



“A STUDY TO ASSESS THE EFFECTIVENESS OF KNEADING TECHNIQUE ON JOINT PAIN AMONG OLD AGE PEOPLE IN SELECTED SURE TRUST HOME IN VATTAMALAI”.

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ABSTRACT

Background of the study:Joint pain is a major musculo skeletal condition among the elderly, and its incidence rises with age. Joint pain reduces physical activity and impairs ones quality of life. It is depent on many things such as family history, physical activity, environmental conditions& trauma. It is the second common rheumatologic problem with a prevalence of 22% to 39% in india. Joint pain is more common in women than men.

Objective:To find out the association between the post test level of joint pain among old age with joint pain and their selected demographic variables.

Research Approach:Quantitative evaluative research.

Research Methodology:Quasi-Experimental design was adopted in this study. The study was conducted among the old age people at sure trust home in vattamalai for experimental group and control group. 20 samples for each group was selected using convenience sampling technique. Data collection was done by using Modified Lower Extremities Functional Scale. Kneading technique was administered for experimental group. The data gathered were analyzed by descriptive, inferential statistical method and interpretation was done on the basis of the objectives of the study.

RESEARCH SETTING:-Old age people at “ Sure trust home” in Vattamalai.

SAMPLE SIZE:-The sample size is 40 old age people with joint pain. Among 20 old age people were taken experimental group and 20 old age people in were control group.

SAMPLING TECHNIQUE:-Convenience sampling technique was used to select the sample.

INTRODUCTION

According to study conducted in united states about 18% of men 60 years and older complained joint pain and the prevalence rises steadily with age. Incidence of joint pain was highest, at about 24% in elderly above 85 to 90 years. 23% of women 60 years and above reported joint pain. By age, India (2017-2018) self reported prevalence of joint or bone disease among old age people was found to be 76.3%.**(Kristina .A 2017-2018).**

Aging is a lifelong process that involves physical, psychological, social and a spiritual Change that occurs from birth to death. Common problems in old age include cataracts and refractive errors, hearing loss, joint pain, back and neck pain, diabetes, chronic obstructive pulmonary disease, dementia and depression. people who are older are more likely to suffer from multiple problems at the same time. Aging is associated with changes in dynamic biological, physiological, environmental, psychological, behavioural and social processes.**(National institute on aging: strategic directions for research , 2020).**

STATEMENT OF THE PROBLEM:

A Study to assess the effectiveness of kneading technique on joint pain among old age people in selected Sure trust Home in Vattamalai.

OBJECTIVES:

- To assess the level of joint pain among old age people with joint pain before kneading technique in experimental and control group.
- To compare the effectiveness of kneading technique on level of joint pain among old age people in experimental group and control group.
- To find out the association between the post test level of joint pain among old age with joint pain and their selected demographic variables.

HYPOTHESIS:

H1 :- There will be a significant difference in the level of joint pain after kneading technique among old age people in experimental group than the control group.

H2 :- There will be a significant association between the level of joint pain among old age people with their selected demographic variables.

ASSUMPTION:

- Old age people with joint pain.
- Kneading technique may be effective in reducing joint pain of old age people.
- Joint pain common in women than men also it associated with aging.
- Kneading technique may be effective in reducing the swelling over the major joints.

DELIMITATION:

- The study limited to the old age people who undergone joint pain only.
- Number of sample delimited to 40.
- Data collection period is delimited to 1 week.
- Study conducted in Sure trust home in vattamalai.

DESCRIPTION OF THE TOOL:-

Section A: Demographic Variables.

It consists of 11 questions regarding to age, sex, educational status, religion, marital status, duration of pain, diet, taking drugs to relieve pain, morbidity, evaluation of physical activity and history of bone disorder.

Section B: Modified lower extremities functional scale.

Modified lower extremities functional scale (MLEFS) is designed to quantify a patients joint pain. It is valid Patient Rated Outcome Measure (PROM) for the measurement of lower extremity function. LEFS is to measure “Patients” initial function, ongoing process, and outcome for a wide range of lower extremity functions. There are 20 items. All items were score from 0 to 4 and each score was calculated as the sum of items included with score calculations of Modified Lower Extremities Functional Scale.

