



DEEP BREATHING EXERCISE IN REDUCING BLOOD PRESSURE AMONG HYPERTENSIVE PEOPLE AT SELECTED AREAS OF KANSARAKUI VILLEGE.

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ABSTRACT

Hypertension is reported to be the fourth reason of early death in developed countries and the seventh in developing countries. There is need to use some alternative treatment to manage hypertension. Hypertension is a significant general health issue in India and world, due to its high recurrence and corresponding, there is a danger of cardiovascular and kidney disorders. The hypertension makes individuals multiple times more inclined to stroke and multiple times bound to have coronary failures. The purpose of this study was to evaluate the effect of deep breathing exercise on blood pressure among patients with hypertension. A Quasi-Experimental one Group Pre- test Post- test design was adopted. A sample of 30 Hypertensive patients was selected using convenient sampling technique at Kansarakui visnagar. Data on demographic variables were assessed. Deep breathing exercise was demonstrated to the participants and their level of blood pressure was measured by sphygmomanometer before and after the intervention. The result displays that in pre-test out of 30 samples, (28%) had pre- hypertension, (20%) had Stage I hypertension, (8%) had Stage II hypertension and (4%) have Normal Blood Pressure. Whereas after intervention, Post- test results shows that out of 50 samples (16%) have Normal Blood Pressure, (20%) had Pre- hypertension and (4%) had Stage I Hypertension among clients with Hypertension. The pre-test mean score among patients with Hypertension was 1.50 with standard deviation 11.352 and post-test mean score among patient with Hypertension was 1.07 with standard deviation 9.090. The calculated paired 't' test value is $t=7.971$ was found to be statistically significant at p value.

KEYWORDS : Hypertension, breathing exercise, hypertensive patients

INTRODUCTION

High blood pressure is a major public health problem in India and its prevalence is rapidly increasing among both urban and rural populations.¹ In fact, hypertension is the most prevalent chronic disease in India. Hypertension can be treated by pharmacological, non-pharmacological and also by alternative therapies.² In that Deep breathing exercise is one of the exercise and relaxation technique which helps to maintain the normal blood pressure.³ The goal of the study is to determine the effectiveness of deep breathing exercise on blood pressure among patients with hypertension.⁴ laughter breathing exercise is also taking key role in reducing stress and helps to recovery from hypertension.^{5,6}

OBJECTIVES

1. To assess the pre and post-test level of the blood pressure among hypertensive clients in experimental group.
2. To compare the pre and post-test level of blood pressure

among hypertensive clients in experimental group.

3. To find out the effectiveness of deep breathing exercise on post-test level of blood pressure among hypertensive clients in experimental group.
4. To determine association between the pre-test blood pressure level among clients with hypertension with their selected demographic variable such as age, gender, education status, occupations, durations of hypertension, family history, food pattern

Hypothesis

- H₁: There will be significant difference in pre and post-test level of blood pressure level among hypertensive client in experimental and control group
- H₂: There will be significant difference between post-test level of blood pressure level among hypertensive client in experimental and control group
- H₃: There will be significant Association between pre-test

level of blood pressure level among hypertensive client with selected demographic variable like age, gender, education, status and occupation, duration of hypertension, food pattern, and family history.

MATERIALS AND METHODS

A Quasi- Experimental One Group Pre-test Post- test research design was used to conduct the study at Kansarakui, visnagar among 30 Hypertensive samples using the convenience sampling technique. The criteria for sample selection were known Hypertension Patient and who is medically fit to do Breathing exercise. The exclusion criteria were smokers and Women under contraceptives. The data collection was done with prior permission from Medical Officer at Kansarakui, visnagar. The purpose of the study was explained to the patients and written informed consent was obtained. The demographic data was collected by using questionnaire and the pre-test level of Blood Pressure was measured by using Sphygmomanometer. After the pre-test, the investigator demonstrated the deep breathing exercise to the patients and Repetitive trails were given to the patients for 10-20 minutes twice a day, for 5 consecutive days. On the 7th day, the post-test level of blood pressure was assessed by using sphygmomanometer and recordings are noted in the chart. The data was analysed using descriptive and inferential statistics. The sample characteristics and level of Blood pressure were described using frequency and percentage. Chi- square was used to associate the pre- test and post- test level of blood pressure with the selected demographic variables.

