EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE OF RISK FACTORS, COMPLICATIONS AND PREVENTION OF ARTHRITIS AMONG THE SELECTED POPULATION AT KADAMALAIPUDHUR VILLAGE, KANCHIPURAM DISTRICT.

By
Mr.K.SRINIVASSAN

A Dissertation submitted to

THE TAMILNADU Dr.M.G.R MEDICAL UNIVERSITY,

CHENNAI.

IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE

DEGREE OF MASTER OF SCIENCE IN NURSING

APRIL – 2012

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ACKNOWLEDGEMENT

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INTRODUCTION

CHAPTER-I

INTRODUCTION

Arthritis can be a very serious and extremely debilitating disease, while it is often thought of as only a disease that can affect serious, arthritis can actually be found on people of any age. Since there are more than 100 different kinds of arthritis, one of the key parts of treatment is to correctly identify what type of arthritis is present. While joints pain is the most common and well recognized symptom of arthritis, there are many other ways it can affect the body. For instance, some type of arthritis affects other organ in the body or cause physical deformities. There are even some types of arthritis, which are related to psoriasis and result in scaly blemishes on the skin. Arthritis can also affect mood, causing people to feel uneasy, tired or worried.

It can be completely unnerving to have nothing wrong with one day and severe pain the next day. Since pain is somewhat a common symptom associated with many different conditions. Not every type of arthritis develops suddenly, but that sense of confusion that builds when you accept that it's not going to go away can sometimes lead you down the wrong path.

We know for sure that it is important to be a partner in own health care and should actively participate in the decision-making process. Chronic arthritis affects every aspect of daily living. The day it is diagnosed with arthritis is the first day of new reality. New reality can overwhelm, or we should choose to face it with courage and perseverance. Our willingness to accept our new reality and adjust and adapt to it, as well as our ability to cope and an unwillingness to give up. These are all factors that will influence how well we live with arthritis. If the joints are painful after a mild workout or we find it difficult to move in the morning, we may have arthritis. However, if we know what we should do about it, we need not worry.

Arthritis is not a new disease and much research has been done and is still being done to find a cure. This ongoing research is financed by The Arthritis Society. They track research trials and the latest breakthroughs on the medical front. Many people start to feel pain and stiffness in their bodies over time. Sometimes their hands or knees or shoulders get sore and are hard to move and may become swollen. These people may have arthritis (ar-THRY-tis). Arthritis may be caused by inflammation (in-flah-MAY-shun), of the tissue lining the joints. Some signs of inflammation include

redness, heat, pain, and swelling. These problems are telling us that something is wrong.

Joints are the places where two bones meet, such as your elbow or knee. Over time, in some types of arthritis but not in all, the joints involved become severely damaged. It's true that arthritis can be painful. But there are things we can do to feel better.

One of the most common problems encountered by the people nowadays is of course arthritis. This is a major problem that actually comes in different forms. If we do not know what arthritis is, it's a disorder that actually causes the inflammation of one or more joints. Most of time, when we have arthritis, we will also have joint pain that goes with it. Arthritis is the most common cause of chronic disability. There are no methods to cure for most forms of arthritis. But with some effort we didn't need to lose all the movement in your joints.

NEED FOR THE STUDY

King (2010), estimated that arthritis affect more than 30% of people above the age of 65years. The affected persons in the age group of 65years and above are projected as nearly 21.4million in 2001 and it is estimated that by the year 2030, 41.4million people

would be affected by arthritis .It was also noted that women (37.3%) are more prone to arthritis when compared to men.

Who (2008), reported prevalence of arthritis in the world as 1% but the rate varies among the age groups. Approximately 2.1million people in the US suffer, of which 1.5million are workers. Arthritis is found in all age groups, and it occurs 3 times more in women than men.

Arthritis foundation (2007) reported the prevalence rate of arthritis in the close relatives varies from 2%to3%.Arthritis affect all people, irrespective of age, race and social status.

American college of rheumatology (2007), stated that arthritis patient more physician visits and 250,000 of them had been hospitalized each year. The population at risk (more than 65year of age) was 58.8%.

Martin et al., (2009) stated that arthritis is one of the most commonly inflammatory joint diseases that require 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 vital

role within the multidisciplinary, ensuring the highest quality of care.

There are currently 580 million elderly aged 60 and over in the world and of these 365 million live in the developing countries. Within east 50years the rate of accelerated death in developing countries have visibly decreased and life expectancy at birth has increased from 41years in 1950s to 62years in 1990.

As life expectancy increases, the incidence of chronic diseases especially arthritis among 50% of population chronic disease or problems increased. The disease becomes more prevalence after the age of 45years, approximately 6million people are diagnosed and improperly self treated. The incident of arthritis in women is 2.3 times affected more than the men. In recent year, nurses are perceived as approachable because they often act as patient's advocates, nurse plays a vital role in teaching patient to arrive at the decision on the risk factors and prevention of complications of arthritis, which will be best for the patients.

Old age people are like the tones of knowledge and experience in your basket but their suggestion not fit for this generation (Henry Donald 2008).

In the last decades joint family system was very common, with lot of family members around. In such a situation the old age people got much attention from all their children. Even after their retirement they were engaged with some other work like small shopping, going out with their grand children etc., so, they don't feel lonely thinking about themselves, and their problems and aging process. Their children also provided care to the parents. Today due to the socio cultural changes the joint family pattern has changed to nuclear ones. And even if there is a joint family the members are restricted to 4 or 5. This has created great impact on the old age people as they are left alone due to the higher education and well settled jobs of children in abroad and now a days, even with the females working, they receive no attention at all. Some do send financial help for their parents but whereas, some do not even turn to have a look towards their parents.

Since the children are away and no body to care for them, they feel lonely, become depressed and concerned about their health problems much more. With the help of structured teaching programme like this we can able to impart the knowledge regarding arthritis, its risk factors, how to prevent the further complications and to manage by their own.

This study was undertaken to find out the effect of structured teaching programme regarding knowledge on arthritis among the selected population.

STATEMENT OF THE PROBLEM

"EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME REGARDING KNOWLEDGE ON RISK FACTORS, COMPLICATIONS AND PREVENTION OF ARTHRITIS AMONG THE SELECTED POPULATION AT KADAMALAIPUDHUR VILLAGE, KANCHIPURAM DISTRICT ".

OBJECTIVES

1. to assess the level of knowledge on risk factors, complications and prevention of arthritis among the selected population who are residing at kadamalaipudhur.

2. to evaluate the effectiveness of structured teaching programme on risk factors, complications and prevention on arthritis among the selected population who are residing at kadamalaipudhur.

3. to explore the association between selected demographic variables with knowledge score among the selected population who are residing at kadamalaipudhur.

OPERATIONAL DEFINITIONS

ASSESS

It refers to the measurement of the level of the knowledge regarding risk factors, complications and prevention of arthritis in this study.

EFFECTIVENESS

In this study, it refers to the significant increase in the level of knowledge of the people through structured teaching programme.

KNOWLEDGE

It means the fact, skills and understanding that have gained through learning and experience.

STRUCTURE TEACHING PROGRAMME

It refers to a planned series of information to the group people so as to help them to learn something. In this study, it refers to a set of information for 45 minutes by using charts and postures to create awareness and spread knowledge to the people regarding arthritis.

ARTHRITIS

It is defined as the inflammation of joints.

RISK FACTOR

It is variable associated with an increased risk of disease or infection.

COMPLICATION

Negative reaction occurring during the course of an illness and usually aggravating the illness.

PREVENTION

Activities designed to protect patients or other members of the public from actual or potential health threats and their harmful consequences.

ASSUMPTION

- ➢ Majority of people who are residing in village has lack of knowledge on risk factors, complications and prevention of arthritis.
- ➢ Assessing the level of knowledge of people, enable awareness of knowledge regarding arthritis.

HYPOTHESIS

H1- There will be significant difference between the pre and post test knowledge scores regarding risk factor, complications and prevention of arthritis among the people.

H2- There will be a significant association between post test knowledge scores with their selected demographic variables.

DELIMITATION

➢ Samples were limited to 100 individuals.

➢ The period of the study was limited to 6 weeks.

PROJECTED OUTCOME

The result may be effective for conducting structure teaching programme of knowledge of risk factors, complications and prevention of arthritis among the selected population.

CONCEPTUAL FRAMEWORK

This investigator adopted modified Imogene king's attainment theory (1981) based on personal and interpersonal systems including perception, action, interaction and transaction. The investigator adopted this basic theory for conceptual framework which is aimed to find out the effectiveness of structured teaching

programme on people regarding risk factors, complications and prevention of arthritis. This involves interaction between the researcher and people. There are four major concepts.

PERCEPTION

It refers to people's representation of reality. It is not observable but it can be inferred. Hence the investigator perception is the need for teaching programme on risk factors, complications and prevention of arthritis among the selected population in panchayat union at kadamalaipudhur, kanchipuram district.

ACTION

It refers any changes that have to be achieved. The nurse educator has planned for structured teaching programme for risk factors, complications and prevention of arthritis among the selected population to update their knowledge.

INTERACTION

It refers to the verbal and non verbal behavior between one individual and environment or between two or more individual who involve goal directed perception and communication. Here the

investigator interacts with the people by giving pre test and planned structured teaching programme.

TRANSACTION

This is the achievement of a goal. In this stage the investigator reassesses the knowledge regarding risk factors, complications and prevention of arthritis on people by conducting post test.

| PERCEPTION | ACTION | INTERACTION | TRANSACTION |

PRE TEST

P E O P L E

Assessment of learning needs about risk factors, complications and prevention of arthritis

Lack of knowledge about risk factors, complications and prevention of arthritis

Preparation of structured teaching programme on risk factors, complications and prevention of arthritis

People are motivated to gain knowledge on risk factors, complications and prevention of arthritis

Administration of structured teaching programme through lecture cum demonstration

Response to structured teaching programme on risk factors, complications and prevention of arthritis

POST TEST

Adequate knowledge on risk factors, complications and prevention of arthritis

Moderately adequate knowledge on risk factors, complications and prevention of arthritis

Inadequate knowledge on risk factors, complications and prevention of arthritis

FEED BACK

FIGURE 1.1 Modified Imogene Kings Goal Attainment Theory (2011)

CHAPTER-II
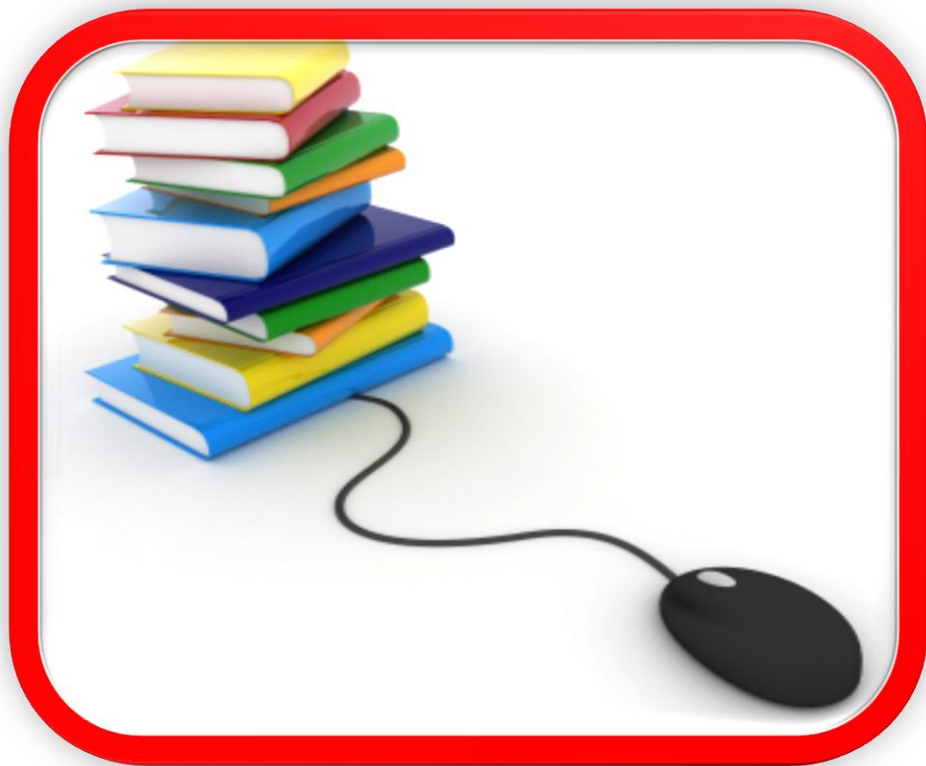
REVIEW OF

LITERATURE

CHAPTER-II

REVIEW OF LITERATURE

A literature review is a "Critical analysis of a segment of a published body of knowledge through summary, classification and comparison of prior research studies, review of literature, and theoretical articles.''

(Wisconsin 2004)

This chapter deals with the information collected in relation to the present Study through published and unpublished materials, which provided the foundation to carry out this study.

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

1. **Literature related to risk factors of arthritis.**

2. **Literature related to complication of arthritis**

3. **Literature related to prevention of arthritis**.

Study Related To Risk Factors of Arthritis

An JY, Tak YR,(2011), this study was to investigate the prevalence of depressive symptoms and risk factors in elderly people (old vs. oldest-old) with arthritis. The findings show that there are age differences in depression and related factors in elderly people with arthritis. Longitudinal studies, which covered depressive symptom severity and which are controlled for a large number of potential confounders, will need to complement the results of this study in the future.

Brock K, (2011), Worry in older community-residing adults. With rising longevity, increasing numbers of older people are experiencing changes in their everyday family and social life, affecting their health. This latter finding suggests the importance placed on the role of the hip and knee in maintaining functional capacity to perform life skills.

Galloway JB, **(2011),** to evaluate the risk of septic arthritis (SA) in patients with rheumatoid arthritis (RA) treated with anti-tumor necrosis factor (TNF) therapy. The risk was highest in the early months of therapy. The patterns of reported organisms differed in the anti-TNF cohort. Prior joint replacement

surgery was a risk factor for SA in all patients. This risk was not significantly influenced by anti-TNF therapy. Anti-TNF therapy use in RA is associated with a doubling in the risk of SA. Physicians and surgeons assessing the RA patient should be aware of this potentially life-threatening complication.

Muthuri SG, (2011), Risk reduction in knee osteoarthritis estimated. Through a meta-analysis of observational studies. To summarize the overall relative risk of knee osteoarthritis (OA) associated with body mass index, and to estimate the potential risk reduction due to the control of this risk factor. The percentage of obesity in different populations was obtained from the International Obesity Task Force. Obesity is a risk factor for many conditions, including knee OA. The benefit of modifying this risk factor may cause significant risk reduction of knee OA in the general population, especially in Western countries where obesity is prevalent.

Kaila-Kangas L, (2011), He reviewed work histories of manual handling of loads >20 kg in relation to hip osteoarthritis by age, exposure and work participation. A nationally representative sample of 3110 Finnish men and 3446 women aged 30-97 was recruited. Work participation among men aged <60 years with hip

osteoarthritis was 20% lower compared with subjects without osteoarthritis. A work history of manual handling of loads >20 kg showed a strong association with hip osteoarthritis in all age groups except the youngest.

Sandell L, (2011), inflammatory mediators: tracing links between obesity and osteoarthritis. Obesity is one of the most influential but modifiable risk factors because it exerts an increased mechanical stress on the tibiofemoral cartilage. This review provides information on the relationship between obesity and OA through biomechanical and biochemical factors and highlights the functions of important obesity-related inflammatory products in the initiation and progression of OA.

