

EFFECTIVENESS OF TRADITIONAL HOME REMEDIE ON KNEE JOINT IMMOBILIZATION AMONG SENIOR CITIZENS

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ABSTRACT

Immobilization of knee joint is one of the most disabling disease in developed countries. Present study was aimed to assess the effectiveness of homemade traditional oil on physical functioning, stiffness, pain and swelling of 60 senior citizens in Narambai rural area at Puducherry. An quasi experimental approach with non-randomized control group design was adopted by the investigator. Data collected for demographic variables, health profile, WOMAC scale to assess the level of pain and swelling, physical functioning, immobilization from study group (SG, n=30) and control group (CG, n=30) in numbers before and after with the intervention. Homemade traditional oil was applied and massage given for 15 minutes for the

duration of 30 days to the SG and CG received routine care. Data analyzed using SPSS Version. Results revealed that 83.33% of senior citizen in the SG and 53.33% in the CG had several symptoms of knee joint immobilization, moderate level of pain and extreme level of swelling, respectively in the posttest mean score was 6.80 ± 2.63 and the pretest mean score 4.90 ± 0.99 of WOMAC knee joint immobilization of pain and swelling in the SG were 53.33%, 63.33% and 57%, whereas in the CG, it was increasing to 56.67% and respectively. The study concluded that the traditional home remedies was effective in improving the level of physical function and reducing the level of stiffness, pain and swelling at the level of 0.001 p value. The demographic variables gender and religion had shown statistically significant association with pretest level of stiffness among senior citizens at $P < 0.05$ level and the other demographic variables had not shown statistically significant association with pretest and posttest level of stiffness among senior citizens in the experimental group and control group.

Key words: Traditional Home Remedy, Knee Joint Immobilization, pain, swelling, physical function, Effectiveness, WOMAC scale.

INTRODUCTION

Immobilization of knee joint is one of the most disabling diseases in developed countries. Global estimates are that 9.6% of men and 18% of women >60 years of age have symptomatic painful immobilization of knee joint. 80% percent of patients with immobilization of knee joint have limitations in movement and 25% cannot perform their major daily activities. Usage of Commercial preparation leads to numbers complication in elderly clients. Family members can't bear with the financial burden raised behind the cost of daily medicines which stimulated the clients to look for cost effective natural and less or nil side effects.

NEED FOR THE STUDY

Knee joint immobilization is the most common chronic condition affecting patients over the age of 60. It is estimated that in adults over the age of 60, up to 6% of adults are symptomatic of knee joint and around 3% are symptomatic of knee joint immobilization. Prevalence of knee joint pain and swelling, immobilization increases

with age and with an aging population. The effect of this disease will represent an ever-increasing burden on health care.

STATEMENT OF THE PROBLEM

A quasi experimental study to evaluate the effectiveness of traditional home remedy on pain, swelling, physical functioning, stiffness and immobilization of knee joint among senior citizens in selected Rural Area at Puducherry.

OBJECTIVES

1. To assess the pre-intervention level of physical functioning, stiffness, pain, swelling, and knee joint immobilization by using WOMAC Scale among the Senior Citizen.
2. To assess the effectiveness of Home remedies on level of physical functioning, stiffness, pain, swelling and knee joint immobilization uses WOMAC scale.
3. To associate the pre-intervention level of physical functioning, stiffness, pain, swelling, and immobilization with selected demographic variables and health profile among senior citizen with knee joint immobilization.

HYPOTHESIS

1. H1: There is a significant difference in physical functioning, stiffness, pain, swelling and knee joint immobilization before and after application of traditional home remedies.
2. H2: There is an association between physical functioning, stiffness, pain, swelling and knee joint immobilization with selected demographic variables and health profile of senior citizens with knee joint immobilization.

METHODS AND MATERIALS

Research Approach: Quantitative approach.

Design: Quasi experimental approach with non-randomized control group design was adopted

Population: Senior citizen above 60yrs with limited mobilization

Sample: Senior citizen with inclusive criteria

Sampling technique and size: Simple random was used to select 60 (sixty) senior citizens, 30 for study group and 30 for control group. Over all there were 60 samples.

Tools: Structured questioners which consisted of three sections. Section I with demographic variable, Section II with health profile and Section III consists WOMAC scale for knee joint immobilization

Reliability: Reliability of tool identified by test, retest method, r value .86 found to be reliable.

