

**EFFECTIVENESS OF NURSING CARE ON HOME
REMEDIES OF ARTHRITIS AMONG OLDAGE GROUP
RESIDING AT ACHARAPAKKAM**

By
Ms. P.SUJIPRIYA



A Dissertation submitted to
**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY,
CHENNAI.**

**IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE
DEGREE OF
MASTER OF SCIENCE IN NURSING.
MARCH – 2010.**



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CERTIFICATE

This is to certify that **EFFECTIVENESS OF NURSING CARE ON HOME REMEDIES OF ARTHRITIS AMONG OLDAGE GROUP RESIDING AT ACHARAPAKKAM** is a bonafide work done by **Ms. P.SUJIPRIYA**, Adhiparasakthi College of Nursing, Melmaruvathur – 603 319, in partial fulfilment for the University rules and regulations towards the award of the degree of Master of science in Nursing, **Branch - IV, Community Health Nursing**, under our guidance and supervision during the academic year 2008 - 2010.

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CHAPTER I

INTRODUCTION

Health is the greatest possession of human being; it lays a solid foundation for happiness. Good health is a prerequisite to human productivity and development.

Health is a state of relative equilibrium of body, which results in successfully dynamic adjustment to external forces. Health and illness are not static but dynamic entities, fluctuating in response to many external influences. Any deviation in the relative equilibrium of body will result in illness (Perkin, 1998).

Illness could be transient, prolonged or persistent and can destroy the foundation of happiness so much, so the occurrence of diseases is always dreaded and detested. In the present dynamic living conditions, musculoskeletal diseases are one of the wide spread diseases, which end up in disability. Among the major disabilities, arthritis is a common illness that is often considered as a

life long disability. Arthritis is an autoimmune disease in nature. It occurs due to the immunological actions of ones own cells, antibodies and components of the body (Hennel, 2006)

Arthritis necessarily hinders a person's independence or affects his personality. For the lucky person with arthritis, the disease may be nothing more than slight morning stiffness. But for millions of others, arthritis can become a disabling, even crippling disease. It can get severe enough to limit everyday activities, such as dressing, climbing stairs, getting out of bed or walking.

Arthritis, besides being an extremely physical disease, also exacts a severe mental, emotional, and financial toll. An estimated one in nine Indians - nearly 10 crore people have some or other form of arthritis. Most of the people feel the pain of the disease after the age of 50, though in rare cases arthritis is known to strike adolescents and children as well.

Arthritis may be a chronic disease as opposed to an acute disease, and for the reason it is a very trying disease for all

concerned – the patient, his or her family and the health care professionals looking after the patient, an arthritic patient is in pain all the time and this affects his or her personality.

Many are often tensed and stiff for much time, and as the disease takes its slow toll, every family member has to learn to adjust the situation created by the presence of an arthritis member. This is rather difficult because often the symptoms cannot be seen by others, since drugs alone cannot cure the sickness, the everyday rehabilitation of an arthritic cripple is equally important. Care should be taken to ensure that their mobility and participation in family affairs to be maintained.

Ryan (2000) stated that chronic conditions have a global impact on patients lives. Living with rheumatologic illness will affect not only individual but also their family members. In the contest of rheumatologic conditions, health only the removal of all the symptoms, as this would be an unrealistic outcome but also an unfair burden on the patients. To overcome the burden, patients require

advice, support, guidance, motivation and education to deal with problems presented by each new phase of their illness.

National Center for Chronic Disease Prevention and Health Promotion (2004), reviewed the need for physical activity decreases the joint pain, improves ability, delays progression and disability. In addition to physical activity, maintaining a healthy weight and avoiding joint injuries reduce the risk of developing arthritis.

NEED FOR THE STUDY

King (2008), estimated that arthritis affects more than 30% of people above the age of 65 years. The affected persons in the age group of 65 years and above are projected as nearly 21.4 million in 2001 and it is estimated that by the year 2030, 41.4 million people would be affected by arthritis. It was also noted that women (37.3%) are more prone to arthritis when compared to men.

WHO (2007), reported prevalence of arthritis in the world as 1% but the rate varies among the age groups. Approximately 2.1 million people in the United States suffer, of which 1.5 million are women.

Arthritis is found in all age groups, and it occurs three times more in women than men.

Arthritis foundation (2007), reported the prevalence rate of arthritis in the close relatives varies from 2% to 3%. Arthritis affects all people, irrespective of age, race and social statu

American College of Rheumatology (2007), stated that, arthritis patients make more physician visits and 2,50,000 of them were hospitalized each year. The population at risk (more than 65 years of age), was 58.8 %

Martin et al., (2009) stated that arthritis is one of the most common inflammatory joint disease that requires special care and a multidisciplinary team. The relief of symptoms, preservation of joint function, prevention of joint damage and deformity, maintenance of an acceptable lifestyle and patient education are the main goals of nursing management and the nurse plays a pivotal role within the multidisciplinary team, ensuring the highest quality of care.

Hirano et al., (2006) conducted a study among arthritis patient's knowledge, attitude and practice. A patient education programme was considered to be effective and brought about 15 – 30% betterment. It was successful at increasing knowledge, changing behavior, improving physical and psychological health status.

There are currently 580 million elderly aged 60 and over in the world and of these 355 million live in the developing countries. Within last 50 years the rate of accelerated death in developing countries has visibly decreased and life expectancy at birth has increased from 41 years in 1950's to 62 years in 1990. As life expectancy increases, the incidence of chronic diseases especially arthritis among 50% of population chronic diseases or problems. The disease becomes more prevalent after the age of 45 years, approximately 6 million people are diagnosed and improperly self treated. The incident of rheumatic arthritis in women is 2 – 3 times affected more than the man.

In recent years, nurses are perceived as approachable because they often act as patient's advocates. A community health nurse plays a vital role in teaching patient to arrive at the decision on the

type of treatment and self care strategy, which will be the best for the patient. As resources are increasingly diverted from the community, a person with arthritis may have reduced access to specialist care. The nurse working in the community level can act as the interface between primary and secondary level of care, to promote a greater understanding of the patients and ensure continuity of the health care.

STATEMENT OF THE PROBLEM

Effectiveness of nursing care on home remedies of arthritis among old age group residing at acharapakkam.

OBJECTIVES:

- to assess the health condition of old age group with arthritis
- to evaluate the effectiveness of nursing care to old age group with arthritis

- to associate the demographic variables with the effectiveness of nursing care to the oldage group with arthritis.

Operational Definition

Effectiveness:

It refers to evaluating the excellency of nursing care to promote the health status of old age group with arthritis in terms of improvement in general health status.

Nursing care:

Nursing care refers to the complete intervention done by the scholar such as assessment of health status, pain relieving measures hot and cold application, strengthening and stretching exercises, diet modification , positions, manual therapy, health education regarding lifestyle modifications and assistive devices.

Arthritis:

Arthritis is chronic inflammatory disease, mainly affecting the peripheral joints, affected joints exhibits inflammation associated with

pain, morning stiffness, swelling, eventual joint destruction, positive rheumatoid factor and radiological changes with a duration of 6 weeks or more.

Old age group:

It refers to the people who are above 55 years of age resides in Acharapakkam.

Assumption:

- Appropriate and timely nursing care to oldage group with arthritis will result in good prognosis and thus prevents complications and help for speedy recovery.
- Timely administration of ongoing assessment and nursing interventions will prevent further degeneration of old age people with arthritis and will improve the compliance to treatment, functional ability of the arthritis patients and self care measures.

Limitations

- The duration of the study was 6 weeks
- Sample size was limited to 30 samples
- Patients who were residing within Acharapakkam village, Kanchipuram district.

Projected outcome:

The study may help to assess the effectiveness of nursing care of patient with arthritis. It would also determine the relationship between demographic variables and preventive measures of people with arthritis. The results of the study will also increase the responsibilities of community health nurse to plan for ongoing nursing care activities in the community. This will enable holistic approach in reducing disabilities and deformities at an earlier phase of the study.

CONCEPTUAL FRAMEWORK

A concept is an idea. Conceptual framework is a group of concepts or ideas that are related to each other but the relationship is not explicit. Conceptual framework deals with abstractions (concepts) that are assembled by virtue of their relevance to a common theme (Polit and Hungler). Conceptualization is a process of forming ideas which are utilized and forms in the conceptual framework for the development of research design. It helps the researcher to know what data is to be collected and gives direction to an entire research process. It provides certain frame of reference for clinical practice and research. The conceptual framework for this study was developed on the basis of modified Orem's self care theory model by Dorothea E. Orem.

In the present study, the assessment involves the assessment of demographic data such as age, sex, educational status, family history, type of treatment, duration of illness, previous hospitalization, type of family and source of health information and assessment of

health status of old age group by observational checklist and rating scale

Nursing system involves the wholly compensatory system, partially compensatory system and supportive educative system.

The wholly compensatory nursing system is represented by a situation in which the individual is unable to engage in those self care actions requiring self directed and controlled ambulation and manipulative movement.

The partially compensatory system is represented by a situation in which both nurse and client perform care measures or other actions involving manipulative tasks or ambulation.

In supportive – educative system the person is able to perform required measures of externally or internally oriented therapeutic self care.

Nursing care involves monitoring vital signs, pain relieving measures hot and cold application, positioning, stretching and strengthening exercises, dietary modification and health education.

Evaluation involves evaluating the improvement in health status in the form of normal health condition , moderate health deterioration and severe health deterioration.

Assessment of old age group with arthritis.

Nursing System

Nursing Care

Evaluation

Assessing the Demographic Factors
Demographic factors such as age, sex, type of family, previous hospitalization, duration of illness, type of treatment, and source of health information.

Wholly compensatory System
Partially compensatory System
Supportive educative System

Monitor Vital Signs
Pain relieving Measures
Hot and cold application
Positioning
Stretching and Strengthening exercises
Dietary modification
Health Education on life style modification and Assistive devices
Rehabilitation

Improvement In Health Status

Normal Health condition
Moderate Health Deterioration
Severe Health Deterioration

Feedback

MODIFIED OREM'S SELF CARE THEORY MODEL (1971)

REVIEW OF LITERATURE

Every time we read about existing knowledge on a subject, the seed is sown for future research therefore. Review of existing literature is a prerequisite for research. It inspires us with the desires to know more.

Good research generally builds existing knowledge. The accumulation of scientific knowledge without supportive literature should be very much analogous to a back of paper with very little applicability unless it is thoroughly reviewed and developed to form a theoretical framework for further studies.

This chapter deals with the selected studies which are related to this study.

CDC, National Center for Chronic Disease Prevention and Health Promotion (2008) stated that arthritis is recognized as a major leading cause of disability. In most of the developed countries the prevalence of arthritis in the general population has been reported

from 35 – 65 years of age. Early aggressive therapy slows down the inflammation in the joint distribution, deformity, lessen the disability any other complications.

The review of literature has been organized under four headings which are as follows.

Part I - studies related to prevalence of arthritis

Part II - studies related to pharmacological management of
Arthritis

Part III - studies related to alternative therapies and self
Care strategies of arthritis.

Part IV - studies related to nursing management of arthritis

STUDIES RELATED TO PREVALENCE OF ARTHRITIS:

Mirunalini Lotankar et al., (2009), stated that arthritis – an ailment which cripples the whole world, it is a common disease having peak incidence in third to fourth decades of life with 3-5 times higher preponderance in females. It has high association with HLA-DR4 and HLA-DR1 and familial aggregation.