Sukswai P, (et al) (2011), to evaluate the clinical features, causative pathogens and outcomes-related to acute hematogenous osteomyelitis and septic arthritis in pediatric patients. The authors conducted a retrospective cohort study of patients less than 15 years of age. MSSA was the most common bacterial pathogen causing pediatric osteoarticular infections in all age groups but was second to MRSA in the newborn group.

Yahya A, Bengtsson C,(2011), They investigated the association between cigarette smoking and the risk of developing rheumatoid arthritis (RA) in the Malaysian population. A total of 1,056 RA patients and 1,416 matched controls aged 18-70 years within a defined area of Peninsular Malaysia were evaluated in a case-control study between August 2005 and December 2009. They conclude smoking is associated with an increased risk of ACPA-positive RA in the Malaysian population, in which the genetic context is similar to several other Asian countries.

Callahan LF,(2010), the purpose of this study was to examine data from the Johnston County Osteoarthritis (OA) Project for independent associations of educational attainment, occupation and community poverty with tibiofemoral knee OA. A cross-sectional analysis was conducted. Occupation had no significant independent association beyond educational attainment and community poverty. Both educational attainment and community SES were independently associated with knee OA after adjusting for primary risk factors for knee OA.

Fagerer N, Kullich W, (2010), in obese rheumatoid arthritis (RA) patient's inflammatory mechanisms and cardiovascular secondary disorders are possibly related to

changed expression of adipocytokines. Significant differences between normal-weight and obese RA patients were found in both leptin and adiponectin measurements. Increased pro-inflammatory leptin and decreased anti-inflammatory adiponectin in obese RA patients can be associated with RA activity and enhanced cardiovascular risk.

Macovei L, **(2010),** Patients with rheumatoid arthritis (RA), an immune-mediated inflammatory rheumatic disease with peripheral and systemic involvement, are at increased risk of bone loss and fractures. One-year prospective observational study on 83 consecutive postmenopausal women, osteoporosis was commonly demonstrated in lumbar spine and osteopenia at hip level. Several characteristics based on DXA assessment have been identified, including preference for distinct skeletal sites (spine, hip, distal forearm), and the particular intervention of menopause.

Maffulli N, (2010), Weight-bearing joints including the hip, knee and ankle are at risk of developing osteoarthritis (OA) in former athletes, after injury or in the presence of misalignment, especially in association with high impact sport. Knee injury is a risk factor for OA. To assess whether benefits from sports

participation outweigh the risks, future research should involve questionnaires regarding the health-related quality of life in former athletes, to be compared with the general population.

Cooper C, (2009), the following three risk factors was found to be associated with osteoarthritis of both the hip and the knee: first, a history of joint injury: for osteoarthritis of the hip, second, climbing stairs frequently: for osteoarthritis of the hip, third, lifting heavy weight frequently: for osteoarthritis of the hip. A case-control study was conducted. In addition, subjects whose height and weight were in the highest quartile were at increased risk of osteoarthritis of the hip and knee, respectively ($p < 0.05$).

Eliza Chakaravarthy (2009) conducted a long term study at Stanford University to investigate the effect of running in Osteoarthritis. In this study 90 persons were randomly assigned to two groups. Forty-five persons formed the study group and 45 persons for control group. The participants continued the study for duration of 18 years. The persons were exercised once a day in early morning. The results indicated that after 18 years 20% of the runners had developed Osteoarthritis in the knee, compared with 42% of the non runners.

K.M.Misillian (2009) conducted a study to determine the gender difference of anxiety level in old age home with Osteoarthritis. In this study participants were prospectively placed in to two groups. In group A 20 male persons and group B 20 female person's .The level of anxiety was scored on Jung anxiety scale. .The conclusion revealed that in group A 12% had severe anxiety and 43% moderate anxiety and remaining were in mild anxiety, but in group B 45% had severe anxiety and 37% had moderate anxiety and remaining were in mild anxiety. The result suggested that female persons had more anxiety than the male persons.

Moses.k.B. (2009) conducted a study to determine the effect of sleep in emotional well being and daily normal activities of patients with Osteoarthritis. This study aimed to examine the relations of sleep patterns to normal physical activities and emotional well being. The variables used were physical activity, and emotionalwell being. The samples were 66 persons selected by simple random technique. They reported the sleep using a Pittsburgh sleep quality index. Reliability of the tool was found to be 0.78. The validity had been described by the researchers as good with a sensitivity of 91.5% and a specificity of 83.4%. The

method of data collection was through questionnaire and interview schedule. The result showed that 64% experienced sleep disturbance and remaining had normal sleeping pattern. The researcher concluded that those who had normal sleeping pattern, had good emotional well being, and physical activities compared to the other.

Study Related To Complications Of Arthritis

Hamblin MJ, (2011), interstitial lung disease (ILD) is an increasingly recognized complication of rheumatoid arthritis (RA) contributing to significantly increased morbidity and mortality. In this paper they will explore an effective clinical algorithm for the diagnosis of RA-ILD. They will also discuss features of drug-related toxicities, infections, and environmental toxins that comprise the main entities in the differential diagnosis of RA-ILD. Finally, they will explore the known and experimental treatment options that may have some benefit in the treatment of RA-ILD.

Komatsu H, (2011), acute liver failure (ALF) with macrophage activation syndrome (MAS) is well known as a complication of systemic-onset juvenile idiopathic arthritis (S-JIA). However, liver failure without overt MAS is rare in S-JIA. They encountered two Japanese children with S-JIA in whom ALF

developed during the remission of clinical manifestations. ALF without MAS was improved with plasma exchange and cyclosporine A combined with pulse methylprednisolone.

Matsuda M, **(2011),** Leukoencephalopathy induced by low-dose methotrexate in a patient with rheumatoid arthritis**.** He reports a patient with rheumatoid arthritis (RA) who developed leukoencephalopathy while being treated with low-dose methotrexate (MTX). She suddenly developed loss of recent memory and left homonymous hemianopsia ascribable to the bilateral but right-predominant occipitotemporal lesions. Intravenous administration of dexamethasone and cessation of MTX quickly relieved her clinical symptoms. Low-dose MTX-induced leukoencephalopathy is a rare complication in RA, but is important with regard to the possibility of serious neurological sequellae.

Rusu TE, (2010), the aim of the study was to evaluate the presence and etiopathogenesis of osteopenia in 41 children with Juvenile Idiopathic Arthritis (JIA). Results were obtained as Speed of sound (SOS) and Z-score. They used standardized clinical evaluation. The disease activity and nutritional status was the most important risk factors for osteopenia. The increase of bone

reabsorption was the main pathogenic mechanism of osteopenia in his study. Calcium and magnesium deficits were related to osteopenia. Decrease of bone synthesis was not associated with osteopenia in the present study.

Jacobsen S*,* **(2010),** Epidemiological studies show an increased prevalence of osteoarthritis of the knee and hand with increased body mass index [BMI]. Osteoarthritis of the hip joint is not related to BMI. The connection between obesity and osteoarthritis cannot exclusively be explained by genetic factors or by the accumulation of tear and wear. Overweight occurs prior to knee joint degeneration, not as a result of diminished activity due to joint degeneration. Weight control seems to be an influential tool in the prophylaxis of overweight-specific joint degeneration.

Bély M, (2010), Complications and/or associated diseases in rheumatoid arthritis can present atypical clinical manifestations which may lead to an incorrect or delayed diagnosis. The aim of this study was to determine: (1) the complications of rheumatoid arthritis, the accompanying diseases, and the mortality of these, (2) the clinically missed diagnoses of complications and/or associated diseases, (3) the possible links between coexistent complications of rheumatoid arthritis and/or diseases

associated with it, furthermore the possible role of these in the mortality of rheumatoid arthritis patients.

Dixon P, (2010), Spontaneous bilateral distal ulna fracture: an unusual complication in rheumatoid patient. Bilateral ulna stress fractures are extremely rare. Patients with rheumatoid arthritis have osteopenic bone secondary to a variety of causes. We report a case of bilateral stress fractures of the ulna in an elderly patient with rheumatoid arthritis, and literature on this condition is reviewed. Prompt recognition and activity modification are essential to treat this rare injury. Recovery can take up to 12 weeks.

Cunha BM, (2010), Rheumatoid arthritis (RA) is one of the major indications of total hip (THA) or knee (TKA) arthroplasty. International studies have suggested that RA is a risk factor for prosthesis infections. Retrospective, comparative cohort study done in the patients .No significant difference was observed. RA was not identified as a risk factor for perioperative infections in THA and TKA. The low incidence of infections in both groups may explain our findings.

Di Gangi M, (2009), Inflammation involving the uveal tract of the eye, termed uveitis, is frequently associated with various rheumatic diseases, including juvenile rheumatoid arthritis, Crohn's disease and Behçet's disease. He describes a case of new-onset uveitis in a patient with rheumatoid arthritis during therapy with etanercept at first and infliximab at last. Although he cannot exclude uveitis as linked to rheumatoid arthritis, it is unlike that the uveitis arises when the joint disease is well controlled. The hypothetical paradoxical effect of anti-TNF is here discussed.

Hasegawa H, (2009), performed abdominal ultrasonography (US) on patients with rheumatoid arthritis (RA) to investigate the frequency and characteristics of gallstones (GS).He observed a high incidence of GS in female patients with RA. With his previous observation of a high incidence of renal stones in patients with RA, these results suggest the importance of US as a diagnostic tool in the management of RA.

Galiutina Olu, (2009), the aim of this investigation was to study the frequency and duration of silent myocardial ischemia (SMI) and to evaluate its relationship with the duration of rheumatoid arthritis (RA) and hyperhomocysteinemia. It was often recorded "silent" myocardial ischemia in patients with the RA,

which was associated with high activity of inflammatory process (high C-reactive protein, the disease activity score, HAQ, number of swollen and painful joints) and hyperhomocysteinemia, whereas disease duration was less important in formation of SMI.

Study Related To Prevention of Arthritis

Lahiri M, Morgan C, **(2011),** Modifiable risk factors for RA: prevention, better than cure. To perform a meta-synthesis of the evidence for modifiable lifestyle risk factors for inflammatory polyarthritis (IP) and RA.Methods. Case-control and cohort studies and systematic reviews published from 1948 through February 2011 and studying modifiable risk factors for RA were retrieved. There is a need for further large-scale prospective studies with a consistent definition of RA phenotype (undifferentiated IP through to ACPA(+)/RF(+) disease). This will ultimately afford the opportunity to evaluate preventative population strategies for RA.

Cho YT (et al), (2011), Use of anti-tumor necrosis factor-α therapy in hepatitis B virus carriers with psoriasis or psoriatic arthritis. HBV reactivation was observed in three patients, one of whom required antiviral treatment. No HBV reactivation-related hepatitis was observed. Two of the seven patients were

inactive HBV carriers, and the other five patients had chronic hepatitis B. Only one patient received antiviral agents before the anti-TNF-α treatment. It can be considered as an alternative in psoriasis patients treated by TNF-α inhibitors, especially in areas with a high HBV burden and in hepatitis B e-antigen-negative patients who have a lower risk of viral reactivation.

Cook KE, Field WE, (2011), this article presents proceedings of the first national conference to assemble professionals to address the issue of arthritis in agriculture. The "Arthritis, Agriculture, and Rural Life: State of the Art Research, Practices, and Applications" conference, May 11-13, 2011, at the Purdue University Beck Agricultural Center in West Lafayette, Indiana, focused on increasing awareness and education in the prevention, effects, care, and treatment of arthritis specific to farmers. The conference concluded with a farmer panel, where attendees heard personal stories from farmers suffering from the effects of arthritis.

Leavenworth JW, (2011), Mobilization of natural killer cells inhibits development of collagen-induced arthritis. Although natural killer (NK) cells have been implicated in regulating immune responses, their ability to modulate disease development in

autoimmune arthritis has not been analyzed. The results suggest that antibody-dependent enhancement of NK activity may yield effective, previously undescribed therapeutic approaches to this autoimmune disorder.

Bergström U, **(2011),** Environmental risk factors are of potential interest for both prevention and treatment of RA. The purpose of this study was to examine the effect of pulmonary function, smoking and socio-economic status on the future risk of RA. Pulmonary dysfunction did not predict RA, but smoking and low socio-economic status were independent risk factors for RA. Other effects of smoking may be important for RA susceptibility.

Lee SY, **(2011),** SHINBARO is a purified extract from a mixture of 6 oriental herbs that have been used as a traditional medicine for treatment of several inflammatory diseases and bone disorders. We determined anti-inflammatory and antinociceptive activities of SHINBARO in adjuvant-induced (osteo) arthritis in rats. He confirmed that SHINBARO is as effective as celecoxib, a selective COX-2 inhibitor, but it has the better safety profile in clinical trials. Finally, SHINBARO was approved as a New

HerbalMedicine for treatment of osteoarthritis by Korean FDA on January 25(th), 2011.

Mangani I, (2009), Physical exercise is associated with a lower risk of disability. The impact of comorbidity on the benefits from physical exercise has not been clearly investigated. Elders with comorbidity may benefit from physical exercise to preserve physical function. Data are from 435 participants with knee osteoarthritis aged > or = 60 years enrolled in the Fitness and Arthritis in Seniors Trial (FAST), who were randomly assigned to 18-month health educational (HE), weight training (WT), or aerobic exercise (AE) interventions. AE and WT interventions improve physical function in individuals with comorbidity. AE improves physical function and knee pain independently of the presence of comorbidity.

Vrezas I, (2009), the aim of this study is to examine the dose-response relationships between age, "lifestyle factors" (body mass index, tobacco smoking,), and symptomatic knee osteoarthritis in a population-based case-control study. In accordance with the literature, he found a strong association between BMI and knee osteoarthritis risk. Considering the relatively high prevalence of occupational manual materials

handling, prevention of knee osteoarthritis should not only focus on body weight reduction, but should also take into account work organizational measures particularly aiming to reduce occupational lifting and carrying of loads.

McCarthy M, (2009), Patients with inflammatory arthritis are at increased risk of vaccine preventable infections. This risk is increased by immunomodulatory therapies. Vaccination for influenza and pneumococcal disease reduces the risk. Immunization rates in patients with inflammatory arthritis on immunosuppressive therapies are low. Immunization schedules should be available for each patient during rheumatology and general practice consultations.

Chang WW, (2009), the aim of this study was to assess the effectiveness of a self-management programme among osteoarthritis knee sufferers. Osteoarthritis of the knee is a major cause of loss of function and is common in the older people. A self-management programme is an effective way to increase arthritis self-efficacy, and helps with mastering self-management practices. This programme has introduced a significant result about self-efficacy and self-management to a chronic disease population in Taiwan.

Ierna M, (2009), although the efficacy of standard fish oil has been the subject of research in arthritis, the effect of krill oil in this disease has yet to be investigated. The objective of the present study was to evaluate a standardized preparation of krill oil and fish oil in an animal model for arthritis. Consumption of krill oil and supplemented diet significantly reduced the arthritis scores and hind paw swelling when compared to a control diet not supplemented with EPA and DHA. The study suggests that krill oil may be a useful intervention strategy against the clinical and histopathological signs of inflammatory arthritis

CHAPTER-III

METHODOLOGY

CHAPTER-III

METHODOLOGY

RESEARCH APPROACH

In this study a quantitative evaluatory approach used to assess the effectiveness of structured teaching programme on risk factors, complications and prevention measures among the people.

RESEARCH DESIGN

Quasi experimental design in which one group pre test post test design approach is used to assess the effectiveness of structured teaching programme.

SETTING OF THE STUDY

The study is conducted at kadamalaipudhur village, kanchipuram district,Tamilnadu.

POPULATION

People aging 35years and above who are residing at kadamalaipudhur village,kanchipuram district.

