EFFECTIVENESS OF HEALTH EDUCATION PROGRAMME ON KNOWLEDGE REGARDING MANAGEMENT OF ORTHOPEDIC APPLIANCES AMONG FRACTURE PATIENTS IN R.L.JALAPPA HOSPITAL, KOLAR, KARNATAKA.

By,

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DECLARATION BY THE CANDIDATE

We hereby declare that the research project entitled **"A Study to Assess the Effectiveness of Health Education Programme on Knowledge regarding Management of Orthopedic Appliances among Fracture Patients in R. L. Jalappa Hospital, Kolar"** is a bonafide and genuine research was carried out by us under the guidance and supervision of Dr. G .Vijayalakashmi , Principal, Sri Devaraj Urs College of Nursing,Tamaka,Kolar-563101.

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"Look at the sky. We are not alone. The whole universe is friendly to us and conspires only to give the best to those who dream and work."

A P J Abdul Kalam

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ABSTRACT

INTRODUCTION

Fracture is disruptions or break in the continuity of the structure of bone. Treatment of orthopedic conditions must account for a variety of factors that includes supporting devices, medications, surgery and rehabilitation therapy. These devices have been extremely successful in

restoring mobility, reducing pain, and improving the quality of life for millions of individual. Hence the study to assess the Effectiveness of Health Education Programme on Knowledge regarding Management of Orthopedic Appliances among Fracture Patients in R. L. Jalappa Hospital, Kolar was an attempts to improve the knowledge of fracture patients regarding management of orthopedic appliances in R.L.Jalappa Hospital and Research center, Tamaka, Kolar.

The objectives of the study were to assess the knowledge on management of orthopedic appliances among fracture patients, to evaluate the effectiveness of health education programme regarding management of orthopedic appliances among fracture patients while comparing pre and post test knowledge scores and to determine the association between post test knowledge scores on management of orthopedic appliances among fracture patients with selected socio demographic variables.

MATERIALS AND METHODS:

A quasi experimental design with one group pre test and post test was adopted for the study. The study was conducted in R L Jalappa Hospital and Research centre, Tamaka, Kolar. The researchers developed structured knowledge questionnaire, validated the tool and then permission was obtained. Using simple random sampling technique, data was collected from 40 participants who fulfilled the inclusion criteria.

RESULTS:

The finding of the study revealed majority (37.5%) of fracture patients were in the age group of 20-30 years and only 5% were belongs to age group of 31-40 years, most (55%) of them were males and only 45% of them were females, majority (70%) of them were married and only 30% of them were unmarried, most (70%) of them were Hindus and only 7.5% of them were belongs to Christian. Majorities (80%) of fracture patients were from rural area and only 20% of them were from urban area. Most (32.5%) of them had high school qualification and only 10% of them had intermediate qualification, majority (65%) of them were belongs to joint family and only 35% of them were from nuclear family, majority (52.5%) of fracture patient’s occupation was coolie and only 15% of them were having private job, most (40%) of themes family

income was Rs <5000 and only 20% of them were having Rs 10,000-15,000 of income, majority (77.5%) of fracture patients were not having previous experience on use of orthopedic appliances and only 22.5% of them were having previous experience.

Related to area wise knowledge score revealed that the highest mean score (4.42) was seen in the area of orthopaedic appliances with SD of 2.40 and the lowest score (0.4) was seen in the area of rest and sleep with SD of 0.62. Regarding over all knowledge score of fracture patients, majority (77.5%) had inadequate knowledge, (22.5%) of them had moderately adequate knowledge and none of them had adequate knowledge. Regarding the effectiveness of health education programme on management of orthopaedic appliances, the pre test mean score of fracture patients was 10.37 with SD of 4.58 whereas the post test mean score was 17.37 with SD of 3.08. The t value was 3.01, which was significant at 0.05 level.

The association of knowledge score with age (x^2=7.91) was significance where as the association of knowledge score with gender (x^2=0.22), Religion (x^2=1.13), Education (x^2=0.02), Type of family (x^2=3.53), Occupation (x^2=3.52) and income (x^2=0.6) were not significant at 0.05 level.

CONCLUSION

The result of the study concludes health education programme regarding management of orthopedic appliances among the fracture patients was effective.

