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**“A study to evaluate the effectiveness of a planned teaching programme  
regarding knowledge on arthritis and its management  
among geriatric population in a selected  
Community of Gurugram”.**

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**Abstract:** **Background of the study:** The term arthritis literally means ‘inflammation of a joint’ but arthritis is actually a collection of more than 100 distinct, conditions. The cause of arthritis is unknown, but it may result from a combination of environmental, demographic, infections, genetic factors, Socioeconomic, psychological, and lifestyle factors.<sup>1</sup> **Aim:** To find out the effectiveness of planned teaching program in improving knowledge of geriatrics population in regards to management of arthritis. **Methodology:** The experimental study was conducted using pre-experimental research design (one group pre-test post-test design) at community of Gurugram. The conceptual framework use in the study was General System theory. The total sample size for the study was 60 geriatric populations. Written a consent has obtained from the samples. Purposive sample technique has used and data collection by structured knowledge questionnaire. **Results:** The study data reveals that the mean  $\pm$  SD post-test knowledge score ( $15.82 \pm 1.909$ ) of geriatric regarding management of arthritis is higher than the mean pre-test knowledge score ( $5.38 \pm 1.728$ ). It shows that planned teaching program was effective in increasing knowledge regarding management of arthritis. The data also revealed that there is statistically significant relationship between knowledge score regarding management of arthritis and age, religion, educational status among geriatric population in a selected community of Gurugram. **Conclusion:** The planned teaching program was found to be effective in increasing the knowledge among geriatric population regarding arthritis.

**Keywords:** Evaluate, Effectiveness, Planned Teaching Programme, Knowledge, arthritis and management, geriatric population.



## 1. INTRODUCTION

After the age of 55 years, the prevalence rate for men and women are estimated to be 2% and 5% respectively. Arthritis occurs worldwide and affects all racial and ethnic groups. It can occur at any time of life, but its incidence tend to increase with age, peaking between the fourth and sixth decade. The incidence of arthritis range from around 20-300 per 100,000 adults per year.<sup>2</sup>

Worldwide prevalence is approx. 1%. Its incidence and prevalence is more in developed countries and less in developing countries that is 0.1-0.5%. but in India, the prevalence of arthritis is 0.75%, which is similar to the developed countries.<sup>3</sup>

Arthritis is not one disease, but rather a broad term that encompasses more than 100 different disorders. All involve the joints and are characterized by chronic pain, limited mobility and decreased range of motion.

- Nationwide, 70 million Americans suffer from some form of arthritis –
- that's one out of three – making arthritis one of the most pervasive diseases in the U.S. as well as the leading cause of disability.
- Arthritis is not just a consequence of aging. While joints people most do show some degeneration over time,
- Many forms of arthritis are driven by immune system-mediated damage that can strike at any time.
- There is no known cure for arthritis, but advancement in science are helping us to identify ways to improve diagnosis and its treatment.
- Arthritis is a chronic inflammatory disorder that affects joints especially synovial joints. Arthritis is an autoimmune disorder whose exact cause is unknown. But it is triggered by infections like streptococci, mycoplasma, rubella etc.
- About 1% of the population in INDIA is affected by Arthritis. This condition commonly acquires between the age group of 60-90years and three times more



commonly in women. There by substantially decreasing mobility of the joints and overall activity of the affected person.

- Ironically, the name of the disease confuses people Since the name of the disease has the word “ARTHRITIS” in it, many assume Arthritis is a disease of elderly. The people who seem least likely to be diagnosed with full blown Arthritis are the elderly.
- Arthritis is a serious illness comparable to Diabetes or Angina. patients do not tend to live as long and require lifelong treatment by a specialist. There is no cure for Arthritis. It is an extremely complex disease. For one thing Arthritis is “heterogeneous”, meaning it does not always behave the same way, even in a single patient.
- The treatment for Arthritis is yet to be discovered. But at present various treatment methods are used to alleviate symptoms and reduce pain. According to American college of Rheumatology (2010 publications) the management of arthritis consist of two fold trend, that is –alleviating the current symptoms and- preventing the further progression of Arthritis.<sup>4</sup>

