'Effect of Foot Reflexology on Blood Pressure & level of Stress among hypertensive patients.'

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ABSTRACT

Hypertension is a major public health problem in India and world, because of its high frequency and concomitant, risk of cardiovascular and kidney disease. Hypertension is interesting disease entity of its own as it remains silent, being generally asymptomatic during its clinical course. As it is hidden beneath outwardly asymptomatic appearance, WHO named it as silent killer.

Hypertension is a major cause of heart failure, stroke, kidney failure and other vascular conditions. Once it is developed it is a life time condition and about 20% of the adult population develops hypertension. Hypertension carries the risk of premature morbidity and mortality which increases as the systolic and diastolic pressures. It is one of the major risk factor for cardiovascular disorder mortality which accounts for 20 to 50%. It is commonest cardiovascular disorder posing a major public health challenge and a worldwide health disorder. In the modifiable risk factor of hypertension environmental stress is a major factor as 'hypertension' itself implies a disorder initiated by tension or stress. It is an accepted fact that psychosocial factors operate through mental processes consciously or unconsciously to produce hypertension.

Foot Reflexology is a complimentary therapy. Down through the years, feet have had a symbolic importance. In ancient Greece, were emblematic of the soul. The Egyptians believed that the feet grounded people to the Earth's energy. The mythological Japanese healer said '**See** too Feet and you will have seen to the Body'**.** Chinese people have been using foot massage for over 3,000 years. In Western societies, Native Americans have used foot reflexology for hundreds of years and in Europe from the 14th Century.

INTRODUCTION

Foot Reflexology is a complimentary therapy. Down through the years, feet have had a symbolic importance. In ancient Greece, were emblematic of the soul. The Egyptians believed that the feet grounded people to the Earth's energy. The mythological Japanese healer said 'See too Feet and you will have seen to the Body'. Chinese people have been using foot massage for over 3,000 years. In Western societies, Native Americans have used foot reflexology for hundreds of years and in Europe from the 14th Century.

Reflexology, Hopi Ear Candling and Reiki are holistic complementary therapies. These therapies have been known to be practiced by various ancient civilizations like Chinese, Egyptians, Japanese and the Native American Indians, as far back as 100BC.[3]

The word massage is an Arebic word means stroke; Massage was first mentioned 3,000 years ago in Chinese writings. This is exactly what the massage therapist does: strokes up and down the body with varying intensity and force to correct any inadequacies in an individual's musculature and nervous system.

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PROBLEM STATEMENT

Effectiveness of foot reflexology on blood pressure & level of stress among hypertensive patients in selected hospital.'

OBJECTIVES

1. To assess the blood pressure among hypertensive patients before administration of foot reflexology in selected hospital.
2. To assess the level of stress among hypertensive patients before administration of foot reflexology in selected hospital.
3. To assess the blood pressure among hypertensive patients after administration of foot reflexology in selected hospital.
4. To assess the level of stress among hypertensive patients after administration of foot reflexology in selected hospital.
5. To compare the blood pressure among

HYPOTHESIS

1. H_0: There will be no significant effect of foot reflexology on blood pressure in hypertensive patients.
2. H_{01}: There will be no significant effect of foot reflexology on stress level in hypertensive patients.
3. H_1: There will be significant effect of foot reflexology on blood pressure in hypertensive patients.
4. H_2: There will be significant effect of foot reflexology on stress level in hypertensive patients.

ASSUMPTION

This study is based on following assumptions:
1. The patients have some knowledge regarding foot reflexology exercises and its positive effect.
2. The foot reflexology will have some effects on hypertension in reducing blood pressure.
3. The foot reflexology may help in reduction of stress level among hypertensive samples.
4. Along with the medical treatment, foot reflexology may help in reducing the blood pressure and stress level among hypertensive patients.

The study is delimited to:
1. Hypertensive Samples those who are admitted in selected Hospital.
2. Hypertensive Samples those who are willing to participate in study.
3. There will be age wise changes in blood pressure.
4. Hypertensive Samples without any other complications.
5. Foot reflexology will be provided only by the investigator.
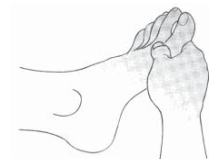
METHODOLOGY

Research Approach: Quantitative Research Approach.