SAMPLE SIZE

100 People residing in kadamalaipudhur village, kanchipuram district, during the period of data collection are selected as samples.

SAMPLE TECHNIQUE

Simple random sampling technique is used.

CRITERIA FOR SELECTION OF SAMPLE

Inclusion criteria

- Age above 35years.
- Who are willing to participate in this study.
- Who are residing at kadamalaipudhur village.

Exclusion criteria

- People who don't know Tamil or English language.
- People who are not co-operative.

INSTRUMENT FOR DATA COLLECTION

The scholar constructed the Instrument based on the objectives of the study through literature review and expert's

guidance .The data collection is derived the following heading demographic variable, by questionnaire method.

SECTION I

This section consists of information about demographic variables such as age, gender, religion, education status, type of family, marital status, monthly income of the family, occupation status, source of income, source of health information.

SECTION II

This section deals with questionnaire for assessment of knowledge regarding road safety. It consists of 30 multiple choice questions related to knowledge regarding risk factors, complications and prevention of arthritis among people. Each correct answer would be given the score of one and the wrong answer would be given the score of zero. The total possible score would be 30.

DATA COLLECTION

The study was conducted in panchayat union kadamalaipudhur village, kanchipuram district. The data was collected for a period of six weeks by using the prepared tools. The tools had been developed based on the study and through review of literature.

CHAPTER-IV

DATA ANALYSIS

AND

INTERPRETATION

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with statistical analysis. Statistical analysis is a method of rendering quantitative information meaningful and intelligent manner. Statistical procedure enables the researcher to analyze, organize, evaluate, interpret and communicate numerical information meaningfully. The data collected from the people had been tabulated, analyzed and interpreted under following headings.

DESCRIPTION OF THE TOOL

It consists of part-I and part-II

PART I

It consists of demographic variables of people such as age, gender, religion, education, types of family, marital status, monthly income, occupation, source of income, source of health information.

PART II

The data was collected through the well prepared multiple choice questionnaire. It consists of 30 questions and total score was 30. Each correct response was given a score of one and the wrong answer will be given the score of zero. It assesses the level of knowledge of risk factors, complications and prevention of arthritis among the selected population.

SCORING PROCEDURE

In structure interview schedule, each questions has one best answer with other 2 responses are 0. For best answer a score of 1was given and wrong answer 0 was given. The maximum score of structured interview schedule was 30 the percentage is calculated by using the formula as follows.

$$\text{Score interpretation} = \frac{\text{Obtain score}}{\text{Total Score}} \times 100$$

Based on information data were classified as follows.

Less than or equal to 50%   - Inadequate knowledge about arthritis.

51-75%   - Moderately adequate knowledge about arthritis.

> 75%   - Adequate knowledge about arthritis.

REPORT OF PILOT STUDY

The pilot study was conducted to assess the reliability, practicability consent value and feasibility of the tool. The study was conducted in sothupakkam village. Ten people who met inclusion criteria had been selected by simple random sampling technique. The level of knowledge regarding arthritis was assessed with the structured questionnaires. The structured teaching programme was given to enhance level of knowledge of people with the help of educational model of charts and posture through lecture cum discussion method. After 7 days post test was conducted to the same people. The result of the pilot study showed that there was a significant improvement regarding

knowledge of risk factors, complications and prevention of arthritis among the selected population.

VALIDITY

The tool was prepared by the investigator based on literature review, under the guidance of experts and on the basis of objectives, which had been assessed and evaluated, accepted by experts of research committee. The content validity of the tool was obtained from research experts from the medical surgical nursing.

RELIABILITY

The reliability was checked by inter rater method .The reliability was 0.73 after the structured teaching programme was provided and then paired 't' test used to assess the effectiveness of structured teaching programme on knowledge of risk factors, complications and prevention of arthritis among the selected population.

INFORMED CONSENT

The dissertation committee prior to the pilot study approved the research proposal. Permission was obtained from the panchayat president of kadamalaipudhur, kanchipuram district.

The oral consent from people was obtained before starting the data collection. Assurance was given that confidentiality would be maintained.

DATA COLLECTION PROCEDURE

The main study was conducted for six weeks among the selected populationwho were residing at kadamalaipudhur village, kanchipuram district and who met the inclusion criteria were selected by using the simple random sampling technique method.

PLAN FOR DATA ANALYSIS

The data had been organized, tabulated and analyzed by using descriptive statistics.

Mean, standard deviation and paired't' test was carried out to assess the effectiveness of structured teaching programme.

Chi-square test was used for the association of demographic variables with level of knowledge regarding knowledge of risk factors, complications and prevention of arthritis among the selected population.

STATSTICAL METHOD

Descriptive statistical analysis and inferential statistical analysis methods was used to find out the percentage, mean, standard deviation, Paired t test and chi square.

Table: 4.1

S.NO	DATA ANALYSIS	METHODS	REMARKS
1.	**Descriptive analysis**	**The total number of score, percentage of score, mean and standard deviation.**	**To describe demographic variables of the knowledge of risk factors, complications and prevention of arthritis among the selected population.**
2.	**Inferential analysis**	**Paired ' t ' test**	**Analyzing the effectiveness of knowledge of risk factors, complications and prevention of arthritis between pretest and post test.**
3	**Inferential analysis**	**Chi square test**	**Analyzing the association between selected demographic variables and knowledge of risk factors, complications and prevention of arthritis among the selected population.**

DATA ANALYSIS AND INTERPRETATION HAVE BEEN DONE UNDER THE FOLLOWING HEADINGS

SECTION –A

Frequency and percentage distribution of demographic variables among the selected population.

SECTION – B

Comparison between pre test and post test scores of level of knowledge regarding risk factors, complications and prevention of arthritis among the selected population.

SECTION – C

Comparison between mean and standard deviation of pretest and posttest of effectiveness of structured teaching programme on knowledge of risk factors, complications and prevention of arthritis among the selected population.

SECTION – D

Mean and standard deviation of improvement score for knowledge of   risk factors, complications and prevention of arthritis among the selected population.

SECTION – E

Association between the demographic variables in relation to level of knowledge regarding risk factors, complications and prevention of arthritis among the selected population.

SECTION –A

TABLE 4.2: FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES OF KNOWLEDGE OF RISK FACTORS, COMPLICATIONS AND PREVENTION OF ARTHRITIS AMONG THE SELECTED POPULATION. N=100

S.No	DEMOGRAPHIC VARIABLES	NUMBER	PERCENTAGE %
1.	Age in years		
	a)35-45years	50	50
	b)46-55years	24	24
	c)56-65years	18	18
	d)Above 65years	08	08
2.	Gender		
	a)Male	57	57
	b)Female	43	43
3.	Religion		
	a)Hindu	70	70
	b)Muslim	18	18
	c)Christian	12	12
	d)Others	0	0
4.	Educational status		
	a) Illiterate	44	44
	b) Primary education	40	40
	c)Secondary education	10	10
	d) Collegiate	6	6
5.	Types of family		
	a)Nuclear	44	44
	b)Joint	56	56

S.No	DEMOGRAPHIC VARIABLES	NUMBER	PERCENTAGE %
6.	Marital status		
	a)Married	78	78
	b)Unmarried	3	3
	c)Widowed	19	19
	d)Divorced	0	0
7.	Monthly income of the family		
	a)Rs1000-Rs2000	40	40
	b)Rs2001-Rs3000	42	42
	c)Rs3001-Rs4000	8	8
	d)Above Rs 4000	10	10
8.	Occupation		
	a)Agriculture	24	24
	b)Daily wages	64	64
	c)Businessman	6	6
	d)Professionals	6	6
9.	Source of income		
	a)Pensioner	0	0
	b)Government aid	16	16
	c)Property	40	40
	d)Dependent on others	44	44
10.	Source of health information		
	a)Mass media	45	45
	b)Health professional	41	41
	c)Friends and relatives	14	14

Table 4.2 depicts the frequency and percentage distribution of the personal factors of demographic variables includes age, gender, religion, educational status, types of family, marital status, monthly income of the family, occupation, source of income, source of health information, had any class of arthritis. Out of 100 people, 50 (50%) were aged between 35-45 years, 24 (24%) were in 46-55 years, 18(18%) were in 56-65years and 8(8%) were above 65 years. Regarding gender, 57 (57%) were male, 43(43%) was female. With regard to the religion of the people 70(70%) were Hindu, 18 (18%) were Muslim and 12(12%) were Christian and others 0(0%). Regarding education status of the people 44 (44%) were illiterate, 40 (40%) were primary school, 10(10%) were high school and 6(6%) was graduate. Types of family reveals that 44 (44%) were in nuclear family, 56(56%) were joint family .regarding the marital status 78(78%) married, 3(3%) unmarried, 19(19%) were widowed and no one was divorced. Concerning with the monthly income of the family, 40(40%) were in Rs1000-Rs2000, 42(42%) were in Rs.2001-.Rs3000, 8(8%) were in Rs3001-Rs4000 and 10(10%) were above Rs4000. Regarding occupation status, 24 (24%) were doing agriculture, 64(64%) were getting daily wages, 6(6%) were businessman and 6(6%) were professionals.

Concerning source of income, no one was pensioner, 16(16%) were under government aid, 40(40%) had property, 44(44%) were depending on others. Regarding Source of health information, 45(45%) getting from media, 41(41%) from health professionals, 14(14%) getting information from friends and relatives.
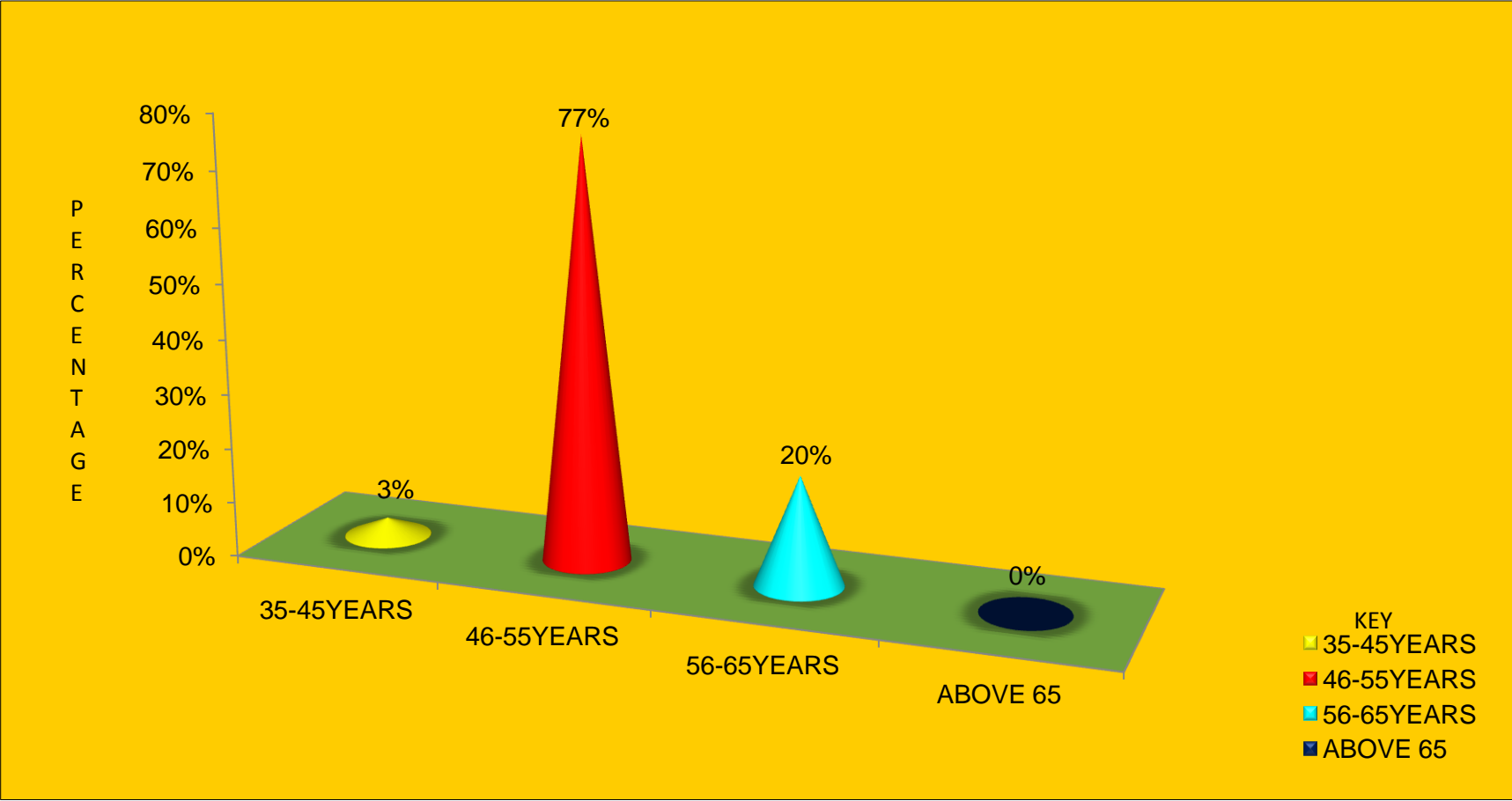
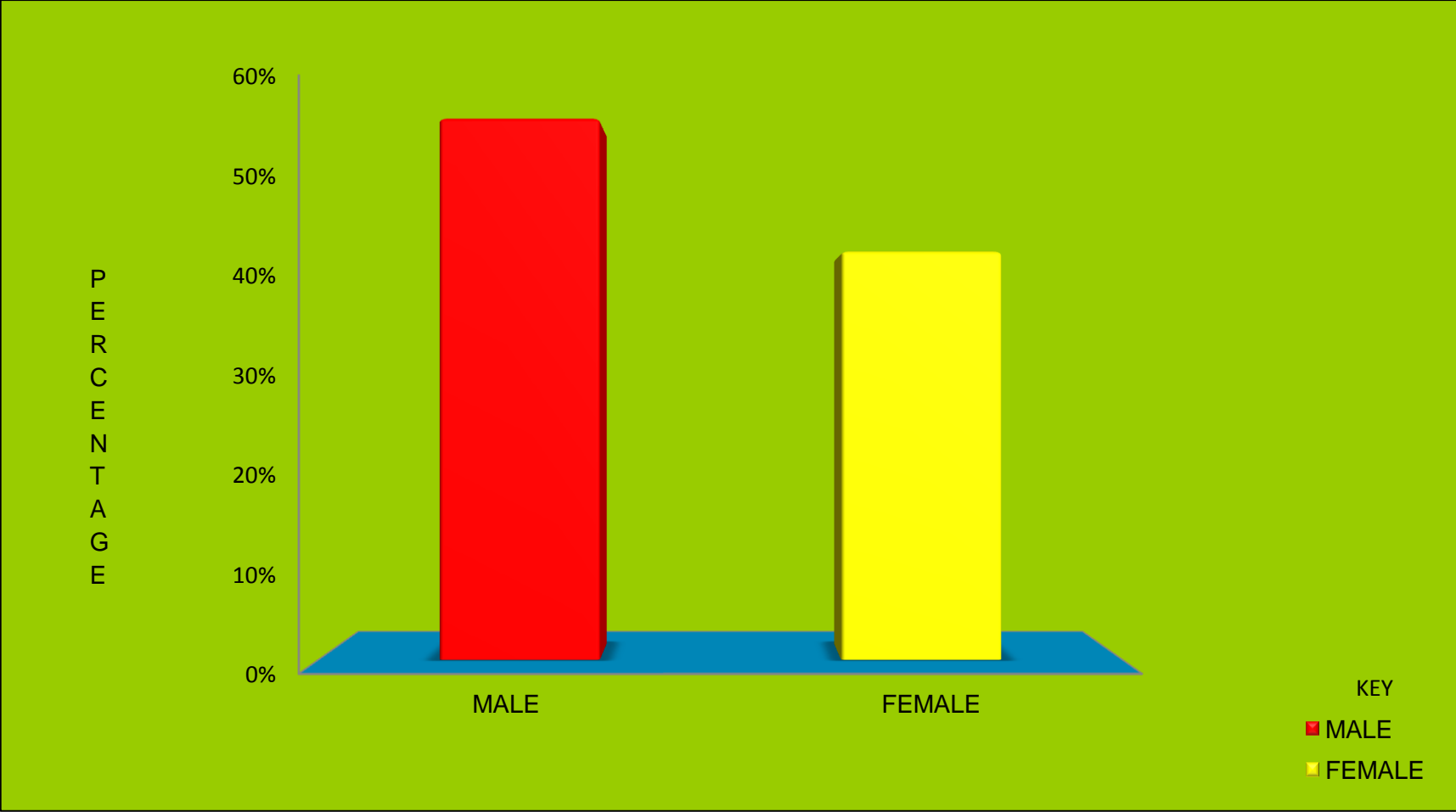**FIG.4.1.PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES ON AGE**