RESULTS AND DISCUSSION

SECTION A:

Frequency And Percentage Distribution Of The Sample According To The Demographic Variables In Control Group And Experimentalgroup

Table No: 1

SR.NO	SOCIO-DEMOGRAPHIC	FREQUENCY (F)	PERCENTAGE (%)
1.	AGE		
	35-50Year	2	6.66%
	51-55 year	6	20%
	56-60 year	15	50%
	61-65 year	7	23.33%
2.	GENDER		
	Male	18	60%
	Female	12	40%
3.	RELIGION		
	Hindu	28	93.33%
	Muslim	1	3.33%
	Other	1	3.33%
4.	EDUCATION STATUS		
	Graduate	3	10%
	PUC	7	23.33%
	Elementary	2	6.66%
	Illiterate	18	60%
5.	OCCUPATION OF CLIENTS		
	Heavy worker	20	66.66%
	Moderate worker	7	23.33%
	Sedentary worker	3	10%
6.	MARITAL STATUS		
	Married	29	96.66%
	Unmarried	1	3.33%
7.	FAMILY MONTHLY INCOME		
	≥Rs. 41430/-	18	60%
	Rs. 20715/- to 41429/-	6	20%
	Rs.15536/- to 20714/-	3	10%

	Rs.10357/- to 15535/-	2	6.66%
8.	FAMILY HISTORY OF HYPERTENSION		
	Yes	28	93.33%
	No	2	6.66%
9.	FROM HOW MUCH TIME YOU ARE SUFFERING FROM HYPERTENSION		
	Less than 1 year	18	60%
	1-5 year	6	20%
	6-10 year	4	13.33%
	11-15 year	2	6.66%
10.	FROM HOW LONG YOUR TREATMENT IS RUNNING		
	Less than 1 year	15	50%
	1-5 year	7	23.33%
	6-10 year	5	16.66%
	11-15 year	3	10%

Table No:1 shows that the Frequency and percentage distribution of demographic variables of patients with hypertension showed that out of 30 sample in regards to the age 40% bellows to 50-60 years, 28% belongs to 40-50 years, 20% belongs to 60-70 years and 12% belongs to 30-40 years. with respect to religion, 98% were Hindu, 0% were Muslim and Christian. Educational status shows that 40% are instructed up to higher secondary. According to occupation 46% are Employee. As far as dietary pattern concerned as 80% are Non- vegetarian and 20% are vegetarian.

Section B: Determine The Effectiveness Of Deep Breathing Exercise On Level Of Blood Pressure Among Patients With Hypertension

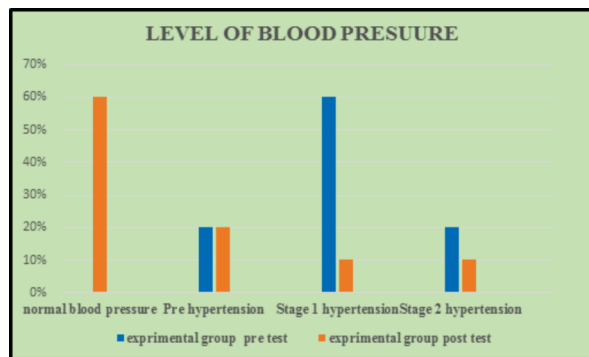


Figure -1 result shows that in the pre-test, out of 30 samples (20%) had pre- hypertension, (20%) had Stage I hypertension, (60%) had Stage II hypertension and (20%) have Normal Blood Pressure. Whereas in the Post- test after intervention, out of 30 samples (60%) have Normal Blood Pressure, (20%) had Pre- hypertension and (10%) had Stage I Hypertension, (10%) had Stage II hypertension among patients with Hypertension.

Section C: Mean And Standard Deviation Of Pre-test And Post-test Among Patients With Hypertension.

TABLE 2: Mean, standard deviation and paired test value on pre and post-test blood pressure level among clients with hypertension in experimental group and control group

GROUP	TEST	MEAN	SD	MEAN DIFFERENCE	PAIRED TTEST	5% LEVEL OF SIGNIFICANCE
EXPERIMENTAL GROUP	PRE TEST	3.1	1.6	1.4	8.34	0.05
	POST TEST	1.90	0.77	0.14	66	0.05

Table: 2 represent, the mean score on blood pressure level in experimental group was 3.0 in pre-test and 1.90 in post-test. The paired t' value was 8.34 which is significant at p > 0.05.

It shows that yoga was effective in reducing the blood pressure

level among clients with hypertension. Hence the research hypothesis (H_1) is accepted.

Section D: Association between the Post Test Level of Blood Pressure among Patients with Hypertensive Patients with Selected Demographic Variables The result discovered that there is no significant association between level of blood pressure with selected demographic variables such as Age, Religion, Educational status, occupation and dietary pattern of hypertensive patients.

DISCUSSION

The present analysis examined the effect of deep breathing exercise intervention on the reduction of blood pressure among hypertensive patients. Present study findings reveal that practicing deep breathing exercise twice a day for a week leads to major reduction in systolic blood pressure. Numbers of studies related to the effects of breathing exercise in reduction of blood pressure undertaken and which prevent the positive effect. The conducted a fast and slow breathing exercise interventional study with 60 samples for 3 months and the findings reveal that BP decreased longitudinally over a 3-month period with both interventions.

CONCLUSION

Regular practice of deep breathing exercise is viable in lessening systolic and diastolic blood pressure by upgrading parasympathetic action and reducing sympathetic excitability thereby effectively reducing the blood pressure.

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