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A Study To Assess The Knowledge Regarding Range Of Motion Exercises With An Intention To Teach Active & Passive Exercises Regarding The Therapeutic Management Of Age Related Degenerative Joint Disease Among The Elderly In Selected Hospitals Of Shahajanpur, U.P.

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Abstract:
The present study has been undertaken A study to assess the knowledge regarding Range of motion exercises with an intention to teach active & passive exercises regarding the therapeutic management of age related degenerative joint disease among the elderly in selected hospitals of Shahajanpur, U.P. In the present study systematic inquiry pretest post-test design for assessing the knowledge regarding Range of motion exercises with an intention to teach active & passive exercises regarding the therapeutic management of age related degenerative joint disease among the elderly. The sample for the present study consists of 60 the elderly. Convenient sampling technique has been used in selecting hospitals of Shahajanpur, U.P. structured teaching programme given by the investigator, helped old age people to improve their knowledge. the pre- interventional mean score of knowledge assessed by structured teaching questionnaires was 11.52 with standard deviation of 4.37. And thepost- interventional mean score was 19.4 with the standard deviation of 1.82, In the study the calculated 't' value of 10.52. is higher than the tabulated 't' value of 2.027. the old age people (62.5%) had inadequate knowledge whereas highest percentage of old age people (37.5%) had satisfactory knowledge after the administration of structured teaching programme.

Key words: *Teach, active & passive exercises, joint disease, the elderly.*

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I. INTRODUCTION:

Commonly referred to as osteoarthritis (OA), degenerative joint disease is a "wear and tear" condition. Most often, persistent repetitive motion that damages structural joints and causes inflammation is the root cause of this illness. Pain, redness, and edema are all symptoms of inflammation. The body uses inflammation to repair and shield injured tissue in response to even the smallest stress. The breakdown of cartilage, which acts as a cushion and smooth gliding surface in the joints, is a result of this cycle of joint damage and inflammation. The hands, knees, hips, and spine are the most common locations, but any joint may be impacted.(Source:)Degenerative joint disease affects about 50% of adult individuals over 65. Pain, functional loss, and decreased endurance are linked to this syndrome, which ultimately results in

The following conditions increase the risk: obesity, hormone imbalances, sickle cell disease, rheumatoid arthritis, post-joint trauma, muscular dystrophy, osteoporosis, and bone problems. Before the age of 55, OA affects men and women equally, but beyond that, it affects women more frequently. Among African American women, knee OA is more prevalent. There are higher rates in men's hips and women's knees. Individuals may have distorted joints, damaged cartilage, discomfort, stiffness, restricted range of motion, lack of flexibility, edema, and weakness. Joint pain and stiffness that may be eased with rest become chronic as the condition worsens, limiting activity and degrading quality of life. The range of mobility of the joints, the structure, any discomfort, and the strength of the corresponding muscles will all be examined physically. Ability to walk

Physical medicine and rehabilitation (PM&R) doctors are experts in the conservative treatment of joint and muscle issues, and they are the ideal people to manage arthritis in the beginning. Rehab, visco supplements, acetaminophen, NSAIDs, weight loss, and corticosteroid injections are among the treatment modalities utilized. Visco supplementation has grown in popularity recently since it relieves arthritis. In order to provide the joint

with additional "cushion," a gel-like material that imitates the lubricant produced naturally might be injected to relieve pain. An orthopaedic surgeon may need to be referred by a PM&R doctor to explore total joint arthroplasty if pain persists despite conservative measures.[3] It is advantageous to educate patients and their families about exercising, losing weight, and using painkillers. Numerous organizations can provide guidance and assistance.

Need For Study

The most frequent cause of long-term impairment in older persons is joint deterioration. While OA was once thought to be a "wear and tear" degenerative disorder of the articular joints, more recent research has shown that OA also has an inflammatory component. This includes increased activity of several cytokines and chemokines in the joint tissues, which stimulate the creation of enzymes that break down matrix. Instead, then originating OA directly, aging changes in by increasing a joint's susceptibility to the impacts of other OA risk factors, such as faulty biomechanics, joint injury, heredity, and obesity, the musculoskeletal system plays a role in the development of osteoarthritis (OA). Increased bone turnover and age-related sarcopenia may also play a role in the development of osteoarthritis. Comprehending the fundamental processes through which aging impacts joint tissues ought to furnish novel avenues for mitigating or averting the onset of osteoarthritis.