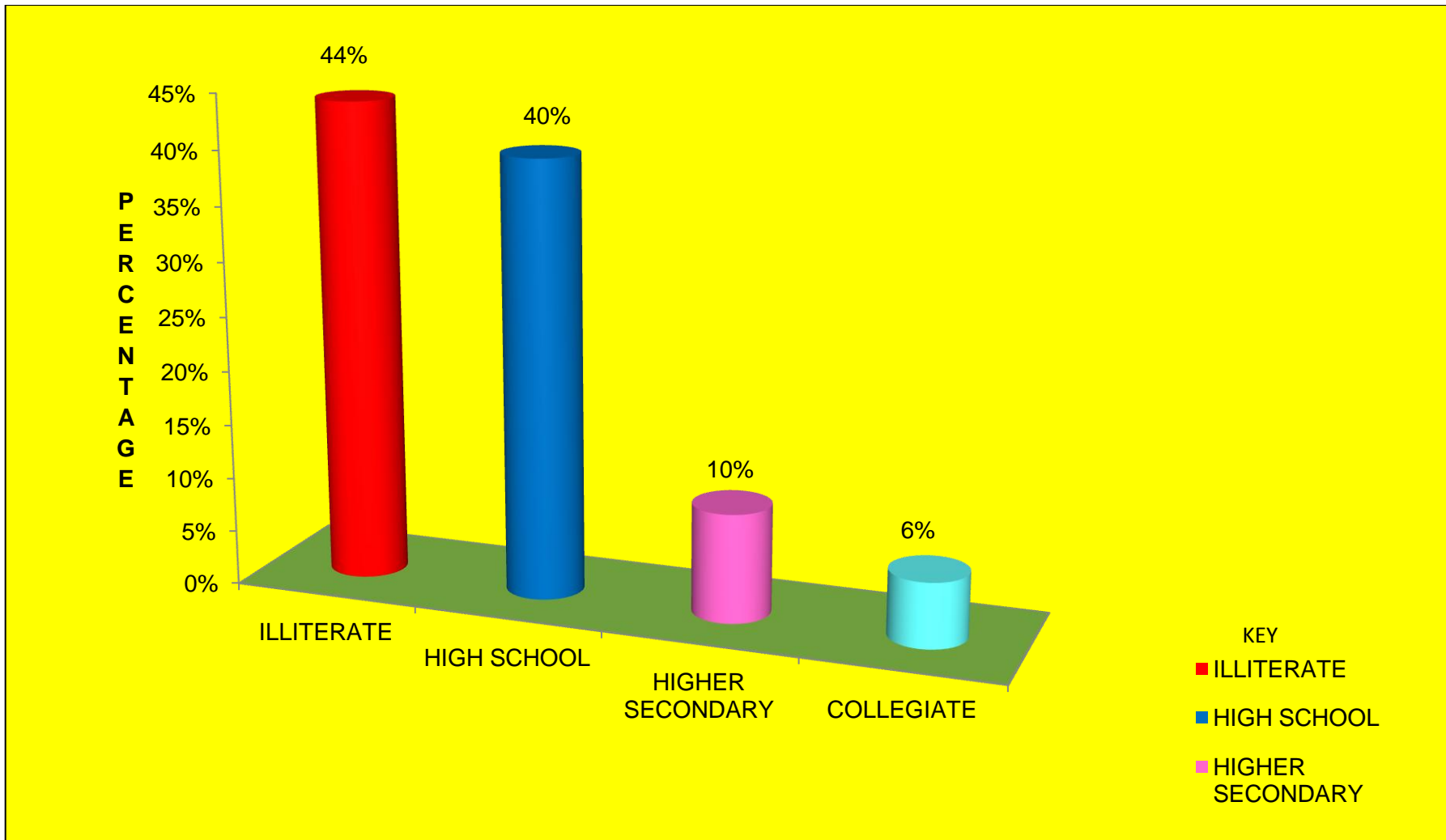**FIG.4.2.PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES ON GENDER**

FIG.4.3. PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES ON EDUCATIONAL STATUS
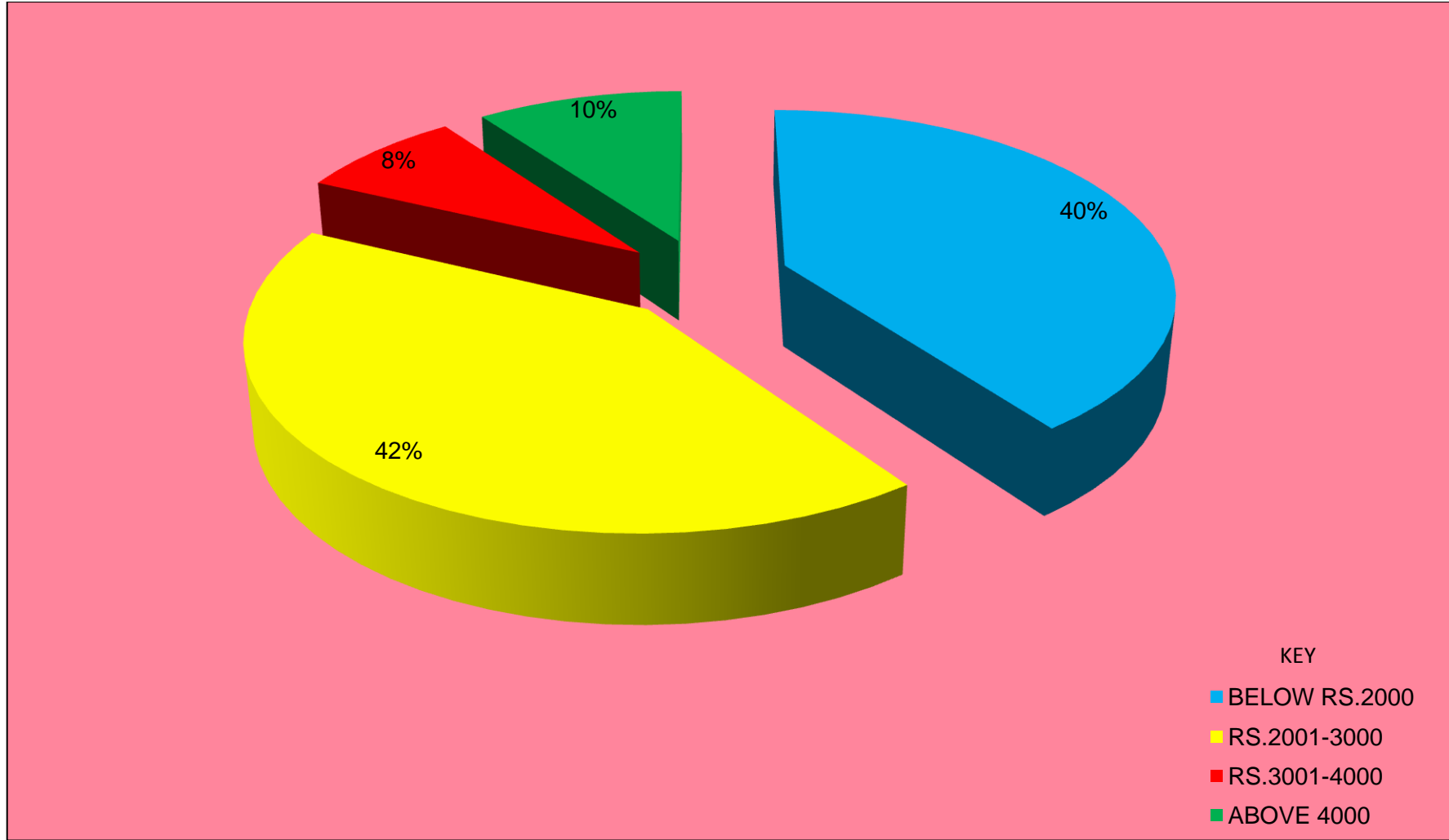
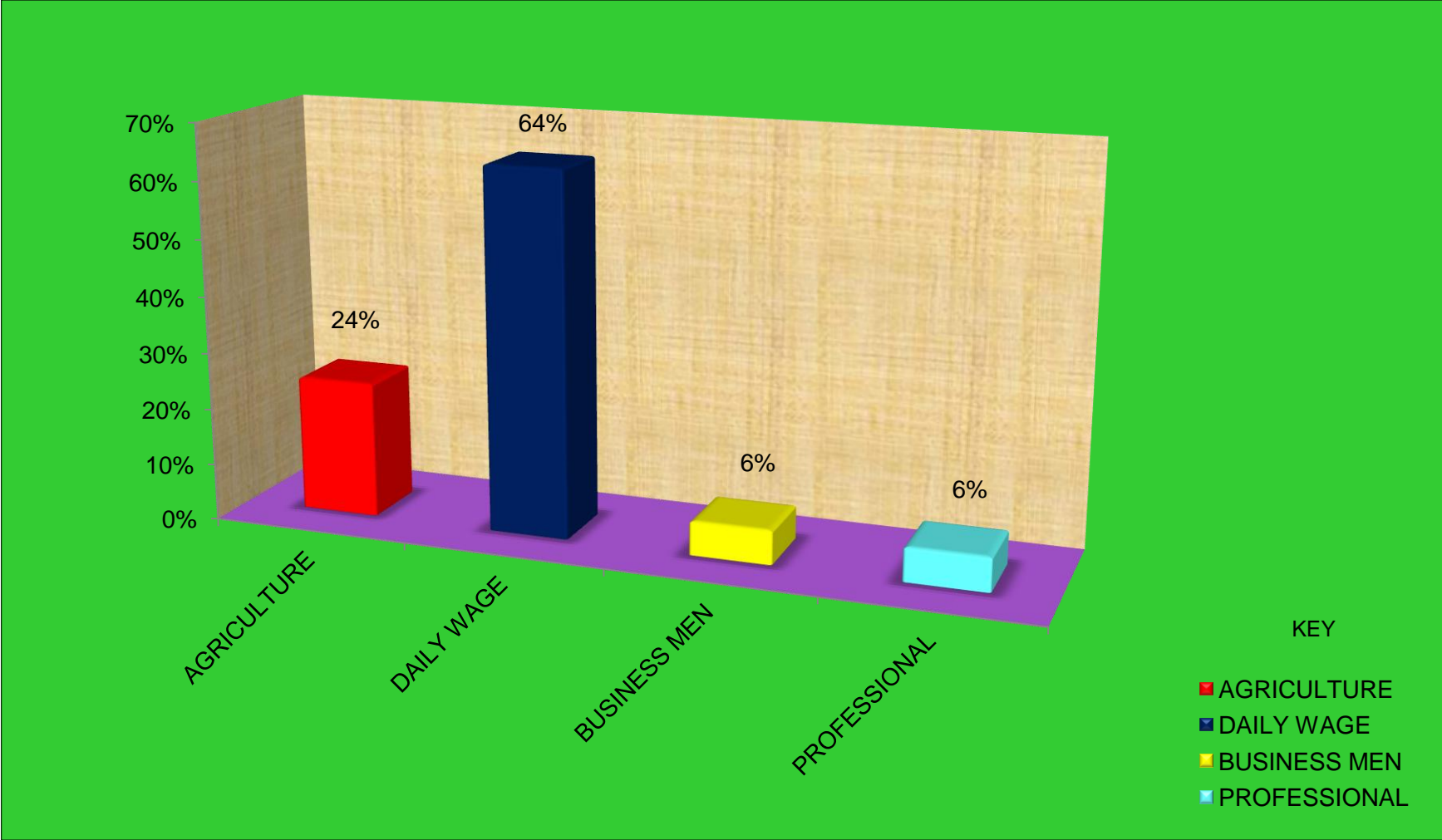**FIG.4.4. PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES ON MONTHLY INCOME**

FIG.4.5. PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES ON OCCUPATION

SECTION – B

TABLE – 4.3: FREQUENCY AND PERCENTAGE DISTRIBUTION OF LEVEL OF KNOWLEDGE AMONG PEOPLE REGARDING KNOWLEDGE OF ARTHRITIS ON PRE TEST AND POST TEST.

N=100

LEVEL OF KNOWLEDGE	ADEQUATE KNOWLEDGE		MODERATE KNOWLEDGE		INADEQUATE KNOWLEDGE		TOTAL	
	No	%	No	%	No	%	No	%
Pre test	0	0	31	31	69	69	100	100
Post test	94	94	6	6	0	0	100	100