Scoring and Interpretation:-

- 0→No pain.
- 1 – 20→ Mild pain.
- 21–40→ Moderate pain.
- 41–60→ Severe pain.
- 61 - 80→Extreme pain.

VALIDITY:-

Validity of the tool was established with the guide of 3 M.Sc(N) faculties with five years of experiences and 1 consulting guidance (Orthopaedician) and physiotherapist. The guide to give suggestions, opinion and further modification of contents to improve the clarity of content items. The final tool prepared by the guidance of advisor.

DATA COLLECTION PROCEDURE:-

The researcher obtained permission from the directors of the old age home for conducting the study. Above 60 years of old age people with joint pain 20 samples experimental group and other than the 20 samples control group. The researcher assessed the level of joint pain with “modified lower extremity functional scale”. samples are selected by convenience sampling technique. Explain the procedure to experimental group and obtained informed consent from the experimental group.

The old age people with joint pain were made to sit or lie down with affected joint exposed. Apply the lubricant (powder) to reduce friction. Muscles and subcutaneous tissues are alternatively compressed and released.

The movement takes place in circular motion which is divided into two phases, pressure and release phases. During the pressure phase of each stroke, the hands and skin move together on the deeper structure and during the release phase, the hand glides smoothly over the skin. The basic direction of movement is circular which includes pressure phase and release phase, should be completed in 3 – 4 seconds. The time duration of kneading was 20 minutes for five consecutive days. On the 5th day, post test was conducted on the same old age people in control group and experimental group for checking the effectiveness of the kneading technique by using Modified lower extremities functional scale. All samples were cooperative during the data collection procedures.

RESULT

SECTION A:- FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE DEMOGRAPHIC VARIABLES AMONG OLD AGE PEOPLE WITH JOINT PAIN IN OLD AGE HOME.

Table-4.1

Frequency and percentage distribution of the samples according to their selected demographic variables.

Total Samples (N)= 40.

| S.No | Demographic Variables | GROUPS | | | |
|----------------|---------------------------|------------------------------|----|-------------------------|-----|
| | | Experimental Group (N=20) | | Control Group (N=20) | |
| | | F | % | F | % |
| 1. | Age | | | | |
| | A). 60- 69 years | 08 | 40 | 10 | 50 |
| | B). 70- 79 years | 12 | 60 | 08 | 40 |
| | C). 80 years & above | 0 | 0 | 02 | 10 |
| 2. | Gender | | | | |
| | A). Male | 09 | 45 | 07 | 35 |
| | B). Female | 11 | 55 | 13 | 65 |
| 3. | Educational Status | | | | |
| | A). Illiterate | 13 | 65 | 10 | 50 |
| | B). Primary | 05 | 25 | 10 | 50 |
| | C). Higher Secondary | 02 | 10 | 0 | 0 |
| | D). Graduate | 0 | 0 | 0 | 0 |
| 4. | Religion | | | | |
| | A). Hindu | 19 | 95 | 20 | 100 |
| | B). Christian | 01 | 05 | 0 | 0 |
| | C). Muslim | 0 | 0 | 0 | 0 |
| 5. | Marrital Status | | | | |
| | A). Married | 12 | 60 | 11 | 55 |
| | B). Unmarried | 03 | 15 | 0 | 0 |
| | C). Widow (or) Widower | 05 | 25 | 09 | 45 |
| 6. | Dietary Habits | | | | |
| A). Vegetarian | 02 | 10 | 01 | 05 | |

| | | | | | |
|-----|--|----|----|----|----|
| | B). Non Vegetarian | 18 | 90 | 19 | 95 |
| 7. | Duration Of Pain | | | | |
| | A). Below 2 years | 0 | 0 | 18 | 90 |
| | B). 2-3 years | 18 | 90 | 02 | 10 |
| | C). Above 3 years | 02 | 10 | 0 | 0 |
| 8. | Taking Drugs To Relieve Pain | | | | |
| | A). Yes | 16 | 80 | 18 | 90 |
| | B). No | 04 | 20 | 02 | 10 |
| 9. | Morbidity | | | | |
| | A). Hypertension | 10 | 50 | 10 | 50 |
| | b). Diabetes Mellitus | 05 | 25 | 05 | 25 |
| | C). Renal Problems | 0 | 0 | 0 | 0 |
| | D). Others | 05 | 25 | 05 | 25 |
| 10. | Evaluation Of Physical Activity | | | | |
| | A). Active | 11 | 55 | 17 | 85 |
| | B). Limited activity | 09 | 45 | 03 | 15 |
| 11. | History Of Bone Disorder | | | | |
| | A). Yes | 18 | 90 | 04 | 20 |
| | B). No | 02 | 10 | 16 | 80 |

Table. 4.1, Shows that frequency and percentage distribution of the demographic variables among old age people with joint pain in old age home.

