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"EFFECTIVENESS OF FIGURE OF EIGHT WALK ADMINISTRATION ON BLOOD PRESSURE AMONG HYPERTENSIVE CLIENTS AT SELECTED PRIMARY HEALTH CENTRES IN PUDUCHERRY".

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ABSTRACT

Background: Blood pressure was first recorded in 1773 by Rev **Stephen Hales** as Hypertension is called as "Silent killer" which is designed to emphasize the direct relationship between the risk of morbidity and mortality, irrespective to age, sex, race from increasing level of blood pressure. Hypertension is the commonest CVD, posing a major public health challenge to population in socioeconomic and epidemiological transition. It is one of the major risk factor for cardiovascular mortality which accounts for 20-50 percent of all death. **Aim:** To evaluate the effectiveness of figure of 8 walk practice on blood pressure among hypertensive clients. **Material and Methods:** Quantitative research approach, Quasi-Experimental research design (Pretest, posttest control group design) was adopted for the study. Simple Random sampling technique was used for data collection and sample size was 60 (30 experimental & 30 Control group). The subjects were randomly assigned into two groups. Pre-test was done to assist the existing blood pressure for both the group. Experiment group received figure of eight walk (20 minutes)

for four weeks and control group did not received. Post test assessment of blood pressure was taken after four weeks for the experimental and control group. Data was analyzed by descriptive and inferential statistics by SPSS- 20. **Results:** The result of the study showed that in the experimental group the pre and post test mean difference in systolic blood pressure was (t=5.704, p=0.000), and the mean difference in diastolic blood pressure of pre and post test revels that (t=11.45, p=0.000), which is also significant: whereas in control group the mean difference in pre and post test systolic blood pressure was (t=0.665, p=0.512), and the mean difference in diastolic blood pressure of pre and post test was (t= 0.283, p= 0.779), which is non-significant.

Key words – Effectiveness, Figure of Eight, Blood pressure, Hypertensive clients & Primary Health centres.

INTRODUCTION

''An early morning walk is a blessing for the whole day." ***–Henry David Thoreau***

It is the birth right of every citizen to achieve highest level of health. Every individual's right is to seek medical aid at any time to maintain the optimum level of health. According to WHO health is a state of complete physical, mental and social well being not merely in the absence of disease or infirmity. It is every individual's unique and prime responsibility to protect themselves against the challenges of their survival. Modern medical care is now enabling many with chronic disease to survive. Developing countries are now warned to take appropriate steps to avoid the "epidemics" of non communicable disease likely to come with socio-economic and health development.

According to the overall census both developed and developing countries the cardiovascular disease and cancer are at present the leading cause of death in developed and developing countries accounting for 70 to 75 percent of total death per year so chronic non communicable diseases are assuming increasing importance among the adult population.

Blood pressure was first recorded in 1773 by Rev **Stephen Hales** as Hypertension is called as "Silent killer" which is designed to emphasize the direct relationship between the risk of morbidity and mortality, irrespective to age, sex, race from increasing level of blood pressure. Hypertension is the commonest CVD, posing a major public health challenge to population in socioeconomic and epidemiological transition. It is one of the major risk factor for cardiovascular mortality which accounts for 20-50 percent of all death.

Our modern life style is characterized by increasing stress that affects our overall well-being. In the race to make more money to have a highest status in society, we forget to look after our health. This makes us susceptible to all kind of disease and disability. In such scenario the best investment can be the investment in our health.

Blood pressure depends on the activity of the person. It varies in the same person on the same day at different times. It changes even while a person is sitting or standing. Immediately on standing, walking or running, BP varies. Hypertension is also dependent on the mental makeup of a person. Different people respond to similar situation differently. In order to manage hypertension, life style management, one of among which is a Yoga lifestyle, helps treat and prevent hypertension through mine and body activities**. (Wasier 2003)**

Joint Nation Committee (2010) defines blood pressure of <120/<80 mmHg as normal. Pre-hypertension is defined as the systolic blood pressure between 120-130 and diastolic 80-89 respectively. Hypertension can be classified into two stages. In stage 1 systolic blood pressure ranges between 140-159 and diastolic 90-99 mm Hg and in stage 2, the systolic blood pressure should be above >160 and diastolic >100.

The prevalence of hypertension has been increasing in developing countries in community surveys have documented that it is more prevalent among the Indians between the third and sixth decades of their life. Hypertension is major modifiable risk factors for cardiovascular disease, which accounts for 57% and 24% of all deaths due to stroke and coronary disease respectively. **(Kearney PM, 2010)**

In Pondicherry, the prevalence rate of hypertension is 18.3% and the prevalence of hypertension was more in males 19.1% than in females 17.5%; and 1.2% of the total subjects had grade I, grade II and grade III respectively. Only 33.8% of them were aware of their hypertensive status. Hypertensive's of 32.1% were on treatment, and 12.5% adequately controlled their BP. About 6.9% of the total hypertensive had severe hypertension. **(Madanmohan, 2010)**