Table 4.3 shows that the knowledge regarding risk factors, complication and prevention of arthritis through the pre test and post test based on questionnaire method. On the pre test day among 100 people 31 (31%) had moderately adequate knowledge, 69(69%) people had inadequate knowledge. In the post test day majority of the people 94(94%) had adequate knowledge, 6(6%) people had moderately adequate knowledge and none of them was in inadequate knowledge.
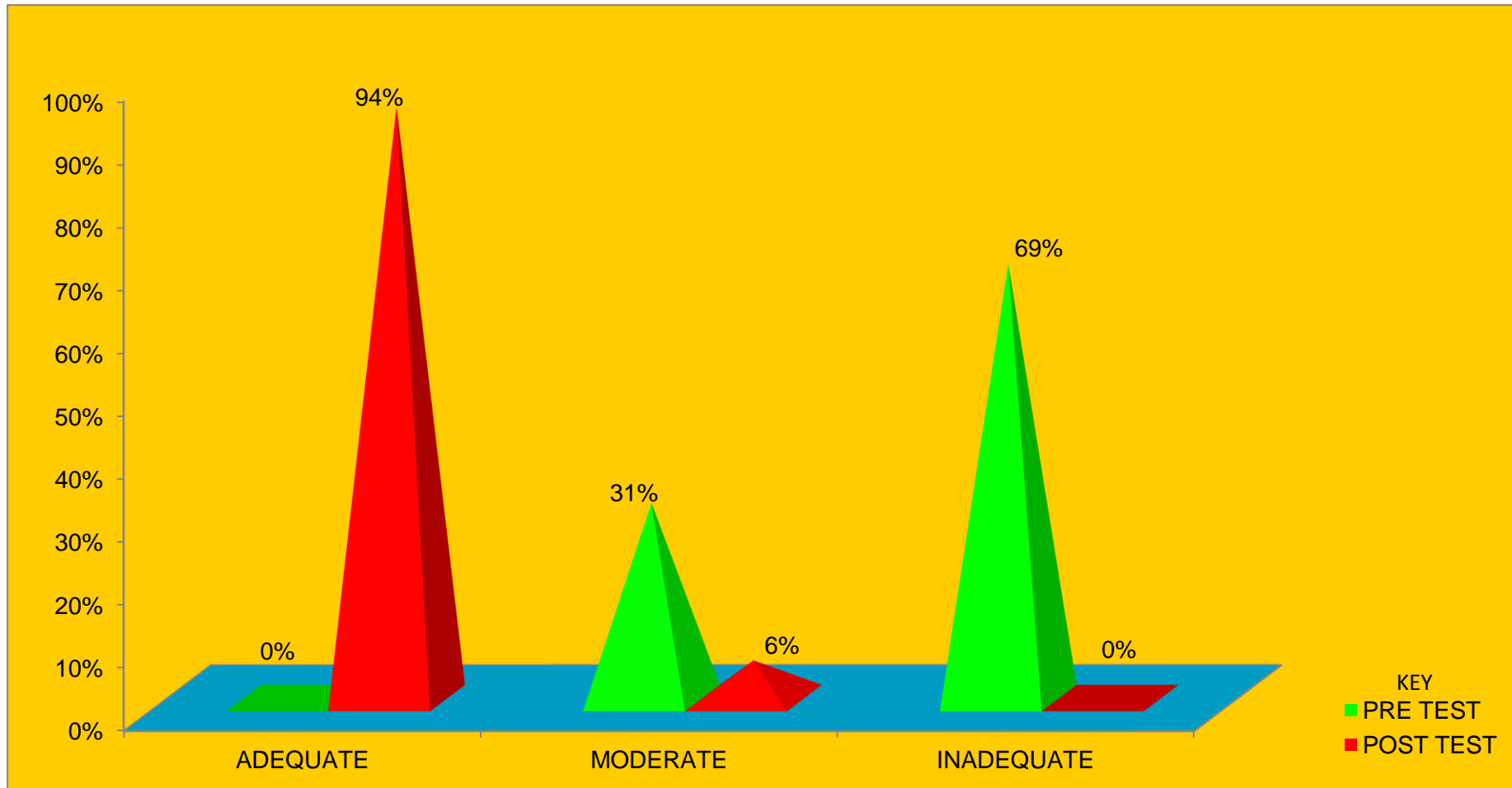
FIG.4.6. FREQUENCY AND PERCENTAGE DISTRIBUTION OF KNOWLEDGE ON RISK FACTORS, COMPLICATIONS AND PREVENTION OF ARTHRITIS AMONG THE PEOPLE ON PRE TEST AND POST TEST DAY

SECTION – C

TABLE – 4.4: COMPARISON BETWEEN MEAN AND STANDARD DEVIATION OF PRE TEST AND POST TEST OF EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE OF ARTHRITIS AMONG THE SELECTED POPULATION.

N=100

S.NO	LEVEL OF KNOWLEDGE	MEAN	STANDARD DEVIATION	CONFIDENCE INTERVAL
1	PRE TEST	13.78	3.338	13.13-14.43
2.	POST TEST	26.22	2.067	25.81-26.63

Table 4.4 shows that the overall mean of knowledge regarding arthritis among the selected population 13.78 in the pre test and 26.22 in the post test. The standard deviation of pre test score is 3.338 and posttest score is 2.067.Confidence interval value in the pre test is **13.13-14.43** and post test is **25.81-26.63.**
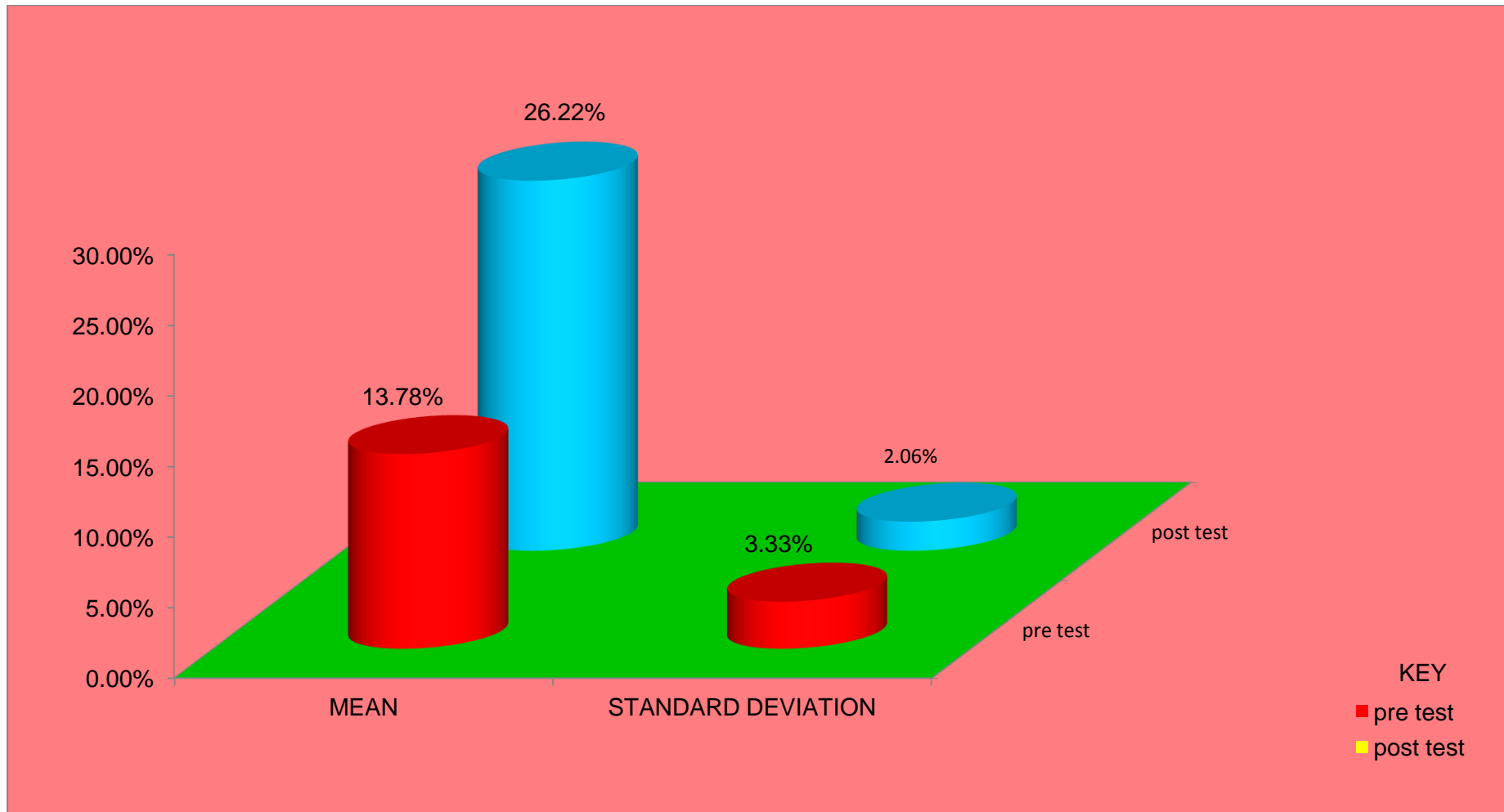
FIG.4.7. COMPARISON BETWEEN MEAN AND STANDARD DEVIATION OF PRE TEST AND POST TEST OF STRUCTURED TEACHING PROGRAMME ON ARTHRITIS

SECTION – D

TABLE – 4.5: MEAN AND STANDARD DEVIATION OF IMPROVEMENT SCORE FOR KNOWLEDGE OF ARTHRITIS AMONG THE SELECTED POPULATION.

S.NO	LEVEL OF KNOWLEDGE	MEAN	STANDARD DEVIATION	't' VALUE	CONFIDENCE INTERVAL
1.	Improvement score	12.440	3.843	32.365	11.67-13.20

$P < 0.05$

Table 4.5 reveals that the mean and standard deviation of improvement score for effectiveness of structure teaching programme of knowledge of arthritis among the selected population. The improvement score of mean value was12.44 with the standard deviation of 3.843 and the 't' test value was 32.365 which were statistically significant. It implies that the structure teaching programme of knowledge of risk factors, complication and prevention of arthritis was effective and showed improvement in knowledge level of people about arthritis.

SECTION – E

TABLE – 4.6: ANALYZING THE ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES AND KNOWLEDGE OF ARTHRITIS AMONG THE SELECTED POPULATION.

N=100

S. NO	DEMOGRAPHIC VARIABLES	POSTTEST				Chi square value
		Adequate		Moderate		
		No	%	No	%	
1.	Age In Years					
	a)35-45years	45	45%	5	5%	3.288 NS
	b)46-55years	24	24%	0	0%	
	c)56-65years	17	17%	1	1%	
	d)Above 65years	7	7%	1	1%	
2.	Gender					
	a)Male	52	52%	5	5%	1.806 NS
	b)Female	42	42%	1	1%	
3.	Religion					
	a)Hindu	66	66%	4	4%	0.132 NS
	b)Muslim	17	17%	1	1%	
	c)Christian	11	11%	1	1%	
	d)Others	0	0%	0	0%	
4.	Education Status					
	a)Illiterate	42	42%	2	2%	2.321 NS
	b)Primary education	36	36%	4	4%	
	c)secondary education	10	10%	0	0%	
	d)collegiate	6	6%	0	0%	
5.	Types of family					
	a)Nuclear family	41	41%	3	3%	0.093 NS
	b)Joint family	53	53%	3	3%	

6.	**Marital status**					
	a)Married	72	72%	6	6%	
	b)Unmarried	3	3%	0	0%	1.8 NS
	c)Widowed	19	19%	0	0%	
	d)Divorced	0	0%	0	0%	
7.	**Monthly income of the family**					
	a)Rs1000-RS2000	37	37%	3	3%	
	b)Rs2001-RS3000	40	40%	2	2%	1.511 NS
	c)RS3001-RS4000	7	7%	1	1%	
	d)Above Rs4000	10	10%	0	0%	
8.	**Occupation**					
	a)Agriculture	21	21%	3	3%	
	b)Daily wage	61	61%	3	3%	2.759 NS
	c)Businessman	6	6%	0	0%	
	d)professional	6	6%	0	0%	
9.	**Source of income**					
	a)Pensioner	0	0%	0	0%	
	b)Government aid	16	16%	0	0%	1.233 NS
	c)Property	37	37%	3	3%	
	d)Dependent on others	41	41%	3	3%	
10.	**Source of health information**					
	a)Mass media	43	43%	2	2%	
	b)Health professional	37	37%	4	4%	2.112 NS
	c)Friends and relatives	14	14%	0	0%	

NS –NOT SIGNIFICANT

Table 4.6 shows that the demographic variables of age, gender, religion, educational status, types of family, marital status, monthly income of the family, occupation, source of income, source of health information had no significant association of level of knowledge regarding risk factors, complications and prevention of arthritis.

CHAPTER-V
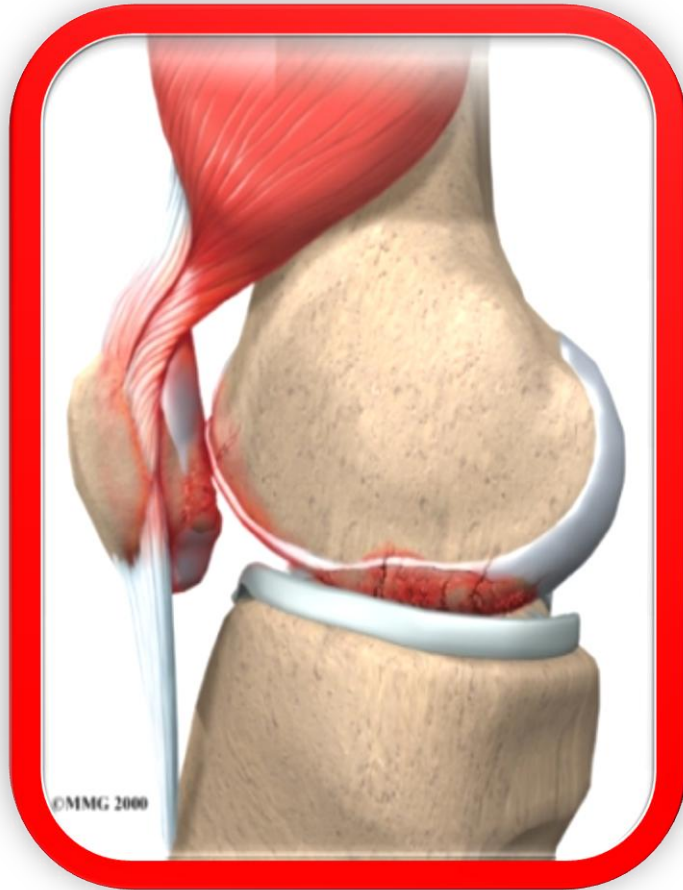
RESULTS AND

DISSCUSSION

CHAPTER –V

RESULTS AND DISCUSSION

The study was undertaken to evaluate the effectiveness of structure teaching programme on knowledge of risk factors, complication and prevention of arthritis among the selected population of kadamalaipudhur. The main objective of the study was to assess the adequacy of the knowledge of the people at kadamalaipudhur village regarding knowledge of arthritis. The study was conducted for a period of six weeks by using quasi experimental research design at kadamalaipudhur village, sample had been selected by simple random sampling technique method. The sampling size was 100. A well formulated structured questionnaire was used to assess the knowledge of arthritis.pre test and structured teaching programme was carried out on the first day. On the eighth day by using the structured questionnaires method post test was carried out.

The first objective was to assess level of the knowledge regarding risk factors, complication and prevention of arthritis.

The assessment of the knowledge regarding knowledge of arthritis carried out in kadamalaipudhur village, kanchipuram district. The people who met inclusion criteria were selected and each of them was assessed with demographic variables and questionnaires method. The data analysis showed that among 100 people 31(31%) had moderately adequate knowledge, 69(69%) had inadequate knowledge. In pre test the overall mean was 13.78 with 3.338 standard deviation. It reveals that, people need educational programme to improve their knowledge about risk factors, complication and prevention of arthritis among the people.

The second objective was to evaluate the effectiveness of structured teaching programme on knowledge of risk factors, complication and prevention of arthritis.

Table 4.3 shows that, in post test, the majority of the people 94(94%) had adequate knowledge, 6 (6%) people had moderately adequate knowledge and none of them was in inadequate knowledge. The overall mean of knowledge regarding arthritis in post test 26.220 with the standard deviation of 2.067.The improvement score of mean value was 12.440 with the standard deviation of 3.843 and the 't' test value was 32.365 which has statistically significant.

The third objective was to associate the effectiveness of structured teaching programme on risk factors, complication and prevention of arthritis among the selected population with their selected demographic variables.

Table 4.6 shows that the demographic variables of age, gender, religion, educational status, types of family, marital status, monthly income of the family, occupation, source of income, source of health information had no significant association of level of knowledge regarding risk factors, complications and prevention of arthritis .

On the whole, the study confirmed that the assumption which was formulated at the beginning was factual and the study was effective in improving their knowledge of the study would be significant difference in the level of knowledge of risk factors, complication and prevention of arthritis among the selected populationwho are residing at kadamalaipudhur village, kanchipuram district .

CHAPTER-VI

SUMMARY AND CONCLUSION

CHAPTER –VI

SUMMARY & CONCLUSION

SUMMARY

The present study was conducted to assess the effectiveness of knowledge on risk factors, complications and prevention of arthritis among the selected population in kadamalaipudhur village. Quasi experimental research design was used for this study .100 people who met inclusion criteria had been selected from kadamalaipudhur village by using simple random sampling technique. The investigator first introduced himself to the people and developed a rapport with them. The pre test was conducted with the questionnaire given to the people regarding knowledge of arthritis. After seven days the post test was conducted by using same evaluation tool. The data collected had been grouped and analyzed by using descriptive statistics and inferential statistics.

