

Effectiveness of Mustard Plaster for Knee Joint Pain

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Abstract

Background: Healthy population makes healthy nation and fewer burdens to the society. “Gray hair is a glorious crown; it is found in the way of righteousness man” (Proverbs 16:31). Ageing is the accumulation of changes in a person over time. Ageing in humans refers to a multidimensional process of physical, psychological, and social change. Nearly 680 million people representing 11.7% of the world population are above age 60. Today most of the elderly people are suffering from knee pain and inability. Knees are involved in activities such as walking, running, climbing, bicycling and even swimming. As knee age, wear & tear can make them less able to tolerate the stresses of everyday activity. Aging knees can cause symptoms ranging from minor discomfort to intense, chronic pain Knee pain is the most frequent complaint among ageing population. The present study has been based on the intensity of mustard plaster on knee pain and inability among elderly people selected old age homes, Coimbatore.

Materials and methods: Out of total elderly people surveyed in the present research 69% had severe knee pain and inability. Purposive sampling technique was adopted to choose the participants. Quasi experimental one group pre- test post- test design was adopted. WOMAC Scale was used to assess level of knee pain and inability. Mustard plaster was applied as an intervention by researcher to elderly people in old age homes for 30 minutes regularly for 3 days. Post assessment was used by WOMAC Scale after therapy. Appropriate statistical technique was used to analyze the data.

Results and Discussions: The result revealed that there was significant reduction in knee pain and inability after mustard therapy. Hence, use of mustard plaster is recommended for home base management of knee joint pain.

Key words: Knee Joint Pain, Mustard Plaster, Elderly population, WOMAC SCALE

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I. Introduction

Health is the greatest gift, contentment the greatest wealth, faithfulness the best relationship. The health of the people is really the foundation upon which all their happiness and all their powers as a state depend. Old age (also refers to as one’s old) consist of age nearing or surpassing the average life span of human being and thus the end of the human life cycle. Euphemism and terms for old people include senior (American usage), senior citizen (British and American usage) and the elderly.

Today most of the elderly people are suffering from knee pain and inability. Knees are involved in activities such as walking, running, climbing, bicycling and even swimming. As knee age, wear & tear can make them less able to tolerate the stresses of everyday activity.

The population of elderly has been increasing over years. Today worldwide there are 600 million persons aged around 60 years and above. This total will be doubled by 2025 and will reach virtually 2 billion by 2050 particularly in developing countries.

As the Health care professionals we could help the elderly to carry out the daily activities without much dependence on the care givers. The most commonly affected are knee and hip joints. Brandon .J.Thomas (2000) conducted a study in U.S that 80% of people are suffering from knee pain. He applied 18 types of massage therapy to reduce the knee pain.

Hence, Community health nurse plays an important role in primary, secondary and tertiary prevention. Here the researcher focuses on secondary prevention thereby identifies knee pain and inability and prevents further consequences of knee pain and inability by using Mustard plaster Therapy.

II. Statement Of The Problem

Effect of mustard plaster on knee pain and inability among elderly people at a selected old age homes, Coimbatore.

III. Objectives

1. To assess the level of knee pain and inability among elderly people
2. To apply mustard plaster among elderly people with knee pain and inability
3. To assess the level of knee pain and inability after application of mustard plaster among elderly people

IV. Operational Definition

1. Effect

Effect refers to the reduction of knee pain and inability by the application of mustard plaster.

2. Mustard plaster

Mustard plaster is prepared by mixing 2 parts mustard powder with one part of water to make a paste. Spread it on a clean cloth, fold it in half and press against the skin for 30 minutes to reduce knee pain and inability among elderly people.

3. Knee pain

Elderly people who complained of pain over the knee was assessed with Womac scale which includes pain, stiffness and function, daily living and classified as mild, moderate, severe and extreme knee pain.

4. Inability

Difficulty in incorporating activities due to knee pain and inability in elderly people who are residing in old age homes was assessed by Womac scale and the inability is interpreted as

Mild physical inability: 1-24 Moderate physical inability : 25- 48 Severe physical inability:49-72 Extreme physical inability: 73-96

5. Elderly People

It refers to the elderly aged between 60-75 years with knee pain and inability residing at, St.Joseph's old age home and Sri Ram Aravindhar Trust, Coimbatore.

V. Hypotheses

H1: There is a significant difference in level of knee pain and inability before and after application of mustard plaster.

VI. Methodology

The data was collected for the period of 30 days in selected old age home, Coimbatore. First the study was conducted in St Joseph's old age home, Podanur, Coimbatore. Using western Ontario McMaster scale 30 samples with knee pain and inability were selected for the study. Then 12 samples with knee pain and inability were selected from Sri Ram Aravindhar Trust, Vadavalli, Coimbatore. Using the western Ontario McMaster scale for the study.

Therapy is given to five groups in which first three groups were selected from St. Joseph's old age home and two groups from Sri Ram Aravindhar old age home. Mustard plaster is pressed against the knee for 30 minutes once in a day for 3 days. After the intervention knee pain and inability level were assessed with same scale on the last day of intervention.

VII. Results And Discussion

The subjects age group in this study ranges from 61 years to 6 years. Out of the total subject 33% were between 61-70 years of age, 43% were between 71-80 years of age, 19% were between 81-90 years of age and 10% were between 91-100 years of age, 36% of them were males and 64% were females. Among 42, 83% were married and 17% were unmarried.

Table 1: Analysis on level of knee pain and inability before and after application of mustard plaster (N=42).

Domains	Before therapy			After therapy			Mean difference	't' value
	Mean	SD	Mean (%)	Mean	SD	Mean (%)		
Pain	40.19	41.86	2.51	20.45	21.30	3.73	19.74	33.03**
Stiffness	1.38	0.85	1.42	0.38	0.62	0.34	1.80	9.49**
Function and daily living	13.47	2.11	3.73	7.04	1.60	1.60	6.43	20.33**

**significant at 0.05 level

The table 1 compares the scores of pain, stiffness and function and daily living before and after application of mustard plaster. The mean difference of pain, stiffness and function and daily living was 19.74, 1.80 and 6.43 respectively. The calculated ‘t’ values for pain, stiffness and function and daily living was 33.03, 9.49 and 20.33 respectively which was compared with the table value at 0.05 level of significance.

Table 2: Significant difference between before and after intervention of mustard plaster (n=42).

Group	Mean	SD	Mean (%)	Mean difference	‘t’ value Before
Before Therapy	54.9	3.98	57.18	-	-
After Therapy	27.3	0.03	28.43	27.6	35.91**

*Significant at 0.05 level

The table 2 compares the score of knee pain and inability before and after application of mustard plaster. The data reveals that the mean score 54.9 (3.98) before application of mustard plaster has decreased to 27.3 (0.03) after application of mustard plaster with a mean difference of 27.6 respectively. To test the significance in mean difference, ‘t’ test for dependent sample was applied. The calculated ‘t’ value 35.91 which was compared with the table value at 0.05 level of significance. It is highly significant. Thus concluding that the application of mustard plaster was effective in reducing knee pain and inability among elderly people

VIII. Conclusion

Knee pain and inability on the whole is a very common condition and frequent problem presenting to general practitioners. The result revealed in the present study is found with evidence that application of mustard plaster brings substantial reduction in knee pain and inability among elderly people.

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