A Study to Assess the Effectiveness of Mustard Plaster Application in Reduction of Knee Joint Pain among Patient with Osteoarthritis in Sivananda Gurukulam, Kattankolathur

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Abstract:
BACKGROUND OF THE STUDY: Osteoarthritis is an extremely common condition and is often referred to as 'wear and tear' of the joints in the body. Many people with arthritis look to these alternative therapies to help relieve the pain, stiffness, stress, anxiety, and depression that accompany their disease. OBJECTIVES: To assess the pretest level of knee joint pain among patient with osteoarthritis before application of mustard plaster. To assess the posttest level of knee joint pain among patient with osteoarthritis after application of mustard plaster. To compare the pretest and posttest level of knee joint pain of the effectiveness of mustard plaster. To find out the association between levels of knee joint pain and selected demographic variables METHODOLOGY: Research design was pre experimental one group pretest and posttest was adopted for the study. Qualitative research setting was at Sivananda Gurukulam Oldage home in kattankolathur, Chennai. Sample size of 30 osteoarthritis patients selected by non probability purposive sampling technique. RESULT: In pretest out of 30 samples majority of them have severe joint pain15 (50%) and 10(33%) of them were having moderate knee pain and 5(17%) have mild pain and none of them having no pain In posttest out of 30 samples majority of them got relieved from knee joint pain8(27%)and 18(60%)of them were having mild knee pain and 4(13%)have moderate pain and none of them have severe and extreme pain. CONCLUSION: The application of mustard plaster on knee joint pain among osteoarthritis patients in Sivananda Gurukulam, kattankolathur in Chennai is effective.

Keywords: EFFECTIVENESS, PAIN, MUSTARD PLASTER, OSTEOARTHRITIS

1. Introduction

Osteoarthritis is one of the most frequent causes of physical disability among adults. Osteoarthritis is an extremely common condition and is often referred to as 'wear and tear' of the joints in the body. The joints most commonly affected are the knees, hips, hands and spine. Many people with arthritis look to these alternative therapies to help relieve the pain, stiffness, stress, anxiety, and depression that accompany their disease. The Arthritis Foundation report that two-thirds of people with arthritis have tried alternative therapies. The use of complementary medicine is more common among people in the world. Alternative therapies for arthritis include such as acupuncture, copper bracelets, glucosamine, chondroitin supplements, naturopathy, yoga, chiropractic, homeopathy, hypnotherapy, medical herbalism and osteopathy. Complementary medicines are used in a variety of ways; some people use them instead of conventional treatments, some alongside. Some people use them regularly and some intermittently. Evidence suggests that users of complementary medicine feels, non-toxic, holistic approaches to health, More over they're 'natural', and harmless with less side effects, and Is locally available in living area. Many people with arthritis look to these alternative therapies to help relieve the pain, stiffness, stress, anxiety, and depression that accompany their disease. The Arthritis Foundation reports that two-thirds of people with arthritis have tried alternative therapies.

1.1. Objectives

To assess the pretest level of knee joint pain among patients with osteoarthritis before application of mustard plaster. To assess the post test level of knee joint pain among patients with osteoarthritis after application of mustard plaster. To compare the pretest and post test level of knee joint pain of the effectiveness of mustard plaster. To find out the association between levels of knee joint pain and selected demographic variables

1.2. Hypothesis
- NH1: There will be no significance reduction of knee joint pain after administration of mustard plaster among the patients with osteoarthritis at Sivananda Gurukulam, Kattankolathur
- NH2: There will be no significant association between knee joint pain intensity and selected demographic variables

2. Methodology
Research design was pre experimental one group pretest and posttest was adopted for the study. Qualitative research setting was at Sivananda Gurukulam Oldage home in kattankolathur, Chennai. Sample size of 30 osteoarthritis patients selected by non probability purposive sampling technique.

2.1. Description of the Tool
Standardized WOMAC Index was used for assessing the knee joint pain among study subjects .tool used for data collection considered 2 parts.
- PARTI: Demographic variables of the study such as age, gender, bodyweight, occupation, area of living and family history of osteoarthritis.
- PART II: WOMAC Osteoarthritis Index (Western Ontario Mc Master University Osteoarthritis Index)

2.2. Scoring Procedure
- Part – I: The information on demographic data was collected from with the osteoarthritis of knee joint and this was not scored but used for statistical analysis.
- Part –II: The WOMAC Osteoarthritis Index (Western Ontario Mc Master University Osteoarthritis Index) is used to assess patient's with Osteoarthritis of the hip or knee using 24 parameters ,these 24 parameters are arranged under 3 headings as joint pain, joint stiffness and difficulty in performing daily activities for each questions, there are 5 responses with scoring from 0-4 .the total score is 96.based on the total scoring ,grading was done as mild(1-24)moderate(25-48)severe(49-74)and extreme(75-96).