Vipinder Singh Chopra et al., (2009), reported that arthritis and periodontitis are widely prevalent diseases and are characterized by tissue destruction due to chronic inflammation. Recently, there is growing ocular manifestations of arthritis.

Hammed and Gipson (2008), reported the problems of musculoskeletal symptoms in a multi-ethnic group. The study population was a community sample of 2117 adults from India. The study found that arthritis is the most commonly reported symptoms from the ethnic groups.

Korpilahde et al., (2008), did a study in Finland to explore the close association between smoking and cotinine levels, in order to detect the determinants of Rheumatoid factor in non-rheumatoid subjects. The study was done among 6947 samples of clinically free arthritis patients. The results revealed that rheumatoid factor was found in 448 subjects. This study finding highlights the association between smoking and serum cotinine levels in rheumatoid arthritis patients.

Arthritis Foundation, USA (2007) stated that arthritis is one of the leading chronic diseases in the United States particularly in the age group of 60 years and above, which accounts for 12.1 million. It is also a leading cause for physical disability in older adults.

They classify the functional status of persons with arthritis as follows.

Class I – completely able to perform usual activities but limited in activities outside of work.

Class II – Able to perform usual self care and work activities but limited in activities outside of work

Class III – able to perform usual self care activities but limited in work and other activities

Class IV – Limited in ability to perform usual self care work and other activities.

Darcy, (2007), in her article addressed the systematic effects of arthritis such as malaise, fatigue, weakness, fever, weight loss and anemia. Peripheral neuropathy and carpal tunnel syndrome are the most common effects. Damage involves nerves, joints, and most often affects hands and feet.

Kats et al., (2007), has studied the development of depressive symptoms among women with arthritis and role function changes. The longitudinal panel study carried among 100 women showed that functional decline leads to development of depression in women.

Hakkinen and Krishnan et al., (2007), conducted a study in Finland to predict the mortality of patients with rheumatoid factor

among 1095 patients with rheumatoid arthritis in the experimental group and 1490 community controls. The study found that in the experimental group there were 40 (10.1%) deaths among 404 patients with rheumatoid arthritis who had difficulties in activities of daily living. In the community controls there were 20 (13.6%) deaths among 147 samples with difficulties of daily living and 14(1.0%) among 1343 with some difficulties in activities of daily living. The findings showed that there was no much significant difference between the experimental and control groups in terms of mortality and morbidity.

Martin Lynda, (2007), stated that arthritis is the most common inflammatory joint disease that requires special care and a multi disciplinary team. The relief of symptoms, preservation of joint damage and deformity, maintenance of an acceptable lifestyle and patient education are the main goals of nursing management and the nurses play a pivotal role within the multidisciplinary team, ensuring the high quality of care.

Minnock et al., (2006), described about the factors influencing the management of rheumatoid arthritis such as social, psychological, environmental and its complex interactions. The change in this factors can alter the perception of self efficacy, beliefs, physical activity and issues in the environment.

STUDIES RELATED TO PHARMACOLOGICAL MANAGEMENT OF ARTHRITIS;

Abbott M.G. et al., (2009), conducted a study on lornoxicam, a potent analgesic for management of arthritis. Forty patients were included in the placebo group and in three groups of 40 subjects each were given lornoxicam in dose schedules of 6mg once daily, 4mg twice daily and 6mg twice daily, The study concluded that lornoxicam administered in doses of 6, 8, and 12 mg /day is effective in patients with arthritis.

Gladd D.A. Olech E., (2009), stated that antiphospholipid antibodies (apl) occur in a variety of autoimmune, malignant and infectious diseases with or without the thrombotic or obstetric

sequelae that characterize the antiphospholipid of apl in systemic lupus erythematosus caring arthritis patients who are concomitantly positive for antiphospholipid antibodies.

Lorenz, et al., (2009), reported lornoxicam, a potent analgesic for management of painful and inflammatory conditions lornoxicam has been shown to be effective and well tolerated in the treatment of pain associated with variety of conditions including rheumatoid arthritis, osteoarthritis good tolerability in long term treatment of rheumatoid arthritis in a long-term study. In the open trail lornoxicam was administrated in different dosage schedules (4 or 8 mg thrice daily) for duration of 6 to 12 months.

Wasko M.C. et al., (2008), conducted a study on hydroxychloro quinine (HCQ) and diabetes in patients with rheumatoid arthritis. HCQ a commonly used anti rheumatic medication has hypoglycemic effects and may reduce the risk of diabetes mellitus. A prospective multicenter study was conducted of 4,905 adults with rheumatoid arthritis (1,808 has taken HCQ and 3,097 had never taken HCQ) none of them had diabetes.

Shwetal Sanghvi and Madhu Kant (2008), conducted a study on the mutual outcome with glucosamine + cetyl myristoleate in arthritis. He stated that compared to placebo, cetyl myristoleate provides an improvement in knee range of motion and overall function in patients with arthritis of the knee, It may be an alternate to the use of NSAIDS for the treatment of arthritis.

Usha Bhau et al., (2008), conducted a study on efficacy and safety of leflunomide alone and in combination with methotrexate in the treatment of refractory arthritis. Among 84 patients, leflunomide showed improvement and remission in 52(62%) and 6(7%) in six months, by intention to treat analysis, adverse events were observed in 15, discontinuation in 5 and 24 dropped out. With combination in 11 patients, there was improvement and remission in nine(91%) and one(9%) after three months.If regular monitoring, leflunomide is an effective and safe drug in the Indian population of arthritis patients.

Terence Gibson (2008), stated the modern management of arthritis, it has become a tenet of treatment that once the diagnosis

has been established and if symptoms warrant, a disease modifying anti rheumatoid drug (DMARD) should be deployed without hesitation. The initial choice of agent is methotrexate. Given weekly with folic acid on a separate day, it is better tolerated than any other DMARD although it is no more effective at reducing pain and swelling than the other agents.

Aggarwal K.K. (2007), conducted a study on hydroxychloroquine and risk of diabetes in patients with arthritis. The study concluded that among patients with arthritis, use of HCO is associated with a reduced risk of diabetes.

Shwetal and Merker et al.,(2007), reported the mutual outcome glucosamine +cetyl myristone in treatment of arthritis disease includes rest and relaxation, exercise proper diet, medication and instruction about the proper use of joints and ways to conserve energy.nutritional supplements like cetyl myristone (CMO) and glycosamine are amongst such supplements which have proven that in relieving the symptoms of arthritis. The oil cmo is the hexadecyl

ester of an unsaturated fatty acid cis-9-tetradecenoic acid is commonly found in whale oils and dairy butter.

Rohini Handa et al., (2006), stated that biological agents that specifically inhibit the effects of tumour necrosis represent a major advancement in the treatment of arthritis. By targeting molecules that are directly involved in the pathogenesis of rheumatoid arthritis, these therapies are proving to be efficacious, highly specific and better tolerated than standard therapies. Additional anti – cytokine agents for the treatment of arthritis are under further development.

STUDIES RELATED TO ALTERNATIVE THERAPIES AND SELF CARE STRATEGIES OF ARTHRITIS:

Daniel H Solomon (2009), revealed that arthritis self management education programs: A meta analysis of the effect on pain and disability, some reports suggest that education programs help arthritis patients better manage their symptoms and improve function.

Jerry C Parker (2008), conducted a study on pain management in arthritis patients, To examine the effectiveness of a cognitive behavioural group (CB), an attention – placebo group, and a control group. The CB group received a comprehensive, 12 month pain management program that taught coping strategies such as problem solving techniques, relaxation training, strategies for attention diversion, and training in family dynamics and communication. Data analysis at 12 months revealed benefits for the CB group in the area of enhanced coping strategies. The findings are discussed in terms of the importance of self efficacy and personal control for patients with arthritis.

Dixon K et al.,(2008), stated that a meta psychological interventions for arthritis pain management in adults, The psychological impact of arthritis can be profound. There is growing interest in psychological interventions for managing pain and disability in arthritis patients. These findings indicate that psychological interventions may have significant effects on pain and other outcomes in arthritis patients.

Catherine L Backman (2007), stated about arthritis and pain, psychosocial aspects in the management of arthritis pain, Psychological factors influence the perception of pain and the presence of pain influences psychological well being and social participation.

Murali Podual (2007), tripology of alternatives beavings in young arthritis “search for alternatives in the young arthritis have we reached the end of the road?

It has been close to five decades since the charnel prosthesis began to be implanted and more than 35 years follow ups of the chosen hips in young arthritis has become available the results and the data seen encouraging but long term outcomes are lacking.

Kerlinger Varience and Clifford (2006) conducted a study on patient satisfaction, with follow up monitoring care. A majority of rheumatoid arthritis patients were females with duration of illness above 11 years, such patients face various psychological, families, marital, sexual, and social and treatment related problems. Most patients have moderate psychological problems. Marital problems are

the least among various psychological problems faced by such clients.

Shaw et al (2006), reviewed on Clinical efficiency of Panekure in inflammatory disorders. This review reveals that the efficiency of Panekure in relieving the pain and inflammation of human beings is confirmed from its effect on both subjective and objective criteria.

Hennel Brownsell et al., (2006) conducted a study in Merseyside among 30 arthritis patients attending a clinic which showed that the level of awareness of arthritis was 7.9% in women and 9.6% in men in the age group of 25 to 75 years. This study also revealed that there was a gap between the knowledge of disease management, and its implications which continued throughout life.

Nousari (2006), said, rheumatologists and dermatologists may prefer Methotrexate to treat connective tissue disorders because they are familiar with it.

Mangliano and Morris (2005), studied the effect of compound analgesia and opioid drug therapy to reduce pain and degeneration for a longer period among arthritis patients. The study found that simple analgesics has an immediate effect on pain relief. The strong opioids with long-term use resulted in potential complications such as constipation, nausea, vomiting and dizziness

Davis Jordan and White (2004) reported that importance of therapeutic management in rheumatoid arthritis as a most effective pain measure. Results showed that the pain relief measures differ according to the nature of pain perception, so it is important to consider non-pharmacological therapies along with pharmacological agents.

Caspell and Fraser (2003) assessed the use of oral steroids and its effectiveness on two groups receiving oral and other forms of steroid therapy administration. Patients below 65 years have proves that difficulty in controlling pain with oral steroids. A significant proportion of individuals with rheumatoid arthritis, who were on other

forms of steroid therapy, had achieved a symptomatic relief, from pain.

Sambrook and Lane (2003), suggested that nurses should ensure that the patients are adequately reviewed about various steroid therapy its risks and benefits. The use of long term steroid therapy may results in development of side effects. A significant proportion of individuals with rheumatoid arthritis achieve symptomatic relief, when the drug us prescribed for short term through various forms.

Hill et al.,(2002) conducted a study in harrogate among 70 arthritis patients. The study found that 62% of patients knew the cause of arthritis, 52% had no idea about the diagnosis,and 6% of them had wide spread confusion about disease modifying drugs. The importance of exercise was reasonably understood but many were no following. 80 % had positive attitude towards exercises to reduce pain and 12% of them had moderately adequate practice on arthritis self care.

Kabat - Zinn et al., (2007), conducted a study on meditation therapy benefits in arthritis. This study supports the potential benefits of prescribing a course in mindfulness- based stress reduction along with the conventional course of physical and pharmacological therapy, achieved a significant 35% reduction in psychological distress among arthritis patients.

Mottenson T et al., (2008), stated on comparison of combination therapy with single drug therapy, including mind body therapies, herbs, energy medicine and any other modalities that are not considered part of standard allopathic care, these therapy taking an active role in disease management.