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CHAPTER-I

INTRODUCTION

“Anyone who stops learning is old, whether at twenty or eighty. Anyone who keeps learning stays young. The greatest thing in life is to keep your mind young.”

-Henry Ford

Health is the level of functional or metabolic efficiency of a living being. In human, it is the coordination and balance of a person's mind, body and spirit. Health further can be described as a condition in which individual is free from illness, injury or pain. According to W.H.O., Health is a state of physical, mental and social wellbeing but not nearly the absence of disease or infinity[1].

The musculoskeletal system is particularly vulnerable to external environmental forces. These forces can cause alterations in the structure of bone or soft connective tissue, resulting in functional disruption. Many injuries occur at home from lifting heavy objects, slipping in the bathrooms on a wet or washed floor, tripping over rugs or pets, falling off chairs or falling downstairs. Other injuries occur in motor vehicle accidents, during recreational activities and on the job. Musculoskeletal injuries can even occur during normal activities as when violent coughing fractures a rib. Factors that increases the possibility of musculoskeletal injuries are age(because older persons have more fragile bones) and pathological condition that weaken the musculoskeletal system[2].

Fractures are disruption or break in the continuity of the structure of bone. Fractures of bone usually occur as a result of blow to the body, a fall, or another accident. Traumatic injuries account for the majority of the fractures, although some fractures are secondary to a disease (pathological fractures). The highest incidence of fracture is in males 15 to 24 years old and in elderly persons especially women aged 65 years or more[3].

Treatment of orthopedic conditions must account for a variety of factors that includes supporting devices, medications, and surgery and rehabilitation therapy. Fracture management modalities include a wide variety of devices including wires, pins, screws, plates, spinal fixation devices and artificial ligaments. These devices have been extremely successful in restoring mobility, reducing pain and improving the quality of life for millions of individuals[4].

As the majority of musculoskeletal disorders are relatively long time in nature. The care and management of these condition calls for specialized orthopedic nursing practice. Finally with the specialized care, nurses can contribute a lot for patient's long term quality of life. So the education for the patients regarding management of orthopedic appliances is very important to improve the knowledge of the patients and to improve the health status[5].

Musculoskeletal conditions rank second overall frequency and cause of restricted or limited activity and are the leading cause of disability among individuals of working age. More than 350,000 hip fractures occur in the US every year. The burden of musculoskeletal conditions at the start of the new millennium, as reported by WHO on 27 October 2010,aims to better prepare nations to deal with the increased disability brought about by the global rise in musculoskeletal conditions. Further report highlighted that nearly 150 musculoskeletal conditions affect millions of people in both developing and developed countries all over the world.

Orthopedic patients require special consideration because despite advances in orthopedic surgery. They are often in hospital for a long time. The overall walls of fracture treatment are anatomic realignment of bone fragments, immobilization to maintain realignment and restoration of normal or near normal function of the injured part[6].

Orthopedic appliances are also called orthotics. They include splints, corset, collars, traction, brases, special shoes or shoe inserts,internal and external fixators. The purposes of this devices are to support injured joints, preventive injury, support weak extremity and support in a specific position in healing[7].

Nurses should act as a centre point of orthopedic patients care. Nurse should provide intervention preoperatively, intra operatively and post operatively to avoid potential complications. Patient education is a critical component of orthopedic nursing that requires nurse communication to maintain optimum independents and quality of life[8].

Based on the available literature regarding management of orthopedic appliances, it revealed that clients were unaware about the orthopedic appliances and its management. Thus the researchers decided to explore the knowledge of client with orthopedic devices in managing the appliances and to improve the quality at life.

NEED FOR STUDY

Fracture is a break in the continuity of bone. Fractures happen when there's more force applied to the bone than the bone can withstand. The most common causes of fracture include fall from a height, road traffic accidents, and direct blow on the bone, crushing force, sudden twisting motion, extreme muscle contraction, and osteoporosis and even over use. Among these most common cause of fracture is osteoporosis. Worldwide, osteoporosis causes more than 8.9 million fractures annually. In every 3 seconds 1 case is diagnosed as fracture. Most common sites of fractures are wrist, hip, femur, tibia and fibula, foot and ankle[9].