The most common form of arthritis is osteoarthritis. Other common rheumatic conditions related to arthritis include gout, fibromyalgia, and arthritis .Rheumatic conditions tend to involve pain, aching, stiffness, and swelling in and around one or more joints. The symptoms can develop gradually or suddenly. Certain rheumatic conditions can also involve the immune system and various internal organs of the body. Some forms of arthritis, such as rheumatoid arthritis and lupus (SLE), can affect multiple organs and cause widespread symptoms. According to the Centres for Disease Control and Prevention (CDC), 54.4 million adults in the United States have received a diagnosis of some form of arthritis. Of these, 23.7 million people have their activity curtailed in some way by their condition. Arthritis is more common among adults aged 65 years or older, but it can affect people of all ages, including children.<sup>5</sup>



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## **2. REVIEW OF LITERATURE**

1. Review of literature related to prevalence and incidences rate of arthritis among geriatrics.
2. Review of literature related to disease condition & its management of arthritis.
3. Review of literature related to effectiveness of planned teaching programme on knowledge of arthritis and its management.

### **Section 1: Review of literature related to prevalence and incidences rate of arthritis among geriatrics.**

Ghia CJ Shiff S Rambhad G Lewis JF , Rao UR Handa R (2016 may) Arthritis can lead to severe disability. This literature review assessed the descriptive epidemiology, comorbidities and extra-articular manifestations, functioning abilities and quality of life, and treatment patterns of arthritis patients in India .A literature review of all observational studies published from 1985 to 2012 was conducted using MEDLINE and Embase. Quantitative and qualitative findings were summarized. Twenty-eight studies were identified for data extraction. Seven described the descriptive epidemiology of Arthritis, 14 described comorbidities and extra-articular manifestations, nine described the functioning abilities and quality of life among patients, and 10 provided information on treatments .This review is confined to studies with small sample sizes, cross-sectional designs, and/or clinical settings that may not be representative of the entire Indian population. There is a need for more robust studies, as conclusions for the entire Indian RA population cannot be drawn from only the current observational studies.<sup>6</sup>

Thulkar, J. et al (2016) Arthritis is an autoimmune disease with a worldwide prevalence of approximately 0.5% to 1% among adults. Arthritis investigators have noted that prevalence in North America and Europe may be higher than prevalence in Asia. It is unclear if this geographical variability exists due to genetic, environmental or study design differences. When



arthritis is left uncontrolled, the arthritis patient may experience joint deterioration, severe disability, decreased quality of life, the onset of comorbidities and premature mortality. The potential comorbidities include but are not limited to cardiovascular disease (CVD), cancer (specifically lymphoma and lymphoproliferative diseases, lung cancer and melanoma), infections, depression and gastrointestinal disease. In particular, cardiovascular disease disproportionately affects Arthritis patients. The cardiovascular (CV) risk score calculated in a recent study of traditional cardiovascular risk factors in Indian patients suggests that arthritis patients have a four-fold increase in cardiovascular risk compared to the general population from the same geographic location. However, no mortality studies of cardiovascular events among Indian arthritis patients are available. Since the 1960s, the gap in cardiovascular disease mortality between arthritis patients and the general populations in other countries has widened, as arthritis patients have remained at an increased risk compared with general populations. A standardized mortality ratio derived from a meta-analysis of North American and European studies suggests that mortality from cardiovascular events is 1.5- fold higher among arthritis patients than among the general population. India can be characterized as a sub-continent, given that it has the second largest population (1.2 billion). Worldwide, the seventh greatest land area worldwide, and socio-cultural diversity that includes over 20 official languages. Understanding the epidemiology of arthritis in India is necessary to drive strategies for disease management. Therefore, a literature review of observational studies focused on epidemiology and other disease aspects (comorbidities/extra-articular manifestations, functional abilities/quality of life and treatment patterns) will increase knowledge of the disease burden rheumatoid arthritis presents in India.<sup>7</sup>

