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A study to assess the effectiveness of yoga therapy on hypertension among geriatric people of selected old age homes at Jabalpur city

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Abstract
Yoga has emerged as a safe effective, alternative therapy of hypertension, the study aimed "To assess the effectiveness of yoga therapy on hypertension among geriatric people" A Quantitative research approach with quasi experimental pre & post - test-control group is design adopted. Purposive sampling technique to select 60 Geriatric people for study. The tool is administered after validity and reliability. pre –test experimental group mean is 166.86, SD is 16.7 and control group pre -test mean is 165.2, SD is 16.53, mean difference is 1.66 and SD is 0.17 and unpaired t value is 0.387 and table value is 2.0452 i.e. non -significant. The data in B.P post –test experimental group mean is 158.2, SD 15.6 and control group post -test mean is 183.33, SD 19.3 and mean difference is 25 and SD difference is 3.7 and used unpaired tvalue is 5.519, table value is 2.0017this is significant.

Keywords: Sphygmomanometer, geriatric person, hypertension, yoga therapy, old age home

Introduction

"Yoga means addition – addition of energy, strength and beauty to body, mind and soul" –Amit Ray

Health and holistic health is closely related, which gives importance to physical, mental, social, spiritual and sexual health as whole. Hypertension is connected with circulation, respiration and function of vital organs. Complementary therapy like yoga is having effect on mental and physical health. So yoga emphasis on promotion, prevention and curative measures and helps to maintain normal blood pressure. Alternative therapy in Nursing is also valuable aspect of health care system. It is mainly based on promotion, maintenance, prevention and cure of disease.

Materials and Methods

A quasi experimental study pre- and post- test only control group design was carried out to assess the effectiveness of yoga therapy in selected old age home at Jabalpur city. Total 60 subjects were selected. Yoga therapy was given (experimental group) in geriatric people on hypertension Data collection tool included structured knowledge questionnaire and check the blood pressure scores. In control group out of 30 samples of the samples majority 18(60%) were in the age group of 71 year and above, regarding religion of samples, of majority 26(86.66%)were Hindu, education standard of geriatric person of majority 18(60%) were under graduate. regarding family type Majority of the samples 24(80%) in nuclear family, regarding marital status, maximum 16(53.33%),were widow/widower, Majority of the group 17(56.6%), had no family history of hypertension, maximum 17(56.6%)were group of meal schedule in two times or less in a day, Majority of the samples 22(73.33%)were vegetarian, Majority of 17(56.6%) were they have others bad habits, Maximum samples 25(83.33%) were sleeping pattern less than 7-8 hr. Majority 14(46.6%)were they have to taking antihypertensive medicine. In experimental group out of 30 samples of the samples majority 16(53.3%) were in the age group of 71 year and above, regarding religion of samples, of majority 27(90%) were Hindu, education standard of geriatric person of majority 23(76.6%) were under graduate. regarding family type Majority of the samples 26(86.6%) in nuclear family, regarding marital status, maximum 14(46.6%),were widow/widower, Majority of the group 16(53.33%), had no family history of hypertension, maximum 13(43.33%)were group of meal schedule in two times or less in a day, Majority of the samples 27(90%)were vegetarian, Majority of 18(60%) were they have others bad habits, Maximum samples 25(83.33%) were sleeping pattern were less than 7-8 hr. Majority 16(53.33%)were they have to taking antihypertensive medicine. The systolic blood pressure mean scores pre –test experimental group was 166.86 with sd was 16.7 and control group pre test mean was 165.2 with sd was 16.53 and mean difference was 1.66 and sd difference was 0.17 and used unpaired calculated t value 0.387 and table value 2.0017 this is less than table value show that result is none significant there is no deferent between mean pre test of experimental group and mean pre test of control group. The diastolic blood pressure mean scores pre –test experimental group was 92.6 with sd was 9.11 and control group pre test mean was 95.6

with sd was 7.17 and mean difference was 3 and sd difference was 1.94 and used unpaired calculated t value is 1.419 and table value is 2.0017 this is less than table value show that is none significant between mean pre test of experimental group and mean pre test of control group.