In India, according to WHO report (2010), the incidence of fractures is 14 cases/10,000 each year, lower limb fractures accounts for 26%, arm fractures accounts for 14% and other fractures for 5%. As compared to other fractures, lower limb fractures are more common than any other fractures[10].

Majority of patients with injuries of the skeletal system will be managed by bed rest, immobilization and rehabilitation itself without requirement of surgical intervention. Immobilization is achieved by application of plaster cast and braces and it also provides support, correction of deformity and promotes union of fracture[11].

Plaster has been used for centuries as a stiffening agent to treat fractures and other musculoskeletal conditions that requires rest, immobilization or correction of a deformity. Despite modern metagullary and internal stabilization, plaster casts and splints remain an important means of external stabilization. Proper casting technique is paramount[12].

Though there are advantages of plaster cast, there are disadvantages also like impaired blood flow, nerve damage, tissue necrosis, infection and cast syndrome. Again complications may arise due to prolonged immobilization of plaster cast which includes hypostatic pneumonia, foot drop, renal calculi, constipation, stiffness of joints and pressure ulcer[12].

A study was conducted on plaster cast associated bacillus aureus wound infection. Two hundred and sixty one bacterial cultures were taken from material in the Steinmann pin application and plaster fixation procedures. Results showed that bacillus contamination rate of plaster when dry or wetted with sterile water or tap water was 25% and 40% respectively and all culture plaster samples were negative after steam and gas sterilization. These results suggested that the patient have acquired infection from the plaster impregnate gauze wetted in tap water[13].

A study was conducted to assess the incidence of late skin complications (heel pressure sores) at a Rozzoli orthopedic hospital. Two hundred and sixteen patients were taken. Results showed that 17.6% (38) developed skin complications in at risk sub groups[14].

There is a need of care after application of plaster cast. It helps in early recovery and prevention of complications. The care includes checking peripheral pulse and nerve function to assess the neurovascular status of the distal part, changing of position, maintenance of nutritional status, maintenance of health hygiene, medications to relieve pain. Patient's role is also involved in taking care of their casted limb to prevent swelling, necrosis and compartment syndrome. It includes skin care, active and passive exercise, proper nutrition, frequent position change and also to gain self care knowledge which is much useful for early recovery[15].

A study conducted in various hospitals of Yelankha revealed that patients were having inadequate knowledge (33.5%), after the health education there was a gain (48.1%) in knowledge score. The study concluded that health education was effective in improving patient knowledge[16].

The investigators while working in orthopedic ward had a personal experience that most of the fracture patients who got admitted in orthopedic ward were unaware of management of orthopedic appliances. With these view the investigators have chosen the study to evaluate the effectiveness of health education on knowledge regarding management of orthopedic appliances among fracture patients in R.L.Jalappa Hospital and research centre[17].

CHAPTER-II

OBJECTIVES

This chapter deals with the statement of the problem, objectives of the study, Operational definitions, Assumptions and Hypothesis.

The statement of the problem selected for the study was as follow:

STATEMENT OF THE PROBLEM

"A Study to Assess the Effectiveness of Health Education Programme on Knowledge regarding Management of Orthopedic Appliances among Fracture Patients in R. L. Jalappa Hospital, Kolar"

OBJECTIVES OF THE STUDY

1. To assess the knowledge on management of orthopedic appliances among the fracture patients.
2. To evaluate the effectiveness of health education programme regarding management of orthopedic appliances among fracture patients while comparing pre and post-test knowledge scores.
3. To determine the association between post-test knowledge scores on management of orthopedic appliances among fracture patients with selected socio-demographic variables.

OPERATIONAL DEFINITIONS

Assess:

In this study it refers to the way of finding out the level of knowledge regarding management of orthopedic appliances among fracture patients who are admitted in R.L. Jalappa Hospital and Research Centre, Tamaka, Kolar.

Effectiveness:

In this study it refers to the extent to which the health education programme was achieved the desired effect in improving knowledge on management of orthopedic appliances among fracture patients.

Health Education:

It refers to systematic way of giving information on management of orthopedic appliances among fracture patients.

Knowledge:

It refers to the correct responses received from the fracture patients to the knowledge questionnaire.