CONCLUSION

In pretest out of 100people, 69(69%) people had inadequate knowledge and 31(31%) had moderately adequate knowledge. In posttest 6 (6%) had moderately adequate knowledge and 94(94%) had adequate knowledge. The 't' value 32.365 was compared with

tabulated table value at the level of P< 0.05 was significant .So it is concluded that the structured teaching programme on knowledge of risk factors, complications and prevention of arthritis was effective.

NURSING IMPLICATIONS

The findings of the study have implications in different branches of nursing that is nursing practice, nursing education, nursing administration and nursing research, by assessing a level of people knowledge regarding risk factors, complication and prevention of arthritis. The investigator received a clear picture regarding the different steps to be taken in different field to improve the same.

IMPLICATION FOR NURSING PRACTICE

❖ Educating and creating awareness is an integral part of the nursing service. Based on the finding of this study structured teaching programme can be planned for the nurses to increase the knowledge of risk factors, complication and prevention.

IMPLICATION FOR NURSING EDUCATION

❖ Nurse as an educator plays a major role in educating the people regarding knowledge of risk factors, complications and prevention of arthritis. So the nurse educator must be educated about the knowledge of arthritis and its strategies in order to impart the knowledge to the people.

❖ Nurse educators should provide opportunities for the people to gain knowledge and skills regarding risk factors, complications and prevention of arthritis.

IMPLICATIONS FOR NURSING ADMINISTRATION

❖ With advanced technology and ever growing challenges of health care needs. The college and hospital administration, have a responsibility to provide nurses, nurse educators and nurse students with continuing education on recent advancements in arthritis. This will enable them to update their knowledge and skills.

❖ The study finding will help the administrator to arrange continuing education programme for nurses regarding arthritis. It helps to prepare adequate learning material for giving health education.

❖ The nurse administrator should take active part in the policy making, developing protocol, standing orders related health care measures.

IMPLICATIONS FOR NURSING RESEARCH

❖ There is a need for intensive and extensive research in this area. It opens a big avenue for research on innovative methods

of creating awareness, development of teaching material and setting up multimedia centers for teaching and for creating awareness among the students, nurses, public and other health care professionals.

❖ The study findings will reveal the current knowledge status about the arthritis strategies and the extent to which the knowledge should be improved.

❖ This study will motivate other investigator to conduct future studies regarding arthritis.

❖ This study will help the nurse researchers to develop insight into the developing module and set information towards creating awareness regarding arthritis.

❖ Awareness, development of teaching material and setting up multimedia centers for teaching and for creating awareness among the public regarding arthritis.

❖ These study findings will identify the present knowledge about arthritis to know extent of necessary information to be given.

❖ This study will motivate other investigator to conduct future studies regarding this topic.

RECOMMENDATIONS

Based on the research findings the following recommendations can be made:

- ❖ The same study can be replicated on a larger sample and also at different settings.

- ❖ A comparative study can be done between semi rural and semi urban peoples.

- ❖ A descriptive study can be conducted on assessment of knowledge regarding arthritis.

- ❖ A structured teaching programme on arthritis can be prepared and given to the teachers and the parent's .so that they can impact knowledge to all school students.

- ❖ The structured teaching programme on knowledge of blood donation can be shown to the teachers and parent's .so that they can impart knowledge to all school students.

BIBLIOGRAPHY
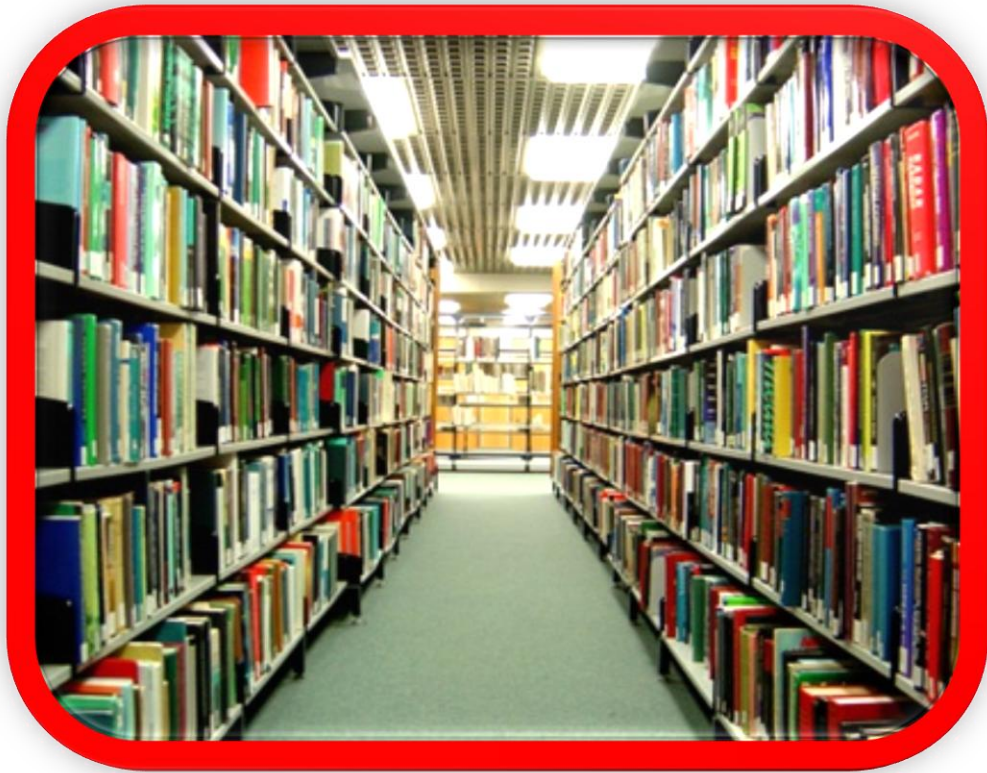
BIBLIOGRAPHY

TEXT BOOKS

1. Barker K. (2007) **"Exercises for arthritis London"** Curropin Rheumatol Company.

2. Basavanthappa. B.T (1993) **"Nursing Research"**, (Ist ed), Bangalore: Jaypee brothers.

3. Bickerton, T. (1985), **"Medical – Surgical Nursing"**, 1st edition, William Heinemann Medical books Ltd.

4. Black M. J and Mawks J. H, (2005), **"Medical Surgical Nursing India"**, Elsevier,

5. Bloom, **"Medical surgical nursing", 15th**edition, Madrid Churchill living stone company.

6. Burns. S (1993) **"The Practice of Nursing Research"**, (4th ed), Philadelphia: W.B. sounders Company.

7. Brunner and Sudharth's (2004), **"Text book of Medical Surgical Nursing"**, 10th edition, Lippincott, Philadephia.Gupta.

8. S.P. (2000) **"Statistical Method"**, (5th ed), New Delhi: Sulthan Chand and Sons.

9. Krishner, Carolyn (2002) **"Therapeutic Exercise, Foundation and Technique"**, (4th ed), New Delhi, Jaypee Brothers.

10. Kothari, C.R. (2000) **"Research Methodology"** (2nd ed), New Delhi, Wishva Prakasan publishers.

11. Kozier. B. Erb. G. Berman. A (2006), **"Fundamentals of Nursing"** (7th ed) New Delhi, Pearson education.

12. Polit. D. T. Hungler, B.P (1999) **"Nursing Research Principles and   Methods"**, (6th ed), Philadelphia: Lippincott company.

13. Raile. M.A. and Marriner. A.T (1997) **"Nursing Theory Utilization and application".** Philadelphia Mosby publications.

14. Tomey. A.M. And Alvigood. R.M. (2002) **"Nursing Theorist and Their Work"**, (5th ed) St. Lousise Mosby publications.

JOURNAL REFERENCE

1.   Alindran. M. (2008) **"Exercise perception for arthritis";**
    Journal of American Physiotherapy, 101: 479 – 481 August.

2.   Angela Hoyle (2003) **"Acupuncture in arthritis knee pain",**
    Journal of Physiotherapy 89: 10 October.

3.   Espen. H (2008) **"Physical therapy interventions for**
    patients with arthritis of the knee", Journal of Physical
    Therapy, 1: 12 January.

4.   Lone, A.R. (2003) **"Analgesic efficacy of transcutaneous**
    electrical nerve stimulation compared with diclofinac
    sodium in arthritis of the knee", Journal of Physiotherapy,
    89: 8 August.

5.   Robin Son. V (2003) **"Thermo therapy for treatment of**
    arthritis" Nightingale Nursing Times 12: 10 December.

6.   Schumacher.H.R, (1994) **"Effect of yoga in arthritis"**, Asian
    Medical J   ournal , 72: 8 March.

7.   Thomas .K.S, **"Benefits of exercise in old age people"**,Asian
    Medical Journal, 83 : 4 April.

8. Basirnia. A (2003) **"laser therapy on arthritis of the knee"**, retrieved from http://www.elservier.com

9. Biordal. J.M. (2008) **"1buproten and glucosamine sulphate in arthritis"**, retrieved from http://www.arthritistoday.org.com.

10. Bouter.M (2006) **"Acupressure in arthritis"**, retrieved from http://www.holisticbamboo online.com/ remedies.

11. Eric manheimer, (2009) **"Acupuncture for arthritis"**, retrieved from http://www. acupuncturetoday.com/mpascms/article.

12. Galeyer(2008) **"Joint pain and lower extremities"**, retrieved from http://www.informationed.com.

13. Hagstad G.B (2005) **"Problem of old age"**, retrieved from http:// www.indianofficer.com

14. Hammar M.D (2003) **"Arthritis in old age"**, retrieved from http://www.librarian observer.com

15. Husain. A (1994) **"Arthritis and yoga",** retrieved from http://www.yogabioline.com.

16. John anne (2008) **"Knee pain in old age"**, retrieved from http:/www.disabledworld.com/ artman.

17. Mayers. L. Nora (2007) **"Exercises for arthritis"**, retrieved from http://www.annals.org / content.

18. Raiesh Nair (2008) **"Yoga in arthritis"**, retrieved from http://www.healthcare.com/potin.62

19. Roger.J.A(1997) **"Review of literature"**, retrieved from http://www.biology.online.dictionary.

20. Sahan Mathew (2004) **"Isometric exercises"**, retrieved from http:// www.online exercises. com.

21. Schumacher, (1994) **"Anxiety in old age"**, retrieved from http://www. Oldage welfare.com .

22. Thomas.K.S. (1999) **"Home based exercise programme in patients with knee pain",** retrieved from http://kneeservices.com.

23. Tilter. K. (1997) **"Problem of old age people",** retrieved from htttp://www.oldage.com.

24. Tom.R and Barbara.G (2000) **"Yoga therapy"**, retrieved from http://www.online .com

NET REFERENCE

http://www.elservier.com

http:// www.indianofficer.com

http://www.librarian observer.com

http://www.yogabioline.com.

http://www.online.com

htttp://www.oldage.com

http://www.annals.org / content

http://kneeservices.com

http://www.oldagewelfare.com

http:// www.online exercises.com.

http://www.healthcare.com/potin.62

http:/www.disabledworld.com/ artman.

http://www.informationed.com.

APPENDIX - I
DEMOGRAPHIC VARIABLES

1. Age in years

    a) 35 – 45 years

    b) 46 – 55 years

    c) 56 – 65 years

    d) Above 65

2. Gender

    a) Male

    b) Female

3. Religion

    a) Hindu

    b) Muslim

    c) Christian

    d) Others

4. Educational status

    a) Illiterate

    b) Primary education

    c) Secondary education

    d) Collegiate

5. Types of family

    a) Nuclear

    b) Joint

6. Marital status

    a) Married

    b) Unmarried

    c) Widowed

    d) Divorced/ separated

7. Monthly income of the family

    a) Rs 1000 to Rs 2000

    b) Rs 2001 to Rs 3000

    c) Rs.3001 to Rs 4000

    d) Above Rs.4000

8. Occupation

    a) Agriculture

    b) Professional

    c) Business man

    d) Daily wager

9. Source of income

    a) Pensioner

    b) Government aid

    c) Property

    d) Dependent on others

10.   Source of health information

    a) Media

    b) Health professional

    c) Friends and relatives

TOOLS

KNOWLEDGE QUESTION ON ARTHRITIS

1. Joints are formed by
   a) Union of two bones
   b) Union of two muscles
   c) Union of two organs

2. Joints help in
   a) Movement of bone
   b) Stabilization
   c) Blood circulation

3. The common joint that is affected is
   a) Joint of knee
   b) Joint of hand
   c) Joint of feet

4. Arthritis means
   a) Inflammation of joints
   b) Inflammation of bones
   c) Inflammation of muscles

5. The major symptoms of arthritis is
   a) Constant joint pain
   b) Constant fever
   c) Constant headache

6. Arthritis pain is caused by
   a) vibrations
   b) Tear of joint
   c) Muscle strain

7. The speed of onset of pain in

    a) Within month

    b) Within weeks

    c) Within few hours

8. Arthritis is common among

    a) 10-20 years of age

    b) 20-30 years of age

    c) above 35 years of age

KNOWLEDGE QUESTION ON RISK FACTORS AND COMPLICATIONS

9. The factors influencing arthritis is

    a) Sedentary life style, joint trauma , obesity

    b) Heart disease and kidney disease

    c) Muscle disorder and diabetes

10. The consumption of one of following vegetables that worsen arthritis is

    a) Potato

    b) Lady's finger

    c) Brinjal

11. One of the modifiable risk factors is

    a) Obesity

    b) Age

    c) Gender

12. Major factors that disrupts the body hormonal balance that cause arthritis is

    a) Hypertension

    b) Sedentary life style

    c) Stress

13. Highly impact occupation on arthritis is

    a) Engineers

    b) Construction crews

    c) Doctors

14. Highly impact sports on arthritis is

    a) Foot ball

    b) Cricket

    c) Chess

15. One of the complications of obesity is

    a) Arthritis

    b) Kidney failure

    c) Paralysis

16. Range of motion of joints is improved by

    a) Regular exercise

    b) Vigorous activity

    c) Regular medication

17. The organs that affected other than joints are

    a) Kidney and eye

    b) Liver and lungs

    c) Brain and spinal cord

KNOWLEDGE QUESTION ON MANAGEMENT AND PREVENTION

18. Stiffness of joint is reduced by

    a) Appropriate use of joint range of motion

    b) Immobilization

    c) Surgical correction

19. One of the easily available home remedy to reduce arthritis pain

    a) Castor oil

    b) Gingely oil

    c) Coconut oil

20. One of the appropriate measures to protect the joint is

   a) Practicing good body mechanics

   b) Immobilizing the joint

   c) Avoiding sternous activities

21. Joint pain is easily minimized by

   a) Gentle massage therapy

   b) Eating plenty of food

   c) Surgical correction

22. The exercise that reduces the pain in arthritis

   a) Cycling

   b) Weight lifting

   c) Running

23. Arthritis symptoms can be reduced by

   a) Mustard powder

   b) Ginger powder

   c) Garlic powder

24. The diet recommended to prevent damage to joint and bones

   are

   a) Vitamin-D and calcium rich diet

   b) Protein rich diet

   c) Fat rich diet

25. One of the way to reduce tear of joints is

    a) Regular exercise

    b) Balanced diet

    c) Regular medication

26. Joint stiffness and contractures can be prevented by

    a) Using splints and braces

    b) Surgical resection

    c) Medications

27. One of the remedy to prevent joint pain is

    a) Hot application

    b) Wax bath

    c) Turmeric

28. The following measures prevent progression of arthritis

    a) Being physically active , healthy diet

    b) Vigorous activity and exercise

    c) Immobilization and prolonged rest hours

29. The essential nutrient needed to prevent arthritis is

    a) Iron

    b) Sodium

    c) Protein

30. Position that worsens arthritis condition is

    a) Lying down

    b) Standing

    c) Deep squatting

PART-III

KEY ANSWER

Q.NO	ANSWER	Q.NO	ANSWER
1	A	16	A
2	A	17	A
3	A	18	A
4	A	19	A
5	B	20	A
6	C	21	A
7	C	22	A
8	A	23	A
9	A	24	C
10	A	25	B
11	A	26	A
12	A	27	B
13	C	28	A
14	B	29	B
15	C	30	A

jdp egh; tptuk;;