Nymon (2004) reported about the effectiveness of acupuncture in reducing musculo skeletal pain among patients with Arthritis. It showed that when patients followed acupuncture treatment, it resulted in reducing pain.

Robinson et al., (2004) conducted a study in Canada among 328 arthritis patients. It showed that thermotherapy has a significant

effect on reducing pain in arthritis patients. It was suggested that superficial moist heat application can be used as a palliative therapy to reduce pain.

Gelht and Minol (2004) stated that exercise is likely to reduce the risk of disability and there is increasing evidence to support its efficacy. Daily exercise was reported to have a great sense of wellbeing, improvement in specific joints and also demonstrated a correlation between weight reduction and symptomatic improvement.

Hyun Soo and Whasook Seo (2004) conducted a study in Korea among 36 patients. The study found that pain management behaviours, regular and psychosocial coping strategies had a significant effect on pain and depression in rheumatoid arthritis patients. It was a seven week intervention programme. Significant improvement was found in practicing pain strategies and improving psychosocial coping.

Mccaffery and Pasero (2004), described the importance of relaxation technique as a non pharmacological measure of pain

management. It can diminish the emotional components of pain, strengthen coping abilities, give patients a sense of pain control, contribute to pain relief, and promote sleep. Therapies that influence emotional, sensory and affective components of pain perception can break the cycle of chronic pain.

Bellamy and Bradly et al., (2003) stated that the non pharmacological methods of analgesia which had been investigated for managing chronic pain such as positioning for comfort, touch therapies, and distraction techniques had shown to reduce pain in the participants of the study.

Schorr et al., (2002), demonstrated the effectiveness of music therapy as a pain reducing measure. Women with rheumatoid arthritis who listens to music for a period of 20 minutes showed a significant pain relief.

STUDIES RELATED TO NURSING MANAGEMENT OF ARTHRITIS:

Deniz Evclik et al.,(2009), stated that hot and cold modalities are the most commonly used physical agents in arthritis treatment. It is well known that cold application is mostly used in acute stages whereas hot is used in chronic stages of arthritis. By using heat, analgesia is accomplished, muscle spasm relieved, and elasticity of periarticular structures obtained. Heat can be used before exercise for maximum benefits. Applications are recommended for 10 – 20 minutes once or twice a day.

Shea B et al.,(2008), reported that thermotherapy is a commonly used modality in treating arthritis. Thermotherapy modalities include superficial moist heat fomentations (hot packs) at different temperatures, This review found there were significant effects for heat and ice packs applications on objective measures of disease activity including joint swelling, pain, medication intake, range of motion (ROM), grip strength, compared to control (no treatment) or active therapy. The reviewers concluded that thermotherapy can be

used as a palliative therapy or as an adjunct therapy combined with exercises for arthritis patients.

Sukenik.S et al.,(2008), demonstrated the effectiveness of hot sulphur bath and fomentations in 40 patients with arthritis, a disorder characterized by inflammation of the joints, swelling, stiffness, overgrowth of cartilage, and pain. The patients clinical symptoms were evaluated after two weeks such as morning stiffness, joint swelling, activities of daily living, patient assessment of severity, improved in patients treated with hot sulphur baths and fomentations.

Jamtvedt G, et al.,(2008), reported that exercise was the most common treatment used, and there is high quality evidence that exercise reduces pain and improves functions in patients with arthritis the purpose of this study is to measure the physical performance in patient with arthritis by comparing clinical practice evidence from systemic reviews.

Cetin Starvin et al., (2007), conducted a study to investigate the therapeutic effects of hot pack administered before exercise in

women with knee osteoarthritis. One hundred patients with bilateral osteoarthritis were selected for this study. Pain and disability index scores were significantly reduced and outcome measures in the study groups had significantly greater reductions than the control group. They also showed greater increases in the muscular strength. Using hot pack before exercises in women with osteoarthritis lead to augmented exercise performance, reduced pain, and improved function.

Marie D et al.,(2007), stated that based on the evidence, aerobic capacity training combined with muscle strength training is recommended as routine practice in patients with arthritis.

Linda L et al., (2006), stated that soft tissue flexibility of both contractile (capsule, tendon) and non contractile tissues (capsule, ligaments) is affected by arthritis and inactivity. Joint stiffness and soft tissue shortening can be reduced with appropriate range of motion and stretching exercises. ROM exercises involve taking the joint through its full available range once or several times without holding the end position. In contrast, stretching exercises require sustained,

gentle tension on targeted soft tissues. Active ROM exercise performed in the evening can significantly reduce morning stiffness in the person with arthritis.

Sophie Laforest et al., (2005), described about more specifically, weekly exercise frequency, particularly regarding walking frequency, and a variety of exercise activities were still significantly greater in the experimental group than in the control group 8 months following the completion of the intervention, moderating influences were observed in the individual characteristics.

CHAPTER III

METHODOLOGY

This chapter describes the methodology followed to assess the effectiveness of nursing care among old age group with arthritis.

This chapter deals with research design, setting, population, sample size, sampling technique, inclusive and exclusive criteria for selection of sample, description of tools and data collection.

RESEARCH DESIGN

Evaluative research design was adopted to evaluate the effectiveness of nursing care of old age group with arthritis.

SETTING

The study was conducted in the village Acharapakkam at Kanchipuram district.

POPULATION

The study population refers to the old age group above 55 years with arthritis residing in Acharapakkam.

SAMPLE SIZE

A Sample size of 30 clients of old age group who have diagnosed as arthritis.

SAMPLING TECHNIQUE

Sample method adopted was probability sampling. Simple random sampling technique is used to select the samples for the study.

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

1. The study included both men and women.
2. Clients who were willing to participate in the study.
3. The clients who could understand Tamil or English.

Exclusion Criteria

1. Clients who were not in old age group.
2. Clients who were not cooperative.

DESCRIPTION OF THE TOOL

Details of the tool are given below.

Part – I

Demographic variables of old age group with arthritis such as age, sex, family history ,duration of illness, etc.

Part – II

Self Structured Rating scale was used to assess the effectiveness of nursing intervention provided to old age group with arthritis. Formulation of nursing implication and the checklist of nursing interventions was used.

Part-III

This part consists of checklist of nursing interventions which was used to find out the effectiveness of nursing care for old age group with arthritis.

DATA COLLECTION PROCEDURE

The study was conducted at Acharapakkam, Kanchipuram district. The data was collected for a period of six weeks by using the prepared tools. The tools were developed based on the objectives of the study and through review of literature.

CHAPTER - IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of data collected from 30 samples on old age group with Arthritis .It deals with description of tool, report of pilot study, informed consent, data collection procedure, score interpretation, method of data analysis plan, results and presentation of findings.

Data analysis was done by using descriptive and inferential statistic procedure. The items were scored after assessment and evaluation and the results were tabulated. The statistical methods used for analysis were mean, standard deviation and paired 't'- test.

DESCRIPTION OF THE TOOL

Details of the tools used in this study are given below

PART-I

A. Demographic variables

Demographic variables includes age, sex, family income, family history, duration of illness, type of treatment, source of health information.

B. Demographic variables relating to Arthritis.

It consists of age, sex, type of treatment, duration of illness, type of family, previous hospitalization, source of health information

PART- II

Self structured Rating Scale

Self structured Rating Scale was used to identify the improvement in the health status of the old age group with arthritis. This part consists of 11 numbers of questions regarding health condition of old age group with arthritis and each question carries maximum score of 3. It was indicated that the total number of score was 33. Minimum score was 1. Total number of minimum score was 11.

Based on the information data were classified as follows.

11 - 18 - Mild Health Deterioration

18 - 25 - Moderate Health Deterioration.

25 - 33 - Severe Health Deterioration.

PART- III

Check list

It consists of check list used for nursing interventions to assess the general health status of the old age group of arthritis. It includes pain relieving measures, vital parameters of temperature, pulse, respiration, blood pressure, positioning, nutritional status, active movement exercise, health education about safety and assistive devices.

REPORT OF THE PILOT STUDY

Prior permission from the authorities was obtained and individual consent taken from the ten samples selected for the study. The pilot study was conducted in kadaperi, Madhuranthagam district, for a period of two weeks. The tools were used to find out the reliability, validity, feasibility and practicability of the tool and which was evaluated by experts of the research committee. Content validity was obtained from community health nursing experts. According to simple random sampling technique ten samples were taken and by using the checklist and Self structured rating scale the health condition of the old age group with arthritis was assessed and then

nursing care was given and the data was evaluated and analyzed by using t-test. The result of the study revealed that the calculated value was 5.48 tabulated values were 4.60. The calculated value was greater than tabulated value at 0.01 level of significance. Therefore there were certain significant effects in the oldage group with arthritis.

VALIDITY

The tools were prepared by the help of expert's guidance on the basis of objectives which were assessed and evaluated, accepted by experts of research committee. Content validity was obtained from community health nursing experts.

RELIABILITY

The reliability was checked by inter rater method. The reliability was 0.78 (78%). Reliability and practicability of tool was tested through the pilot study and used for main study.

INFORMED CONSENT

The investigator obtained approval from the dissertation committee and from the president, primary health centre, and medical officer at Acharapakkam. Oral consent was taken from the study participants to conduct the study. The data collection was done for six weeks by using interview and observational method.

DATA COLLECTION PROCEDURE

The researcher introduced herself and maintained good rapport and made the people to cooperate and accept as participants for this study. The data was collected from old age group with arthritis. The data collection was done for ten minutes on the assessment day and after getting the demographic data from the clients. Assessment was done with the help of Self structured Rating Scale. Nursing Interventions was carried out on all the days during study period. On the day of evaluation, health status was evaluated with the help of Self structured Rating Scale.

SCORE INTERPRETATION

$$\text{Scoring interpretation} = \frac{\text{Obtained score}}{\text{Total score}} \times 100$$

SCORE DESCRIPTION

Description	Percentage
Mild	below 50%
Moderate	50% - 75%
Severe	above 75%

STATISTICAL METHOD

The statistical method used for analysis was number percentage, mean, standard deviation and correlation.

S. No.	Data analysis	Methods	Remarks
1.	Descriptive statistical analysis.	The total number of score and percentage of the score.	To describe the demographic variable of old age group with arthritis.
2.	Inferential statistical analysis.	Paired t test Correlation	Analyzing the effectiveness between the pre and post care of old age group with arthritis. Correlation between demographic variables and effectiveness of pre and post assessment of old age group with arthritis.

Data analysis and interpretation have been done under following headings.

Section- A : Distribution of demographic variables of old age group with arthritis.

Section- B : Frequency and percentage distribution of health status of old age group with arthritis.

Section- C : Comparison of mean and standard deviation of assessment and evaluation score of old age group with arthritis.

Section- D : Improvement score of mean and standard deviation of assessment and evaluation and effectiveness of nursing care on old age group with arthritis.

Section- E : Correlation between selected demographic variables and effectiveness of nursing care on old age group with arthritis.

SECTION-A: FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES OF OLD AGE GROUP WITH ARTHRITIS.