Management:

It refers to the activities undertaken by fracture patients to manage the orthopedic appliances.

Orthopedic Appliances:

It refers to plaster, cast, or braces, traction, splints that supports, aligns, prevents and corrects musculoskeletal deformities of the body in order to improve the function of a movable part of the body.

Fracture patients:

In this study it refers to individual who were admitted in RLJH & Research Centre, Kolar with the diagnosis of fracture and having any one of the orthopedic appliances for immobilization of fracture.

ASSUMPTIONS

1. Fracture patients may be having some knowledge on management of orthopedic appliances.
2. Structured Health Education may improve the knowledge level of fracture patients regarding management of orthopedic appliances.
3. There may be some association of knowledge with selected socio-demographic variables.

NULL HYPOTHESIS

$H_0$1: There will not be statistically significant difference between pretest and posttest knowledge score of fracture patients regarding management of orthopedic appliances.

$H_0$2: There will not be statistically significant association between the knowledge on orthopedic appliances with selected socio-demographic variables.

SUMMARY

This chapter has dealt with the objectives of the study, operational definition, variables, assumptions and hypothesis of the study.

CHAPTER-III

REVIEW OF LITERATURE

The term review of literature refers to the activities involved in identifying and searching information on a topic and developing an understanding of the topic[18].

For the present study, the literature was reviewed from the text books, journals, electronic resources, articles and dissertations, then it was organized under the following headings

1. Studies related to prevalence of orthopedic conditions
2. Studies related to care of patients with orthopedic appliances
3. Studies related to knowledge on self care management of plaster cast
4. Studies related to effectiveness of health education among fracture patients

1. Studies related to prevalence of orthopedic condition

A study was conducted to identify the incidence of patient with lower extremity injuries presenting to emergency departments in the US. The researcher used the National Injury Surveillance System (NEISS) to obtain a probability sample all lower extremity injuries treated at emergency departments during 2009. A total of 119,815 patients were selected for the study. Strains and sprains accounted for 36% of all lower extremity injuries. The injury with the greatest incidence was an ankle sprain (206 per 100,000;95% confidence interval, 181-230). Older patients were more likely to have lower trunk fracture and contusions/ abrasions. The most common incidence for injury was at home (45%)[19].

A descriptive study was conducted on the prevalence and functional impact of musculoskeletal conditions among clients of a primary health care facilities in an under resourced area of Cape Town, South Africa. It was clinics in two resource poor communities .Phase 1 consisted of screening and those who screened positive for peripheral or spinal joint pain went on to complete phase2, which included the Stanford Health Assessment Questionnaire. A total of 1005 people were screened in phase1. Of these, 362 (36%) reported musculoskeletal conditions not due to injury in the past 3 months. The mean disability index for those with musculoskeletal condition was mild to moderate and moderate to severe in those over 55 years of age related incidence and early outcomes of hip fracture. A total of 1177 patients were selected for the study. Patients were divided in to 3 groups; group A (<64 years), group B (between 65 to 84 years) and group C (>85 years). The study reveals that there was no significant difference in the type of fracture across the 3 groups. Older patients who had internal fixation of intra capsular fractures had a better walking ability at 4 months. Mortality was higher in older patients[20].

A study was conducted to determine the prevalence of orthopedic condition in adult patients seen at a private hospital in France. The research team selected the male and female patients over 18 years of age who presented for first visit with the orthopedic surgeon for an

orthopedic non-traumatic condition. A total 18,780 patients were seen; 11,343(60.4%) females and 7437(39.6%) males. The reported prevalence of orthopedic conditions ranged from 7.2% to 36.2%. Spine and knee conditions accounted for 33.4% and 12.7% among females, and 13.6% and 4.8% among males[21].

2. Study related to care of patient with orthopedic appliance

The observational study was conducted on 100 patients with traumatic fractures of hip and femur bones who were admitted to KashanShahid –Beheshti Hospital during the first 6 months of 2012 , and for whom skeletal or skin traction was performed. Data were collected using a check list including questions about the personal charecteristics and 23 items related to care for patients with tractions. These items were in 3 domains including caring while establishing traction, recording care and patient's education. Descriptive statistics were calculated and data were analyzed using the independent sample t-test and person correlation coefficient. The mean age of patients was 51.16+_ 23.28 years and 66% of them were male. In total, 47% of the patients were treated by skin traction and 53% by skeletal traction. The overall mean score of quality of care was 10.20+_ 2.64 . Quality of establishing traction was good in 55% of patients, but the quality of care was poor in the domains of recording care(88%) and patient education 96%. Total mean of quality of care was significantly different between male and female patients($p<0.02$)[22].