The systolic blood pressure mean scores post –test experimental group was 158.2 with sd was 15.6 and control group post test mean was 183.2 with sd was 19.3 and mean difference was 25 and sd difference was 3.7 and used unpaired calculated t value is 5.519 and table value is 2.0017 this is more than table value show that result is significant there is different between mean post test of experimental group and mean post test of control group, that is clearly indicated the effectiveness of yoga therapy in post test of experimental group, hence H2 accepted. The diastolic blood pressure mean scores post –test experimental group was 89.6 with sd was 7.177 and control group post test mean was 96.6 with sd was 6.96 and mean difference was 7 and sd difference was 0.217 and used unpaired calculated t value is 3.841 and table value is 2.0017 this is more than table value show that result is significant there is different between mean post test of experimental group and mean post test of control group, that is clearly indicated the effectiveness of yoga therapy in post test of experimental group, hence H2 accepted.

Subheadings

Footnotes

"Yoga means addition – of energy, strength and beauty to body, mind and soul" –Amit Ray

"Hypertension Range of Blood Pressure "According To Joint National Committee Classification of Hypertension {7may2018}"

Results and Discussion

The major findings of the study revealed that the pre –test experimental group mean is 166.86 with SD is 16.7 and control group pre -test mean is 165.2 with SD is 16.53, mean difference is 1.66 and SD is 0.17 and unpaired t value is 0.387 and table value is 2.0452 i.e. non -significant. The data in B.P post –test experimental group mean is 158.2

with SD 15.6 and control group post -test mean is 183.33 with SD 19.3 and mean difference is 25 and SD difference is 3.7 and used unpaired t value is 5.519 and table value is 2.0017 this is significant.

Tables and Figures

Table 1: Comparison of pre-test blood pressure score between experimental group and control group.

Groups	Mean	Mean difference	Sd	Sd Difference	Unpaired t-test
Experimental Pre –test	166.86	1.66	16.7	0.17	0.387
Control Pre – test	165.2		16.53		

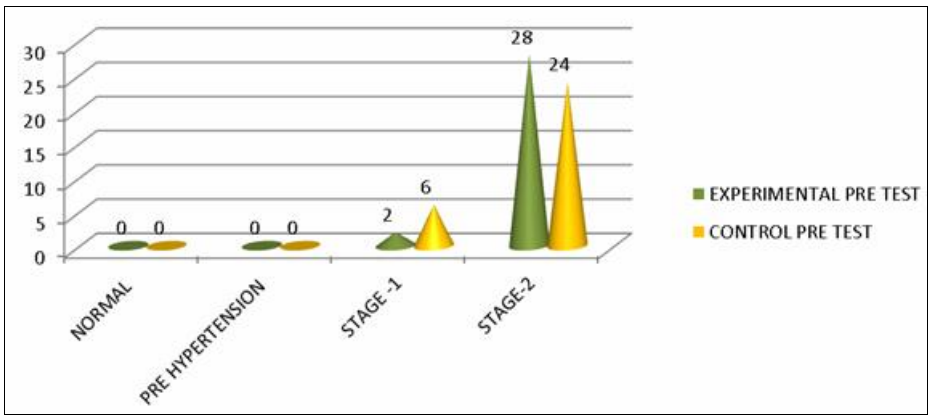

Fig 1: Comparison of pre-test blood pressure score between experimental group and control group.

The data presented in this Table No 1. fig. no. 1 clearly indicates the blood pressure scores pre –test experimental group mean was 166.86 with sd was 16.7 and control group pretest mean was 165.2 with sd was 16.53 and mean difference was 1.66 and sd difference was 0.17 and used unpaired calculated t value is 0.387 and table value is 2.0017 this is less than table value show that is non significant between mean pre test of experimental group and mean pre test of control group.

