategy. And, out of 105 patients with hypertension, 50(47.6%) patients were in Hypertension stage I and 55(52.4%) patients were in Hypertension stage II after Agitation Management strategy. Chi square test for association was performed to check relation of Systolic blood pressure among hypertensive clients before and after Agitation Management strategy. It was seen that, no. of patients inHypertension stage I before Agitation Management strategy were significantly higher 75(71.4%) were significantly higher than no. of patients inHypertension stage II after Agitation Management strategy 55(52.4%) (p<0.001)

Table 8: Effectiveness of agitation management in reducing diastolic blood pressure among hypertensive clients depicts that mean pre diastolic blood pressure of hypertensive patients was 87.1 which was reduced after Agitation Management strategy as mean post diastolic blood pressure was 84.1 The paired t test was used to test the hypothesis and significant difference in the level of diastolic blood pressure between pre-test and post-test of patients with Hypertension Agitation Management strategy and is significant (p<0.001).The above table depicts the mean and standard deviation of mean diastolic blood pressure score obtained before and after the Agitation Management strategy among patients with hypertension.

Table 9 represents relation of Diastolic blood pressure among hypertensive clients before and after Agitation Management strategy. It was found that, out of 105 patients with hypertension, 54(51.1%) patients were in Hypertension stage I and 51(48.6%) patients were in Hypertension stage II before Agitation Management strategy. And, out of 105 patients with hypertension, 77(73.3%) patients were in Hypertension stage I and 28(26.7%) patients were in Hypertension stage II after Agitation Management strategy. Chi square test for association was performed to check relation of Diastolic blood pressure among hypertensive clients before and after Agitation Management strategy. It was seen that, no. of patients inHypertension stage I before Agitation Management strategy were significantly higher 54(51.4%) were significantly lower than no. of patients inHypertension stage I after Agitation Management strategy 77(73.3%) (p<0.001)

Section E: Findings related to the association between hypertensive clients (Blood pressure after agitation management strategy) and there selected demographic variables such as age ,sex ,education ,occupation ,habits ,diet ,diet pattern ,family history ,body mass index ,and duration of illness.

Table-10 shows the association of hypertensive clients (systolic blood pressure after agitation management strategy) and there selected demographic variables such as age ,sex ,education ,occupation ,habits ,diet ,diet pattern ,family history ,body mass index ,and duration of illness was done using Chi –square test.The analysis revealed that there was association with duration of illness (in years) for hypertensive patients and no association could be found with any of demographic variables of patients with hypertension (systolic blood pressure after agitation management strategy).

Table-11 shows the association of hypertensive clients (diastolic blood pressure after agitation management strategy) and there selected demographic variables such as age ,sex ,education ,occupation ,habits ,diet ,diet pattern ,family history ,body mass index ,and duration of illness was done using Chi –square test.The analysis

revealed that no association could be found with any of demographic variables of patients with hypertension (diastolic blood pressure after agitation management strategy).

IV.   DISCUSSION:

Among 105 patients with hypertension,

• 12(11.4%) were between age group 25-35 years, 24(22.9%) were between age group 36-45 years, 27(25.7%) were between age group 46-55 years while 42(40%) were between age group 56-70 years.

• 59(56.2%) were males while 46(43.8%) were females.

• 30(28.6%) patients were illiterate, 16(15.2%) patients with hypertension had completed primary education, 22(21%) patients with hypertension had completed secondary education and 37(35.%) nurses had completed graduation.

• 50(47.6%) patients with hypertension were sedentary workers and. 55(52.4%) patients with hypertension were non sedentary workers.

• 101(96.4%) patients with hypertension were married, 4(3.8%) patients with hypertension were unmarried.

• 12(11.4%) patients with hypertension had smoking habit, 13(12.4%) patients were alcoholic, 13(12.4%) patients had habit of tobacco chewing, 21(20%) patients had habit of mishari and 46(43.8%) patients had no habits.

• 43(41%) patients with hypertension were vegetarian and 62(59%) patients were non- vegetarian.

• 49(46.7%) patients with hypertension had family history present and 56(53.3%) patients had family history absent.

• 32(30.5%) patients with hypertension had BMI level below normal, 39(37.1%) patients had BMI level at normal and 34(32.4%) patients were above normal.