A quasi experimental study about comparison between the effects of simple traction , splints on pain intensity in patients with femur fracture was performed on 32 patient with femur fracture. Pre hospital emergency ambulances were divided in to 2 groups of simple traction , splints using a table of random numbers. Continuous convenient sampling was employed in each group to use either a simple traction, splint for the patients with femur fracture. Pain intencity of the patients was then measured by a visual analogue scale (VAS) immediately 1 hour, 6hour, 12 hour after splinting. The effects of 2 technology were finally compare. After splinting, pain intensity decreased significantly in both groups ($p=0.0001$).The reduction significantly more in the traction splinting group at the first, sixth and twelth hour after splinting ($p=0.02$) compare with the simple splint group. There was no significant in pain intensity immediately after splint between the two groups ($p=0.441$)[23]

A study was conducted with an objective to determine the complication of water proof plaster cast following lower limb fracture in adolescents at pediatric cardiology unit, University of Geneva. Fifty adolescents were included in the study who underwent water proof cast immobilization for a leg or ankle fracture. Results showed that minor skin complications occurred in 2% of patients due to initial displacement and rest of the patient had no complications[24].

A study was conducted to determine the efficacy of waterproof cast-lining materials in children short-leg casts in Children's Hospital Boston. A total of 165 waterproof-lined casts were applied and 124 children and parents completed a survey (76.9%) upon cast removal. There were 16 (12.9%) minor skin integrity issues. Results concluded that waterproof casts in stable fractures and sprains allow acceptable immobilization with no significant associated unusual risk[25].

A study was conducted on nutritional status and wound healing in open fractures of the lower limb at Christian Medical College and Hospital, Ludhiana. Forty three patients with plaster cast application for fractures of lower limb were studied prospectively for 40 weeks using anthropometrical, biochemical and hematological parameters to ascertain their relationship between wound healing and nutritional status. Nearly half (21/43) of patients were malnourished at admission and the number increased to 22 a week after injury. Dietary advice and better intake improved nutritional status. They found that wound healing was earlier when nutritional status was improved[26].

A study was conducted to assess the effect of the commonly used below knee plaster casts on driving ability at Hairmyres Hospital, Lanarkshire. The study aims to help doctors decide whether or not a patient is fit to drive with a plaster cast. Three types of cast were tested using one drier. A score was given for several driving abilities. Ankle and tibia casts were found to have significant affects on driving ability. But will usually depend upon medical advice[27].

3. **Studies related to Knowledge on Self Care Management of Plaster Cast**

A study was conducted with an objective to assess the knowledge of patient's with fracture on self care of casted limb at selected hospitals, Pune . Fifty patients with lower limb fracture were included. Samples were selected by using non-probability sampling technique. The mean knowledge score was (26.56%). Result showed that the patient had inadequate knowledge on self care of casted limb[28].

A study was conducted with an objective to assess the knowledge regarding care of children with plaster cast among mothers at Hosmat Hospital, Bangalore. Sixty care takers were included. Data was collected using structured knowledge questionnaire. Results revealed that the mothers had inadequate knowledge on care of children with plaster cast with a mean knowledge score of (33.56%)[29].

A study was conducted with an objective to assess the knowledge of clients regarding self care of plaster cast with fractured lower limb at selected hospitals, Bangalore. Thirty patients with fractured lower limbs were selected. Samples were selected by using non-probability sampling technique. Result showed a mean knowledge score 33.5% and study concluded that clients had inadequate knowledge regarding care of patient on plaster cast with lower limb fracture[30].

4. **Studies related to effectiveness of health education among fracture patients**

A study was conducted to evaluate the effectiveness of health education on knowledge regarding care of plaster cast among the patients with fractured limb, who were admitted in selected Hospitals of Yelahanka. Sixty long bone fracture of lower limb patients were selected. Result showed that the post-test knowledge score (81.6%) was significantly higher than the pre-test knowledge score (33.5%). Therefore 48.1% of knowledge gain was the net benefit of the study. The paired t-test (t=74.49 P=0.001). The findings signify that the self instructional module was effective[31].