- Highest percentage (60%) of old age people belongs to the age group in experimental group between 70 – 79 years and control group also 60 - 69years(50%).
- Highest percentage (55%) of female belongs to the sex in experimental group between (65%) of female in control group.
- Highest percentage (65%) of illiterate old age people in experimental group and (50%) of illiterate in control group.
- Highest percentage (95%) of hindu religion in experimental group between (100%) of hindu in control group.
- Highest percentage (60%) of old age people were married in experimental group and (55%) of married old age people in control group.
- Highest percentage (90%) of non vegetarian diet habit in experimental group and (95%) of old age people in non vegetarian in control group.
- Highest percentage (90%) of older people 2-3 years joint pain in experimental group between (90%) of below 2years joint pain in control group.
- Highest percentage (80%) of old age people taking drugs to relieve pain and (90%) of taking drugs to relieve pain in control group.
- Highest percentage (50%) of old age people have hypertension in experimental group and (50%) of hypertension in control group.
- Highest percentage (55%) of old age people active in experimental group and (85%) of active in control group.
- Highest percentage (90%) of old age people have bone disorder in experimental group and (80%) of old age people no bone disorder in control group.

SECTION B:- THIS SECTION DEALS WITH EFFECTIVENESS OF KNEADING TECHNIQUE ON REDUCING THE LEVEL OF JOINT PAIN AMONG THE SELECTED OLD AGE PEOPLE.

Table . 4.2,

1.Assessment of joint pain in both experimental and control group.

Total Sample (N=40).

| S.No | Variable | Sources | GROUPS | | | |
|------|-----------|---------------|------------------------------|-------------------|-------------------------|-------------------|
| | | | Experimental Group (N=20) | | Control Group (N=20) | |
| | | | Frequency (F) | Percentage (%) | Frequency (F) | Percentage (%) |
| 1. | Pre Test | No Pain | 0 | 0 | 0 | 0 |
| | | Mild Pain | 0 | 0 | 02 | 10 |
| | | Moderate Pain | 08 | 40 | 12 | 60 |
| | | Severe Pain | 10 | 50 | 06 | 30 |
| | | Extreme Pain | 02 | 10 | 0 | 0 |
| 2. | Post Test | No Pain | 0 | 0 | 08 | 40 |
| | | Mild Pain | 14 | 70 | 10 | 50 |
| | | Moderate Pain | 06 | 30 | 02 | 10 |
| | | Severe Pain | 0 | 0 | 0 | 0 |
| | | Extreme Pain | 0 | 0 | 0 | 0 |

Table . 4.2, Shows that the following,

- Pre test scores of joint pain, in the experimental group , out of 20 old age people, 8(40%) had moderate joint pain and 10(50%) had severe joint pain and, 2(10%) had extreme joint pain.
- With regard to the pre test scores of joint pain, in control group, out of 20 old age people with joint pain 2(20%) had mild joint pain and 12(60%) had moderate joint pain and 6(30%) had severe joint pain.
- With regard to the post test scores of joint pain , in the experimental group, out of 20 old age people with joint pain , 14(70%) had mild joint pain and 6(30%) had moderate joint pain.
- With regard to the post test scores of the joint pain, in the control group, out of 20 old age people with joint pain, 8(40%) had no joint pain and 10(50%) had mild joint pain and 2(10%) had moderate joint pain.

2.Comparison of the effectiveness of kneading technique on level of joint pain among old age people with joint pain in experimental group and control group.