3. Results

Sl no	Grading	Pre Test	
		Frequency N	Percentage %
1	Mild	5	17%
2	Moderate	10	33%
3	Severe	15	50%
4	Extreme	0	0%
	Total	30	100

Table 1: Pretest Level of Knee Joint Pain

Reveals that out of 30 samples majority of them have severe joint pain 15(50%) and 10(33%) of them were having moderate knee pain and 5(17%) have mild pain and none of them having no pain
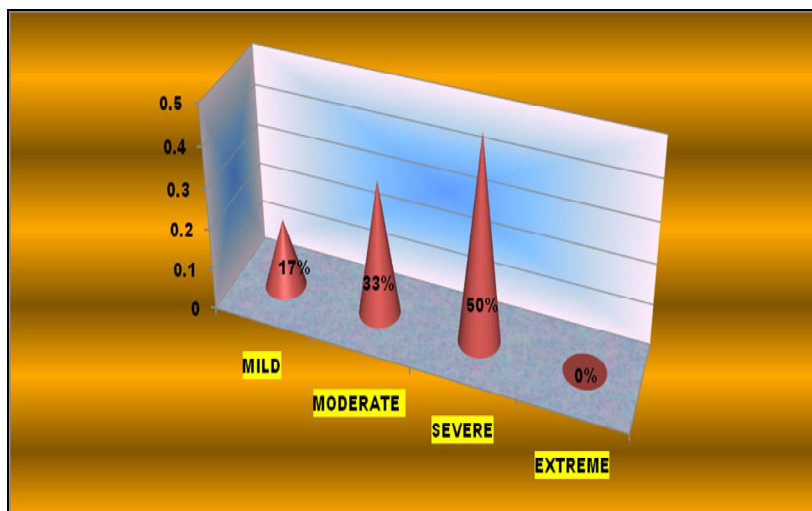

Figure 1: Pretest Level of Knee Joint Pain before Administration of Mustardplaster

S no	Grading	Post Test	
		Frequency N	Percentage %
1	Mild	18	60%
2	Moderate	4	13%
3	Severe	0	0%
4	Extreme	0	0%
5	No Pain	8	27%
	Total	**30**	**100**

Table 2: Post Test Level of Knee Joint Pain

Reveals that out of 30 samples majority of them got relieved from knee joint pain8(27%)and 18(60%)of them were having mild knee pain and 4(13%)have moderate pain and none of them have severe and extreme pain
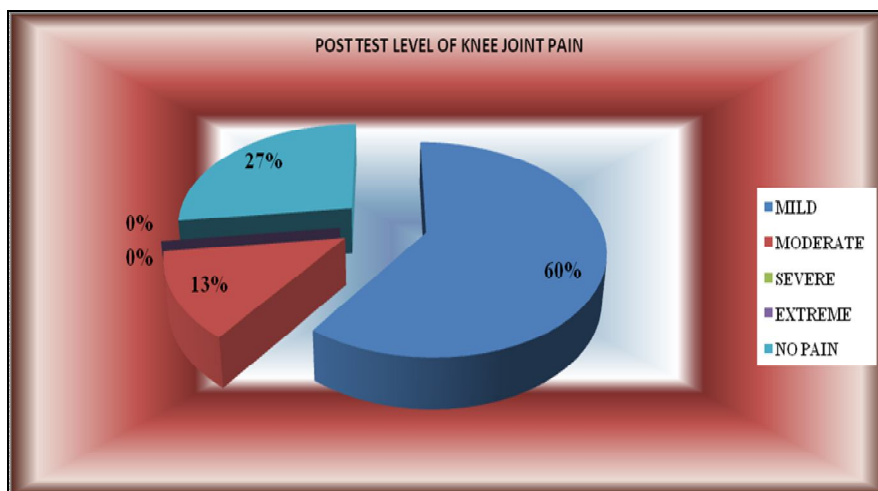

Figure 2: Post test Level of Knee Joint Pain after Administration of Mustard Plaster