Data collection: Final study was conducted for 8 weeks in Narambai, Puducherry. Participants were allotted by simple random technique for study and control group. Intervention applied for study group and routine care for control group was given. Collected data was analyzed after coding by using descriptive and inferential statistics in terms of frequency, percentage, mean, standard deviation 't' value and chi-square.

MAJOR FINDING'S AND DISCUSSION

SEC A: 1. Findings related to demographic variables

Majority 17(56.67%) were in the age group of 56 – 60 years, 18(60%) were female, 18(60%) were Muslim, 17(56.67%) had primary education, 16(53.33%) were homemaker, 18(60%) had a family monthly income Rs.5,000 – 10,000, 26(86.67%) were married, 15(50%) belonged to nuclear family, 20(66.67%) received information through health personnel and 20(66.67%) had the habit of drinking alcohol from the study group. Where as in the control group, most of them 16(53.33%) were in the age group of 51 – 55 years, 19(63.33%) were female, 12(40%) were Muslim, 15(50%) were illiterate and had primary education respectively, 24(80%) were coolie, 14(46.67%) had a family monthly income Rs.5,000 – 10,000, 16(53.33%) were married, 12(40%) belonged to joint and nuclear family respectively, 16(53.33%) received information through health personnel and 14(46.67%) had no food habit.

SEC A: 2. Findings on health profile of study and control group.

Among the study group participants most of them 15(50%) were in the age group of 45-50 years, 17(56.7%) Duration of knee joint immobilization 4-6 months, 15(50%) had both knee joint pain, 21(70%) had no previous history of injury 19(63.3%) had no treatment history of knee joint immobilization, 8(26.7%) had thyroid disorder. where in control group 11(36.7%) were in the age group of 45-50yrs, 10(33.3%) had 0-4 months duration of knee joint immobilization, 17(56.7%) had both knee joint pain, 21(70%) had no previous history of injury, 20(66.7%) had no treatment history of knee joint immobilization, 11(36.7%) had both co-morbidity illness.

SEC B: comparison of Pretest and posttest, level of pain, stiffness, swelling, physical functioning and knee joint immobilization among senior citizens in the experimental group.

Variables	No Symptoms		Mild		Moderate		Severe		Worse Severe	
	No.	%	No.	%	No.	%	No.	%	No.	%
Pain										
Pretest	0	0	0	0	10	33.33	18	60.0	2	6.67
Post Test	0	0	10	33.33	18	60.0	2	6.67	0	0
Stiffness										
Pretest	0	0	0	0	5	16.67	22	73.33	3	10.0
Post Test	0	0	7	23.33	21	70.0	2	6.67	0	0
Physical functioning										
Pretest	0	0	0	0	5	16.67	24	80.0	1	3.33
Post Test	0	0	2	6.67	28	93.33	0	0	0	0
Swelling										
Pretest	0	0	0	0	5	12.03	14	46.0	1	5.32
Post Test	0	0	2	1.2	28	53.30	0	0	0	0
Immobilization										
Pretest	0	0	0	0	5	10.67	24	50.0	1	1.33
Post Test	0	0	1	7.6	28	34.33	0	0	0	0
Overall										
Pretest	0	0	0	0	5	16.67	24	80.0	1	3.33
Post Test	0	0	3	10.0	26	86.67	1	3.33	0	0

The table shows that in the pretest, with regard to pain, 18(60%) had severe pain, 10(33.33%) had moderate pain and 2(6.67%) had worse severe pain whereas in the post test, 18(60%) had moderate pain, 10(33.33%) had mild pain and 2(6.67%) had severe pain.

Comparison of pretest and posttest, level of pain, physical functioning, stiffness, swelling and knee joint immobilization among senior citizens in the control group.
N = 30