Table 2: Comparison of post-test blood pressure score between experimental group and control group

Groups	Mean	Mean difference	Sd	Sd Difference	Unpaired t-test
Experimental Post –test	158.2	25	15.6	3.7	5.519
Control Post– test	183.2		19.3		

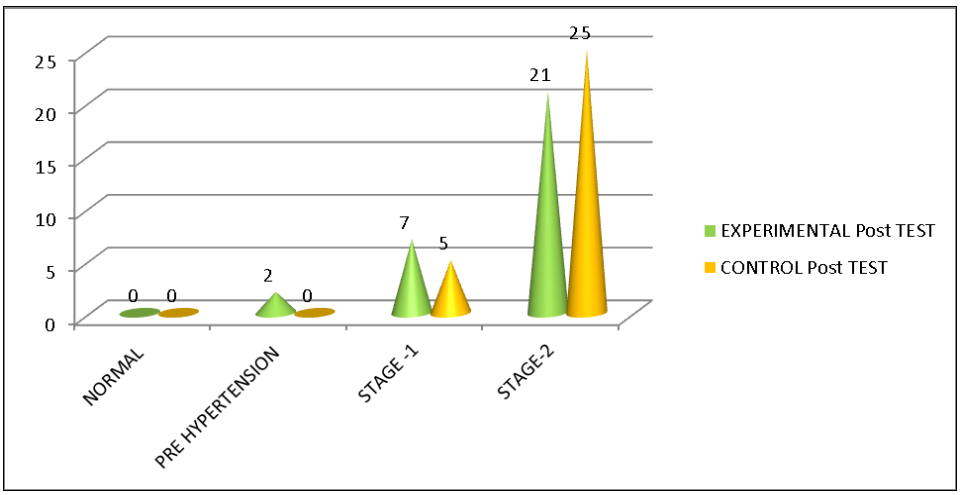

Fig 2: Comparison of post-test blood pressure score between experimental group and control group

The data presented in this Table No 2. fig. no. 2 clearly indicates the blood pressure scores post –test experimental group mean was 158.2 with sd was 15.6 and control group post test mean was 183.2 with sd was 19.3 and mean difference was 25 and sd difference was 3.7 and used unpaired calculated t value is 5.519 and table value is 2.0017 this is more than table value show that is significant between mean post test of experimental group and mean post test of control group, that is clearly indicated the effectiveness of yoga therapy in post test of experimental

group, hence H2 accepted.

Table 3: Hypertension range of blood pressure according to joint national committee classification of hypertension {7MAY2018}

Hypertension range	
Range	**Interpretation**
Normal	SBP<120 mm/hg DBP <80 mm/hg
Pre hypertension	SBP-120-139mm/hg DBP-80-89mm/hg
Stage -1 hypertension	SBP-140-159mm/hg DBP-90-99mm/hg
Stage-2 hypertension	SBP->160mm/hg DBP->100mm/hg

Equations
Mean
Formula

$$\overline{X} = \frac{\Sigma X}{n}$$

Standard deviation
Formula

$$\sigma = \sqrt{\frac{\sum (x-\mu)^2}{n}}$$

The obtained correlation was corrected for length by using Spearman – Brown Prophesy formula.

Chi-square test
Formula

$$\chi^2 = \sum \left[\frac{(O-E)^2}{E} \right]$$

Paired t- test
Formula

$$T = \frac{\overline{X} - \overline{Y}}{S_d / \sqrt{n}}$$

Unpaired t- Test

$$s^2 = \frac{\Sigma(X_1^2) - \frac{(\Sigma x_1)^2}{n_1} + \Sigma(X_2^2) - \frac{(\Sigma x_2)^2}{n_2}}{n1+n2-2} \qquad t = \frac{\overline{X_1} - \overline{X_2}}{\sqrt{\frac{s^2}{n_1} + \frac{s^2}{n_2}}}$$

Conclusions
After the detailed study it was concluded that there is a significant difference in the blood pressure scores of the geriatric people after the administration of yoga therapy as compare to the previous scores of blood pressure in 30 consecutive days.
The study also revealed out that there was a great difference the hypertension (blood pressure score) between experimental group and control group of the geriatric people Hence, it can be said that the yoga therapy is effective in maintaining the blood pressure scores among geriatric person.

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One heart is full of gratitude and thanks to lord almighty whose abundant blessing led us throughout the study. No individual is complete in himself / herself. They need to learn and develop with the encouragement and assistance from their teachers, elders, colleagues etc. at all stages of life for better development. The completion of this dissertation not only gives me immense joy and contentment after many months of demanding efforts, but also provides a welcome opportunity to express my sincere gratitude to all those who had helped me in its successful completion**.**

Conflict of Interest
Not available

Financial Support
Not available

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