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## Effectiveness of Drumstick Leaves Tea upon the Level of Blood Pressure among the Hypertensive Clients in Sree Balaji Medical College and Hospital

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### **Abstract:**

**BACKGROUND OF THE STUDY** Hypertension is a silent killer. People with Hypertension remain unaware of their diagnosis, and of those who are aware, only a minority are treated and have their Hypertension successfully controlled. **OBJECTIVES:** To assess the pretest level of blood pressure among the hypertensive clients before administration of drumstick leaves tea .To assess the posttest level of blood pressure among the hypertensive clients after administration of drumstick leaves tea. To compare the pretest and posttest level of blood pressure among the hypertensive clients after administration of drumstick leaves tea. To find out the association between the level of blood pressure and selected demographic, clinical variables **METHODOLOGY:** Research design was pre experimental design one group pretest, posttest design was adopted for the study in Sree Balaji Medical College &Hospital , Chennai. Sample size of 40 hypertensive clients were selected by nonprobability purposive sampling technique. **RESULT:** In pretest majority of the hypertensive clients Out of 40 samples 29(72.5%) were belongs to mild level of hypertension. 11(27.5%) were having moderate hypertension before administration of drumstick leaves tea. In posttest After administration of drumstick leaves tea over a period of 2 weeks Out of 40 samples 26(65%) were having normal blood pressure ,14(35%) belongs to mild level of hypertension **CONCLUSION:** The study reveals that drumstick leaves tea was effective in reducing the level of blood pressure among hypertensive clients. The difference was found to be statistically significant  $p < 0.001$  level which indicates the effectiveness of drumstick leaves tea in reducing the level.

**Keywords:** hypertension, effectiveness, drumstick leaf tea, hypertensive clients

### **1. Introduction**

Hypertension is an iceberg disease. A multicenter three year study spearheaded by the All India Institute of Medical sciences (AIIMS) published in the “journal of human hypertension” revealed almost one in two women in urban study sites and one in three women in rural sites were suffering from hypertension. India’s largest clinic based survey study **Screening India’s Twin Epidemic (SITE)** show that one in every five Indian adults living in urban cities, suffer from hypertension. Hypertension is second, after smoking, as a contributor to the Global Burden of Disease in the late (2010) analysis. [1] In most individuals it is easily treated and controlled, with effective control reducing deaths and disability from a number of conditions, including cerebrovascular, cardiovascular, and renal disease [2] .Yet in both developed and developing countries, a significant proportion of people with Hypertension remain unaware of their diagnosis, and of those who are aware, only a minority are treated and have their Hypertension successfully controlled [3]. Hypertension is common worldwide, affecting an estimated billion people, nearly three-quarters of whom live in low or middle income countries (LMICs) [4].

#### *1.1. Objectives*

To assess the pretest level of blood pressure among the hypertensive clients before administration of drumstick leaves tea .To assess the posttest level of blood pressure among the hypertensive clients after administration of drumstick leaves tea. To compare the pretest and posttest level of blood pressure among the hypertensive clients after administration of drumstick leaves tea. To find out the association between the level of blood pressure and selected demographic, clinical variables.

#### *1.2. Null Hypothesis*

- H01: There is no significant difference in the pre and posttest levels of blood pressure on administration of drumstick leaves tea among hypertensive clients.

- H02: There is no significant association between the selected demographic variables, pre and posttest levels of blood pressure among the hypertensive clients.
- H03: There is no significant association between the selected clinical variables, pre and posttest levels of blood pressure among the hypertensive clients.

**2. Methodology**

Research design was pre experimental design one group pretest, posttest design was adopted for the study in Sree Balaji Medical College & Hospital, Chennai. Sample size of 40 hypertensive clients were selected by nonprobability purposive sampling technique. The questionnaire has 3 parts consisting of Demographic variables are the background factors which influences the disease condition of the clients. These are age, gender, educational status, marital status, religion, area of living. clinical variables used to assess the risk factors for hypertension .It includes height, weight, body mass index, habit of taking non vegetarian diet, habit of chewing tobacco, habit of smoking, habit of consuming alcohol, nature of physical activity, history of hypertension, family history of hypertension, habit of taking anti hypertensive drugs, history of other associated diseases. Interpretation of blood pressure values were classified based on the British Hypertension Society Scale of Hypertension (BHS IV) as follows

| Category | Systolic Blood Pressure mm Hg | Diastolic Blood Pressure mmHg |
|----------|-------------------------------|-------------------------------|
| Mild     | 140 – 150                     | 90 – 110                      |
| Moderate | 160 -179                      | 100 – 109                     |
| Severe   | >/180                         | >/110                         |