• 4(3.8%) patients with hypertension with their duration group <1 year, 38(36.2%) had 1-3 years of duration of illness, 28(26.7%) with 4-6 years of duration of illness, 17(16.2%) with 7-10 years of duration of illness and 18(17.1%) with 10 and above years of duration of illness.

Findings related to the effectiveness of agitation management in reducing blood pressure among hypertensive clients.

It was found that;   Mean pre systolic blood pressure of hypertensive patients were 141.7 which was reduced after Agitation Management strategy as mean post systolic blood pressure was 137.9.Mean pre diastolic blood pressure of hypertensive patients was 87.1 which was reduced after Agitation Management strategy as mean post diastolic blood pressure was 84.1

The paired t test was used to test the hypothesis and significant difference in the level of systolic and diastolic blood pressure between pre-test and post-test of patients with Hypertension regarding Agitation Management strategy and is significant ($p<0.001$).

Findings related to the association between post- test blood pressure of hypertensive patients with demographic variables.

The association of hypertensive clients (systolic blood pressure after agitation management strategy) and there selected demographic variables such as age ,sex ,education ,occupation ,habits ,diet ,diet pattern ,family history ,body mass index ,and duration of illness was done using Chi –square test.

The analysis revealed that there was association with duration of illness (in years) for hypertensive patients and no association could be found with any of demographic variables of patients with hypertension (systolic blood pressure after agitation management strategy).

The association of hypertensive clients (diastolic blood pressure after agitation management strategy) and there selected demographic variables such as age ,sex ,education ,occupation ,habits ,diet ,diet pattern ,family history ,body mass index ,and duration of illness was done using Chi –square test. The analysis revealed that no association could be found with any of demographic variables of patients with hypertension (diastolic blood pressure after agitation management strategy).

 Similar and contrast studies related to our study, **A** study conducted in Selected Rural Areas of Community Health Centre at Ambilikkaisubjects who practiced GI were shown significantly effective on systolic BP & diastolic BP (t values were 23.217 & 40.577) than in control (t= 0.44 &0.900) had lower severity of stress (t= 33.36) than in control (t value 0.855) and significantly more improvement on their QOL (t value 108.22) than in control (t value 0.276). These results suggest that more attention needs to be paid to the mental health situation of hypertensive patients in order to reduce their stress and to improve their quality of life which are similar to our study. [14]

 Contrast to our study anotherstudy investigated the effects of daily practice of DGB on (a) 24-h BP and breathing patterns in the natural environment, as well as (b) BP and breathing pattern during clinic rest. Altogether, 40 participants with pre-hypertension or stage 1 hypertension were trained to decrease breathing rate through DGB or to passively attend to breathing (control, CTL) during daily 15-min sessions. The participants practiced their breathing exercise at home for 4 weeks. The DGB (but not the CTL) intervention decreased clinic resting BP, mid-day ambulatory systolic BP (in women only) and resting breathing rate, and increased resting tidal volume. However, 24-h BP level was not changed by DGB or CTL interventions, nor was overnight breathing pattern. These findings are consistent with the conclusion that a short-term, autonomic mechanism mediated the observed changes in resting BP, but provided no evidence that regular DGB affected factors involved in long-term BP regulation. [15]

V.   CONCLUSION:

The significant findings of the study revealed that,

Demographic Variables:

• **Age:**

Among 105 patients with hypertension, 12(11.4%) were between age group 25-35 years, 24(22.9%) were between age group 36-45 years, 27(25.7%) were between age group 46-55 years while 42(40%) were between age group 56-70 years.

• **Gender:**

Among 105 patients with hypertension, 59(56.2%) were males, while 46(43.8%) were females.

• **Education:**

Among 105 patients with hypertension, 30(28.6%) patients were illiterate, 16(15.2%) patients with hypertension had completed primary education, 22(21%) patients with hypertension had completed secondary school, and 37(35.%) nurses had completed graduation.

• **Occupation:**

Among 105 patients with hypertension, 50(47.6%) patients with hypertension were sedentary workers and. 55(52.4%) patients with hypertension were non-sedentary workers.

• **Marital status:**

Among 105 patients with hypertension, 101(96.4%) patients with hypertension were married, 4(3.8%) patients with hypertension were unmarried.

• **Habit:**

Among 105 patients with hypertension, 12(11.4%) patients with hypertension had the smoking habit, 13(12.4%) patients were alcoholic, 13(12.4%) patients had the habit of tobacco chewing, 21(20%) patients had habit of *mishari*and 46(43.8%) patients had no addictions.

