

EFFECT OF YOGA ON STRESS AMONG PATIENTS WITH HYPERTENSION IN SELECTED HOSPITAL AT PUDUCHERRY.

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Abstract:

Life in the modern world is fight with stress and stressful conditions it leads many systemic diseases. Among these hypertension has now become a global pandemic and it is rapidly increasing in developing countries like India. A quantitative quasi experimental study was conducted to find the effectiveness of yoga on stress and intervention with 200 samples selected through convenience sampling technique for study and control group in medical wards of SVMCHRC, Puducherry. The patients aged between 40-60 years, both gender diagnosed with hypertension were included as samples. Baseline data were collected by structured questionnaires and stress were assessed by using modified Perceived Stress Scale by Sheldon Cohen. The specific Yogasanas, Pranayama and Om meditation practice were implemented to the study participants. The patients were followed for twelve weeks. After that post test was conducted with same questionnaires and tool. The results revealed that yoga was very effective alternative therapy to reduce level of stress.

Key words: yoga, stress, hypertension

Introduction:

Hypertension or elevated blood pressure is a serious medical condition that significantly increases the risk to the heart, brain, kidney and other organs. Hypertension is a major cause of premature death worldwide. One of the global targets for noncommunicable diseases is to reduce the prevalence of hypertension by 25% by 2025. Stress is one of the predisposing factors for hypertension and it is leading risk factor for mortality and it ranked as third cause of disability. Yoga will decrease the cortisol level there by stress is reduced and it improves the blood flow to the arteries that results in control of hypertension.

Statement of the Problem:

“Effectiveness of yoga on stress among patients with hypertension in selected hospital at Puducherry”.

Objectives:

1. To assess the level of stress among patients with hypertension in study and control group.

2. To evaluate the effectiveness of yoga on stress among patients with hypertension in study group.
3. To find out the association between stress with selected demographic and clinical variables among patients with hypertension.

Methodology:

Research Approach: The research approach used for this study was quantitative research approach.

Research Design: Quasi experimental non randomized control group design was used in this study.

Variables:

Dependent Variable: The dependent variable in this study was stress among patients with hypertension.

Independent Variable: The independent variable in this study was yoga.

Research Setting: The study was conducted in the medical wards of Sri Venkateshwaraa Medical College Hospital and Research Centre.

Population: The population for the present study comprised of the patients with hypertension.

Sample: Samples includes the patients with hypertension who were admitted in male and female medical wards in SVMCH&RC at Puducherry and who were fulfilling the inclusion criteria.

Sample size: The sample size of the study was 200 patients with hypertension as determined by power analysis in that 100 patients were in the study group and another 100 patients were in the control group.

Sampling techniques: Samples were selected by convenience sampling technique.

Sampling criteria:

Inclusion criteria

1. Patients diagnosed with hypertension and those who were admitted in medical ward.
2. Patients with stage - 1 and stage - 2 level of hypertension in the range of 140-179 mm of Hg systolic blood pressure and 90-109mm of Hg diastolic blood pressure.
3. Patients who could speak and understand Tamil and/or English.
4. Patients who were willing to participate in this study and who were on regular treatment.

Exclusion criteria

1. Patients who were already practicing yoga, meditation and any other alternative therapy.
2. Patients with severe anxiety and other co morbid conditions.
3. Patients with chronic illness and uncooperative patients.
4. Patients who were in antenatal, postnatal and other gynecological problems.

Development and description of the tool:

Part I: - Consist of demographic and clinical variables.

Part II: - Consists of modified Perceived Stress scale.

Results and Discussion:**SECTION A: Distribution of demographic and clinical variables among patients with hypertension.**

Regarding demographic variables among 200 patients with hypertension in study group and control group the majority of patients, 39% were in the age group of 51 – 55 years, On gender 50% of them were male and remaining 50% were female in both study and control group. Regarding education, 25% in the study group and 23% in the control group had primary education. In relation to the occupation, 43% in the study group and 42% in the control group were unemployed. In the aspect of marital status, 89% in the study group and 87% in the control group were married. 25% had a monthly income of Rs. \leq 5000/month. In the study group 69% and control groups, 73% of them from rural area. With regard to type of family, 60% in the study group and 57% in the control group belonged to nuclear family. Regarding source of information about illness 38% of patients from professional workers and 35% from mass media. In relation to food pattern 86% in study group and 83% in control group had mixed diet.