CHAPTER-IV

METHODOLOGY

Methodology of research organizes all the components of the study in a way that is most likely to lead a valid answer to the sub problems that have been posed.

(Burns and Grove, 2002)

Methodology of the research indicates the general pattern of organizing the procedure for empirical study together with the method of obtaining valid and reliable data for problem under investigation[18].

(Polit and Hungler, 2004)

The present study aimed to know the effectiveness of health education in improving knowledge regarding management of orthopedic appliances among fracture patients.

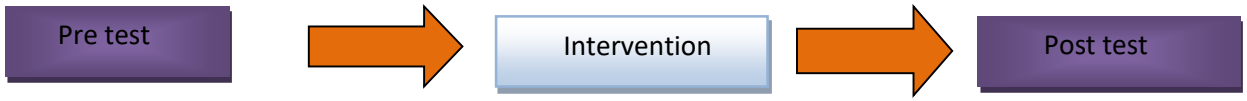
RESEARCH APPROACH

It indicates the procedure for conducting the study. In order to accomplish the objectives of the present study, an intervention approach was adopted.

RESEARCH DESIGN

The term research design refers to the researcher overall interest for obtaining answer to the research questions or for testing research hypothesis.

For the present study a quasi experimental with one group pre test and post test design was used.



SETTING OF THE STUDY

Setting is the location where the study was conducted for the present study. The present study was conducted in orthopedic wards of RL Jalappa Hospital & Research Centre, Tamaka, Kolar.

POPULATION

The population refers to the target population which represents the entire group of all the elements like individuals or objects that need certain criteria to include in the study. In the present study, the population for the study comprises the fracture patients admitted with orthopedic appliances.

SAMPLE SIZE

In this study the sample comprised of 40 patients who were diagnosed as having fracture and admitted to hospital with different orthopedic appliances in RL Jalappa Hospital & Research Centre. Totally 40 patients were included in the study.

SAMPLING TECHNIQUE

Sampling technique defines the process of selecting a group of people or other elements with which to conduct a study. For the present study simple random sampling technique of lottery method was used.

SAMPLING CRITERIA

Inclusion criteria

Patients who were;

1. Diagnosed as fracture and having different orthopedic appliances and admitted in RL Jalappa Hospital.
2. With the age group of 20 to 60 years.
3. Able to understand Kannada or English language.

4. Willing to participate in the study.

Exclusion criteria

Patients who were;

1. Critically ill
2. Developed complication during the study period.
3. Mentally challenged

DATA COLLECTION INSTRUMENTS

Based on the objectives of the study it was decided to administer Structured Knowledge Questionnaire to assess the Knowledge on management of orthopedic appliances among the fracture patients.

DESCRIPTION OF THE TOOL

The adopted tool consists of the following sections,

SECTION- A

This section consists of socio demographic variables which included age, gender, religion, education, occupation, type of family, income, marital status, place of residence and previous experience.

SECTION-B

This section consists of Structured Knowledge Questionnaire regarding management of orthopedic appliances among fracture patients. It had 30 items of multi choice questions and these were distributed under six areas as follows;

Sl No	Area of knowledge	Item No
1.	Fracture	1,2,3,4,5,6,7
2.	Orthopaedic Appliances	8,9,10,11,12,13,14,15,16,17,18,19
3.	Diet	20,21,22
4.	Activity	23,24,25
5.	Rest and Sleep	26,27
6.	Follow Up	28,29,30

Note: Scoring system: For knowledge questionnaire one mark was awarded for the correct answer and no mark was awarded for the wrong answer. So total allotted score was 30.

For the knowledge questionnaire, the scoring interpretation was given as follows.