Perruccio et al. (2016) Arthritis and other rheumatic conditions are among the most prevalent chronic conditions in Canada and other parts of the world. They include many types of arthritis and autoimmune diseases that affect the bones and joints and other components of the musculoskeletal (MSK) system causing morbidity, disability with resultant, health care utilization. Arthritis is perceived as a disease of the aged, but is prevalent in both men and women younger than 65 years. Arthritis and rheumatic conditions pose a major economic and health burden to society. Arthritis affects more than 4.2 million Canadians or 16.0% of the



population over the age of 15 years. approximate that the prevalence of arthritis in Canada will be greater than previously estimated affecting between 21.0% to 26.0% of the population by 2021. With the aging of the population, this burden is expected to increase impacting the lives of individuals and the population as a whole. A review of literature was conducted to examine how widespread arthritis and rheumatic conditions are within Canada as well as other parts of the world. Understanding how many people have arthritis and other rheumatic conditions is the first step in assessing the extent of burden and potential concerns regarding health care needs and health service requirements. This report presents the prevalence estimates for arthritis, osteoarthritis (OA), rheumatoid arthritis as well as other rheumatic conditions including ankylosing spondylitis (AS), psoriatic arthritis (PsA), lupus/systematic lupus erythematosus (SLE), scleroderma/systematic sclerosis (SSc), gout, Sjogren's syndrome (SS) and Still's disease.<sup>8</sup>

Katie A. Sharff & Eric P. Richards & John M. Townes (2013)- Septic arthritis is a rheumatologic emergency as joint destruction occurs rapidly and can lead to significant morbidity and mortality. Accurate diagnosis can be particularly challenging in patients with underlying inflammatory joint disease. This review outlines the risk factors for septic arthritis and summarizes the causative bacterial organisms. We highlight advances in antibiotic management with a focus on new drugs for methicillin-resistant *Staphylococcus aureus* (MRSA) and discuss the use of adjunctive therapies for treatment of septic arthritis in adults.<sup>9</sup>

Maurizio Benucci, Veronica Rogai, Fabiola Atzeni, Volker Hammen, Piercarlo Sarzti-Puttini, Alberto Migliore (2017)- This literature review examines available evidence on the current and past costs associated with arthritis in Italy, together with the future health-economic prospects for the disease. Studies have been conducted to date on the prevalence, or the associated costs, of Arthritis in Italy. Although future changes in the incidence of arthritis are a matter of debate, the impact of Arthritis on health care costs is expected to grow in coming decades in line with projected increases in life expectancy and in the proportion of elderly people in Italy. It has been estimated that the indirect (productivity loss and informal care) and intangible (deterioration in health-related quality of life) costs of the disease will contribute to an increase in national health service expenditure, which will correspond to 1% of the total



health care costs of the nation in the near future. The introduction of biological agents for the treatment of rheumatic diseases has resulted in an increase in the direct costs of Arthritis; however, economic analyses that exclude indirect costs will underestimate the full economic impact of Arthritis. The effectiveness of innovative therapies in preventing disease progression and functional impairment may, over time, attenuate the cost impact of Arthritis in terms of hospitalizations and work absenteeism. Further research is needed to develop estimates of the economic impact of different therapeutic approaches in patients with Arthritis in Italy, in order to provide tools that can drive the choice of the most cost-effective therapeutic option while maintaining high-quality care.<sup>10</sup>

## **Section 2: Review of literature related to disease condition & its management of arthritis.**

A study conducted by researcher in December 2016 in Russia -The representatives of immunoinflammatory diseases are rheumatic ones, such as primarily rheumatoid arthritis, juvenile idiopathic arthritis, spondyloarthritis, psoriatic arthritis, systemic lupus erythematosus, and other systemic connective tissue diseases, which are characterized by a being high risk and untimely death. The high risk of untimely death in these diseases has been found to be associated with the severity of an immunoinflammatory process that gives rise to severe irreversible damage to vital organs and systems and with the development of wide spectrum of conditions (infections, interstitial lung disease, malignant tumors, osteoporotic fractures, etc.). Among them, diseases of the cardiovascular system, which are most commonly caused by the early development and accelerated progression of atherosclerotic coronary lesions, which hold a central, position. This study gives the data available in the recent literature on the impact. Of antirheumatic therapy (disease-modifying antirheumatic drugs and biological agents) on' the cardiovascular system.<sup>11</sup>

