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Research Article

A Study to Evaluate the Effectiveness of Guided Imagery on Level of Blood Pressure in Hypertensive Senior Citizens Residing in Selected Old Age Homes of Dharwad District

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Abstract: Background: Guided imagery is a therapeutic approach that has been used for centuries. With this therapy, a practitioner helps to create positive mental images and desired outcomes for specific situations. Through the uses of mental imagery, the mind body connection is activated to enhance an individual's sense of wellbeing, reduced stress, reduced anxiety and it has the ability to enhance the individual's immune system. **Objectives:** 1) To assess the level of blood pressure in Hypertensive senior citizens in Experimental group. 2) To assess the level of blood pressure in Hypertensive senior citizens in Control group. 3) To evaluate the effectiveness of guided imagery in Experimental group in terms of reduction in the level of blood pressure. 4) To compare the posttest level of blood pressure in Experimental group and Control group. 5) To find out an association between pre-test level of blood pressure of Experimental group with their selected socio-demographic variables. 6) To find out an association between pre-test level of blood pressure of Control group with their selected socio-demographic variables. **Methodology:** The research approach used is evaluative, and design used is Quasi-experimental; Non-randomized control group design. The sample comprised of 30 Hypertensive senior citizens (Experimental group + 15, Control group + 15). A Non probability purposive sampling technique was used to select the samples. The tool used for data collection was Semi-structured Interview and blood pressure monitoring sheet was used to monitor the level of blood pressure in Hypertensive senior citizens and the tool was prepared for present study. The collected data was analyzed by using descriptive and inferential statistics. **Results:** The calculated unpaired systolic BP 't' value of samples in experimental group were (t_{cal}=8.93) greater than the tabulated value (t_{tab}=2.014), whereas in the diastolic BP 't' value of samples were (t_{cal}=6.53) greater than the tabulated value (t_{tab}=2.014). The calculated unpaired systolic BP 't' value of samples in control group were (t_{cal}=4.7) greater than the tabulated value (t_{tab}=2.014), whereas in the diastolic BP 't' value of samples were (t_{cal}=4.8) greater than the tabulated value (t_{tab}=2.014). There was association found in one variable that is duration of Hypertension. Hence there was statistical association between pre-test level of blood pressure in hypertensive senior citizens of experimental group with their selected demographic variables i.e. duration of Hypertension. There was no association between pre-test level of blood pressure in hypertensive senior citizens in control group and selected demographic variable. **Conclusion:** The Guided Imagery was effective on the level of blood pressure in Hypertensive senior citizens in Experimental group compare to Control group.

Keywords: Guided Imagery, level of blood pressure, hypertension, senior citizens, old age homes.

Introduction

Being healthy should be a part of our life style as a whole. Good health and a happy mind are priceless possessions that one can have. If one is healthy he or she can always week on getting health. However, wealth without good health is useless. Health is a wealth better than gain and gold.[1,2] A major criticism of their view of health is that it is unrealistic, because it leaves most of us unhealthy, most of the time, few. It fails to take into account not just temporary spells if ill health, but also the growing number of people living with chronic illnesses and disabilities.[3,4]

The increases in blood pressure with age are mostly associated with structural changes in the arteries and especially with large artery stiffness and due to suffering of blood vessels. It is known from various studies that rising blood pressure is associated with increased cardiovascular risk.[5]

The world's population is ageing virtually every country in the world is experiencing growth in the number of proportion of older persons in their populations.[6] One of the non-pharmacological treatments that can be used to decrease hypertension is Guided Imagery Therapy.[7]

Guided imagery is a therapeutic approach that has been used for centuries. With this therapy, a practitioner helps to create positive mental images and desired outcomes for specific situations. Through the uses of mental imagery, the mind body connection is activated to enhance an individual's sense of wellbeing, reduced stress, reduced anxiety and it has the ability to enhance the individual's immune system.[8,9,10] These practices can help patients relax, improve sleep, prepare for surgery, experience greater clarity, compassions, gratitude, feel more calm, confident and comfortable.[11,12]

The present study was aimed to achieve the following objectives

1) To assess the level of blood pressure in Hypertensive senior citizens in Experimental group.
2) To assess the level of blood pressure in Hypertensive senior citizens in Control group.
3) To evaluate the effectiveness of Guided Imagery in Experimental group in terms of reduction in the level of blood pressure.
4) To compare between post-test level of blood pressure of Experimental group and Control group.
5) To find out an association between pre test level of blood pressure of Experimental group with their selected socio-demographic variables.
6) To find out an association between pre test level of blood pressure of Control group with their selected socio-demographic variables.

The study attempted to examine the following research hypotheses

H_1: There will be a statistical difference in post test and pre test level of blood pressure in Hypertensive senior citizens in Experimental group at 0.05 level of significance.
H_2: There will be a statistical difference in post test and pre test level of blood pressure in Hypertensive senior citizens in Control group at 0.05 level of significance.
H_3: There will be a significant difference in post test level of blood pressure in Hypertensive senior citizens in Experimental group and Control group at 0.05 level of significance.
H_4: There will be a statistical association between pre test level of blood pressure in Hypertensive senior citizens of Experimental group with their selected demographic variables at 0.05 level of significance.
H_5: There will be a statistical association between pre test level of blood pressure in Hypertensive senior citizens of Control group with their selected demographic variables at 0.05 level of significance.