N = 30

S NO.	Demographic Variables	Frequency	Percentage
1	Age in years a) 55-60 b) 61-65 c) 66-70 d) 71 and above	6 7 9 8	20 23 30 27
2	Sex a) Male b) Female	11 19	37 63
3	Educational status a) Illiterate b) Primary schooling c) Higher secondary d) Graduates	18 6 6	60 20 20
4	Family monthly income a) Up to Rs 2000/ b) Rs.2001-Rs.3000/ c) Rs .3001-Rs 4000/ d) Above Rs4000/	21 2 3 4	70 7 10 13
5	Type of family a) Nuclear family b) Joint family	11 19	37 63

6	Family history of illness a) Diabetes mellitus b) Hypertension c) Others	9 11 10	30 37 33
7	Type of Treatment a) siddha b) Allopathy c) Homeopathy	9 21 0	30 70 0
8	Duration of illness a) Less than 1 year b) 2-3 years c) 3-4 years d) Above 4 years	7 7 8 8	23 23 27 27
9	Marital status a) Married b) Unmarried c) Widower	12 0 18	40 0 60
10	Previous hospitalization a) Yes b) No	27 3	90 10
11	Source of health information a) Mass media b) Health personnel c) Relatives, neighbors and friends	9 9 12	30 30 40

Table 4.1 shows the distribution of demographic variables of arthritis clients.

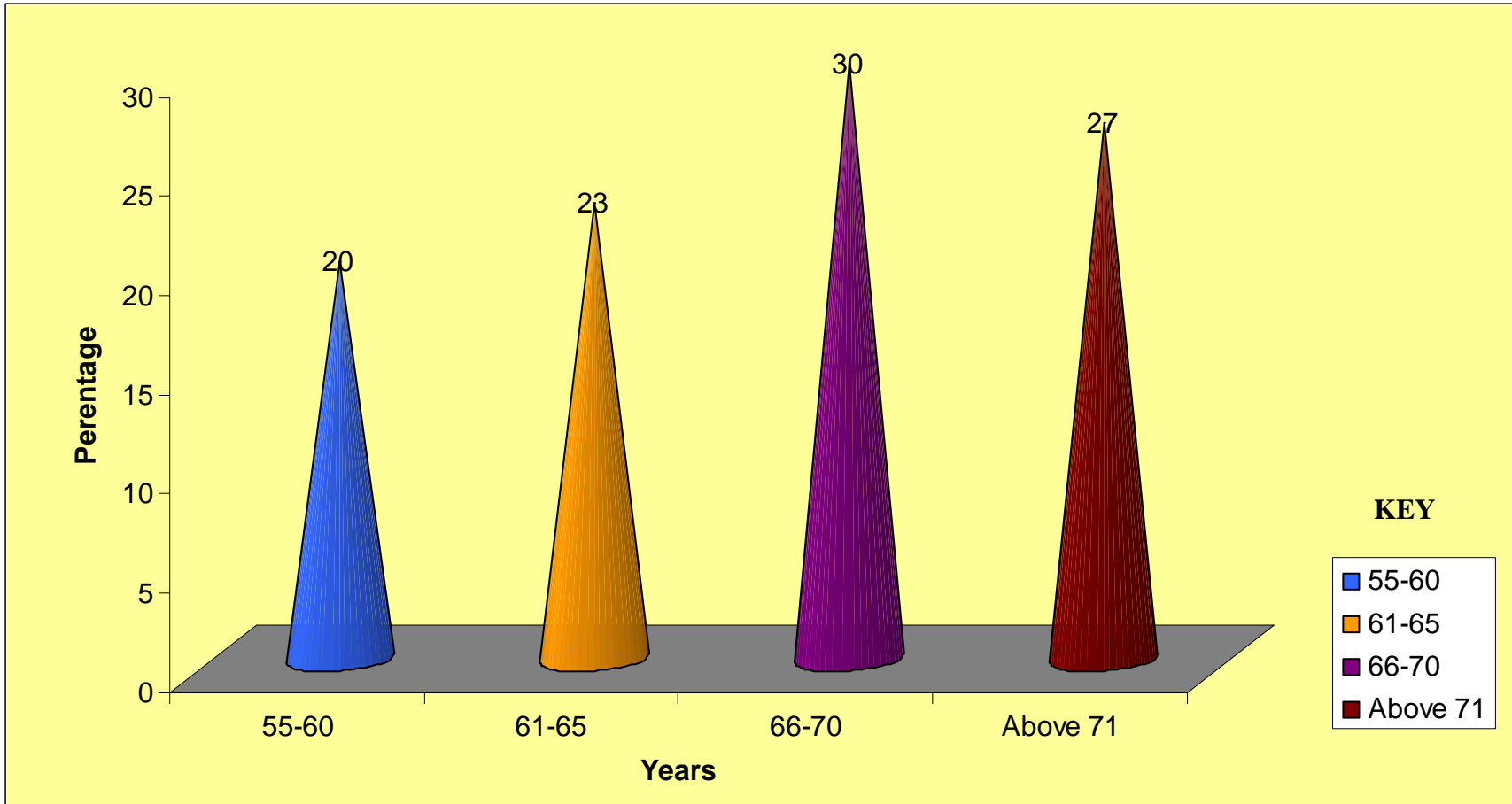


Fig No: 4.1 Percentage of Age distribution among old age group with Arthritis

The table shows that among 30 samples, six (20%) were in age group of 55-60 years and nine (30%) in 66-70 years,

Regarding Gender, female eleven (33.6%), male nineteen (63.3%).

Regarding educational status, eighteen (60.0%) were illiterate, Higher secondary six (20%).

Referring to family monthly income, up to Rs.2000/- twenty one (70%), and two (7%), Rs.3001-Rs.4000%.

Type of family, Nuclear family eleven (37%), joint family nineteen (63%).

About the family history, diabetes mellites nine (30.0%), hypertension eleven (37%).

Duration of illness, less than 1 year seven(23%) above 5 years eight(27%).

Marital status, married eighteen (60%) unmarried twelve(60%).

Previous hospitalization 'yes' twenty seven(90.0%) 'No' three(10.0%).

Regarding type of treatment, siddha nine (30%), allopathy twenty one(70%).

Source of health information, mass media nine (30%), friends and relatives twelve (40%).

SECTION- B : ASSESSMENT SCORING ABOUT PROGRESS IN HEALTH CONDITION OF OLDAGE GROUP WITH ARTHRITIS.

TABLE 4.2 - FREQUENCY AND PERCENTAGE DISTRIBUTION OF HEALTH STATUS OF OLDAGE GROUP WITH ARTHRITIS.

S. NO	HEALTH STATUS	MILD		MODERATE		SEVERE		TOTAL	
		NO	%	NO	%	NO	%	NO	%
1.	Assessment day	0	0	14	47	16	53	30	100
2.	Evaluation day	19	63	11	37	0	0	30	100

Table_4.3 shows that the health status of old age group with arthritis. On assessment and evaluation day self structured rating scale was used. On the assessment day the health status of 14(47%) were in moderate health condition and 16(53%) were in severe health condition. On the evaluation day 19(63%) were in mild health condition, 11(37%) were in moderate health condition and none of them in severe health condition.

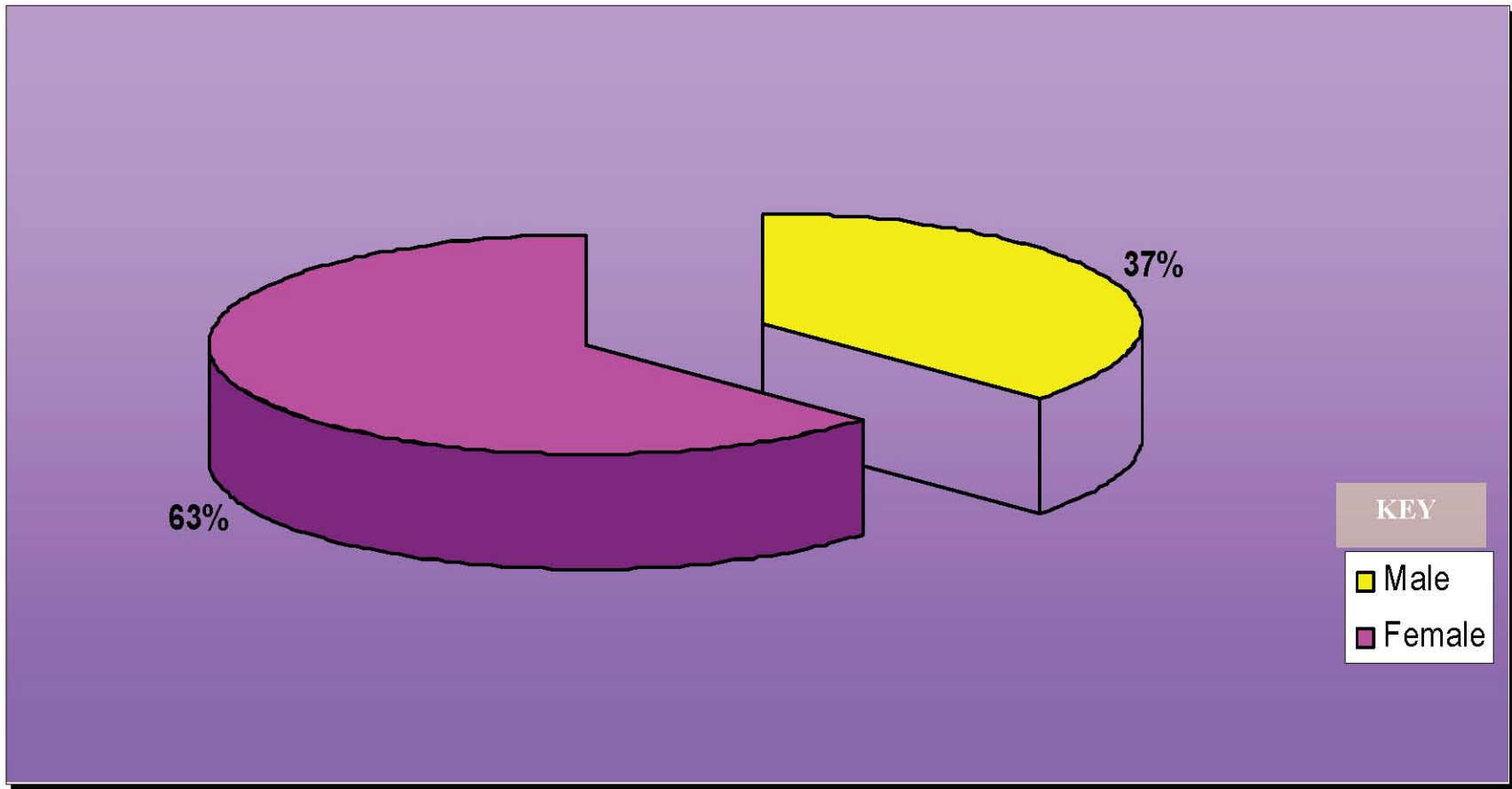


Fig No: 4.2 Percentage of sex determination among old age group with Arthritis

SECTION C : COMPARISON BETWEEN MEAN AND STANDARD DEVIATION OF ASSESMENT AND EVALUATION OF Oldage group with arthritis

TABLE – 4.3

S.NO	HEALTH STATUS	MEAN	S.D	C.I
1.	ASSESSMENT	25.36	3.049	26.24-24.47
2.	EVALUATION	15.16	1.982	16.52-13.79

Table 4.3 shows comparison between mean and standard deviation of assessment and evaluation on oldage group with arthritis. This table shows that during the assessment, the mean was 25.36 with the standard deviation of 3.049 and confidential interval of 26.24 - 24.47 and on evaluation the mean was 15.16 with the standard deviation of 1.982 and confidential interval of 16.52 – 13.79.