Dco, P et al (2013) In the United States, arthritis and other rheumatic conditions, a family of more than 100 diseases, are among the most prevalent, disabling, and costly conditions. In 1997, they were estimated to affect more than 15.0% (43 million) of the population and are projected to affect 18.2% (59.4 million) of the 2020 population. In 1990, the major life activities (work, school, home) of 7 million people were limited by these conditions, and



projected figures indicate that 11.6 million will be limited in 2020. Arthritis and other rheumatic diseases have a significant impact on many demographic groups. Arthritis is the most prevalent and disabling condition among women. Arthritis is among the top four chronic conditions affecting different racial and ethnic groups (e.g., Caucasian, African American, Asian/Pacific Islanders, and Hispanics) and is ranked first or second in each group as a cause of activity limitation.<sup>12</sup>

Etemadifar, M.R. et al (2013) The effects of morbidity on those with arthritis are also substantial; direct and indirect costs associated with arthritis were estimated to total \$65 billion in 1992. Decreasing the prevalence of arthritis would lead to a much greater decrease in functional limitations and costs of long-term care in the 21st century than would similar decreases in the prevalence of coronary artery disease, stroke, cancer, diabetes, or dementia. It will be difficult to achieve the primary goals of Healthy People 2017—to increase quality and years of healthy life and to eliminate health disparities—without concerted public health efforts to address arthritis.<sup>13</sup>

Liza, H. et al (2010) Arthritis and other rheumatic conditions have only recently been addressed as public health problems. Public health efforts for chronic diseases have historically focused on leading causes of death. Arthritis is primarily a quality-of-life issue because it is usually nonfatal and incorrectly viewed as being an inevitable part of aging, affecting only older people, and having no effective treatment. However, a variety of interventions are available that can improve the health and quality of life of people with arthritis. Arthritis education and exercise/physical activity programs slow down or reduce long-term impairments and disabilities, reduce pain, and help people adjust to their condition. There is extensive and consistent evidence that health education programs on arthritis management produce positive changes in knowledge, behavior, psychosocial factors, and health status.<sup>14</sup>

Pande, K. et al (2015) Arthritis often leads to increased inactivity that results in reduced joint mobility, strength, fitness, exercise participation, and risk for development of coronary heart disease, yet in the past, people with arthritis were specifically discouraged from participating in exercise activities. Since 1975, however, study results have consistently indicated that moderate





intensity aerobic exercise is both safe and physically and psychologically beneficial for people with arthritis. The U.S. Surgeon General's report on Physical Activity and Health concluded that regular moderate aerobic or resistance-training exercise programs relieve symptoms and improve function in people with rheumatoid arthritis (RA) or osteoarthritis (OA). Because of the apparent efficacy of these interventions, clinical and public health practitioners are recommending participation in exercise or physical activity and self-management education programs for people with arthritis. Fortunately, a number of education and exercise programs are offered in a packaged or ready-to-use format and are available for widespread use by health professionals at the state and local levels. Yet far less than 1% of people with arthritis participated in Arthritis Foundation-sponsored self-management education or exercise programs in 2001 (M. Boutaugh, Arthritis Foundation, personal communication, 2002), which suggests that these programs are not reaching many people with arthritis who would benefit from them. The aging of the population and the increasing prevalence of arthritis make it more important than ever to raise awareness of the growing impact of arthritis and other rheumatic conditions and available interventions to decrease symptoms and increase function. The purpose of this article is to review and compare nine packaged (ready-to-use) arthritis intervention programs that are widely available to health professionals who want to address the large and growing problem of arthritis. Interventions currently in the research and development stage or not yet evaluated or packaged (materials ready for easy distribution and implementation) are not included in this review.<sup>15</sup>

For all of these reasons, patients with Arthritis often look to Complementary and Alternative Medicine (CAM) for additional sources of relief. In fact, joint pain and arthritis are among the top five most common reasons that Americans seek CAM (3). Usually, CAM is sought in addition to allopathic (standard medical) treatment to ease symptoms of the disease and side effects of drug therapy. Below is an outline of the currently available research for treatments that are commonly used by Arthritis patients, as well as a synopsis of what may be recommended as safe and possibly effective for this population.<sup>16</sup>