Methodology

The sample comprised of 30 Hypertensive senior citizens (Experimental group + 15, Control group + 15). A Non-probability purposive sampling technique was used to select the samples. The tool used for data collection was Semi-structured Interview and blood pressure monitoring sheet was used to

monitor the level of blood pressure in Hypertensive senior citizens and the tool was prepared for present study. The collected data was analyzed by using descriptive and inferential statistics.

The reliability of the tool checked by administering it to 08 samples (Experimental group-4 and control group-4). Applying Karl Pearson's Correlation Coefficient formula, the reliability of the study was r= 0.74. Hence the tools were found to be reliable.

The data was collected by administration of Semi-structured Interview and blood pressure monitoring sheet was used to monitor the level of blood pressure in Hypertensive senior citizens in Experimental group and Control group. Administration of Guided Imagery to the Experimental group for 4 weeks. No intervention given for Control group. The post-test level of blood pressure of the study was carried out from the both Experimental and Control group by using the same tool as in the pre-test. The collected data was tabulated and analyzed by using descriptive and inferential statistics.

Major finding of the study was as follows

1) The findings related to the selected socio-demographic data of Hypertensive senior citizens in Experimental and Control group

In Experimental group

- ✓ Majority of the subjects 09(60%) belonged to the age group of 60-70 years, 4(26.66%) belonged to the age 70-80 years and 02(13.34%) belonged to the age group of 80-90 years.
- ✓ Majority of subjects 11(73.34%) were female and 4(26.66%) were male.
- ✓ Majority of the subjects 15(100%) were Hindu, whereas no one belonged to Muslim, Christian and Others.
- ✓ Majority of the subjects 04(26.67%) was unmarried, 1(6.67%) was married, 10(66.66%) of were widower, no one belongs to divorced.
- ✓ The educational status of the subjects 07(46.66%) were completed primary education, 06(40%) completed secondary education, 02(13.34) were completed pre-university education and whereas no one belonged to no formal education, and graduate education.
- ✓ The maximum number of subjects 02(13.34%) were staying in old age home less than 1 year, 10(66.66%) were staying in old age home for 2-3years, 02(13.34%) were staying in old age home for 3-4years and 1(6.66%) staying in old age home for more than 4years.
- ✓ All the subjects 15(100%) were not having any bad habits.
- ✓ All the subjects 15(100%) were vegetarian.
- ✓ Majority of the subjects 10(66.66%) had family history of hypertension and 05(33.34%) had no family history of hypertension.
- ✓ Majority of the subjects 08(53.34%) were having hypertension for 1-5years, 06(40%) were having hypertension 5-10 years and 01(6.66%) were having hypertension 10-15 years.
- ✓ All the subjects 15(100%) were taking allopathy medication.
- ✓ All the subjects 15(100%) not having any information regarding Guided Imagery therapy.

In Control group

- ✓ Majority of the subjects 05(33.33%) belonged to the age group of 60-70 years, 7(46.66%) belonged to the age 70-80 years and 03(20%) belonged to the age group of 80-90years.
- ✓ All the subjects 15(100%) were female and no one belonged to male.
- ✓ Majority of the subjects 7 (46.66%) were Hindu, and 08(53.34%) was Christian whereas no one belonged to Muslim, and Others.
- ✓ Majority of the subjects 08(53.34%) of were unmarried, 01(6.66%) were married and 06(40%) were widower and no one belonged to divorced.
- ✓ The educational status of the subjects 08(53.34%) were completed primary education, 06(40%) completed secondary education, 01(6.66%) completed pre university whereas no one belonged to graduate and others.

- ✓ The maximum number of subjects 05(33.33%) were staying in old age home less than 1 year, 07(46.66%) were staying 2-3 years, 02(13.34%) were staying in old age home for 3-4years and 1(6.66%) was staying in old age home for more than 4 years.
- ✓ All the subjects 15(100%) were not having any bad habits.
- ✓ Majority of the subjects 6(40%) were vegetarian and 9(60%) were having mixed diet.
- ✓ Majority of the subjects 09(60%) had family history of hypertension and 06(40%) had no family history of hypertension.
- ✓ Majority of the subjects 08(53.34%) were having hypertension for 1-5years, 06(40%) were having hypertension 5-10 years and 01(6.66%) was having hypertension for 10-15 years.
- ✓ All the subjects 15(100%) are taking allopathy medication.
- ✓ All the subjects 15(100%) not having the any information regarding Guided Imagery therapy.

2) Findings related to pre-test and post-test level of blood pressure in Hypertensive senior citizens (frequency and percentage) in Experimental group and Control group

In Experimental group Pre-test, majority 01(6.66%) had pre hypertension, 04(26.66%) had stage I hypertension and 10(66.66%) had stage II hypertension where as in the post test 11(73.34%) had pre hypertension, 04(26.66%) had stage I hypertension and no one had stage II hypertension. In Control group Pre-test, majority 06(40%) had stage I hypertension and 09(60%) had stage II hypertension and no one belonged to pre hypertension whereas in the post test 12(80%) had stage I hypertension, 03(20%) had stage II hypertension and no one belonged to pre hypertension.