Objectives of the Study:

1.To assess the level of knowledge regarding range of motion exercises in therapeutic managementof age related degenerative joint disease among the elderly in selected hospitals of shahjanpur, U.P.
2.To assess the level of awareness regarding range of motion exercises in therapeutic managementof age related degenerative joint disease among the elderly in selected hospitals of shahjanpur, UP.
3.To associate the level of knowledge and awareness regarding range of motion exercises in therapeutic management of age related degenerative joint disease among the elderly in selected hospitals of shahjanpur, U.P with their selected socio demographic variables.
4.To correlate the level of knowledge and awareness regarding range of motion exercises in therapeutic management of age related degenerative joint disease among the elderly in selected hospitals of shahjanpur, U.P with their pre-test score

Hypothesis:

H_1 : The mean post test score will be higher regarding range of motion exercises in therapeutic management of age related degenerative joint disease

H_2 : There is statistically significant association between the level of knowledge with their selected socio demographic variables.

II. Review Of Literature

In the present study the review of literature is organized and presented as follows:

1.Literature related to incidence and prevalence of degenerative bonediseases
2.Literature related to risk factors degenerative bone disease.
3.Literature related to management and nursing interventions of degenerative bone diseases.

Palazzo et al (2015), in their analytic study on burden of rheumatic and musculoskeletal diseases in France were carried out. The data on disabilities associated with rheumatic and musculoskeletal diseases were extracted from the national 2008±2009 Disability-Health Survey of 29,931 representative of the population in France. They used the coreset of disability categories for rheumatic and musculoskeletal diseases of the World Health Organization's International Classification of Functioning, Disability and Health for analysis. The investigators assessed the risk of disability associated with rheumatic and musculoskeletal diseases using odds ratios and the societal impact of rheumatic and musculoskeletal diseases using the average attributable fraction. The investigators concluded that rheumatic and musculoskeletal diseases are highly prevalent and significantly affect activity limitations and participation restrictions.

Furtado et al (2014) conducted a study to evaluate potential risk factors related to Low back pain in the daily routines of two sets of youths: individuals complaining of chronic Low back pain and a control group. A univariate analysis showedstatistically significant associations ($P < 0.05$) with the presence of Low back pain and some factors. There were negative associations between Low back pain and the following variables, body mass index, health self- assessment, physical functioning, body pain, general health, and vitality, social functioning. There was a positive correlation with the following variables: global pain by visual analog scale, presence of diffuse pain and number of tender points. The investigatorsconcluded that some variables related to chronic diffuse pain and lower quality of life mightbe associated to chronic Low back pain in young adults. However, longitudinal studies arenecessary.

Luedtke et al, 2015, in their analytics study on the effectiveness of transcranial direct current stimulation alone and in combination with cognitive behaviour all management in patients with non-specific chronic low back