With regard to clinical variables in study group and control group, 47% of patients from study group and 39% of patients from control group are not having history of exposure with any life events. 56% of patients have no family history of hypertension in study group and 52% of patients had family history of hypertension in control group. Most of the patients are not able to specify the relationship in both study group 56% and control group 48%. With regard to stage of hypertension 56% in the study group and 61% in the control group had stage 1 hypertension. With regard to the duration of hypertension, 40% in the study group and 42% were had 4 - 6 years. Regarding treatment duration in the study group, 42% had a treatment in between 4-6 years and 40% of the subjects in the control group had a treatment in between 1 - 3 years. 53% from study group had a history of hospitalization for hypertension treatment and, 56% from control group had no history of hospitalization for hypertension treatment. About medication compliance 35% from study group and 40% from control group got regular treatment. Related to drug most of the patients had amlodipine from both group 64% and 69% respectively, and duration of drug 62% in study group and 68% in control group had once in a day. 59% and 53% of patients from both groups are not following any type of exercise. In the study group 27% and control group 24% of them having a habits of both alcohol and tobacco use. Regarding experience of physical symptoms majority of the patients had during any activities in both group 61% and 58% respectively.

Table 1: Distribution of pretest and posttest level of stress among study and control group of patients with hypertension. (N=200)

Assessment	Level of stress	Pretest		Post test-1		Post test-2		Post test -3		Post test -4	
		n	%	N	%	n	%	n	%	n	%
Study group	Low	5	5.00	7	7.00	10	10.00	15	15.00	23	23.00
	Moderate	62	62.00	69	69.00	78	78.00	74	74.00	71	71.00
	High	33	33.00	24	24.00	12	12.00	11	11.00	6	6.00
Control group	Low	7	7.00	7	7.00	8	8.00	9	9.00	10	10.00
	Moderate	61	61.00	60	60.00	60	60.00	61	61.00	61	61.00
	High	32	32.00	33	33.00	32	32.00	30	30.00	29	29.00

SECTION B: Effectiveness of yoga on stress among patients with hypertension.

Table 2: Effectiveness of yoga on stress. (N=200)

Stress score		Study group (n=100)		Control group (n=100)		Mean difference	Student Independent t – test
		Mean	SD	Mean	SD		
Pretest		24.07	4.30	23.65	5.06	-0.42	t=0.63 P=0.53
Post test – 1	7 th day	23.31	4.30	23.75	5.09	0.44	t=0.66 P=0.51
Post test – 2	4 th week	22.21	4.29	23.53	5.07	1.32	t=1.99 P=0.05*
Post test – 3	8 th week	19.33	4.28	23.42	5.02	4.09	t=6.20 P=0.001***
Post test – 4	12 th week	18.60	4.80	23.33	5.00	4.73	t=6.82 P=0.001***

Table 3: Multiple comparison of stress between pretest and posttest among study and control group.

Group	Assessment	Study		Bonferroni t- test		Repeated ANOVA test F value
		Mean	SD	Comparison	MD	
Study	Pretest	24.07	4.30	-	-	F=80.76 P=0.001***
	Posttest-1	23.31	4.30	Pretest vs post-I	0.76	
	posttest-2	22.21	4.29	Pretest vs Post-II	1.86	
	Posttttest-3	19.33	4.28	Pretest vs Post-III	4.74	
	Posttttest-4	18.60	4.80	Pretest vs Post-IV	5.47	
Control	Pretest	23.65	5.06	-	-	F=1.94 P=0.16
	Posttest-1	23.75	5.09	Pretest vs post-I	-0.01	
	posttest-2	23.53	5.07	Pretest vs Post-II	0.12	
	Posttttest-3	23.42	5.02	Pretest vs Post-III	0.23	
	Posttttest-4	23.33	5.00	Pretest vs Post-IV	0.32	

SECTION C: Association between stress with selected demographic and clinical variables among patients with hypertension.

The significance association found in male, rural patients, stage-1 hypertension, 4-6 years treatment duration, previously hospitalized patients and regular medication compliance ($t=2.06$ $p=0.04^*$, $t=2.00$ $p=0.05^*$, $t=2.44$ $p=0.02^*$, $F=3.01$ $p=0.03^*$, $t=2.10$ $p=0.04^*$, $F=2.81$ $p=0.04^*$) are reduced more stress score than others.

DISCUSSION:

The results of research proved that the yoga was very much effective in reducing the level of stress which is indicated by the statistical value $t=6.82$ indicated that the yoga was very effective at $P<0.001$ level.

CONCLUSION:

In pre-test study group patients are had 24.07 and control group patients are had 23.65 stress score, the mean difference of stress score is -0.42. It is not statistically significant difference between study and control group. In post test -4 after administration of yoga, among study group the mean difference of stress score is 4.73 which indicated statistically high positive improvement was found and it was confirmed by student independent t- test. This study concludes that yoga is very effective intervention in reduction of stress among patients with hypertension.

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