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### **Section 3: Review of literature related to effectiveness of planned teaching programme on knowledge of arthritis and its management.**

Mottle L M, Laurindo I M, Santos Ne toll (2010 May) A study was conducted to evaluate the effects of self-instruction on learning, satisfaction with the teaching approach, and health status of personal with arthritis by control-group pre-test-post-test design, among thirty subjects receiving care at a rheumatology clinic that met the study criteria, were randomly assigned to two groups, self-instruction and control group. One-way analysis of covariance on post-test Arthritis Knowledge Inventory (RAKI) scores, with the pre-test as covariate, was used to examine the difference in learning between the self-instruction and control groups. There was significant difference between the groups ( $P=0.01$ ). Participants who completed the self-instructional program had improved scores on the post-test as compared to the control group.<sup>17</sup>

Merck manual of medical information (2013) Arthritis is the most common autoimmune inflammatory arthritis in adults. Arthritis has a significant negative impact on the ability to perform daily activities, including work and household tasks, and health related quality of life, and it increases mortality. The American College of Rheumatology (ACR) last published a guideline for Arthritis management in 2012, which was an update of the 2008 Arthritis guideline. Because there has been rapid accrual of evidence and new therapies, advancement of guideline development methodologies, and the need to broaden the scope of its 2012 Arthritis recommendations, the ACR has developed a new 2015 Arthritis pharmacologic treatment guideline.<sup>18</sup>

Silva K N, et al (2010 May) A research in Brazilian Cochrane centre Sao-Paulo-Brazil to assess the effectiveness and safety of balanced training (proprioceptive training) to improve functional capacity in patient with rheumatic arthritis. 864 patients with history of rheumatoid arthritis are selected by using random selection and data was collected regarding the knowledge of exercise and balance training. And they are compared with patients who had knowledge of exercise and balance control by using randomized controlled trails. After the comparative study of muscle strength, endurance walking and swimming exercise the researchers concluded that the most of the patients are unaware of exercise and balance training method.<sup>19</sup>



#### 4. Statement of problem

“A study to evaluate the effectiveness of a planned teaching programme regarding knowledge on arthritis and its management among geriatric population in a selected community of Gurugram”.

#### Hypothesis

Hypothesis Will Be Tested at 0.05 Level Of Significance.

- H1: There will be significant difference between Pre-test and Post-test knowledge score regarding arthritis and its management among geriatric population.
  
- H2: There will be significant association of Post-test knowledge score with demographic variables.

#### Operational definitions of terms

- **Geriatric population**–In this study it refers to the people whose age is between 60-80 years and above
- **Arthritis**- Arthritis refers to the inflammation of bone and joints, Symptoms generally include joints pain and stiffness. Other symptoms may include redness, warmth, swelling, and decreased range of the motion of the affected joints. It is a leads programme, which teaches us about arthritis.
- **Planned teaching programme** - It refers to the disease condition i.e. arthritis in terms of definition, causes, predisposing factors, clinical feature, diagnostic evaluation, line of treatment and nursing management related to self-care, diet, exercise, medication, follow-up check-ups and counselling.
- **Effectiveness**- Effectiveness refers to increase in the post-test knowledge scores than the pre-test knowledge scores.



- **Evaluation-** evaluation refers to the gain in post-test mean knowledge score on arthritis which will be measured by using structured MCQ knowledge questionnaire in terms of excellent, very good, good, average, satisfactory & poor.

## Assumptions

### In the present study it is assumed that

- Planned teaching programme is one of the acceptable methods of teaching to impart knowledge regarding arthritis among the geriatric population.
- Arthritis is one of the common diseases of the bones and joints which effects majority of the geriatric population.
- Geriatric population has some knowledge regarding arthritis and its management.
- Preventive measures early diagnosis and management of arthritis will prevent the geriatric population from further complication.

- **Conceptual framework**

The conceptual framework for the present study is based on System Model (first proposed under the name of ‘General System Theory’) by the biologist Ludvig Von Bertalanffy, 1968 to assess the effectiveness of increase in the post-test and pre-test knowledge score.