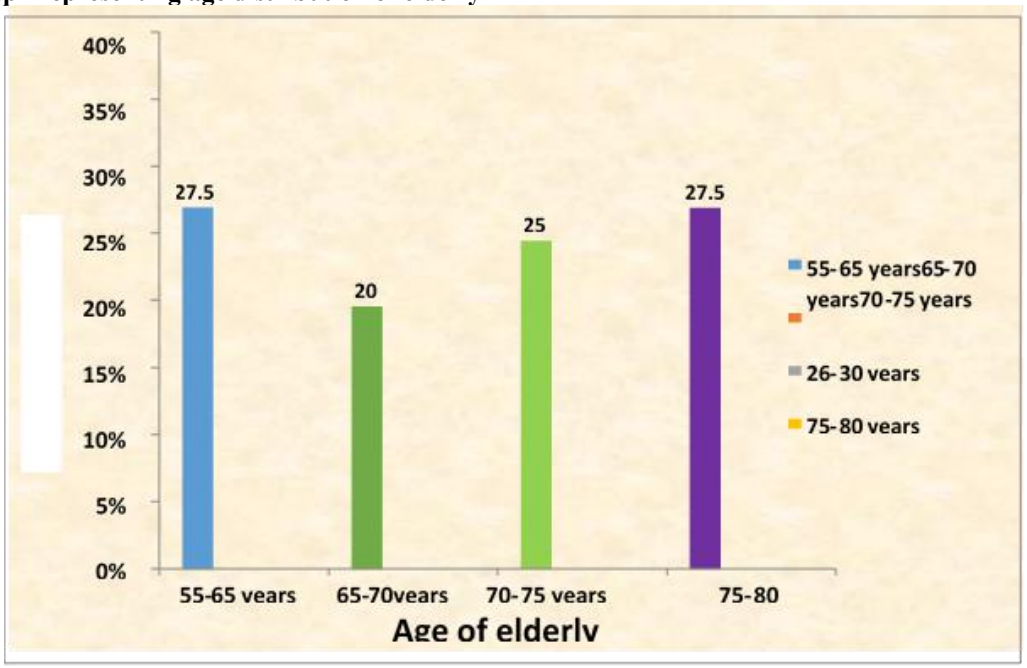
pain. Double blind parallel group randomized controlled trial with six months. The researcher concluded that the trial on the effectiveness of transcranial direct current stimulation for the reduction of pain and disability do not support its clinical use for managing non-specific chronic low back pain.

III. Data Analysis And Interpretation

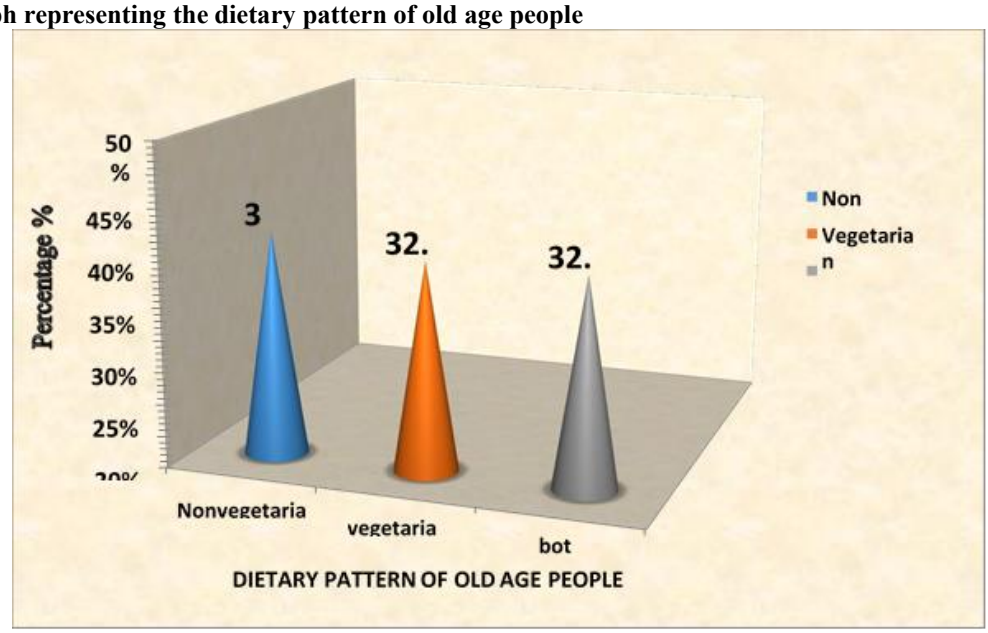
1.Distribution Of Old Age People According To Their DemographicVariable.
N=60

S.No	Demographic variable	Frequency	Percentage (%)
1	Age in years		
	a.55-65	30	27.5
	b.65-70	10	20
	c.70-75	10	25
	d.75-80	10	27.5
2	Sex		
	a.Male	50	75
	b.Female	10	25
3	Diet		
	a.A Non vegetarian	15	35
	b.Vegetarian	40	32.5
	c.c. Both	05	32.5
4	Marital Status		
	a.Married	55	32.5
	b. Unmarried	05	35
	c.Divorcee	0	0
5	Duration of visit in hospital		
	a. One year	30	57.5
	b. Two year	20	35
	c. Three year	10	7.5
6	Previous source of knowledge		
	a.Family	0	0
	b. Relatives	30	7.5
	c.Friends	20	35
	Mass media	10	57.5
7	Education		
	a. Primary	10	27.5
	b. Higher Secondary	10	25
	c. Graduate	35	20
	d. Professional	05	27.5