Table 4.3

| S.No | Group | Test | Mean | SD | MD | t- value | P-value |
|------|--------------------|-----------|------|----|------|----------|--------------------|
| 1. | Experimental Group | Pre test | 43 | 13 | 12.5 | 2.20* | 11 P<0.05 HS |
| | | Post test | 33 | 11 | | | |
| 2. | Control Group | Pre test | 26 | 09 | 30.9 | 2.57* | 05 P>0.05 NS |
| | | Post test | 15 | 06 | | | |

O1 EXPERIMENTAL GROUP, ***p<0.05 high sign

O2 CONTROL GROUP, *p>0.05 non – significant

Table 4.3, Showed that Mean, SD, Calculated table value of pre test and post test effectiveness of kneading technique in joint pain among old age people in old age home.(Experimental group and control group).

Experimental group pre test Mean (43), SD (13), and post test Mean (33), SD (11), in Paired (calculated) t value (11),t value (2.20) and Control group pre test Mean (26), SD(09), and post test Mean (15), SD (06) , in Paired (calculated) t value(05), t value (2.5).

It is observed that calculated t value 11 is than the table value (or) probability (p>0.05).It is inferred that there is a significant difference between experimental group (pre test and post test), control group (pre test and post test) Mean, SD, Paired t and t values there for it is concluded that the kneading technique is effective. joint pain level is reduced.

SECTION C:- ASSOCIATION OF THE POST TEST SCORES OF JOINT PAIN AMONG EXPERIMENTAL GROUP AND CONTROL GROUP WITH THEIR SELECTED DEMOGRAPHIC VARIABLES.

Table . 4.4

Association of post test score of kneading technique on joint pain among old age people.

| S.No | Demographic Variables | Experimental group (N=20) | | | Control group (N=20) | | |
|------|-----------------------|---------------------------|----|--------------|----------------------|----|--------------|
| | | χ | df | Significance | χ | df | Significance |
| 1. | Age | 21.03 | 8 | 15.51 | 22.36 | 8 | 15.51 |
| 2. | Sex | 22.36 | 4 | 9.49 | 19.68 | 4 | 9.49 |
| 3. | Educational status | 19.68* | 12 | 21.03 | 14.07* | 12 | 21.03 |
| 4. | Religion | 27.59 | 8 | 15.51 | 23.69 | 8 | 15.51 |
| 5. | Marrital satus | 19.68 | 8 | 15.51 | 18.31 | 8 | 15.51 |

| | | | | | | | |
|-----|---------------------------------|--------|----|-------|--------|----|-------|
| 6. | Dietary habits | 23.69 | 4 | 9.49 | 35.17 | 4 | 9.49 |
| 7. | Duration of pain | 23.69 | 8 | 15.51 | 26.30 | 8 | 15.51 |
| 8. | Taking drugs to relieve pain | 22.36 | 4 | 9.49 | 26.30 | 4 | 9.49 |
| 9. | Morbidity | 16.92* | 12 | 21.03 | 16.92* | 12 | 21.03 |
| 10. | Evaluation of physical activity | 19.68 | 4 | 9.49 | 22.36 | 8 | 15.51 |
| 11. | History of bone disorder | 43.77 | 4 | 9.49 | 21.03 | 4 | 9.49 |

Table. 4.3, Shows that following,

- In the experimental group , with regard to the educational status, morbidity the chi square value was 19.68 and 16.92. The table value at 2 degree freedom was 21.03 which was significant at 0.05 level. There was no significant association between the level of joint pain among the old age people with joint pain and the other demographic variables.
- In the control group , on considering the educational status, morbidity the chi square value was 14.07 and 16.92. The table value at 2 degree freedom was 21.03 which was significant at 0.05 level. There was no significant association between the level of joint pain among the old age people with joint pain and the other demographic variables.

The significant reduction was made by the effectiveness of kneading technique in relieving joint pain among old age people with joint pain with influence of demographic variables like educational status , morbidity to relieve pain in experimental group and demographic variable like educational status , morbidity in the control group. There was association between the educational status, morbidity to relieve pain in experimental group and there was an association between educational status, morbidity in the control group for the post test score ($p < 0.05$).

CONCLUSION:-

From the results of the study, it is concluded that rendering kneading technique to the old age people with arthritis was effective in reducing the joint pain. This alternative therapy was not only cost effective but also easy to follow. The old age people with joint pain can include this therapy in their routine activities. The old age people's leisure time may be enough and utilized for doing these kneading technique.

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