The following are the major concepts of the theory:

- **Context:** It is the setting in which the research study will be planned and implemented.
- **Input:** Input is the term denoting either an entrance or changes which are inserted into a system and which activate/modify a process.
- **Process:** The system’s part or subsystems perform a series of mechanical or chemical operations on something to change or preserve it are called as process or throughput.
- **Output:** It is the end product of the system i.e. the quantity of product that is created within a given period of time.
- **Feedback:** feedback was not assessed in this study.

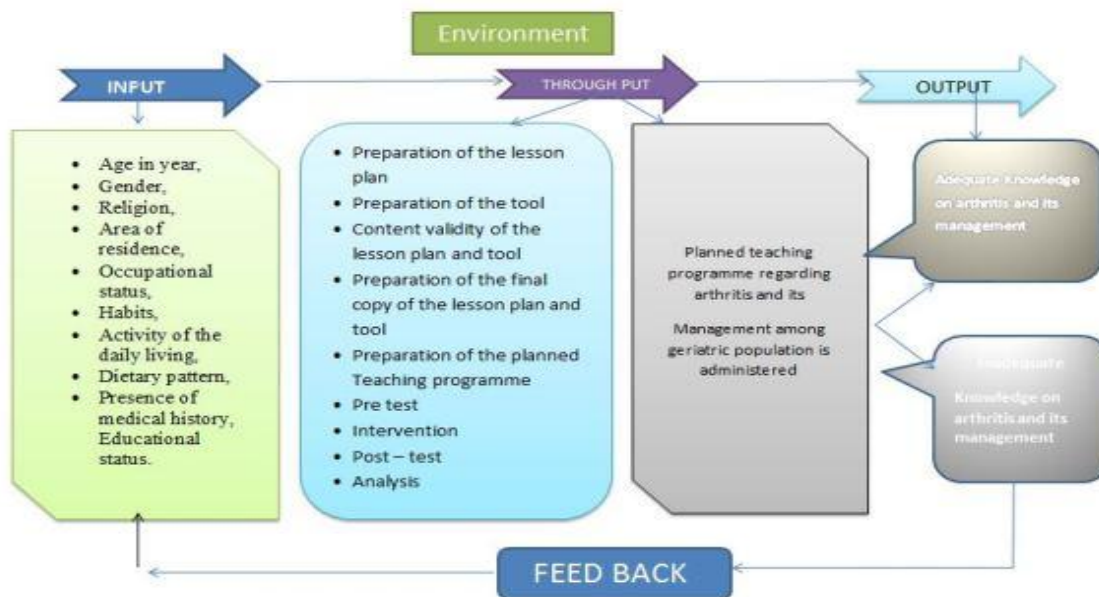


FIGURE 1: MODIFIED VON BERTALANFFY'S GENERAL SYSTEM THEORY MODEL (1968)

#### 4. Methodology

- Research approach- pre experimental approach.
- Research design- one group pre-test and post-test design.
- Setting –community village Gurugram , district of Haryana state.
- Variables-

Dependent variables: knowledge of geriatric population in regarding arthritis and its management.

Independent variable: planned teaching programme on arthritis and its management.

Demographic variables: in the present it refers to the selected demographic variables such as age in year, gender, religion, area of residence, occupational status, habits, activity of the daily living, dietary pattern, presence of medical history, educational status.

- Sample- geriatric population in selected community of Gurugram.
- Sampling technique- non probability convenient sampling.
- Population—geriatric population who are at the age in 65years and above.
- Sample- geriatric population in selected community of Gurugram.



- Sample size- total sample 60 (geriatric population).
- Sampling technique- non probability convenient sampling.
- Method of collection of data-structured questionnaire was used to collect the data.