<50% is below average or inadequate knowledge

51 to 75% is average or moderately adequate knowledge

>75% is adequate or adequate knowledge

DESCRIPTION OF HEALTH EDUCATION PROGRAMME

The investigator had prepared a content on health education programme based on the study objectives, as follows;

- Introduction to fracture
- Definition of fracture
- Causes of fracture
- Diagnostic measures for fracture
- Definition and types orthopedic appliances
- Care of patient in plaster cast
- Care of patient in traction
- Care of patient in splint

- Diet for fracture patients
- Activity for fracture patients
- Rest and sleep
- Rehabilitation and follow up
- Conclusion

CONTENT VALIDITY

The prepared tool and lesson plan on health education programme along with objectives and criteria check list was submitted to seven research experts in the field of nursing and orthopedic for their opinion regarding relevance, appropriateness and degree of agreement in each item of the tool and lesson plan. Suggestions and recommendations given by the experts were incorporated.

RELIABILITY

The reliability is defined as the degree of consistency of dependability with which an instrument measures the attribute it is designed to measures[18].

(Polit and Hungler, 1999)

Reliability of the tool was done using Spearman Brown's prophesy formula and it was found to be 0.96. Hence the structured knowledge questionnaire was found to be reliable.

Spearman Brown's prophesy formula for reliability;

$$r^1 = \frac{2r}{1+r}$$

Where r = Correlation co-efficient computed on the split value

r^1 = The estimated reliability of the entire study

DATA COLLECTION PROCEDURE

The data was collected from 26-6-14 to 30-7-14 in the following phases.

Preparatory phase: A written permission was obtained from the Medical Superintendent and Chief Nursing Officer of RL Jalappa Hospital & Research Centre. Through simple random sampling technique 40 subjects were included in the study. After taking consent from the fracture patients, the date regarding knowledge on management of orthopaedic appliances was assessed by using structured knowledge questionnaire.

Intervention phase: Then a health education programme on management of orthopedic appliances was administered to the study subjects in Kannada using charts and flash cards for one hour.

Closing phase: After seven day, the knowledge was reassessed regarding management of orthopedic appliances among fracture patients. Then researchers thanked the fracture patients who were participated in the study.

Plan for data analysis

The data was analyzed using descriptive and inferential statistics as follows;

- Socio demographic data was analyzed using frequency and percentage.
- Knowledge was analyzed using mean and standard deviation.
- Association between knowledge score with socio demographic variables was analyzed by using chi-square test.

SUMMARY

This chapter dealt with research approach, research design, setting, population, sampling technique, development and description of tool, procedure of data collection and plan for data analysis.

CHAPTER-V

ANALYSIS AND INTERPRETATION

Data analysis is defined as the systematic organization and synthesis of research data and testing of research hypothesis using those data (Polit and Hunler, 1999)[18].

This chapter presents the analysis and interpretation of data collected from 40 fracture patients using structured knowledge questionnaire. Data collected were analyzed and interpreted by using descriptive and inferential statistics.

OBJECTIVES OF THE STUDY:

1) To assess the knowledge on management of orthopedic appliances among fractured patients.
2) To evaluate the effectiveness of health education programme regarding management of orthopedic appliances among the fractured patients while comparing pre and post test knowledge scores.
3) To determine the association between post test knowledge score on management of orthopedic appliances among the fractured patients with selected socio demographic variables.

Based on the objectives of the study, the collected data was organized, tabulated and presented under following sections:

SECTION- I: Distribution of fracture patients according to their Socio-demographic variables

SECTION-II: Distribution of Knowledge score of fracture patients regarding management of orthopedic appliances.

SECTION-III: Effectiveness of health education programme among fracture patients regarding management of orthopedic appliances.

SECTION-IV: Association of post test Knowledge score with selected socio-demographic variables.

SECTION-I

DISTRIBUTION OF FRACTURE PATIENTS ACCORDING TO THEIR SOCIO-DEMOGRAPHIC VARIABLES

This section deals with data pertaining to socio demographic variables of fracture patients. The fracture patients were assessed for socio demographic variables before assessing their knowledge and presented from table 1 to 10.