Variables	No Symptoms		Mild		Moderate		Severe		Worse Severe	
	No.	%	No.	%	No.	%	No.	%	No.	%
Pain										
Pretest	0	0	0	0	12	40.0	17	56.67	1	3.33
Post Test	0	0	0	0	12	40.0	16	53.33	2	6.67
Stiffness										
Pretest	0	0	0	0	9	30.0	15	50.0	6	20.0
Post Test	0	0	0	0	9	30.0	15	50.0	6	20.0
Physical functioning										
Pretest	0	0	0	0	11	36.67	18	60.0	1	3.33
Post Test	0	0	0	0	11	36.67	18	60.0	1	3.33
Swelling										
Pretest	0	0	0	0	5	12.03	14	46.0	1	5.32
Post Test	0	0	2	1.2	28	53.30	0	0	0	0
Immobilization										
Pretest	0	0	0	0	5	10.67	24	50.0	1	1.33
Post Test	0	0	1	7.6	28	34.33	0	0	0	0
Overall										
Pretest	0	0	0	0	12	40.0	17	56.67	1	3.33
Post Test	0	0	0	0	10	33.33	18	60.0	2	6.67

The table shows that in the pretest, with regard to pain, 17(56.67%) had severe pain, 12(40%) had moderate pain and only one (3.33%) had worse pain whereas in the post test, 16(53.33%) had severe pain, 12(40%) had mild pain and 2(6.67%) had worse severe pain.

SEC C: Effectiveness of traditional home remedies for the management of knee joint immobilization among senior citizens in the experimental group. N = 30

Variables	Pretest		Post Test		Mean Difference Score & %	Paired 't' test Value
	Mean	S.D	Mean	S.D		
Pain	11.63	2.73	6.80	2.63	4.83 (24.1%)	t = 69.941 p = 0.0001, S***
Stiffness	4.90	0.99	2.90	0.88	2.0 (25%)	t = 24.083 p = 0.0001, S***
Physical Functioning	28.77	5.04	17.70	3.79	11.07 (23.1%)	t =29.569 p = 0.0001, S***
Swelling	14.50	0.76	1.80	0.78	2.0 (25%)	t = 24.083 p = 0.0001, S***
Immobilization	38.77	5.04	16.80	2.69	11.07 (23.1%)	t =29.569 p = 0.0001, S***
Overall	45.30	7.99	27.40	6.59	17.90 (23.6%)	t = 40.649 p = 0.0001, S***

***p<0.001, S – Significant

The above table depicts that in the experimental group, the pretest mean score of pain was 11.63±2.73 and the posttest mean score was 6.80±2.63. The mean difference score was 4.83 i.e., 24.1%. The calculated paired't' test value of t = 69.941 was found to be statistically highly significant at p<0.001 level.

SECTION C (1): Association between the pretest level of pain, stiffness, swelling, physical functioning and knee joint immobilization among senior citizens with the selected demographic variables in the control group.

(n= 30)

WOMAC Scale	Demographic Variables	
	Gender	Source of information
Pain	$\chi^2=6.801$	$\chi^2=13.868$
Stiffness	d.f=2	d.f=6
Physical functioning	p = 0.033	p = 0.031
	S*	S*

*p<0.05, S – Significant, NS – Non Significant

Table shows that in the control group, the demographic variables gender and source of information had statistically significant association with pretest level of pain among senior citizens, other demographic variables had not shown statistically significant.

SECTION C (2): Association between the pretest level of pain, stiffness, swelling, physical functioning and knee joint immobilization among senior citizens with the selected health profile in the experimental group.

(n= 30)

WOMAC Scale	Health Profile	
	Treatment history of knee joint immobilization	Presence of co- morbidity
Pain	$\chi^2= 2.92$	$\chi^2=4.94$
Stiffness	d.f=1	d.f=2
Physical functioning	p = 0.05 S*	p = 0.02 S*

*p<0.05, <0.02 S – Significant, NS – Non Significant

Table 3.2 shows that in the experimental group, the health profile treatment ,history of knee joint immobilization, Presence of co- morbidity had statistically significant association with pretest level of pain among senior citizens, other health profile had not shown statistically significant.

CONCLUSION

The study concluded that the traditional home remedies was effective in improving the level of physical function and reducing the level of stiffness, pain and swelling at the level of 0.001 p value. The demographic variables gender and religion had shown statistically significant association with pretest level of stiffness among senior citizens at P<0,05 level and the other demographic variables had not shown statistically significant association with pretest and posttest level of stiffness among senior citizens in the experimental group and control group. The subjects had inadequate knowledge regarding traditional home remedies. The planned teaching

methods mixed oil application was to be very effective method in terms of creating awareness regarding traditional home remedies.

RECOMMENDATIONS

1. The study can be conducted among larger sample for the better generalization. The study can be conducted in different settings.
2. Comparison between traditional home remedies and other home application methods can be done.

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