The above table shows that there was a significant improvement in the health status of old age group with arthritis. Thus the nursing care on old age group with arthritis was very effective.

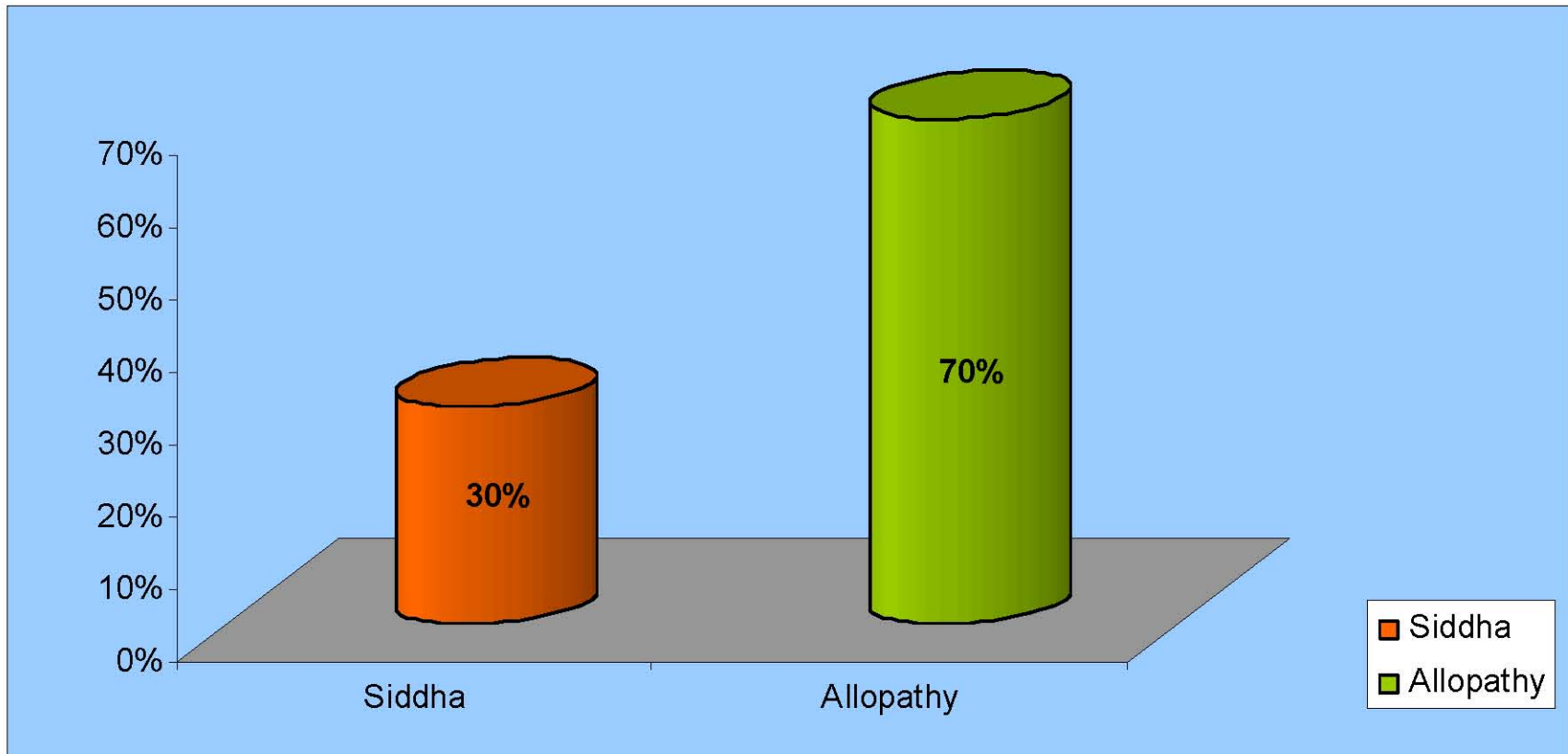


Fig No: 4.3 Percentage of type of treatment among old age group with Arthritis

SECTION – D: MEAN AND STANDARD DEVIATION OF IMPROVEMENT SCORE FOR OLDAGE GROUP WITH ARTHRITIS

TABLE – 4.4

S.NO	HEALTH STATUS	MEAN	S.D	‘t’ Value
1.	Improvement score	10.2	2.21	25.24

Table 4.4 shows the mean and standard deviation of improvement score for effectiveness of home remedies among oldage group with arthritis. The total number of sample taken were 30. The table also reveals the assessment of health status and the value of mean, standard deviation and ‘t’ value of improvement score. The improvement score of mean value was 10.2 and standard deviation was 2,21 and the ‘t’ value was 25.24. The ‘t’ value was compared with tabulated value at $P < 0.01$.

The calculated value was greater than the tabulated value. There was a significant improvement in the health status of old age group with arthritis.

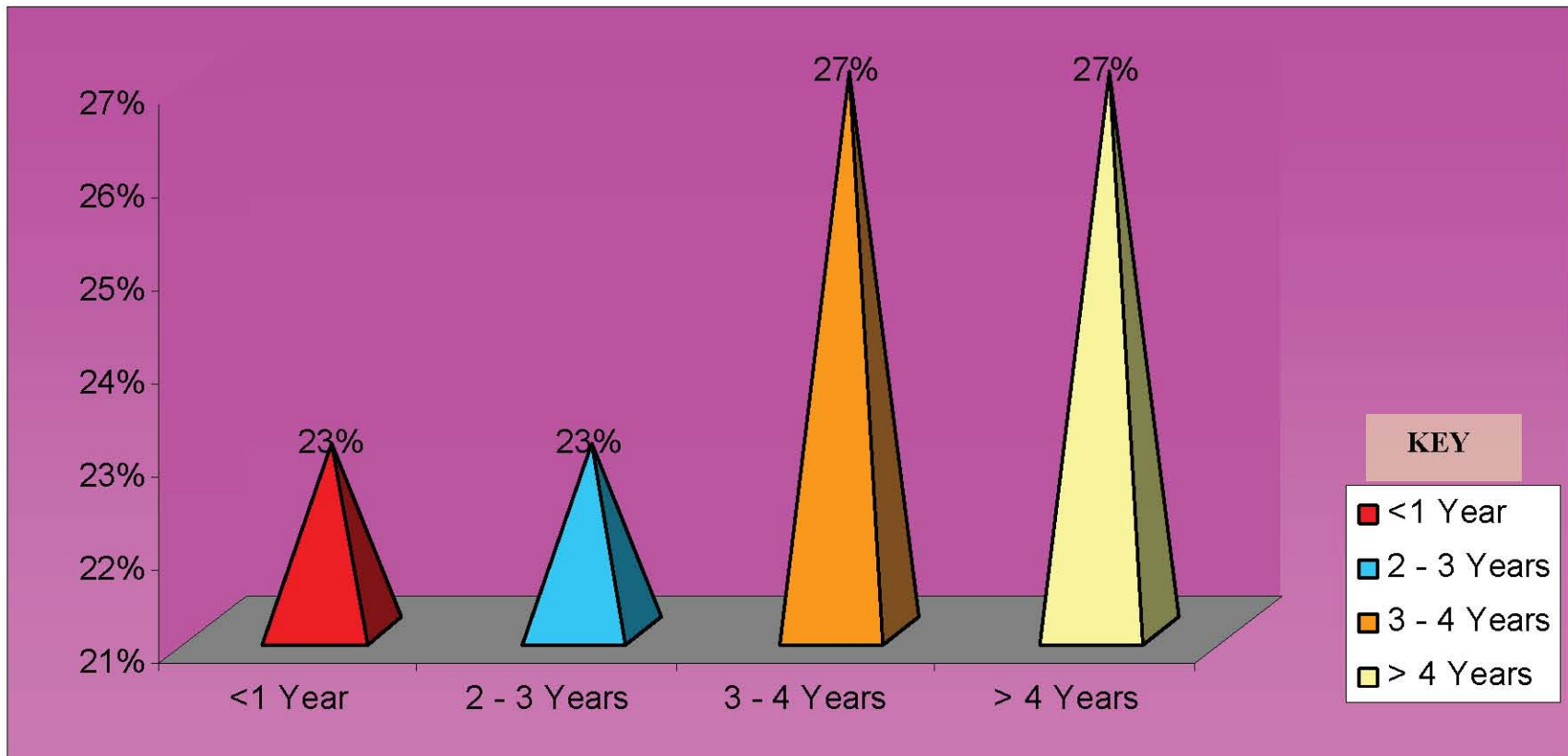


Fig No: 4.4 Percentage of duration of illness among old age group with Arthritis

SECTION – E

CORRELATION BETWEEN DEMOGRAPHIC VARIABLES AND EVALUATION SCORES OF HEALTH STATUS OF OLD AGE GROUP WITH ARTHRITIS

S NO	DEMOGRAPHIC VARIABLES	ASSESSMENT DAY						EVALUATION DAY						R value
		MILD		MODERATE		SEVERE		MILD		MODERATE		SEVERE		
		NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	
1	Age													*0.80
	a.55 - 60 years	0	0	3	10	3	10	4	13	2	7	0	0	
	b. 61 - 65 years	0	0	2	7	5	17	4	13	3	10	0	0	
	c.66 - 70 years	0	0	4	13	5	17	7	23	2	7	0	0	
	d. > 71 years	0	0	5	17	3	10	4	13	4	13	0	0	
2	Sex													*0.90
	a. Male	0	0	6	20	5	17	8	27	3	17	0	0	
	b. Female	0	0	8	27	11	37	11	37	8	27	0	0	
3	Education Status													0.15
	a. Illiterate	0	0	8	27	10	33	11	37	7	23	0	0	
	b. Primary Schooling	0	0	5	17	1	1	5	17	1	1	0	0	
	c. Higher Secondary	0	0	2	7	4	13	3	10	3	10	0	0	
	d. Graduates													
4	Family Monthly Income													0.71
	a. Up to Rs.2000/-	0	0	6	20	15	50	11	37	10	33	0	0	
	b. Rs.2001 to 3000/-	0	0	2	7	0	0	1	1	1	1	0	0	
	c. Rs.3001 to 4000/-	0	0	2	7	1	1	2	7	1	1	0	0	
	d. Above Rs.4000/-	0	0	4	13	0	0	3	10	1	1	0	0	
5	Types of family													*0.90
	Nuclear	0	0	4	13	7	23	4	13	7	23	0	0	
	Joint	0	0	10	33	9	30	15	50	4	13	0	0	

6	Family History of Illness												
	a. Diabetes Mellitus	0	0	3	10	6	20	7	23	2	7	0	0
	b. Hypertension	0	0	3	10	8	27	7	23	4	13	0	0
	c. Others	0	0	8	27	2	7	7	23	3	10	0	0
7	Type of Treatment												
	a. Siddha	0	0	5	17	4	13	7	23	2	7	0	0
	b. Allopathy	0	0	9	30	12	40	12	40	9	30	0	0
8	Duration of illness												
	a. < 1 year	0	0	2	7	5	17	4	13	3	10	0	0
	b. 2 – 3 years	0	0	4	13	3	10	5	17	2	7	0	0
	c. 3 - 4 years	0	0	3	10	5	17	6	20	2	7	0	0
	d. > 4 years	0	0	5	17	3	10	4	13	4	13	0	0
9	Marital Status												
	a. Married	0	0	6	20	6	20	10	33	2	7	0	0
	b. Unmarried	0	0	0	0	0	0	0	0	0	0	0	0
	C. Widower	0	0	8	27	10	33	11	37	7	23	0	0
10	Previous Hospitalization												
	a. Yes	0	0	13	43	14	47	17	57	10	33	0	0
	b. No	0	0	2	7	1	1	1	1	2	7	0	0
11	Source of Health Information												
	a. Mass Media	0	0	2	7	7	23	5	17	4	13	0	0
	b. Health Personnel	0	0	5	17	4	13	5	17	4	13	0	0
	c. Relatives and Friends	0	0	7	23	5	17	7	23	5	17	0	0

* significance

Table 4.5- reveals that there is a positive relationship between effectiveness of nursing care 30 old age group with arthritis and demographic variables such as age, sex, type of family, duration of illness and previous hospitalization.

