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Effect of Selected Yogic Practices on the Management of Stress among Hypertensive Patients

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Abstract:

Aims of Study: To study the effect of selected yogic practices on the management of stress in mild and moderate hypertensive patients.

Material and Methods: In this study, 45 samples each in experimental and control group, both male and female patients in the age group between 40 years and 60 years with mild and moderate hypertensive patients. From this study, it is observed that the application of selected yogic practices would reduce stress in case of experimental group compared to control group due to yogic interventions between pre and post training period.

Study Period : Experimental Group: Yoga training given for a period of Six months – six days in a week of one hour duration and Follow up period for six months once in a week of one hour duration.

Control Group – Monitored the stress assessment without yogic practices for the twelve months

Result: The average stress level of experimental group was much higher than the control group at the base line. After one year, the stress level decreased among the members of the experimental group; but was found to have increased in the control group. Hence, the inference is that, yogic practices decreased the stress level among the sample.

Conclusion: Yoga can play an important role for reducing the stress level in mild and moderate hypertensive patients.

Keyword: Yoga, hypertension, stress

1. Introduction

Yoga is a philosophical science, born out of man's seeking to fathom the meaning of existence. Yoga is derived from the Sanskrit word 'Yuj' which means 'union' or to 'join' or 'to yoke'. The ultimate aim of yoga is self-evolution. In ancient times, people lived the yogic way and were having good health. In these days when health deteriorated due to man's changing values and lifestyle yoga gained ground in its use as therapy. Yoga is considered a mind-body type of complementary and alternative medicine practice. Yoga brings together physical and mental disciplines to achieve peacefulness of body and mind, helping our body to relax and manage stress and anxiety.

2. Stress

Stress is simply a reaction to a stimulus that disturbs our physical or mental equilibrium. In other words, it's an omnipresent part of life. A stressful event can trigger the "fight-or-flight" response, causing hormones such as adrenaline and cortisol to surge through the body. A little bit of stress, known as "acute stress," can be exciting—it keeps us active and alert. But long-term, or "chronic stress," can have detrimental effects on health.

3. Objective

The aim of the study is to identify the effect of selected yogic practices on stress assessment on mild and moderate hypertensive patients. For this situation experimental study is most suitable. For this purpose, two groups viz., experimental and control groups are observed.

4. Methods

The researcher has formulated the hypotheses in accordance with the study is that the level of stress in the experimental group would reduce after the yogic practices between pre and post training period compared to control group, and the subjects are selected from the patients of Rajah Muthiah Medical College Hospital, Annamalai University, Annamalainagar, Chidambaram and approval for the study was obtained from the Annamalai University Institutional Human Ethics Committee, Rajah Muthiah Medical College.

The Orientation was given before the commencement of yoga training, viz., the purpose of the study and the role of the patients were explained. The patients were motivated to undergo yoga training regularly and to exhibit their maximum ability. Experimental group

members are exposed to yogic practices (Asana, Pranayama, Mudras, Relaxation Techniques and Meditation and Diet advice given to all the subjects undertaken for the study by Senior Dietician of Rajah Muthiah Medical College Hospital, Annamalai University) for the period of 6 months along with Drug, six days in a week of one hour duration and follow up period for 6 months, yoga training is given once in a week of one hour duration. In the case of control group, though they are not exposed to yogic practices but they are taking only drugs. The observations of various measures are taken at pre test level, and they are observed at every three months interval i.e. after 3 months & 6 months and follow up periods; 9 months & 12 months. Similar to experimental group, though they are not exposed to yogic practices but they are taking only drugs and they are also observed at the same interval. The stress assessment was made pre and post period through the structured standard questionnaire for the experimental and control group.

5. Instrument Reliability

In this investigation, the questionnaire used was already standardized and verified for the reliability, content validity and construct validity.

6. Analysis and Discussion

Respondents		Mean	S.D.	N
Experimental Group	Before	76.4222	6.23585	45
	After	44.7778	6.61571	45
Control Group	Before	65.6000	8.61922	45
	After	69.4667	9.09445	45

Table 1: Stress Level

Stress level for experimental group and control group are compared. Stress level is measured before and after yogic practice. In the case of experimental group stress level before yogic practice is 76.4222 and after is 44.7778. In the case of control group also the stress level is observed to be 65.6000 and 69.4667 during the same period. In the experimental group yogic practice is administrative and the stress level is reduced from 76.4222 to 44.7778. But, in the case of control group the stress level is increased from the base line being 65.8000 to 69.4667.

Group		Mean	S.D.	S.E.	t	df	Sig.
Experimental Group	Before	31.6444	8.873731	1.31739	24.021	44	0.0001
	After						
Control Group	Before	-3.8667	8.41427	1.25433	-3.083	44	0.004
	After						

Table 2: Differences in Stress Level

Student's t-test carried out to find the paired differences between stress level before and after state for both experimental and control group. T-value for experimental group is 24.021 and the P-value is 0.001. This implies that there is considerable level of difference in the stress level of before and after. Due to Yogic Practice the stress level has reduced so the t-value is positive.

Considering the control group t-value is -3.083 and significant value is 0.004. So it is observed that there is significant difference in the stress level during the beginning and end of study period of the control group. Comparing the mean values from the previous table the differences is due to increase in stress level. Actually the stress level increased at the end of the fourth phase compared to base line and the increase is significant as well.

Yogic practice reduced the stress level in the experimental group and so there is significant difference in the stress level between experimental and control group. But the stress level in the control group, the stress level has increased considerably.