Research Design: Quasi Experimental Time Series Research Design.

Variable of Study:

Independent Variables

The presumed cause is independent variable. The independent variable in this study is Foot Reflexology therapy.

Dependent Variables

The presumed effect is dependent variable. The dependent variable in this study is Blood Pressure and Level of Stress.

Setting of the Study: The study was conducted in selected hospital of selected city.

Population:

Target population: Hypertensive Patients admitted in Medicine Wards in selected Hospital in overall Pune city.
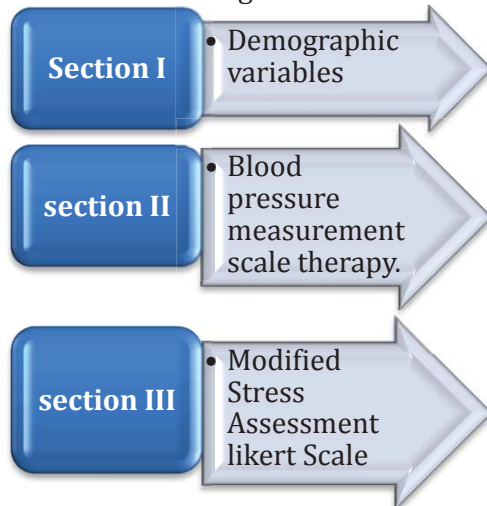
Accessible Population: Hypertensive Patients admitted in Medicine Wards in selected Hospital in Pune city.

Sample: Hypertensive Patients admitted in Medicine Wards in selected Hospital.

Sampling technique: Non-probability convenience sampling techniques

Sample Size: sample size was 40 Hypertensive patients, Male and Female admitted in Medicine Wards in selected Hospital in Pune city.

The tool is consisting of Three sections

Section I • Demographic variables

section II • Blood pressure measurement scale therapy.

section III • Modified Stress Assessment likert Scale

MAJOR FINDINGS

I. Findings related to demographic variables

Age: Majority of 12 (30%) of subjects belong to 36-45 years, 10 (25%) of the subjects belongs to 26-35 years, 10 (25%) of subjects belong to 46-55 years and 08 (20%) of the subjects belong to 50-60 years.

Gender: Majority of 27 (67.5%) of subjects belong to males, 13 (32.5%) of subjects belong to females.

Educational qualification: Majority of 11 (27.5%) subjects are Graduate and above, 09 (22.5%) subjects has Primary Education,09 (22.5%) subjects has undergone through Secondary Education, 06 (15%) subjects has No Formal Education, and 05 (12.5%) subjects has undergone through any others class of Education.

Occupation: Majority of 10 (25%) subjects are in any others Category, 09 (22.5%) subjects belongs to Private Employed, 07 (17.5%) subjects belongs to Government Employed, 07 (17.5%) subjects belong to Business category, and 07 (17.5%) subjects are Retired.

Monthly Family Income: Majority of 19 (47.5%) subjects belongs Up to Rs – 10,000/- monthly income, 11 (27.5%) subjects belong to Rs- 10,001 – 15,000/- monthly income, 06 (15%) subjects belongs to Rs - 25,001/- and above monthly income, and 04 (10%) subjects belong to Rs - 15,001 – 25,000/- monthly income.

Type of Family: Majority of 23 (57.5%) subjects belongs in Nuclear Family, 12 (30%) subjects belong in Joint Family, and 05 (12.5%) subjects belongs in any others type of Family.

Dietary Pattern: Majority of 24 (60%) subjects are non – Vegetarian and 16 (40%) subjects belong to Vegetarian.

Marital status: Majority of 27 (67.5%) subjects are Married, 05 (12.5%) subjects are Unmarried, 05 (12.5%)

Sr. No	Assessment / Measurement	Mean Systolic and Diastolic Blood Pressure After Foot Reflexology	
		Systolic	Diastolic
1.	Mean Blood Pressure	140.64	80.43

subjects are Widow, and 03 (7.5%) subjects are Divorced / Separated.

Health Habits: Majority of 12 (30%) subjects are Tobacco Chewers, 11 (27.5%) subjects has other health habits, 10 (25%) subjects Consumes Alcohol and 07 (17.5%) subjects are Cigarette Smokers.