1. taJ tuk;G

   m. 35-45 taJ
   M. 46-55 taJ
   ,. 56-65 taJ
   <. 65 tajpw;f;F Nky;

2. ghypdk;
   m. Mz;
   M. ngz;

3. kjk;

   m. ,e;J
   M. K];yPk;
   ,. fpU];Jth;

4. fy;tpj;;jFjp

   m. gbg;gwpT ,y;yhjth;
   M. njhlf;ff;fy;tp
   ,. cah;fy;tp
   <. gl;ljhhpfs;

5. FLk;gj;jpd; tif

   m. jdpf;FLk;gk;
   M. $l;Lf;FLk;gk;

6. jpUkz epiy

   m. jpUkzkhdth;
   M. jpUkzkhfhjth;

,. tpjit
<. tpthfuj;jhdth;

7. FLk;gj;jpd; khj tUkhdk;

   m. &gha; 1000 - &gha; 2000
   M. &gha; 2001 - &gha; 3000
   ,. &gha; 3001 - &gha; 4000
   <. &gha; 4000jpw;f;F Nky;

8. Ntiyj;;jFjp

   m. tptrhak;
   M. $ypj;njhopy;
   ,. njhopyjpgh;
   <. njhopy; rhh;e;j Ntiy

9. tUkhdj;jpw;fhd %yhjhuk;

   m. Xa;Tjpak;
   M. muR cjtpfs;
   ,. FLk;gr;nrhj;J
   <. kw;wth;fis rhh;e;jpUj;jy;

10.   Rfhjhu jfty;fs; ngw cjTk; rhjdq;fs;

   m. njhiyf;fhl;rp
   M. Rfhjhu Jiwapdh;
   ,. ez;gh;fs; kw;Wk; cwtpdh;fs;

tpdhf;fs;

1. %l;L cUthjy;

   m. ,uz;L vYk;Gfs; re;jpf;Fk; ,lj;jpy;
   M. ,uz;L jirfs; re;jpf;Fk; ,lj;jpy;
   ,. ,uz;L cly; cWg;Gfs; re;jpf;Fk; ,lj;jpy;

2. %l;bd; gad;ghL

   m. vYk;G mirtjw;F
   M. epiyg;ghl;bw;F
   ,. rpwe;j ,uj;j Xl;lj;jpw;F

3. %l;Lthjk; vd;gJ

   m. %l;L tPf;fkiljy;
   M. vYk;G tPf;fkiljy;
   ,. jirfs; tPf;fkiljy;

4. nghJthf ghjpf;fg;gLk; %l;L

   m. Koq;fhy; %l;L
   M. tpuy; %l;L
   ,. ghjq;fspd; %l;L

5. %l;Lthjj;jpd; Kf;fpakhd mwpFwp

   m. epiyahd %l;Ltyp
   M. epiyahd fha;r;ry;
   ,. epiyahd jiytyp

6. %l;Ltyp Vw;gLtjw;F fhuzk;

   m. mjph;T
   M. %l;L fpopjy;
   ,. jirg;gpbg;G

7. %l;Lthjj;jpdhy; Vw;gLk; typ Muk;gpf;Fk; Neuk;

   m. xU khjj;jpw;Fs;
   M. XU thuj;jpw;Fs;
   ,. xU rpy kzp Neuj;jpy;

8. %l;Lthjk; nghJthf fhzg;gLk; taJ

   m. 10-20 tajpw;Fs;shf
   M. 20-30 tajpw;Fs;shf
   ,. 35 tajpw;F Nky;

9. %l;Lthjk; tUtjw;fhd tha;g;ig Vw;gLj;Jk; fhuzp
   m. nkj;jdkhd tho;f;if Kiw mjpf cly;gUkd;
   M. ,ja Neha; kw;Wk; rpWePuf Neha;
   ,. jir Neha; kw;Wk; rh;f;fiu Neha;

10.   %l;Lthj typ mjpfkhtjw;F fhuzkhFk; fha;fwp

   m. cUisf;fpoq;F

M. ntz;ilf;fha;
,. fj;jphpf;fha;

11.   %l;Lthjj;;jpid jLf;f khw;wf;$ba xUtifahd fhuzp

m. mjpf cly;gUkd;
M. taJ
,. ghypdk;

12.   %l;Lthjj;;ij Vw;gLj;Jk; `hh;Nkhd; khw;wj;jpw;fhd fhuzp

m. cah; ,uj;j mOj;jk;
M. nkj;jdkhd thof;if Kiw
,. kd mOj;jk;

13.   %l;Lthjk; Vw;gl mjpf tha;g;Gs;s egh;fs;

m. nghwpahshh;
M. fl;Lkhd njhopyhspfs;
,. kUj;jth;

14.   %l;Lthjk; Vw;gl mjpf tha;g;Gs;s tpisahl;L

m. fhy;ge;J
M. kl;iilge;J
,. rJuq;f tpisahl;L

15.   mjpf cly;gUkd; nfhz;bUg;gjhy; Vw;gLk; tpisT

m. %l;Lthjk;
M. rpWePuf NfhshW
,. gf;fthjk;

16.   %l;L mirit Nkk;gLj;j nra;af;$bait

m. njhlh;r;rpahd kw;Wk; Neh;j;jpahd clw;gapw;rp

M. fbdkhd eltbf;iffs;
,. njhlh;r;rpahd jpahdk;

17.　　%l;Lthjj;jpdhy; ghjpf;fg;gLk; kw;w cWg;Gfs;

m. fy;yPuy; kw;Wk; EiuaPuy;;
M. fz; kw;Wk; rpWePufk;;
,. %is kw;Wk; jz;Ltlk;;

18.　　%l;L tpiwg;ig Fiwg;gjw;fhd topKiw
m. mirahky; ,Uj;jy;;
M. rPuhd %l;L mirTfs;;
,. mWit rpfpr;ir Kiw

19.　　%l;L typia Fiwf;f vspjhf tPl;by; gad;gLk; nghUs;

m. ey;nyz;nza;;
M. Njq;fha; vz;nza;;
,. Mkzf;F vz;nza;;

20.　　%l;il ghJfhf;f cjTk; topKiw

m. %l;il mirahky; itj;jpUj;jy;;
M. rPuhd cly; mirtpid cgNahfpj;jy;;
,. fbdkhd eltbf;iffs; Nkw;nfhs;Sjy;;

21.　　%l;Ltypapid vspjhf Fiwf;f$bait

m. jir gFjp gpbj;J tpLjy;;
M. mWit rpfpr;ir Kiw
,. mjpf czit cl;nfhs;Sjy;;

22.　　%l;Ltypia Fiwf;f cjTk; clw;gapw;rp

m. kpjptz;b cgNahfpj;jy;;
M. Ntfkhf XLjy;;

,. Mjpf vil J}f;Fjy;

23.   %l;Lthj mwpFwpfis Fiwf;f vLj;Jf;nfhs;s Ntz;ba nghUs;

   m. fLF J}s;
   M. G+z;L
   ,. ,Q;rp

24.   vYk;GfisAk; %l;LfisAk; ghJfhj;J nfhs;tjw;F

   m. itl;lkpd; 'D' kw;Wk; fhy;rpak;
   M. Gujr;rj;Js;s czT
   ,. nfhOg;G rj;Js;s czT

25.   %l;Lfspd; fpopit jLf;Fk; topfspy; xd;W

   m. njhlh;r;rpahd clw;gapw;rp
   M. rhptpfpj czT
   ,. njhlh;r;rpahf kUe;J cl;nfhs;Sjy;

26.   %l;Lthpwg;ig jLf;Fk; Kiw

   m. %l;L ftrk;
   M. mWit rpfpr;ir
   ,. kUe;J nghUl;fs; cl;nfhs;Sjy;

27.   %l;Ltypia Fiwf;f vspikahd topKiw

   m. nkOF xj;jlk;
   M. nte;ePh; xj;jlk;
   ,. kQ;rs; J}s; G+Rjy;

28.   %l;Lthjk; mjpfhpg;gij jLg;gjw;fhd topKiwfspy; xd;W

m. mirahky; ,Uj;jy; kw;Wk; mjpf xa;ntLj;jy;
M. fLikahd clw;gapw;rp kw;Wk; eltbf;iffs; Nkw;nfhs;Sjy;
,. MNuhf;fpakhd czT cl;nfhs;Sjy; kw;Wk; MNuhf;fpakhd cly;epiy
    itj;jpUj;jy;

29.   %l;Lthjj;jpid jLf;f cjTk; Cl;lr;rj;J

m. cg;Gr;rj;J
M. ,Uk;Gr;rj;J
,. Gujr;rj;J

30.   %l;Lthjj;jpid mjpfhpf;Fk; cly; mikg;G

m. gLj;jpUj;jy;
M. epd;wpUj;jy;
,. Koq;fhypl;L mkUjy;

tpilfs;:

1.	m	16.	m
2.	m	17.	m
3.	m	18.	m
4.	m	19.	m
5.	M	20.	m
6.	,	21.	m
7.	,	22. m	
8.	m	23.	m
9.	m	24.	,
10.	m	25. M	
11.	m	26.	M
12.	m	27. M	
13.	,	28.	M
15.	,	30. m	

CENTRAL OBJECTIVES:

Help the people to acquire knowledge and develop desirable attitude about the arthritis and to develop skill to practical assist in all settings.

CONTRIBUTORY OBJECTIVES:

The people will be able to

- define arthritis
- list out the types of arthritis
- enlist the etiology and risk factors of arthritis
- describe the pathophysiology of arthritis
- list out the clinical features of arthritis
- describe the complications of arthritis
- explain the management of arthritis
- discuss the home remedies of arthritis
- describe the prevention of arthritis
- discuss the ten self help techniques for arthritis

S.No	Contributory objective	Time	Content	Teachers activity	Learners activity
1.	define arthritis	2 mts	**ARTHRITIS** **INTRODUCTION:** Suffering from joint pain is more than simply a mild discomfort. Your joints affect everything that you do. If you run, if you walk even when you are sitting down and not doing anything joint pain can be a significant burden on your life that affects almost everything you do. **DEFINITION:** Inflammation of a joint, usually accompanied by pain, swelling, and stiffness, and resulting from infection, trauma, degenerative changes, metabolic disturbances, or other causes. -LEWIS.	Explaining	Listening

| 2. | enlist the types of arthritis | 5 mts | Arthritis literally means joint inflammation, and it can affect joints in any part of the body. Joints are places in the body where two bones meet.

_MAYOCLINIC.

INCIDENCE:

The incidence rate is approximately 3% with a two or three times greater incidence in women than in men. Prevalence ranges from 0.5-1.5% of the population in industrailzed countries. Peak incidence occurs between the ages of 40 and 50. The annual incidence in women was recently estimated at 36per 100,000 and in men at 14 per 100,000(ratio2.5:1).

TYPES OF ARTHRITIS:

❯ MONOARTHRITIS

❯ POLYARTHRITIS | Explaining | Listening |

			MONOARTHRITIS:		
			• Pyogenic arthritis • Tubercular arthritis • Haemophilic arthritis • Secondary osteoarthritis • Gout arthritis **POLYARTHRITIS:** • Rheumatoid arthritis • Rheumatic fever • Juvenile chronic poly arthritis • Primary osteoarthritis		
3.	list down the etiology and risk factors of arthritis	10 mts	**ETIOLOGY AND RISK FACTORS:** • Injuries • Age related changes • Gender • Toxins • Microbes	Explaining	Listening

| 4. | explain the patho - physiology of arthritis | 5 mts | • Hormonal factors
• Genetic predisposition
• Smoking and tobacco use
• Body weight
• Life style
• High impact sports

PATHOPHYSIOLOGY:

When a susceptible host experiences initial immune response to an antigen
↓
It triggers the formation of an abnormal immunoglobinG(igG)
↓
Auto antibodies formed against this abnormal (igG)
↓
Formation of immune complex
↓
It leads to activation of complement and inflammatory response
↓
Neutrophils attracted to the site of inflammation release
↓
Proteolytic enzymes that can damage articular cartilage and cause synovial thickening.
↓ | Explaining | Listening |

| 5. | enlist the clinical manifestations of arthritis | 5 mts | Joint changes from chronic inflammation begin when the hypertrophied synovial membrane invades the surrounding cartilage, ligaments, tendons and joint capsule.

 ↓

 Pannus forms with in the joint, it erodes the entire surface of articular cartilage

 ↓

 Production of inflammatrory cytokines at the pannus causes further cartilage destruction

 ↓

 Pannus also scars and shortens supporting structures causing joint laxity, subluxation and contractive (stiffness).

 CLINICAL MANIFESTATIONS:

 Major symptoms

 • Pain
 • Stiffness in multiple joints
 • Swelling over the joints
 • Fever due to infection
 • Tenderness over the joints | Explaining | Listening |

6.	enumerate the diagnostic evaluation of arthritis	5mts	**Other manifestations:** • Rashes all over the body • Anaemia • Skin lesions • Peripheral neuritis • Vasculitis **DIAGNOSTIC EVALUATION:** • X-rays of the joints • Reduced joint space • Subchondral cyst • Deformities of hand and feet **Blood ;** • Elevated ESR • Low hemoglobin value • Rheumatoid factor • Latex fixation test • Rose – waaler test	Explaining	Listening

			• Synovial fluid examination • Synovial biopsy.		
7.	list out the differential diagnosis of arthritis	2mts	**DIFFERENTIAL DIAGNOSIS:** • Systemic lupus erythematous • Psoriatric arthropathy • Osteoporosis • Ankylosing spondylitis	Explaining	Listening
8.	explain the complications of arthritis	2mts	**COMPLICATIONS:** • Joint destruction • Pathological dislocation • Septicemia • Anaemia • Kidney stone • Sceliritis • Peripheral neuropathy • Gastrointestinal problems	Explaining	Listening

9.	explain the management of arthritis	5mts	• Osteoporosis • Heart disease • Periodontal disorder • Lung disease. **MANAGEMENT:** **Pharmacological management** **Non steroid anti inflammatory drugs** • Ibubrufen • Indomethacin • Aspirin • Ketoprofen • Diclofenac sodium **Disease modifying anti rheumatic drug** • Methotrexate • Sulfasalazine • Hydroxychloroquine • Azathioprine	Explaining	Listening

- Leflunomide
- Cyclosporine

SURGICAL MANAGEMENT:

Preventive surgery:

This is done to prevent damage to the joint and near by tendons by the inflammed ,hypertrophied synovium. It consists of synovectomy of the wrist , knee, and MP joints.

Palliative surgery:

This is done in situations where the general condition of the patients does not permit corrective surgery, but where some relief can be provided by limited surgical procedures such as bone block operations, tendon lengthening etc.,

Reconstructive surgery:

This has revolutionized the rehabilitation of patients with deformed and painful joints. It includes tendon transfers, interposition arthroplasties and total joint replacement is most popular are the hip, knee MP joints.