Finding of the study:

The statistical analysis was showed that during the initial assessment with the mean value 25.36 and standard deviation value is 3.049. This result shows that the evaluation mean 1.982 and standard deviation 15.16 and the 't' value is 25.24 shows highly significant and there was a correlation between demographic variables and effectiveness of nursing care. So it was concluded that a significant improvement in the health status on old age group with arthritis.

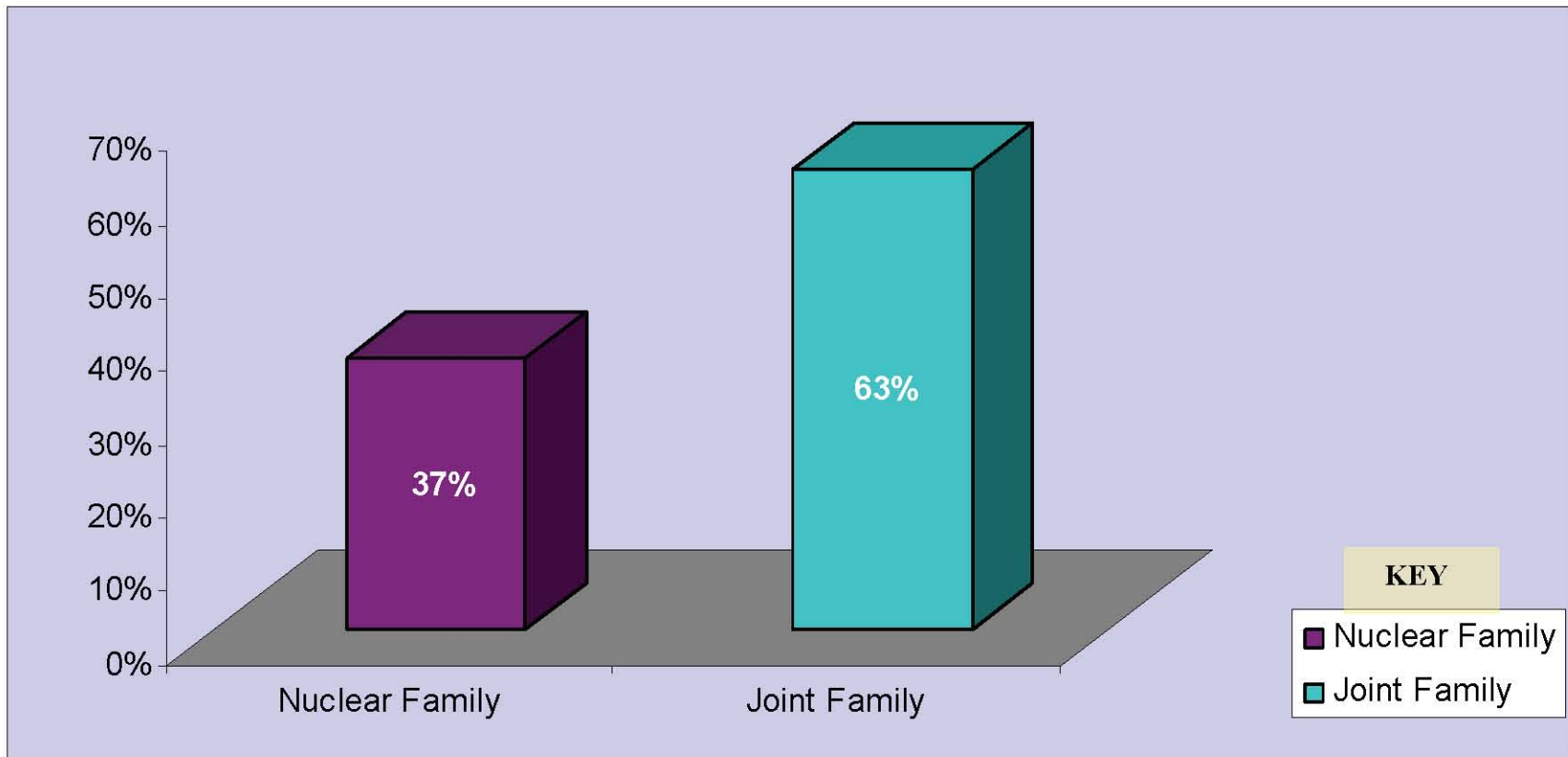


Fig No: 4.5 Percentage of type of family among old age group with Arthritis

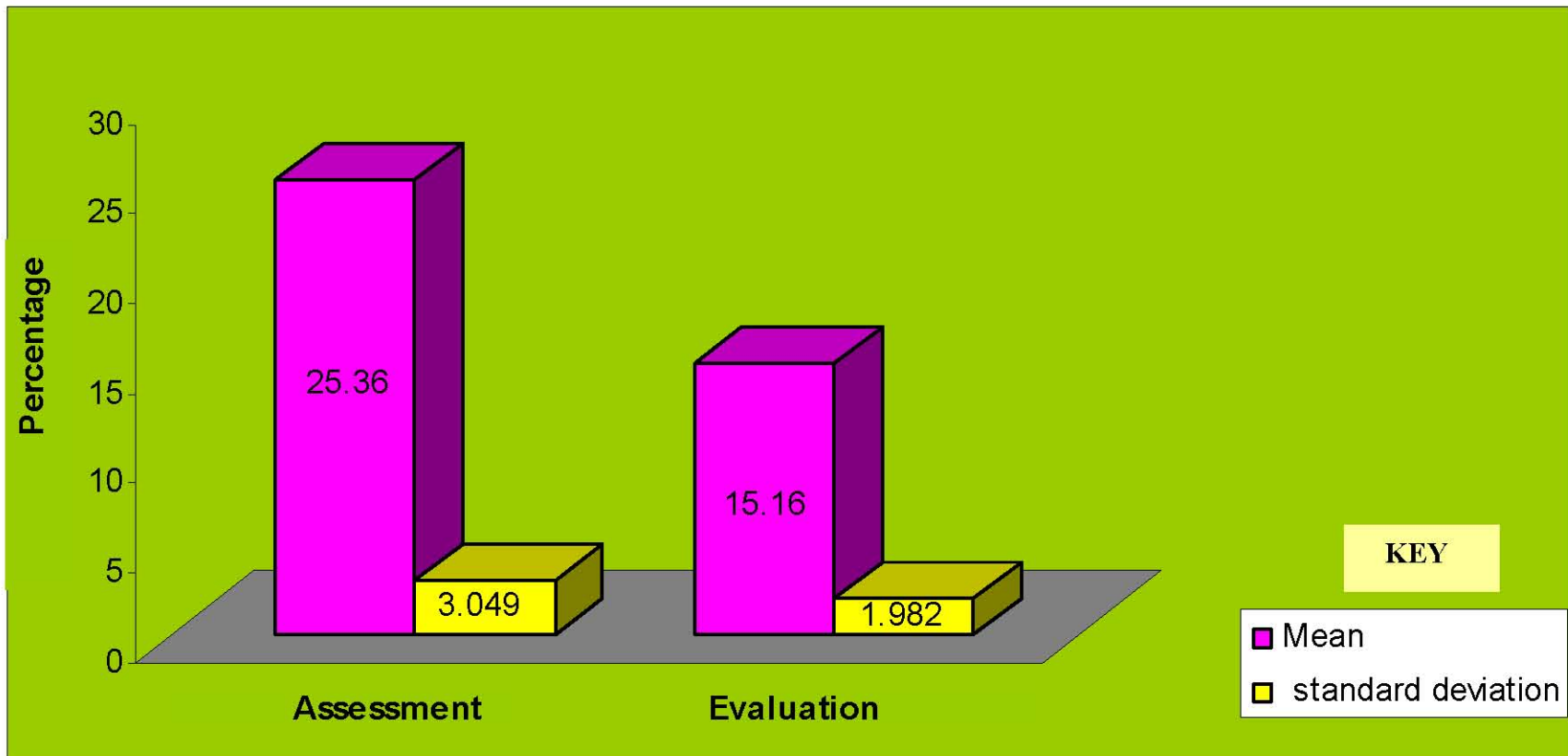


Fig No: 4.6 Percentage distribution of mean and standard deviation of Assessment and Evaluation

CHAPTER-V

RESULTS AND DISCUSSION

The aim of the present study was to evaluate the effectiveness of nursing care on old age group with arthritis. A total number of 30 samples were selected for the study. Assessment was done by self structured rating scale. After the nursing care was given as per nursing protocol and at the seventh day the evaluation was done by using self structured rating scale.

The result of the study had been discussed according to the objectives of the study, conceptual framework and on related literature.

The study was conducted at Acharapakkam. Thirty old age group with arthritis who met the inclusion criteria were included in the study. Each client was assessed with questionnaire for demographic variables, questionnaire for demographic variables relating to arthritis self structured rating scale and with checklist for vital parameters.

The first objective was to assess the health status of the old age group with arthritis.

Table 4.2 On assessment day sixteen(53%) clients were in severe health status, fourteen (47%) were in moderate health status with mean 25.36 and standard deviation 3.049. It reveals that most of the clients were in severe condition. They need nursing care to promote health status.

The second objective was to evaluate the effectiveness of nursing care on old age group with Arthritis.

The nursing care as per the protocol provided to each client was observed by using self-structured rating scale. Comparison of assessment mean level of 25.36 and evaluation mean of 15.16 showed the improvement score mean of 10.2 with standard deviation of 2.21. The paired t 25.24 shows the difference in health status between before and after the nursing care. So there is significant improvement between the assessment score and evaluation score. It shows nursing care was effective.

The third objective was to correlate demographic variables and effectiveness of nursing care.

The correlation proved that there was significant correlation between the demographic variables (age, sex, type of family, duration of illness, type of treatment, previous hospitalization, and effectiveness of nursing care and improvement of health status of old age group with arthritis.

From the statistical analysis, the improvement score mean 10.2 with standard deviation of 2.21 the paired 't' value of 25.24 which were significantly at $P < 0.01$ level and the calculated value was greater than table value at 0.01 level of significance. It implies that the nursing care provided by the investigator was effective and showed improvement in health status of old age group with arthritis.

CHAPTER VI

SUMMARY AND CONCLUSION

The present study was conducted to elicit the effectiveness of nursing care on old age group with arthritis. A total of 30 old age group with arthritis, who met the inclusion criteria were selected by using simple random sampling technique.

The objectives of the study was to assess the health status of old age group with arthritis and to correlate the evaluation status with demographic variables.

The investigator first introduced herself to the clients and developed a good rapport with them. After the selection of sample, the nursing care was given. Demographic variables, vital parameters and health status were assessed, then nursing care was given to the old age group with arthritis.

There is two part in this section.

PART – I: Interview technique was used to collect the demographic variables with arthritis among old age group.

PART – II: Self structured rating scale for assessment of health status of old age group with arthritis.