Eight walking is one of the main gaits of locomotion among animals, and is typically slower than running and other gaits. Eight walking is defined as an inverted pendulum gait in which the body vaults over the shift limb or limbs with each step. Human eight walking are accomplished with a strategy called the double pendulum. During the forward motion, the leg that leaves the ground wings forward from the hip. This sweep is the first pendulum. Then the leg strikes the ground with the heel and rolls through to the toe in a motion described as an inverted pendulum. The motion of the two leg is coordinated so that one foot or the other is always in contact with the ground. The process of eight walking recovers approximately sixty per cent of the energy used due to pendulum dynamics and ground reaction force. **Robert Pastore (American Heart Association)**

There are several non-pharmacological experimental studies of controlling blood pressure (BP) like physical activity, yoga, relaxation techniques and treadmill walk have been proven to be of use. Hence in this study the researcher is interested to bring the effectiveness of Figure of eight walk in

reduction of hypertension. All it requires is a little time and the will to make effort. The most easy, simple and cost effective way to do this figure eight walking exercise. Chronic non communicable diseases are assuming increasing importance among the adult population in both developed and developing countries. The researcher has selected the age group between 40-70 years.

STATEMENT OF THE PROBLEM

A Quasi experimental study to evaluate the effectiveness of figure of 8 walk on reduction of hypertension among hypertensive patients age between 40-70 yrs in selected PHCs in Puducherry.

OBJECTIVES

1. To assess the pre-test levels of blood pressure among control and experimental group.
2. To evaluate the post test levels of blood pressure among control and experimental group.
3. To evaluate the effectiveness of Figure of eight walk among both the groups.
4. To associate the effectiveness of 8 walk with the demographic variables in the study group.

HYPOTHESES

P value was tested at the level of significance 0.05

H_1- There is a significant difference between pre and post test levels of blood pressure (Systolic blood pressure, diastolic blood pressure) in hypertensive clients in experimental group.

H_2- There is a significant association between the effectiveness of Figure of eight walk and demographic variables.

DELIMITATIONS

The study is delimited to:

1. The selected primary health centre Puducherry.
2. A sample size of 60 subjects. (30 in experimental & 30 in control group).
3. A period of four weeks.

MATERIAL AND METHODS

Quantitative research approach, Quasi-Experimental research design (Pretest, posttest control group design) was adopted for the study. Simple Random sampling technique was used for data collection and sample size was 60 (30 experimental & 30 Control group). The subjects were randomly assigned into two groups. Pre-test was done to assist the existing blood pressure for both the group. Experiment group

received figure of eight walk (20 minutes) for four weeks and control group did not received. Post test assessment of blood pressure was taken after four weeks for the experimental and control group. Data collection was done by using demographic profile; self structured questionnaire and figure of eight walking. Data was analyzed by descriptive and inferential statistics by SPSS- 20. The conceptual framework used for this study was based on **J.W Kenny's open system model**. The content validity of the tool was obtained from the experts in the field of community. The reliability of the tool was established by karl pearson's formula which (0.9876) was found highly reliable. Feasibility of the study was confirmed by pilot study. The data was organised, analysed and interpreted in terms of the study objectives. The data was summarized and tabulated by using descriptive statistics (Mean, Frequency, Percentage & Standard Deviation) and inferential Statistics (t-test, Chi–square).

RESEARCH VARIABLES

Independent Variable: Figure of Eight

Dependent Variable: Hypertension

Demographic Variable:

- Age in years
- Gender
- Nutritional level
- Religion
- Education
- Income

RESULTS

Age indicates that 46.7% of elderly people were in 40-50 years of age, 40% of elderly people were 51-60 years, 13.3% of elderly people were 61-70 years belongs to experimental group. Similarly in control group 63.3% of elderly people were in 40-50 years, 16.7 % of elderly people were 51-60 years, 20% of elderly people were 51-60 years, 20% of elderly people were 61-70 years respectively.

Gender indicates that 53.3 % of elderly people were male and remaining 46.7% of elderly people were female in experimental group. In control group, each 50% of elderly people were male and female.

In experimental group, Nutritional pattern of the all elderly people were non-vegetarian. In control group, majority 66.7 % of the elderly people were also non-vegetarian.

In experimental group, Majority 83.3% of the elderly people were belongs to Hindu religion. In control group, Majority 46.75 % of the elderly people were Muslim.

In experimental group, Majority 46.7% of the elderly people were having education of degree and above. In control group, Majority 53.3% of the elderly people were having education of High school & higher secondary school.

In experimental group, Majority 73.3% of the elderly people monthly income were above 5000. In control group, Majority 53.3% of the elderly people monthly income were also above 5000.

The result of the study showed that in the experimental group the pre and post test mean difference in systolic blood pressure was (t=5.704, p=0.000), and the mean difference in diastolic blood pressure of pre and post test revels that (t=11.45, p=0.000), which is also significant: whereas in control group the mean difference in pre and post test systolic blood pressure was (t=0.665, p=0.512), and the mean difference in diastolic blood pressure of pre and post test was (t= 0.283, p= 0.779), which is non-significant.

The demographic variable in experimental group had association with the selected variables like religion, nutrition, education and income at $p<0.05$ level of significance and other variable did not shown any statistical significance with the post test level of blood pressure.

CONCLUSION:

The study concludes that figure of eight walk has got good impact on health reducing blood pressure.

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