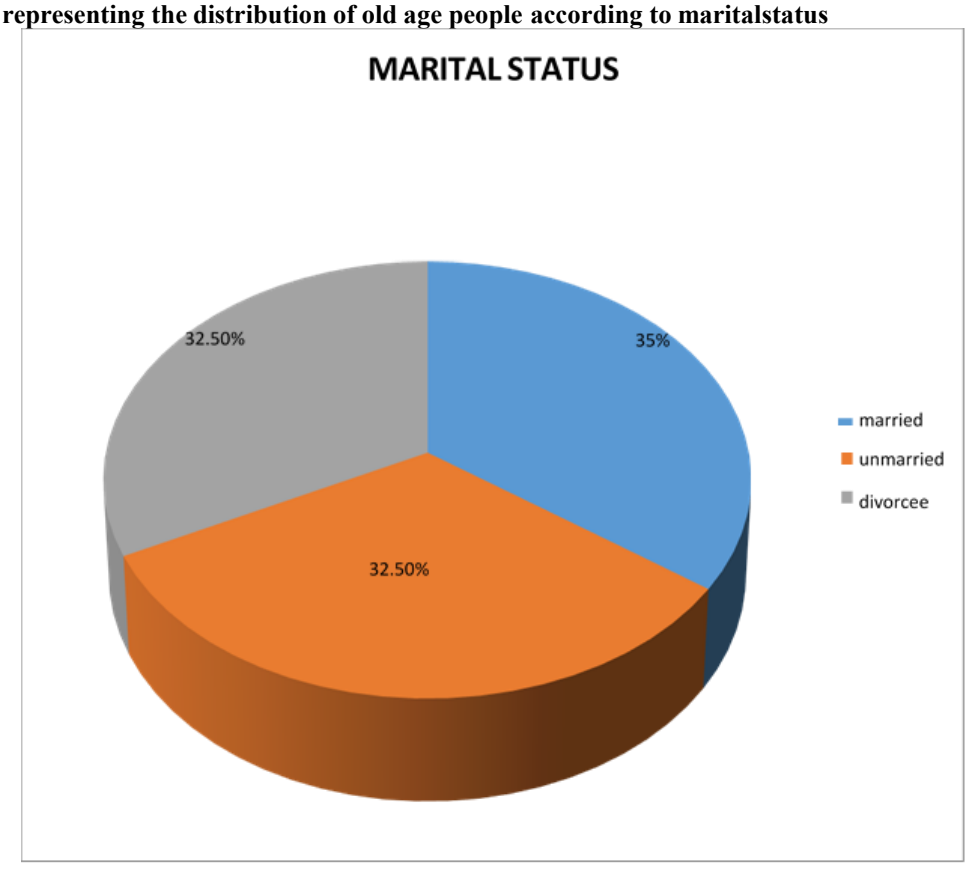
Bar graph representing age distribution of elderly



Bar graph representing the dietary pattern of old age people



Pie chart representing the distribution of old age people according to maritalstatus



Frequency and percentage distribution of pre-interventional knowledge scoreof old age people (N=60)

LEVEL OF KNOWLEDGE	POST-INTERVENTIONAL KNOWLEDGE SCORE			
	Frequency	Percentage (%)	Mean	S.D
Inadequate	10	62.5	11.52	4.37
Satisfactory	05	2.5		
Adequate	45	37.5		

Frequency and percentage distribution of post-interventional knowledge scoreof old age people(N=60)

LEVEL OF KNOWLEDGE	POST-INTERVENTIONAL KNOWLEDGE SCORE			
	Frequency	Percentage(%)	Mean	S.D
Inadequate	Nil	Nil	19.4	1.82
Satisfactory	09	18		
Adequate	51	82.2		