CONCLUSION:

On the assessment out of thirty samples 16 (53 percentage) clients were under severe pain.

On evaluation of nursing care, the clients' pain was minimized, improvement in joint mobility, improving coping abilities of clients with family members.

There was statistically ($P < 0.01$) significant increase in health status, In relation to effectiveness of nursing care, there was remarkably maintained health status could be found after the nursing care of old age group with arthritis.

The results of the study have got implications on nursing Practice, nursing education, nursing administration and nursing research.

NURSING IMPLICATIONS:

This study would provide insight among the nurses to detect certain problems like pain, discomfort, tenderness, swelling, and full assessment which would guide them to detect life support measures appropriately to prevent further complications. It also meets the challenges among nurses for growing autonomy in decision making capacity to render priority based to the clients at a given movement.

The study protocol could apply the knowledge while rendering care to the clients in collaborative manner. The protocol also provides a standard of care or clinical guidelines which could still be individualized for a specific client, depending on how an institution recommends protocol implementations.

IMPLICATIONS FOR NURSING EDUCATION:

Interpretation of theory and practice are vital needs and they are important for nursing education. This study would emphasize among learners to develop observational skills and develop systematic assessment to help them to detect the problem and motivate them to render care to the clients at acute stage.

Nurses who are working in community area should be expected to have thorough knowledge in management of old age group with arthritis, and identification of existing problem needs and quick assessment skills. Nursing students have to assess the arthritis client problems and to provide effective experience based care.

Nurse educators, when plan to instruct the students should be provided with adequate opportunities to develop skills in handling the

old age group with arthritis and should demonstrate how to tackle such clients in community and clinical settings.

IMPLICATIONS FOR NURSING ADMINISTRATION

The administrator manages the old age group with arthritis. The nurse leaders in nursing care confronted to under take the health needs of the most vulnerable effective organization and management.

The nursing administrator should give attention in proper selection, placement of effective utilization of the nurses in all access with in the available resources giving importance for their creativity, internal ability in education.

The administrator should provide adequate in service education programme on latest management strategies in care of arthritis and handling of advanced technologies would motivate nurses to carryout nursing intervention and improve the standards of nursing.

IMPLICATIONS FOR NURSING RESEARCH

Today nursing is involved in every aspect of changes in health care delivery system advanced technology, development of newer

discipline in medicine. Nursing needs to be developed to study in specific areas of problems encountered by the arthritis clients.

This is the time to formulate the nursing care policy. This study directs the nursing personnels to broaden and expand their knowledge and skill to elicit problems and to conduct various research to improve their power to implement prompt activities.

The Nursing discipline must follow the evidence based practice, this will provide quality of nursing care. This study will imply the nursing research to conduct and motivate the learners to adopt a relevant study with all dissemination namely physical, mental, emotional, social and spiritual change, in care of arthritis.

By conducting many research and utilization of their findings and disseminating knowledge would provide a vision for positive growth in nursing discipline.

RECOMMENDATIONS

Based on the research findings the following recommendations are made,

- Similar study can be conducted with large samples.

- This study can be conducted in urban area.

- Experimental study can be conducted by introducing structured teaching programme.

- A descriptive study can also be conducted to evaluate problems and institute nursing care for old age group with arthritis.

- Descriptive study on assessment of knowledge, attitude, and practice of arthritis and ortho rehabilitation can be initiated.

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APPENDIX - I
THE DEMOGRAPHIC VARIABLES

1. Age

- a. 55-60 years
- b. 61–65 years
- c. 66 –70 years
- d. 71 years and above

2. Sex

- a. Male
- b. Female

3. Educational Status

- a. Illiterate
- b. Primary schooling
- c. Secondary schooling
- d. Graduate

4. Family Monthly Income

- a. < Rs.2000/-
- b. Rs.2001 to Rs.3000/-
- c. Rs.3001 to Rs.4000/-
- d. Rs.4001 and above

5. Type of family

- a. Nuclear family
- b. joint family

6. Family history of illness
- a. Diabetes Mellitus
 - b. Hypertension
 - c. Bronchial asthma
 - d. Others
7. Type of treatment
- a. Allopathy
 - b. siddha
 - c. Homeopathy.
8. Duration of illness
- a. below 1 year
 - b. 2 to 3 years
 - c. 3 to 4 years
 - d. above 4 years
9. Marital status
- a. Married
 - b. unmarried
 - c. Widower
10. Previous Hospitalization
- a. Yes
 - b. No.
- 11 Source of health information
- a. Mass media
 - b. Health personnel
 - c. Relatives, neighbors and friends

APPENDIX - II

Self structured rating scale for the old age group with arthritis

	Assessment	Task	Score	No. of Days						
				1	2	3	4	5	6	7
1	Presence of Joint pain	a. Mild pain	1							
		b. Moderate pain	2							
		c. Severe pain	3							
2	Temperature	a. 97 – 99°F	1							
		b. 99 – 101°F	2							
		c. 101-103°F	3							
3	Pulse	a. 72 b/mt	1							
		b. 72-80 b/mt	2							
		c. > 80 b/mt	3							
4	Respiration	a. >22 b/mt	1							
		b. 22-39 b/mt	2							
		c. 40-60 b/mt	3							
5	Blood pressure	a. 120/90 mm Hg	1							
		b. 130/90 mm Hg	2							
		c. 140/90 mm Hg	3							
6	Activity of the client	a. Able to move extremities voluntarily	1							
		b. Able to move extremities on command	2							
		c. Unable to move extremities voluntarily	3							
7	Assess the dietary pattern	a. Adequate and nutritious food taken	1							
		b. Inadequate food intake	2							
		c. refuse to take	3							
8	Presence of fatigue	a. No fatigue	1							
		b. Some time present	2							
		c. Frequently present	3							

S.No	Assessment	Task	Score	No. of Days						
				1	2	3	4	5	6	7
9	Skincolour	a. normal	1							
		b. red in colour	2							
		c. dark in colour	3							
10	tenderness	a. mild	1							
		b. moderate	2							
		c. severe	3							
11	swelling	a. mild	1							
		b. moderate	2							
		c. severe	3							

Score

1-Mild Health deterioration

2-Moderate Health deterioration

3-Severe Health deterioration

APPENDIX - III
CHECKLIST OF NURSING INTERVENTIONS FOR CLIENTS WITH
ARTHRITIS.

S. No.	Criteria	No. of Days						
		1	2	3	4	5	6	7
1.	Pain relieving measures							
2.	Vital signs							
3.	Positioning							
4.	Nutritional status							
5.	Active body movement exercise							
6.	Health education about self care and hygienic measure.							

APPENDIX - IV

PROTOCOL FOR NURSING CARE ON CLIENTS WITH ARTHRITIS

S No	Nursing Interventions	Rationale
1	Monitor vital signs, <ul style="list-style-type: none">• Temperature• Pulse Rate• Respiration• Blood Pressure	Provides base line data to detect abnormal changes to find the deterioration in health status
2	Pain Relieving Measures, <ul style="list-style-type: none">• Hot applications (hot packs)• Cold Application	Helps to relieve pain and stiffness and to increase mobility of joints
3	Maintaining proper posture and body alignment <ul style="list-style-type: none">• Comfortable bed (wrinkle free)• Extra pillows	To prevent joint deformity as possible To promote comfort
4	Maintenance of Nutrition: <ul style="list-style-type: none">• Assessing the nutritional requirements• Regular weight checking• Modification of dietary pattern	Helps to promote good appetite and maintain weight at or close to ideal

5	<p>Active body exercises</p> <ul style="list-style-type: none"> • Range of motion exercises • Balance activity with rest periods • Regular physical exercises such as walking, Jogging and etc., 	<p>To prevent unnecessary mobility restriction</p> <p>To prevent deconditioning and foster a positive attitude</p> <p>To increase joint motion flexibility and endurance</p>
6	<p>Health Education:</p> <ul style="list-style-type: none"> • Assistive devices • Life style modifications 	<p>To compensate for contractures and weakness</p> <p>To foster maximum independence</p>
7	<p>Psychological counseling and coping strategies</p>	<p>To alter negative effects of fatigue</p>

HEALTH EDUCATION

TECHNIQUES TO PROTECT JOINTS:

The following techniques reduce stress to joints.

- Respond to pain, if pain lasts more than an hour or two after activity. Stop doing that particular activity for a while.
- Use your biggest muscles, for ex: Women should carry a shoulder bag rather than hand bag. Push doors open with your arms rather than with your hands or fingers.
- Alternate between light and heavy tasks. Do not do all your heavy tasks at once. Take frequent breaks and rest between tasks.
- Minimize joint stress that may lead to deformity for ex: use a large wide pen rather than thin one, maintain good and comfortable posture, change position frequently.
- Plan for rest ex: take a walk where you can sit down if you need it.

CONSERVE ENERGY:

Make activities that are really important to your priority.

Eliminate unnecessary tasks.

- Assess your joints, if they are warm or swollen; use them as little as possible. Put them through range of motion exercises once a day.
- Assess the task you must to do, such as your work, follow the least painful way to accomplish the tasks.
- Avoid prolonged or unnecessary bending, stretching, reaching, climbing stairs or prolonged grip.
- Sit to work as much as possible because standing places more stress on hip and knee joints and uses more energy.

ARTHRITIS DEVICES FOR HOME USE:-

- Adaptive devices can enhance the activities of daily living for clients with arthritis. Clients with arthritis may benefit from adaptive devices that compensates for decreased strength and range of motion of their extremities.

- When decreased strength and active range of motion of their hand is a problem, enlarged handles on eating utensils, pen and pencils, tooth brushes and house hold handles can be useful.

- Exercises helpful for arthritic people to increase flexibility improve circulation and muscle tone and prevent further movement restriction.
 - a) Stand alternately on tip toes and flat of foot.
 - b) Knee scissor, loop a cloth ring (ex: bandage) around a chain leg. Move leg from normal position to and fro.
 - c) Extend cloth ring – Quadriceps settings
 - d) Palm presses – Press palms together bend wrists
 - e) Side pull – Loop cloth ring over wrists. Pull arms against resistance for cloth ring.
 - f) Wand Exercise – Holding a short pole, Move arms from thigh level to above head.

NURSING DIAGNOSIS

- ❖ Joint Pain related to exacerbation of disease activity as manifested by weakness and joint limitation

- ❖ Impaired physical mobility related to joint pain, stiffness and swelling as manifested by limitation of joint motion.

- ❖ Fatigue and weakness related to exacerbation of disease activity, pain as manifested by weakness

- ❖ Sleep deprivation related to joint pain, stiffness and chronic inflammation

- ❖ Ineffective role performance related to chronic pain, feelings of helplessness and hopelessness

- ❖ Self care deficit related to joint deformity, pain and fatigue.