Arthrotomy :

An Arthrotomy is a process involving creating an opening in a joint. The joint is aspirated first, if pus is present, open arthrotomy is indicated. The pus is cultured and is subjected to gram staining. Appropriate antibiotics are then chosen and are given intravenously before surgical drainage. Antibiotics are used for a minimum period of 2 to 4 weeks.

Arthroplasty :

Arthroplasty (literally "surgical repair of joint") is an operative procedure of orthopedic surgery performed, in which the arthritic or dysfunctional joint surface is replaced with something better or by remodeling or realigning the joint by osteotomy or some other procedure.

Patellectomy

It is rarely done except as a last resort contemplated in osteoarthritis present for several years.

10.	describe the home remedies of arthritis	5mts	**HOME REMEDIES FOR ARTHRITIS:** • Effective arthritis treatment is to wrap red flannel gently around painful joint and leave it over night. • A gentle massage with warm olive oil is very effective to relieve arthritis pain. • Steam bath and body massage are beneficial in arthritis. • Take 10 grams of camphor and 200 grams of mustard oil. Mix in a glass bottle and close with a tight cork and keep the bottle in the sun till the camphor dissolves. Massage the affected area daily. • Castor oil is an effective rub for treatment of arthritis.	Explaining	Listening
11.	discuss the prevention of arthritis	5mts	**ARTHRITIS PREVENTION:** **Arthritis diet:** It does not include vegetables and fruits that are rich in vitamin-C, vitamin -D, calcium, omega-3, fatty acid, zinc, magnesium and many more.	Explaining	Listening

Best exercise for arthritis:

Exercise really works well for people suffering from arthritis and it is important to do them regularly to see effective results.

Ayurveda for arthritis:

Ayurveda says arthritis is mostly because of air and indigestion problem in the body. indigestion cause gastric problem in body and it adds toxic air & bacterial, they cause inflammation and swelling

In the joints.

Gugul,haritaki,sudarsban,brhmi and bibbitaki are very effective for natural treatment of arthritis. mahanaayam oil is also very effective and it reduces joint pain problem in body to cute arthritis.

Medications:

- ❖ Non steroidal anti-inflammatory drug
- ❖ Steroids
- ❖ Pain killers.

Injection supplements for arthritis:

There are many injection supplement are corticosteroids, synvic, viscosupplementation, hyalgan and others to cure arthritis.

Medical equipments for arthritis:

Equipment that is available like braces, support system, socks, arthritis, caliper, Insole and many more to cure arthritis.

Joint fluid therapy:

It is process of injecting gel in the joints and it act as supplement for synovial fluid to cure arthritis.

Acupuncture/acupressure:

It is process of pressing (or) stimulating various points like nerves, muscle and other body organs.

Hydrotherapy (or)water therapy for treatment of arthritis:

Warm water is excellent source to ease and reduce joints pain, they relaxes muscles and increase motion.

Meditation:

Tension is also a reason behind arthritis, meditation help reducing them and Control stress (or) anxiety.

Tai chi exercise art:

It is form of martial arts, light movement exercises that are used to relax and improve body motion.

| 12. | Explain the ten self help techniques | 5mts | **Magnet therapy:**

It is said, magnet is used to improve blood circulation in body but there is no evidence that it can cure arthritis.

Music therapy:

It is used to reduce stress and I would recommend medication over it.

THE TEN SELF HELP TECHNIQUES.

1. Positive mental attitude:
The patient is told to focus on things other than pain and their own body. They are encouraged to think positively.

2. Regular medication
The patient is told the value of regular and correct medication

3. Regular exercise
The patient should follow a regular and appropriate exercise programme most suited for themselves.

4. Use of joints
The patient is told the value of correct posture and the methods of using the joints wisely to reduce stress on the painful joints eg. Sitting and writing. | Explaining | Listening |

5. Energy conservation:

Patients are instructed to listen to the body's "inner signals". Slowing down and avoiding too many activities reduces the stress and strain on the joints.

6. Assistive devices:

Devices like splints, braces and walking sticks can help establish the joints. Provide strength and reduce pain and inflammation.

7. Adequate sleep:

A good adequate sleep provides rest.

The ailing joints and reduces the pain and swelling.

8. massage:

A good moderate brings warmth and relieves pain due to arthritis.

9. Relaxation techniques:

Relaxation techniques like yoga, meditation etc help to relax the muscle, mind and controls respiration, heart rate, blood pressure. This helps in the control of pain.

| | | | | 10. Modification in daily activities:
❧ Using western toilets.
❧ Bath aids and railings
❧ Long handle broomstick and mop to clean the floors.
❧ Use of walking sticks
❧ High chairs.
❧ Avoid squatting position.
❧ To avoid squeezing clothes while washing clothes.
❧ To avoid walking on the uneven and hard and rough surfaces.
❧ To sleep on the hard surfaces. | | |

kj;jpa Nehf;fq;fs;:-

kf;fs; %I;L thjj;ij gw;wpAk; mjd; tpisTfs; kw;Wk; tpopg;Gzh;T gw;wp mwpe;J nfhz;L mij tho;f;if KOtJk; filgpbj;jy;.

Fwpg;gpl;I Nehf;fq;fs;:-

kf;fs; fw;Wf; nfhs;s Ntz;bait

    i.   %I;Lthjj;jpd; tpsf;fk;

    ii.   %I;Lthjj;jpd; tiffs;

    iii.   %I;Lthjj;jpd; fhuzpfs;

    iv.   %I;Lthjj;jpd; mwpFwpfs;5

    v.   %I;Lthjj;jpd; tpisTfs;

    vi.   %I;Lthjj;jpd; rpfpr;ir Kiwfs;

    vii.   %I;Lthjj;jpd; tPI;L itj;jpa Kiwfs;

    viii.   %I;Lthjj;jpd; jLg;G Kiwfs;

    ix.   %I;Lthjj;ij jLf;Fk; 10 topKiwfs;

t. vz;	Fwpg;gpl;l Nehf;fq;fs;	fhyk;	nghUslf;fk;	Mrpupau; nray;ghL	ftdpg;Nghh; nray;ghL
1.	%l;Lthjj;jpd; tpsf;fk;		**%l;L thjk;** **mwpKfk;:** %l;Ltypahy; mtjpgLtJ vd;gJ mnrsfhpaj;ij tpl mjpfkhdJ. cq;fs; nray;fs; midj;ijAk; cq;fs; %l;Lf;fs; ghjpg;gila nra;Ak;. ePq;fs; XbdhNyh ele;jhNyh cl;fhh;e;jpUe;jhNyh my;yJ xd;Wk; nra;ahky; ,Ue;jhy; $l %l;Ltyp cq;fs; tho;ifapy; kpfg;nghpa ghjpg;ig cz;lhf;Fk.; **tiuaiw:** %l;L thjk; vd;gJ %l;Lfspy; Vw;glf; $ba tPf;fk; kw;Wk; tpiwg;Gfshy; %l;Lfis ghjpf;Fk; NkYk; %l;Lfspy;	fw;gpj;jy;	ftdpj;jy;

| 2. | %l;Lthjj;jpd; fhuzpfs; | | typ tPf;fk; tpiwg;G rpijT khw;wq;fs; kw;Wk; tsh;rpij njhe;juTfs; Mfpait %l;Lthjj;jpd; Kf;fpa mwpFwpfshFk;. **Neha; kw;Wk; mghaf;Fwpfs;:**

 • fhaq;fs;
 • taJ njhlh;Gila khw;wq;fs;
 • ghypdk;
 • er;Rg; nghUl;fs;
 • Ez;Zaph;fs;
 • `hh;Nkhd; fhuzpfs;
 • kugpay; Kw;rhh;G
 • Gif kw;Wk; Gifapiy gad;ghL
 • cly; vil
 • tho;f;if Kiw.
 Kf;fpa mwpFwpfs;:

 - typ | fw;gpj;jy; ; | ftdpj;jy; |

| 3. | %l;Lthjj;jpd; mwpFwpfs; | | - %l;Lfs; tpiwg; ghjy;
- %l;Lfs; tPf;f kiljy;
- njhw;wpdhy; Vw;gLk; fha;r;ry;
- %l;Lfs; rpte;jpUj;jy;
kw;w mwpFwpfs;:
- Cly; KOtJk; jbj;jy;

- ,uj;j Nrhif

- rUk Neha;fs; | fw;gpj;jy; | ftdpj;jy; |
| 4. | %l;Lthjj;jp;;;d;;

Nehapwpjy;
 fzpg;G
Kiwfs; | | **Nehapwpjy; fzpg;G Kiw:**

- fjph;fs; %yk;

- %l;Lfspy; ,ilntsp Fiwjy;

- %l;Lfspy; ePh;f;fl;b

- if kw;Wk; fhy;fspy; FiwghL

- ,uj;j ghpNrhjidfs;:
   ➤ Mjpfhpj;j ESR

   ➤ Fiwe;j NkhFNshgpd; kjpg;G

   ➤ Klf;F fhuzp

   ➤ %l;Lf;Fhpa jput ghpNrhjid | fw;gpj;jy; | ftdpj;jy; |

| 5. | %l;Lthjj;jpd;

tpisTfs;

%l;Lthjj;jpd; | | ➢ %l;Lf;Fhpa gahg;]p

tpisTfs;:
- %l;Lfs; rpijtiljy;
- %l;Lfs; ,lg;ngah;T
- ,uj;j Nrhif
- rpWePuf fy; Vw;gLjy;
- fz; ghjpg;G
- euk;G jsh;r;rp
- ,iu Fly; rpf;fy;fs;
- vYk;GUf;fp Neha;
- ,ja Neha;
- gw;fspy; NfhshW
- Eiua{uy; Neha;

rpfpr;ir Kiw:

kUe;jpay; rpfpr;ir:
-];Buha;L my;yhj vjph;g;G mow;rp kUe;Jfs; (NSAID)

- ,z;Nlh kPj;jhrpd;

- M];gphpd;

- ll;uhf;]p FNshNuhFapd;

- Irf;Nsh];Nghhpd; | fw;gpj;jy; | ftdpj;jy;

ftdpj;jy; |

| 6. | rpfpr;ir Kiwfs; | | **mWit rpfpr;ir Kiw:**
 - jLg;G mWit rpfpr;ir
 - rPuikg;G mWi rpfpr;ir
 - %l;L mWit rpfpr;ir

 <u>**%l;L thjj;jpw;fhd tPl;L itj;jpa Kiwfs;::**</u>

 ❖ %l;bd; kPJ ,uT KOtJk; rptg;G fk;gsk; Rw;wp itf;f Ntz;Lk;
 ❖ #lhd kw;Wk; nkd;ikahd Mypt; vz;nza; nfhz;L %l;bd; kPJ krh[; nra;jy;
 ❖ ePuhtp Fspay; kw;Wk; cly; krh[; thjj;jpd; jhf;fj;ij Fiwf;f cjTfpwJ
 ❖ fw;G+uk; 10 fpuhk; msT vLj;J fLF vz;nzAld; xU ghl;lypy; fiuj;J fw;G+uk; fiuAk; tiu #hpa xspapy; itj;jgpd; jpdrhp %l;Lfspd; krh[; nra;tjhy; typ FiwfwJ. | fw;gpj;jy; | |
| 7. | %l;Lthjj;jppd;

 tPl;L itj;jpa

 Kiwfs; | | | fw;gpj;jy; | ftdpj;jy; |

| 8. | %l;Lthjj;jpd; jLg;G Kiwfs; | | ❖ Mkzf;nfz;nza; %l;Lthj rpfpr;irf;F gad;gLfpwJ

%l;Lthj jLg;G Kiwfs;:

❖ czT Kiwfs; fha;fwpfs; kw;Wk; itl;lkpd; "rp" epiwe;j goq;fs;
❖ rpwe;j clw;gapw;rp
❖ MAh;Ntj rpfpr;ir
❖ kUe;Jfs;
   -];Buha;Lfs; my;yhj vjph;g;G Row;rp kUe;Jfs;
   -];Buha;Lfs;
   - typ epthuzpfs;
❖ %l;Lthjj;jpd; kUj;Jt cgfuzq;fs;
   - %l;Lthjk;
   - Cd;WNfhy;
   - Rhf;];
❖ jput rpfpr;ir:
%l;Lfspy; nIy; cl;nrYj;Jtjd; %yk; typ FiwfpwJ. | fw;gpj;jy; | ftdpj;jy; |

			❖ Mf;FgQ;rh; euk;Gfs; jir kw;Wk; cly; cWg;Gfspy; mf;FgQ;rh; nra;tjd; %yk; typ FiwfpwJ ❖ jz;zPh; rpfpr;ir nte;ePh; xj;jlk; nfhLg;gJ %yk; %l;L ,af;fk; Nkk;gLj;jg;gLfpwJ. ❖ jpahdk;: %l;L thjj;ijh cUthf;Fk; kd mOj;j fhuzpia Fiwf;f jpahdk; gad;gLfpwJ ❖ fhe;jKiw rpfpr;ir: ,e;j rpfpr;ir clypy; ,uj;j xl;lj;ij Nkk;gLj;JfpwJ. ❖ ,irKiw rpfpr;ir: kd mOj;jj;ij Fiwf;f gad;gLfpwJ. **vspjhd gj;J Ra cjtp topKiwfs;:** 1. Neh;kiwahd kd mZFKiwia Vw;gLj;Jjy; (Positive Attitude) 2. jpdrhp kUe;Jfs; vLj;Jf; nfhs;Sjy;		

9.	%l;Lthjj;ij jLf;Fk; 10 topKiwfs;		3. jpdrhp clw;gapw;rp Nkw;nfhs;Sjy;
			
			 4. rPuhd Kiwapy; %l;Lfis gad;gLj;Jjy;
			
			 5. fbdkhd Ntiyfis jtph;j;jy;
			
			 6. cjTk; rhjdq;fs;
			
			   - %l;L ftrk;
			
			   - Cd;WNfhy;
			
			 7. NghJkhd J}f;fk; filgpbj;jy;
			
			 8. krh[; Nkw;nfhs;Sjy;
			
			 9. mikjpngWk; cj;jpfs;::
			
			   - Nahfh kw;Wk; jpahdk; Nkw;nfs;Sjy;.
			
			 10. jpdrhp eltbf;ifspy; khw;wk; Vw;gLj;Jjy;::
			
			 • Nkw;fj;jpa foptiw Kiwia gad;gLj;Jjy;.
			• jiuia Rj;jk; nra;a ePz;l ifg;gpb cs;s Jilg;g fl;ilia gad;gLj;Jjy;.
			
			 • cah; ehw;fhypfs; gad;gLj;Jjy;.
			• Fj;Jf;fhy; ,l;L cl;fhh;e;j epiya jtph;j;jy;.
			• Jzpfs; Jitf;Fk; NghJ Jzpfis mOj;jp KWf;fp gpoptij jtph;j;jy;.
			• rPuw;w kw;Wk; fbdkhd epy gug;Gfspy; eil
				fw;gpj;jy;	ftrpj;jy;

		gapw;rpia jtph;j;jy;.		

AUDIO-VISUAL AIDS

CAUSES AND RISK FACTORS OF ARTHRITIS

COMPLICATIONS OF ARTHITIS

HOME REMEDIES FOR ARTHRITIS

DO'S AND DON'T'S FOR ARTHITIS

SCHOLAR GIVING INTRODUCTION

SCHOLAR CONDUCTING THE PRE TEST

SCHOLAR CONDUCTING THE STRUCTURED TEACHING PROGRAMME

SCHOLAR CONDUCTING THE POST TEST