Table 1

**3. Result**

| Pretest Level of Blood Pressure | Pre Test       |                 |
|---------------------------------|----------------|-----------------|
|                                 | Frequency<br>N | Percentage<br>% |
| Normal                          | -              | -               |
| Mild                            | 29             | 72.5            |
| Moderate                        | 11             | 27.5            |
| Severe                          | -              | -               |
| Total                           | 40             | 100             |

Table 2: Pretest Level of Blood Pressure

Reveals Pretest Level Of Blood Pressure Among The Hypertensive Clients Before Administration Of Drumstick Leaves Tea .Among 40 Hypertensive Clients 29(72.5%)Belongs To Mild Level Of Blood Pressure,11(27.5%)Belongs To Moderate Level Of Blood Pressure

| Posttest Level of Blood Pressure | Post Test      |                 |
|----------------------------------|----------------|-----------------|
|                                  | Frequency<br>N | Percentage<br>% |
| Normal                           | 26             | 65              |
| Mild                             | 14             | 35              |
| Moderate                         | -              | -               |
| Severe                           | -              | -               |
| Total                            | 40             | 100             |

Table 3: Posttest Level of Blood Pressure among Hypertensive Clients

| Pretest Level of Blood Pressure | Pre Test |      | Post Test |     | Chisquare<br>MC NEMER<br>26.0<br>P<0.001 |
|---------------------------------|----------|------|-----------|-----|--|
|                                 | N        | %    | N         | %   |  |
| Normal                          | 0        | 0    | 26        | 65  |  |
| Mild                            | 29       | 72.5 | 14        | 35  |  |
| Moderate                        | 11       | 27.5 | 0         | 0   |  |
| Severe                          | 0        | 0    | 0         | 0   |  |
| Total                           | 40       | 100  | 40        | 100 |  |

Table 4: Posttest Level of Blood Pressure among Hypertensive Clients  
Comparison of Pre and Post Test Level of Blood Pressure among Hypertensive Clients

Reveals the comparison of effectiveness of drumstick leaves tea among hypertensive clients respectively. It shows that 27.5% Of them had moderate level of blood pressure, none of the study participants had normal level of blood pressure, before administration of

drumstick leaves tea .In post test evaluation after administration of drumstick leaves tea majority of the hypertensive clients 65% had normal level of blood pressure 35% of them had mild level blood pressure . chi square test was Formulated by using McNemar test .The difference was found to be statistically significant at  $p<0.001$  level which indicates the effectiveness of drumstick leaves tea among hypertensive clients in reducing blood pressure level. The investigator rejects null hypothesis as stated drumstick leaves tea is not effective in reducing blood pressure level among hypertensive clients.

#### 4. Major Findings of the Study

Regarding age majority of the clients 13 (33%) belongs to the age group between 41-50 years. 6(15%) belongs to the age group between 31-40 years. 10(25%) belongs to the age group between 51-60 years, 11(27%) belongs to the age group of above 61 years. Regarding sex 21 (53%) are male 19(47%) were female.

According to educational status 6(15%) belongs to illiterate 12(30%) belongs to primary education 9(23%) completed their secondary education 9(23%) completed their higher secondary education 4 (10 %) completed their degree. With regard to marital status 2(5%) were unmarried. 34(85%) were married 2(5%) were widow 2(5%) were belongs to divorced status .And regarding religion 37 (92%) belongs to Hindu community 2(5%) belongs to Christian 1(3%) belongs to Muslim. None from other groups. Regarding living area 35(87%) were living in urban area, 5(13%) were living in rural area.

In pretest majority of the hypertensive clients Out of 40 samples 29(72.5%) were belongs to mild level of hypertension. 11(27.5%) were having moderate hypertension before administration of drumstick leaves tea. In posttest After administration of drumstick leaves tea over a period of 2 weeks Out of 40 samples 26(65%) were having normal blood pressure ,14(35%) belongs to mild level of hypertension. In relation to effectiveness of drumstick leaves tea post test score the difference was found to be statistically significant at  $p<0.001$  level which indicate the effectiveness of drumstick leaves tea among hypertensive clients in reducing blood pressure level.

#### 4. Conclusion

The study reveals that drumstick leaves tea was effective in reducing the level of blood pressure among hypertensive clients. The difference was found to be statistically significant  $p<0.001$  level which indicates the effectiveness of drumstick leaves tea in reducing the level.

#### 5. References

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