Period	Mean	S.D.	N
Third Month	4.2889	0.58861	45
Sixth Month	4.4667	0.50452	45
Ninth Month	4.7333	0.44721	45
Twelfth Month	4.8889	0.31782	45

Table 3: Differences of opinion about Yogic Practices

From the table 3 it is observed that the mean values about the opinion about yoga during third month, sixth month, ninth month and twelfth month are 4.2889, 4.4667, 4.7333 and 4.8889 respectively. It is found that the positive opinion about yoga is keep increasing at every phase. The sample expressed that they have better opinion about yogic practice and it starts improving one phase after the other. The respondents in the experimental group expressed better opinion about yogic practice and it increases stage after stage in the whole period of study.

Further, one way ANOVA for repeated measures is performed to identify whether there is any significant difference in their opinion about yogic practices during the four phases of observation and the result is shown below.

Opinion about yogic practices	df	Mean Squares	F	Sig
	3	3.235	27.472	0.001

Table 4: Opinion about Yogic Practices

The repeated test of measures for opinion regarding yogic practices resulted in F-value is 27.472 and P-value is 0.001. From this is observed that there is considerable level of difference in their opinion with regard to yogic practice among four phases of observation. The opinion about yogic practice varied among four periodical observations among the respondents of experimental group.

Period		Mean Differences	S.E.	Sig
Third Month	Sixth Month	- 0.178	0.058	0.021
	Ninth Month	- 0.444	0.081	0.001
	Twelfth Month	- 0.600	0.092	0.001
Sixth Month	Ninth Month	- 0.267	0.067	0.001
	Twelfth Month	- 0.422	0.074	0.001
Ninth Month	Twelfth Month	- 0.156	0.055	0.040

Table 5: Paired differences of opinion about Yogic Practices

Third month opinion about yoga is compared to the following three phases and the mean differences are - 0.178, - 0.444 and - 0.600. All the differences are negative because of improved opinion during every phase. The significant value also indicates the differences are to as extent of considerable level. Similar is the result of sixth month opinion about yogic practices with that of the following two phases. The mean differences are observed to be - 0.267 and - 0.444 and they are also significant at one percent level. Further, ninth month opinion value is also found to differ considerably with twelfth month opinion because the mean difference is - 0.156 at 5 % level.

The yogic practice is well received by the respondents of experimental group and their positive opinion gets strengthened stage by stage.

The Opinion of respondents about yogic practice of third month compared with sixth month, ninth month and twelfth month taking at a time. The mean differences are - 0.178, -0.444, -0.600 with corresponding value 0.021, 0.001 and 0.001 respectively. This indicates that there is significant difference in their opinion of third month with sixth month, ninth month and twelfth month. The negative sign indicates that their opinion is higher in the following month compared to third month. The differences also increased stage by stage.

Similarly, paired comparison is made between sixth month opinion about yogic practice with ninth and twelfth month. The mean differences are - 0.267 and - 0.422 with p-values for both the cases. The differences in their opinion differed considerably at 1% level. Further, the negative sign indicates that their opinion about yogic practiced increased in ninth and twelfth month compared to sixth month. Further, the respondents' opinion about yogic practice of ninth month and twelfth month also found to differ with mean differences if -0.156 and p-value is 0.040. This also indicates that twelfth month opinion is higher during twelfth month compared to ninth month and the differences is significant at 5% level.

On the whole the opinion about yogic practice of respondents of experimental group increased phase after phase and also is each the difference is significant.

7. Findings

7.1. Stress

The average stress level of experimental group was much higher than the control group at the base line. After one year, the stress level decreased among the members of the experimental group; but was found to have increased in the control group. Hence, the inference is that, yogic practice decreased the stress level among the sample.

The difference between base line average stress levels with that of the end of the twelfth month average is found to differ significantly. In the control group the increase was found to be significant and in the experimental group the reduced stress level was found to differ significantly.

The experimental group respondents expressed positive opinion about yogic practices and their positive attitude got strengthened stage by stage throughout the study period. The opinion level about yogic practices also found to differ among the various phases.

The findings of Damodaran. A. et al. (2002)¹ and McCaffrey. R., et al. (2005)² shown that there was a significant reduction of stress score after the yogic practices. The present study follows the findings of Damodaran and McCaffrey.

¹ Therapeutic Potential of Yoga Practices in Modifying Cardiovascular Risk Profile in Middle Aged Men and Women. J Assoc Physicians India., 50(5), pp. 633-40.

² The Effects of Yoga on Hypertensive Persons in Thailand. Holist Nurs Pract. 19(4), pp. 173-80.

7.2. Yogic Practices

The opinion regarding yoga was stronger and stronger stage by stage and there was significant difference in their opinion between every stage under observation.

The findings of Tatum. N.G., R.C. Bradley and C. Igel (2011)³ shown that therapeutic yoga program has demonstrated significant improvement in yogic practices and the research confirmed that yoga poses improve the standing balance and increased floor transfer ability. The yoga program may be used and adopted across the continuum of care as an intervention in a safety. The present study and Tatum et. al. study, are in the same line and yogic practices improve their ability.

8. Conclusion

It is found that, due to yogic practices, to have keeping good health of an individual in the context of hypertension specifically. Yogic practitioners have given positive opinion about yoga practices and they have experienced a reduction in stress due to yogic practices. This needs to be accepted by individuals and practice it for their self betterment. Yogic practice need to be part of an individual's daily life routines as that of taking food.

9. References

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³ Therapeutic Yoga to Improve Balance and Floor Transfer in Older Adult. *Topics in Geriatric Rehabilitation*, 27(2), pp.134-141.