• **Diet pattern:**

Among 105 patients with hypertension, 43(41%) patients with hypertension were vegetarian, and 62(59%) patients were non- vegetarian.

• **Family history:**

Among 105 patients with hypertension, 49(46.7%) patients with hypertension had family history present, and 56(53.3%) patients had family history absent.

• **BMI level:**

Among 105 patients with hypertension, 32(30.5%) patients with hypertension had BMI level below average, 39(37.1%) patients had BMI level at average, and 34(32.4%) patients were above normal.

• **Duration of illness (in years):**

Among 105 patients with hypertension, 4(3.8%) patients with hypertension with their duration group <1 year, 38(36.2%) had 1-3 years of duration of illness, 28(26.7%) with 4-6 years of length of disease, 17(16.2%) with 7-10 years of duration of illness and 18(17.1%) with ten and above years of duration of illness.

Objectives of the study

Objective 1: To assess the level of Blood Pressure among hypertensive patients admitted in K. Hospital

Objective 2: To determine the level of blood pressure among hypertensive clients before Agitation Management strategy

Mean presystolic blood pressure of hypertensive patients was 141.7, and mean diastolic blood pressure was 87.1. It found that, out of 105 patients with hypertension, according to pre systolic BP, 30(28.6%) patients were in Hypertension stage I, and 75(71.4%) patients were in Hypertension stage II. But according to pre diastolic patients, it was found that out of 105 patients with hypertension 54(51.4%) patients were in Hypertension stage I, and 51(48.6%) patients were in Hypertension stage II. It saw that no. of patients inHypertension stage I according to pre diastolic blood pressure were significantly higher 54(51.4%) than no. of patients inHypertension stage I according to presystolic blood pressure 30(28.6%) (p=0.04)

Objective 3: To assess the level of blood pressure among hypertensive clients after Agitation Management strategy.

Mean post systolic blood pressure of hypertensive patients was 137.9, and mean diastolic blood pressure was 84.1.

It found that, out of 105 patients with hypertension, according to post systolic BP, 50(47.6%) patients were in Hypertension stage I, and 55(52.4%) patients were in Hypertension stage II. But according to pre diastolic patients, it was found that out of 105 patients with hypertension77(73.3%) patients were in Hypertension stage I, and 28(26.7%) patients were in Hypertension stage II. It saw that, no. of patients inHypertension stage II according to post diastolic blood pressure were significantly lower 28(26.7%) than no. of patients inHypertension stage II according to post systolic blood pressure 55(52.4%) (p=0.05)

Objective 4: To determine the effectiveness of agitation management in reducing blood pressure among hypertensive clients

Mean presystolic blood pressure of hypertensive patients were 141.7, which was reduced after Agitation Management strategy as mean post systolic blood pressure was 137.9.

The paired t-test was used to test the hypothesis and significant difference in the level of systolic blood pressure between pre-test and post-test of patients with Hypertension Agitation Management strategy and is significant ($p<0.001$).Mean pre diastolic blood pressure of hypertensive patients was 87.1 which reduced after Agitation Management strategy as mean post diastolic blood pressure was 84.1 The paired t-test was used to test the hypothesis and significant difference in the level of diastolic blood pressure between pre-test and post-test of patients with Hypertension Agitation Management strategy and is significant ($p<0.001$).

So it is concluded that agitation management in reducing blood pressure among hypertensive clients is effective.

Objective 5: To find out the association between hypertensive clients and there selected demographic variables such as age, sex, education, occupation, habits, diet, diet pattern, family history, body mass index, and duration of illness.

The association of hypertensive clients (systolic blood pressure after agitation management strategy) and there selected demographic variables such as age, sex, education, occupation, habits, diet, diet pattern, family history, body mass index, and duration of illness was done using Chi-square test.The analysis revealed that there was an association with duration of disease (in years) for hypertensive patients and no association could be found with any of demographic variables of patients with hypertension (systolic blood pressure after agitation management strategy). The association of hypertensive clients (diastolic blood pressure after agitation management strategy) and there selected demographic variables such as age, sex , education, occupation, habits , diet , diet pattern, family history, body mass index, and duration of illness was done using Chi-square test.The analysis revealed that no association could be found with any of the demographic variables of patients with hypertension (diastolic blood pressure after agitation management strategy).

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