3) Findings related to pre-test and post test level of blood pressure in Hypertensive senior citizens in Experimental group

The calculated unpaired systolic BP 't' value of samples in experimental group were (t_{cal}=8.93) greater than the tabulated value (t_{tab}=2.014), whereas in the diastolic BP 't' value of samples were (t_{cal}=6.53) greater than the tabulated value (t_{tab}=2.014). There was statistical difference in pre test and post test level of blood pressure in Hypertensive senior citizens in experimental group at 0.05 level of significance. Hence, H_1 was accepted. Therefore, the guided imagery was effective on the level of blood pressure in Hypertensive senior citizens of experimental group.

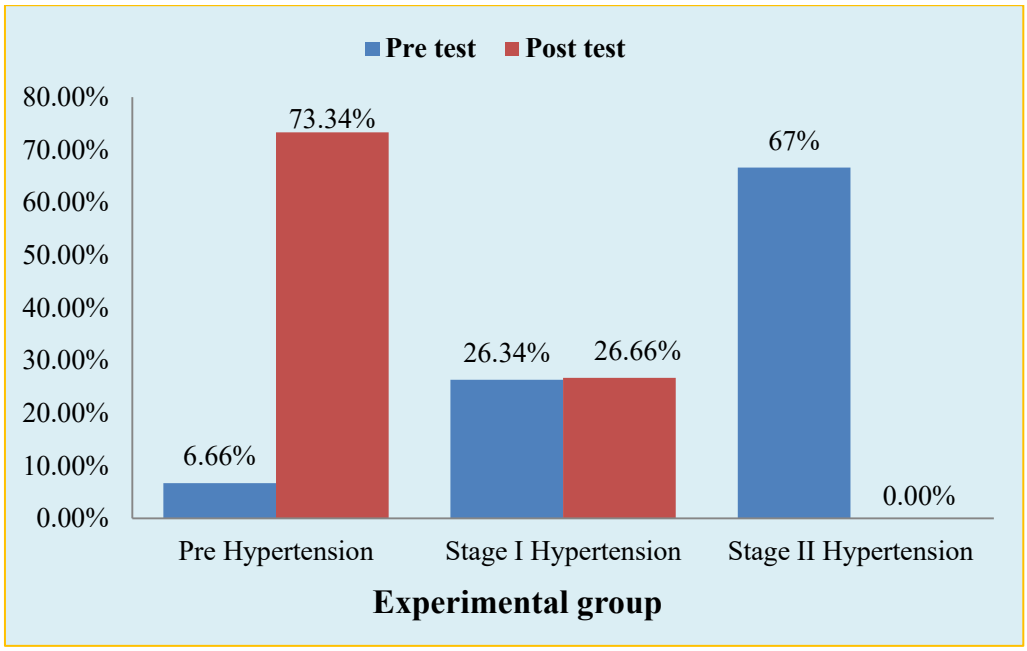

Figure 1. Pre-test and post-test level of blood pressure in Hypertensive senior citizens in Experimental group

4) Findings related to pre-test and post-test level of blood pressure in Hypertensive senior citizens in Control group

The calculated unpaired systolic BP 't' value of samples in control group were (t_{cal}=4.7) greater than the tabulated value (t_{tab}=2.014), whereas in the diastolic BP 't' value of samples were (t_{cal}=4.8) greater than the tabulated value (t_{tab}=2.014). There was statistical difference in pre test and post test level of blood pressure in Hypertensive senior citizens in Control group at 0.05 level of significance. Hence, **H_2 was accepted**. Therefore, the guided imagery was effective on the level of blood pressure in Hypertensive senior citizens of Control group.

5) Findings related to comparison of post test level of blood pressure in Hypertensive senior citizens and unpaired 't' values of pain score of subjects of Experimental and Control group.

The calculated unpaired systolic BP 't' values of samples were (t_{cal}=6.57) greater than the tabulated value (t_{tab}=2.014), whereas in the diastolic BP t value of samples were (t_{cal}=2.214) greater than the tabulated value (t_{tab}=2.014). **Hence, H_3 was accepted**. There was statistical difference in post-test score regarding level of blood pressure in Hypertensive senior citizens in experimental group and control group at 0.05 level of significance.

6) Association between pre-test level of blood pressure in Hypertensive senior citizens in Experimental group and selected demographic variables

There was association found in one variable that is duration of Hypertension. Hence there was statistical association between pre test level of blood pressure in hypertensive senior citizens of experimental group with their selected demographic variables i.e. duration of Hypertension. **Hence $H_{4.10}$** was accepted and remaining all were not accepted.

7) Association between pre-test level of blood pressure in Hypertensive senior citizens in Control group and selected demographic variables

There was no association between pre-test level of blood pressure in hypertensive senior citizens in control group and selected demographic variable hence **H_5 was not accepted**.

Declarations

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