Exercises: Majority of 22 (55%) subjects are in none category means not practicing any type exercises, 07 (17.5%) subjects are practicing Yoga, 05 (12.5%) subjects are doing Pranayama, and 06 (15%) subjects are practicing other activities of exercises.

On Oral Anti-Hypertensive Drugs: Majority of 21 (52.5%) subjects are on Oral Anti-Hypertensive Drugs and 19 (47.5%) subjects are not taking any kinds of Oral Anti-Hypertensive drugs.

Sr. No	Assessment / Measurement	Mean Systolic and Diastolic Blood Pressure Before Foot Reflexology	
		Systolic	Diastolic
1.	Mean Blood Pressure	154.76	90.64

II. Analysis of data related to Mean blood pressure before and after foot reflexology:

Blood Pressure among Hypertensive Samples before administration of Foot Reflexology in terms of percentage

Mean systolic and diastolic blood pressure before administration of foot reflexology in percentage, shows that Mean Systolic Blood Pressure is 154.76 and Mean Diastolic Blood Pressure is 90.64. (Mean Blood Pressure before Foot Reflexology is 154.76/90.64 mmHg).

Blood Pressure among Hypertensive Samples after administration of Foot Reflexology in terms of percentage.

Mean systolic and diastolic blood pressure After administration of foot reflexology in percentage, shows that Mean Systolic Blood Pressure is 140.64 and Mean Diastolic Blood Pressure is 80.43 (Mean Blood Pressure After Foot Reflexology is 140.64/80.43 mmHg).

III. Analysis of data related to Level of Stress score before and after foot reflexology:

Level of Stress among Hypertensive Samples before administration of Foot Reflexology in terms of frequency and percentages.

Level of Stress Score Before administration of Foot Reflexology, the level of stress score among Hypertensive Samples was, 67.5% samples were in Moderate Stress (61 - 80), 22.5% samples were in Severe Stress (81 – 100), 10% samples were in Mild Stress (41 - 60), and 0% samples were in Normal / Eustress (21 - 40).

Level of Stress among Hypertensive Sample after administration of Foot Reflexology in terms of frequency and percentages.

The level of stress score among Hypertensive Samples was 50% samples were in Moderate Stress (61 - 80), 47.5% samples were in Mild Stress (41 - 60), 2.5% samples were in Normal / Eustress (21 - 40) and 0% samples were in Severe Stress (81 – 100).

IV. Analysis of data to find the association between related demographic variables on effect of Foot Reflexology on Level of Stress with post test research findings among Hypertensive Samples.

This section deals with association between selected demographic variables assessed by using chi-square

test. The result summaries of chi-square test are tabulated below:

(N=40)

Sr. No	Selected Variables	Calculated Value (X^2)	T Value (P 0.05)	DF	
1.	Age in Years:	9.0210	16.92	9	No Significant Association with any demographic variables
2.	Gender:	0.7017	7.82	3	
3.	Educational Qualification:	14.3508	21.03	12	
4.	Occupation:	14.6172	21.03	12	
5.	Monthly Family Income:	6.7642	16.92	9	
6.	Type of Family:	8.9794	12.59	6	
7.	Dietary Pattern:	3.1607	7.82	3	
8.	Marital Status:	1.2194	16.92	9	
9.	Ill Health Habits:	12.4417	16.92	9	
10.	Exercises:	11.4963	16.92	9	
11.	On Oral Anti HTN Drugs:	1.5776	7.82	3	

Researcher applied Chi square (X^2) test for the association between selected demographic variables.

Above table denotes that calculated Chi Square (X^2) value of Demographic variables such as Age, Gender, Educational Qualification, Occupation, Monthly Family Income, Type of Family, Marital Status, Dietary Pattern, Ill Health Habits, Exercises, and Oral Antihypertensive Drugs is lesser than tabulated P value (0.05). Thus there is no significant association of effect of foot reflexology on level of stress among hypertensive samples related to above demographic variables.

The above finding gives sufficient evidence that there was a significant effect of foot reflexology in reducing blood pressure among hypertensive patients in selected hospital. The above findings also denote that before foot reflexology majority of hypertensive samples stress score was moderate to severe stress. As after foot reflexology majority of hypertensive samples stress score mild to moderate stress. It means level of stress has decreased after foot reflexology.

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