## 5. Results and Discussion

**Table 1: Frequency and percentage distribution of geriatrics based on demographic variables of regarding arthritis.**

**N=60**

Variables	Categories	Frequency	Percentage (%)
<b>Age (in years)</b>	65-70 years	35	58.3%
	71-75 years	12	20.0%
	76-80 years	13	21.7%
	81-and above years	0	0.0%
<b>Gender</b>	Male	33	55.0%
	Female	27	45.0%
<b>Religion</b>	Hindu	44	73.3%
	Muslim	14	23.3%
	Christian	1	1.7%
	Any other	1	1.7%
<b>Area of residence</b>	Urban	8	13.3%
	Rural	52	86.7%
<b>Occupation status</b>	Govt- Employee (retired)	8	13.3%
	Private-employee(retired)	5	8.3%
	Self-employee	43	71.7%
	Unemployed	4	6.7%
<b>Activity of the daily living</b>	Highly active	0	0.0%
	Moderately active	40	66.7%
	Sluggish	20	33.3%
<b>Habits of the participants</b>	Smoking	25	41.7%
	Alcoholism	7	11.7%
	Tobacco chewing	11	18.3%
	None of the above	17	28.3%



<b>Dietary habits</b>	Vegetarian	46	76.7%
	Non vegetarian	14	23.3%
<b>Presence of medical history</b>	No	13	21.7%
	Yes	47	78.3%
<b>Educational status</b>	Illiterate	0	0.0%
	<10th class	41	68.3%
	10th To 12th Std (primary senior secondary)	16	26.7%
	Graduation	3	5.0%
	Post- graduation and above	0	0.0%

**Table 2:** Depicts that more geriatrics were of age 65-70 years ( 58.3%),majority of geriatrics were male(55.0%), religion wise most of the geriatrics were Hindu (73.3%)majority of geriatrics were residing rural area(86.7%) half of the geriatrics were occupation status self-employee (71.7%), half of the geriatrics were moderately active (66.7%),more than half of the geriatrics were smoking (41.7%),majority of the geriatrics were vegetarian(76.7%),majority of the geriatrics were having yes medical history (78.3%),half of the geriatrics were education up to 10<sup>th</sup> class (68.3%).

**Table 3: Comparison of pre-test and post-test knowledge scores of geriatrics regarding arthritis.**

N=60							
Paired T Test	Mean±S.D.	Mean%	Range	Mean Diff.	Paired T Test	Table Value at 0.05	P value
PRETEST KNOWLEDGE	5.38±1.728	26.90	2-8				
POSTTEST KNOWLEDGE	15.82±1.909	79.10	12-20	10.440	29.569	2.00	0.001***

\*\*\*Significance Level 0.05 Maximum=20 Minimum=0

Table: 3 The PRETEST test range was 2-8, mean 5.38 standard deviation was 1.728 mean percentages was 26.9 % and the POSTTEST test range was 12-20, mean 15.82 standard deviation was 1.909 and mean percentage was 79.1%.

**Section. 1 Finding related to comparison of mean, standard division and t value of pre-test & post-test knowledge score of among geriatrics regarding arthritis**

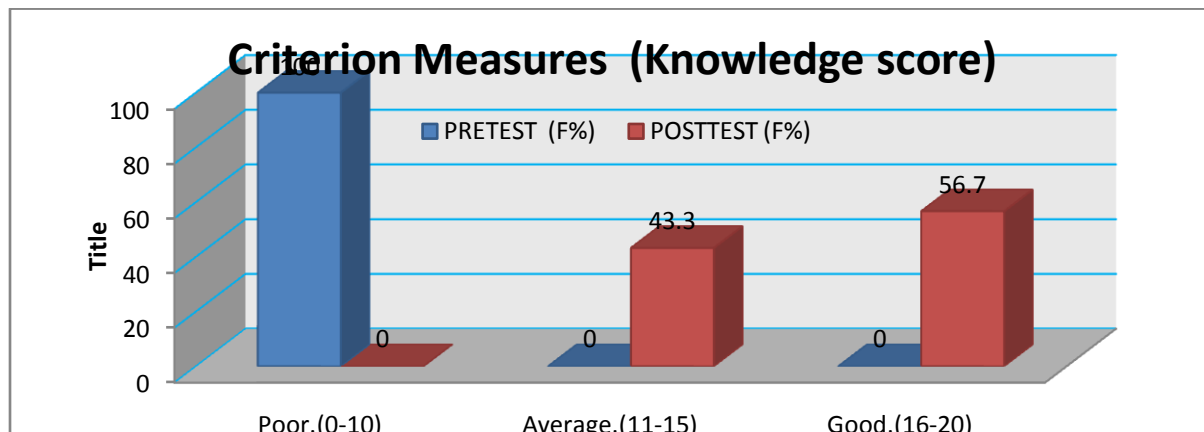


Fig .2 shows in the pretest-test, (100%) had poor knowledge 0%,had average knowledge and 0%had good knowledge and in post-test (56.7%) had good knowledge (43.3%) had average and (0%) had poor knowledge.