Data	Before Intervention		After Intervention		Effectiveness (Difference)		Effectiveness
	Mean	SD	Mean	SD	Mean	SD	'T' Test
WOMAC Index	54.1	11.8	18.2	12.1	35.9	8.3	20.3***

Table 3: Effectiveness of Mustard Plaster Application on Osteoarthritis Knee Joint Pain
Effectiveness of Mustard plaster (mean) before and after intervention
*S: Statistically significant *** p< 0.001*

Reveals the effectiveness of Mustard plaster on knee joint pain. The mean value is 54.1 before intervention and 18.2 after intervention. The S.D value is 11.8 before intervention and 12.1 after intervention. The difference of mean and S.D is 35.1 and 8.3 respectively. To test significance't' test has been applied. The overall paired't' test value is 20.3. It is hypothesized that there is significant in effectiveness of Mustard plaster application. It was inferred that experimental group who received Mustard plaster application were found to be effective at the level of P<0.001.
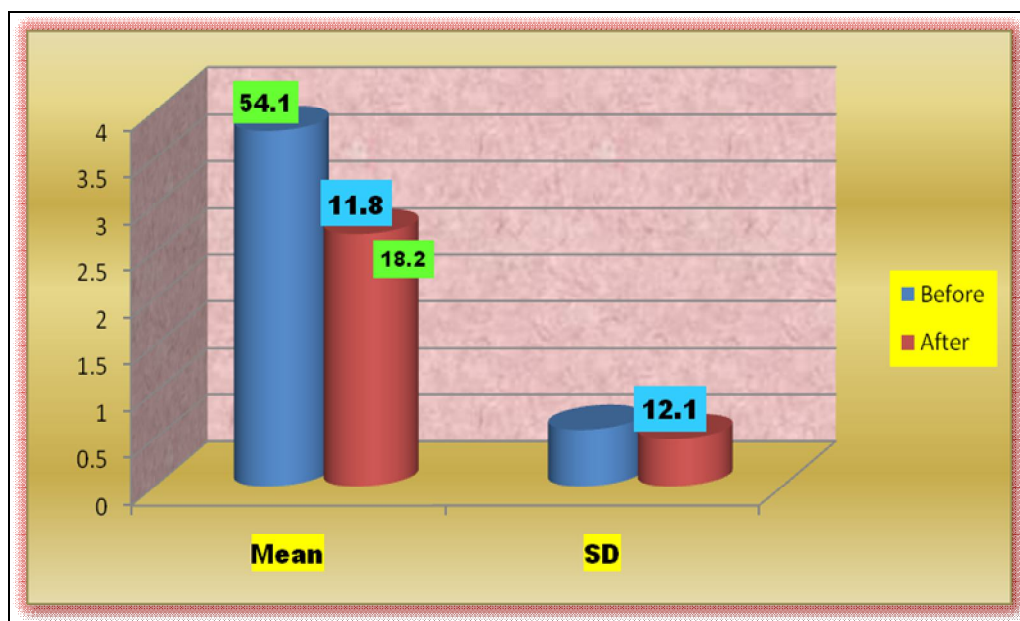
Figure 3: Effectiveness of Mustard Plaster (Mean) and Standard Deviation Before and After Intervention

4. Major Findings of the Study

1. In pretest out of 30 samples majority of them have severe joint pain15 (50%) and 10(33%) of them were having moderate knee pain and 5(17%) have mild pain and none of them having no pain

2.In posttest out of 30 samples majority of them got relieved from knee joint pain8(27%)and 18(60%)of them were having mild knee pain and 4(13%)have moderate pain and none of them have severe and extreme pain

3. The mean value is 54.1 before intervention and 18.2 after intervention. The S.D value is 11.8 before intervention and 12.1 after intervention. The difference of mean and S.D is 35.1 and 8.3 respectively. The overall paired' test value is 20.3. It is hypothesized that there is significant in effectiveness of Mustard plaster application. It was inferred that experimental group who received Mustard plaster application were found to be effective at the level of $P<0.001$.

4. The association of chi square of the mustard plaster among osteoarthritis clients with the demographic variables showed that there was a no statistical significant association with age, gender, occupation, body weight in kilograms, area of living except family history of osteoarthritis respectively.

5. Conclusion

The application of mustard plaster on knee joint pain among osteoarthritis patients in Sivananda Gurukulam, kattankolathur in Chennai is effective.

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