Comparison of mean, mean percentage and standard deviation of pre and post-interventional knowledge score of old age people

Group	Mean	Mean difference	Mean percentage(%)	Standarddeviation	't' value
Pre interventional	11.52		28.8	4.37	
Post interventional	19.4	7.88	48.5	1.82	10.52*

P < 0.05, Significant

Association of pre-interventional knowledge score with their selecteddemographic variable

S.No	a	Pre -interventional score		Df	Chi-square
		Inadequate	Satisfactory		
1.	**Age in years**				
	a. 55-65	07	04		7.78
	b. 65-70 c. 70- 75 d. 75-80	06 05 07	02 05 04	03	
2.	**Sex**	12	10	02	3.53
	a.Male	13	05		
	b. Female				
3.	**Diet**				
	a. Non vegetarian	09	05	02	3.83
	b. Vegetarian c. Both	07 09	06 04		
4.	**Marital status**				
	a. Married	09	05		
	b. Unmarried	07	06	02	3.83
	c. Divorcee	09	04		
5.	**Previous source of knowledge**				
	a. Family	07	04		
	b. Relatives	06	02	03	7.78
	c. Friends	05	05		
	d. Mass media e.	07	04		

Association of post-interventional knowledge score with their selected demographic variable

S.No	Demographicvariable	Pre -interventional score			df	Chi-square
		Inadequate	Satisfactory	Adequate		
1.	**Age in years**					
	a. 55-65	2 1	2	7 4		
	b. 65-70 c.70- 75	2 2	3 2	6 7	6	1.34
	d. 75-80		2			
2.	**Sex**	0 2	04	16	02	0.17
	a.Male b. Female	0 2	04	18		
3.	**Diet**					
	a. Non vegetarian	01	03	10	04	9.58(S)
		02	03	08		

	b. Vegetarian c. Both	01	02	10		
4.	**Marital status**					
	a. Marriede.			11		
	b. Unmarried	01	02			
	c. Divorcee	02	05	06	04	
		03	02	08		10.2(s)
5.	**Previous sourceof knowledge**					
	e. Family			08		
		01	02			2.92
	f. Relatives	02	01	05	06	
	g. Friends	02	02	07		
	h. Mass media	01	01	08		

IV. Summary

Based on the findings of the study it can be summarized that

- Finding of the study show that percentage of old age people (62.5%) had inadequate knowledge and none of the sample had adequate knowledge.
- The mean pre- interventional knowledge score was 11.52 whereas the mean post- interventional knowledge score was 19.4. The post interventional scores proved that the structured teaching programme given by the investigator, helped old age people to improve their knowledge. The effect of structured teaching programme was interventional in term of gain knowledge and the findings showed that it was significant at 0.05 level.
- There is no association of pre-interventional knowledge with chi square It was an overall enriching, challenging and interesting experience for the investigator while conducting the study.

V. Conclusion

On the basis of the finding of the study, the following conclusions were drawn: Peak percentage of the old age people (27.5%) were in the age group 55-65 years and 75-80 years and (25%) in 70-75 years rest of the (20%) were in the age group 60-65 years. Regarding sex 75% were male and 25% were female. As per the diet 35% are non-vegetarian, 32.5% are vegetarian and 32.5% comes in both categories. Regarding the marital status 32.5% are married, 35% are unmarried and 32.5% are divorcee. According to duration of visit to hospital 57.5% are from one year, 35% are from two years and 7.5% are from three years.

Regarding the education 27.5% had primary education, 25% had secondary education, 20% were graduate and 27.5 were professional. As per the previous source of knowledge 7.5% of them were through relatives, 35% of them were through friends and 57.5% of them were through mass and media.

Prior to the administration of structured teaching programme, the old age people (62.5%) had inadequate knowledge whereas highest percentage of old age people (37.5%) had satisfactory knowledge after the administration of structured teaching programme.

The mean pre- interventional knowledge score was 11.52 whereas the mean post- interventional knowledge score was 19.4. The post interventional scores proved that the structured teaching programme given by the investigator, helped old age people to improve their knowledge. There is no significant association of pre-interventional score on ROM on degenerative bone diseases with their demographic variable of old age people.

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