**Table 4: Association of Posttest knowledge Scores with Selected Socio-Demographic Variables.**

Variables	Categories	Good	Average	Poor	Test value	Table Value	df	p Value
Age (in years)	65-70	20	15		Fisher's Exact Test 1.086	5.991	2	0.581
	71-75	8	4					
	76-80	6	7					
	81-and above	0	0					
Gender	Male	19	14		Chi square Test 0.025	3.841	1	0.875
	Female	15	12					
Religion	Hindu	27	17		3.150	7.815	3	0.369





	Muslim	7	7					
	Christian	0	1					
	Any other	0	1					
Area of residence	Urban	4	4		0.167	3.841	1	0.683
	Rural	30	22					
Occupation status	Govt- Employee (retired)	5	3		0.472	7.815	3	0.925
	Private-employee(retired)	3	2					
	Self-employee	24	19					
	Unemployed	2	2					
Activity of the daily living	Highly active	0	0		0.543	3.841	1	0.461
	Moderately active	24	16					
	Sluggish	10	10					
Habits of the participants	Smoking	12	13		1.602	7.815	3	0.659
	Alcoholism	5	2					
	Tobacco chewing	7	4					
	None of the above	10	7					
Dietary habits	Vegetarian	24	22		1.621	3.841	1	0.203
	Non vegetarian	10	4					
Presence of medical history	No	7	6		0.054	3.942	1	0.817
	Yes	27	20					
Educational status	Illiterate	0	0		2.600	599.1	2	0.270
	<10th class	21	20					
	10th To 12th Std (primary senior secondary)	10	6					
	Graduation	3	0					
	Post- graduation and above	0	0					

Table 4: It shows that there was no statistically association of knowledge with selected variable like age, gender, religion, area of residence, occupation status, activity of daily living, habits of



the participants, dietary habits, presence of history, educational status, which is assessed by fisher's exact test as p value is  $>0.05$  level of significance. Hence  $H_2$  is rejected and  $H_{02}$  is accepted.

## **6. Conclusion**

The present study was conducted among 60 geriatric population in selected community. On the basis of pre-test knowledge mean score of geriatric population  $5.38 \pm 1.728$  and post test knowledge mean score  $15.82 \pm 1.909$ . And there is no significance association between the level of scores and other demographic variables at the 0.05 level of significance.

## **7. Nursing Implication**

### **Nursing education**

- Nursing education programme should prepare nurses to identify problems in geriatric population. It helps in identification of symptoms through the maintenance of good IPR in community.
- Nursing educators should prepare the nurses to impart health education to all geriatric population regarding knowledge on arthritis and its management.

### **Nursing practice**

- Nurse may plan the health education programme to improve knowledge level of geriatric.
- Nurses play a role to educate women to make them aware about the complications of the condition and how to manage it.

### **Nursing administration**

- Nurse administrators have the highest levels of authority to hold discussion and meeting on the prevailing health status of the community.
- Nurse administrators should organize in- service education programme, refresher course and workshop for nurses and encourage them to participate in these activities.



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## **Nursing research**

Nurses play a key role in providing healthcare to the participants and being close to them. They can conduct projects and research studies in the hospital and community. They need to engage in multidisciplinary research, so that it will help them to improve their knowledge and by applying it, many health problems can be solved. Adequate research has been carried out to estimate the risk factors, management of arthritis and its knowledge among geriatric in community areas. This in turn helps them for safe guarding by adapting preventive measures.

## **Recommendations**

Based on the finding of the study, the following recommendations are offered for future research.

- A similar study can be replicated on a large sample.
- A same study can be conducted in different settings like urban and rural community.
- Quasi experimental study can be conducted to evaluate the effectiveness of health educational module on arthritis and its management between experimental and control group.
- A similar study can be conducted in different settings with different teaching programmes like, structured teaching programme etc.



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