- ❖ Joint deformity related to disease activity as manifested by limited range of motion

S NO	ASSESSMENT	NURSING DIAGNOSIS	GOALS	PLANNING	IMPLEMENTATION	RATIONALE	EVALUATION
1.	<p>Subjective Data:- The client complains of severe pain</p> <p>Objective Data:- The client has severe pain over the knees and shows painful expressions</p>	Joint Pain related to exacerbation of disease activity as manifested by weakness and joint limitation	The client will be able to reduce the pain to some extent.	<ul style="list-style-type: none"> ➤ Assess the characteristics of pain, site, location, Intensity, duration, severity, frequency of pain. ➤ Provide pain relieving measures ➤ Encourage range of motion exercises ➤ Schedule balance activity with rest periods. ➤ Provide comfortable position and comfortable devices. ➤ Encourage the client to have regular medications and exercises. 	<ul style="list-style-type: none"> ➤ Assessed the characteristics of pain. ➤ Application of hot packs and moist heat to affect the joints ➤ Encouraged stretching and strengthening exercises ➤ Prepared activity plan. ➤ Provided adequate pillows and comfortable devices. ➤ Encouraged client to have medications and exercises regularly. 	<ul style="list-style-type: none"> ➤ It provides the base line data and information ➤ To relieve the pain and stiffness ➤ To strengthened the joints. ➤ To plan appropriate activities. ➤ To ensure comfortness to the client. ➤ To relieve the pain and weaknes. 	The client's pain minimized to some extent.

S.NO	ASSESSMENT	NURSING DIAGNOSIS	GOAL	PLANNING	IMPLEMENTATION	RATIONALE	EVALUATION
2.	<p>Subjective data:</p> <p>The client says pain during walking.</p> <p>Objective data:</p> <p>The client has pain, stiffness and swelling of joints.</p>	Impaired physical mobility related to joint pain, stiffness and swelling as manifested by limitation of joint motion.	The client range of motion will increase.	<ul style="list-style-type: none"> ➤ Monitor the activity level of the client. ➤ Apply moist heat to affected joints ➤ Encourage range of motion exercises. ➤ Schedule morning care and procedures later in the day after morning stiffness subsides. ➤ Teach patient to use assistive devices. ➤ Encourage aquatic exercise program (walking) or aerobic conditioning. 	<ul style="list-style-type: none"> ➤ Monitored the activity level of the client. ➤ Applied moist heat to affected joints (hot packs, warm shower) ➤ Encouraged stretching and strengthening exercises ➤ Scheduled care according to the ability of client. ➤ Provided health education to client to use assistive devices. ➤ Encouraged aquatic exercise program. 	<ul style="list-style-type: none"> ➤ It provides the base line data. ➤ To relieve stiffness and increase mobility. ➤ To prevent unnecessary Mobility restriction. ➤ To reduce the morning stiffness. ➤ To promote independence. ➤ To increase joint motion, flexibility and endurance. 	The client's range of motion increased.

S NO	ASSESSMENT	NURSING DIAGNOSIS	GOAL	PLANNING	IMPLEMENTATION	RATIONALE	EVALUATION
3.	<p>Subjective data: The client complains of weakness all over the body</p> <p>Objective data The client has fatigue and weakness:</p>	Fatigue and weakness related to exacerbation of disease activity, pain as manifested by weakness.	The client will improve stamina and endurance.	<ul style="list-style-type: none"> ➤ Assess the degree of fatigue and weakness of client. ➤ Assess the causative factors of fatigue and weakness. ➤ Balance activity with rest periods. ➤ Encourage regular physical exercise such as walking, jogging to patient level of tolerance. ➤ Review nutrition and sleep pattern. ➤ Refer for psychologic counseling and coping strategies. 	<ul style="list-style-type: none"> ➤ Assessed the fatigue; the client cannot able to perform activities due to pain ➤ Assessed the causative factors of fatigue and weakness ➤ Prepared activity schedule for the clients. ➤ Encouraged regular physical exercises. ➤ Reviewed nutrition and sleep pattern. ➤ Provided psychologic counseling and coping strategies. 	<ul style="list-style-type: none"> ➤ It provides base line data. ➤ To plan appropriate activities. ➤ To relieve fatigue and weakness. ➤ To prevent deconditioning and foster a positive attitude. ➤ To alter negative effects of fatigue. ➤ To enhance the coping strategies. 	The client's improves stamina and endurance.

S NO	ASSESSMENT	NURSING DIAGNOSIS	GOALS	PLANNING	IMPLEMENTATION	RATIONALE	EVALUATION
4..	<p>Subjective data:</p> <p>The client complains of sleeplessness due to pain</p> <p>Objective data:</p> <p>The client verbalizes pain and with presences of redness of eyes.</p>	Sleep deprivation related to joint pain, stiffness and chronic inflammation	The client will express satisfaction with his /her current amount of sleep.	<ul style="list-style-type: none"> ➤ Assess the sleep pattern of the client ➤ Maintain a regular sleep schedule ➤ Provide comfortable devices ➤ Encourage the client to take prescribed medications ➤ Encourage the client to avoid sleep during day time. 	<ul style="list-style-type: none"> ➤ Assessed the sleep pattern of the client ➤ Maintained regular sleep schedule ➤ avoiding caffeine or alcohol ➤ warming the bed or taking a bath before bed time ➤ Provided comfortable devices ➤ extra pillows ➤ bed boards ➤ lighter weight blankets ➤ Encouraged clients to take medications. ➤ Encouraged client to avoid sleep during day time. 	<ul style="list-style-type: none"> ➤ Helps to know the baseline data for planning ➤ Helps to maintain regular sleep pattern ➤ To ensure comfortable sleep pattern ➤ To reduce the pain and ease the painful joints ➤ To promote sleep level during night time. 	The client express the satisfaction with current amount of sleep

S NO	ASSESSMENT	NURSING DIAGNOSIS	GOALS	PLANNING	MPLEMENTATION	RATIONALE	EVALUATION
5.	<p>Subjective data:</p> <p>The client complains of pain and weakness.</p> <p>Objective data:</p> <p>The client has extreme fatigue during activities.</p>	Self care deficit related to joint deformity, pain and fatigue.	The client will be able to perform self care activities with minimal pain.	<ul style="list-style-type: none"> ➤ Assess the level of activities of the client ➤ Provide activity schedule for the client ➤ Educate the client regarding pain relieving techniques. ➤ Teach the client regarding active and passive exercises. ➤ Arrange all the articles and orient the client regarding the arrangement 	<ul style="list-style-type: none"> ➤ Assessed the activities, client faces difficulty in meeting the activities of daily living. ➤ Provided activity schedule for the clients with the adequate periods of rest and sleep. ➤ Educated the client regarding the pain relieving techniques like; ➤ maintaining proper posture ➤ Taught the clients regarding active and passive exercises like flex and extend the knees. ➤ Arranges all the articles near to the clients and oriented the clients regarding the placement of articles. 	<ul style="list-style-type: none"> ➤ Helps to know the baseline data for planning ➤ Helps to improve the activity of the clients ➤ Helps to relieve pain and thereby improves self care ➤ Helps to improve the activities and meet the self care ➤ Helps to actively participate in self care activities. 	The client perform self care activities to some extend.

S NO	ASSESSMENT	NURSING DIAGNOSIS	GOALS	PLANNING	IMPLEMENTATION	RATIONALE	EVALUATION
6	<p>Subjective data:</p> <p>The client says feeling of helplessness and pain.</p> <p>Objective data:</p> <p>The client has chronic pain and feeling of powerlessness.</p>	Ineffective role performance related to chronic pain, feelings of helplessness and hopelessness	The client will be able to express improved satisfaction with the performance	<ul style="list-style-type: none"> ➤ Assess the level of performance of the client ➤ Help the client to realize the benefits of healthier approach strategies ➤ Encourage the client to verbalize the feelings and concerns ➤ Exercising the healthy control over the disease ➤ Providing reassurance and support ➤ Help the clients set realistic goals praising them for all accomplishments 	<ul style="list-style-type: none"> ➤ Assessed the level of performance; the client is ineffective to perform ➤ It includes seeking out information and assistance ➤ Encouraged the client to verbalize the feelings and concerns ➤ Exercised the healthy control over the disease ➤ Provided reassurance and support to the client ➤ Helped the client to set realistic goals praising them for all accomplishment 	<ul style="list-style-type: none"> ➤ Helps to know the baseline data for planning ➤ Helps to improve the performance of the clients ➤ Helps to explicit the feelings of the clients ➤ Helps to promote the healthier habits thereby prevents diseases ➤ Helps to relieve the stress. ➤ Helps the clients to perform their role well 	The client expressed improved satisfaction with their performance

S NO	ASSESSMENT	NURSING DIAGNOSIS	GOALS	PLANNING	IMPLEMENTATION	RATIONALE	EVALUATION
7.	<p>Subjective data:</p> <p>The client complains of inability and pain to perform activities.</p> <p>Objective data:</p> <p>The client has joint deformity and limited range of motion.</p>	Joint deformity related to disease activity as manifested by limited range of motion.	The client will have minimal deformity and optimal activity.	<ul style="list-style-type: none"> ➤ Assess the deformity level of the client. ➤ Encourage client for correct application of resting splints. ➤ Selection of properly fitting footwear. ➤ Advise the client to maintain proper posture and body alignment. ➤ Selection and use of assistive devices. ➤ Encourage compliance with treatment and daily range of motion exercises. 	<ul style="list-style-type: none"> ➤ Assessed the deformity level of the client. ➤ Encouraged client for correct application of resting splints. ➤ Proper selection of fitting footwear. ➤ Advised the client to maintain proper posture and body alignment. ➤ Advised the client about proper selection and use of assistive devices. ➤ Encouraged the daily range of motion and exercises. 	<ul style="list-style-type: none"> ➤ It provides the base line data. ➤ To ensure comfortless to the client. ➤ To promote the activity of the client. ➤ To prevent joint deformity as possible. ➤ To promote independence. ➤ To provide maximum joint protection. 	The client has minimal deformity and optimal activity,

CASE ANALYSIS

SAMPLE 1:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client pain was minimized and health status was improved.

SAMPLE 2:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved to some extent.

SAMPLE 3:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client pain and stiffness was moderately reduced.

SAMPLE 4:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client range of motion was improved.

SAMPLE 5:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved.

SAMPLE 6:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client pain and stiffness was reduced and the health status was improved.

SAMPLE 7:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved.

SAMPLE 8:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client pain was minimized to some extent.

SAMPLE 9:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client pain was reduced to some extent and the health status was moderately improved.

SAMPLE 10:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved.

SAMPLE 11:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved.

SAMPLE 12:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved to some extent.

SAMPLE 13:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client range of motion was improved and the pain also minimized.

SAMPLE 14:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved.

SAMPLE 15:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client swelling and stiffness was reduced and the pain was moderately controlled.

SAMPLE 16:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved.

SAMPLE 17:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client swelling and stiffness was reduced and health status was improved.

SAMPLE 18:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved.

SAMPLE 19:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved.

SAMPLE 20:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client range of motion was good and pain was reduced during activities.

SAMPLE 21:

On the day of assessment, the client exhibited manifestations like severe pain, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved to some extent.

SAMPLE 22:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness in joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was moderately improved.

SAMPLE 23:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved.

SAMPLE 24:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client pain and stiffness was reduced and the health status was improved.

SAMPLE 25:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client performs activities with minimal pain and stiffness.

SAMPLE 26:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved.

SAMPLE 27:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client health status was improved and he performs activities with the use of assistive devices.

SAMPLE 28:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the

client pain was minimized to some extent and health status was moderately improved.

SAMPLE 29:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions, manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client range of motion was increased and the health status was improved.

SAMPLE 30:

On the day of assessment, the client exhibited manifestations like severe pain, stiffness, swelling over joints and limited joint movements. The selected nursing interventions such as monitoring vital signs, pain relieving measures such as hot and cold application, strengthening and stretching exercises, diet modification, positions,

manual therapy, health education regarding lifestyle modifications and assistive devices were provided. On the day of evaluation, the client pain was minimized and the health status was moderately improved.