TABLE 1: Distribution of Fracture Patients based on their age

N=40

Age in years	Frequency	Percentage
20-30years	15	37.5%
31		
41		
51		
To		

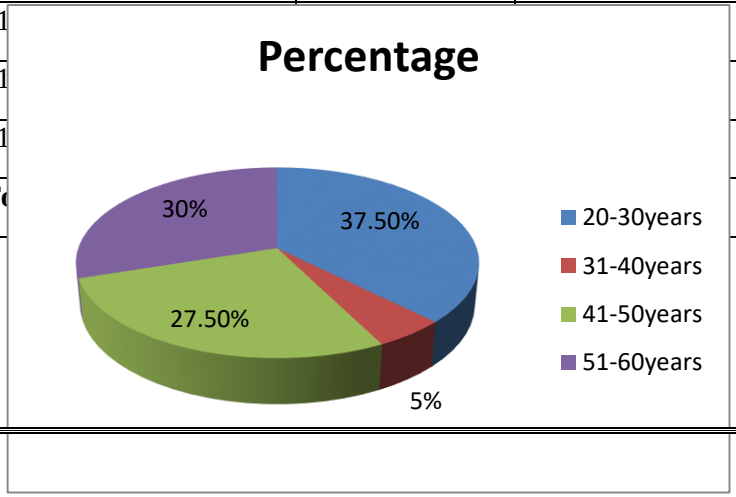


Figure 1: Pie diagram showing percentage distribution of fractured patients based on their age

The above table and pie diagram shows that majority (37.5%) of fracture patients were in the age group of 20-30 years and only 5% of them were belongs to the age group of 31-40 years.

TABLE 2: Distribution of fracture patients based on their gender

N=40

Gender	**Frequency**	**Percentage**
Female	18	45%
Male	22	55%
Total	**40**	**100%**

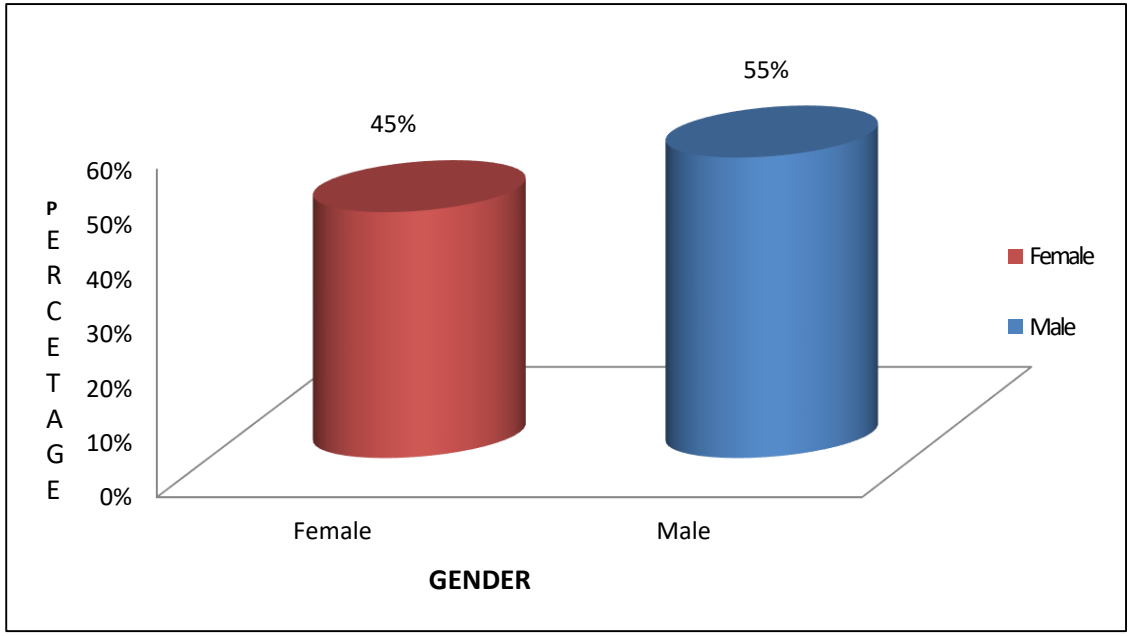


Figure2: Cylindrical diagram showing distribution of fracture patients based on their gender

The above table and cylindrical diagram shows that majority (55.5%) of fracture patients were males and only (45%) of them were females.

TABLE 3: Distribution of fracture patients based on their marital status

N=40

Marital status	**Frequency**	**Percentage**
Married	28	70%
Unmarried	12	30%
Total	**40**	**100%**

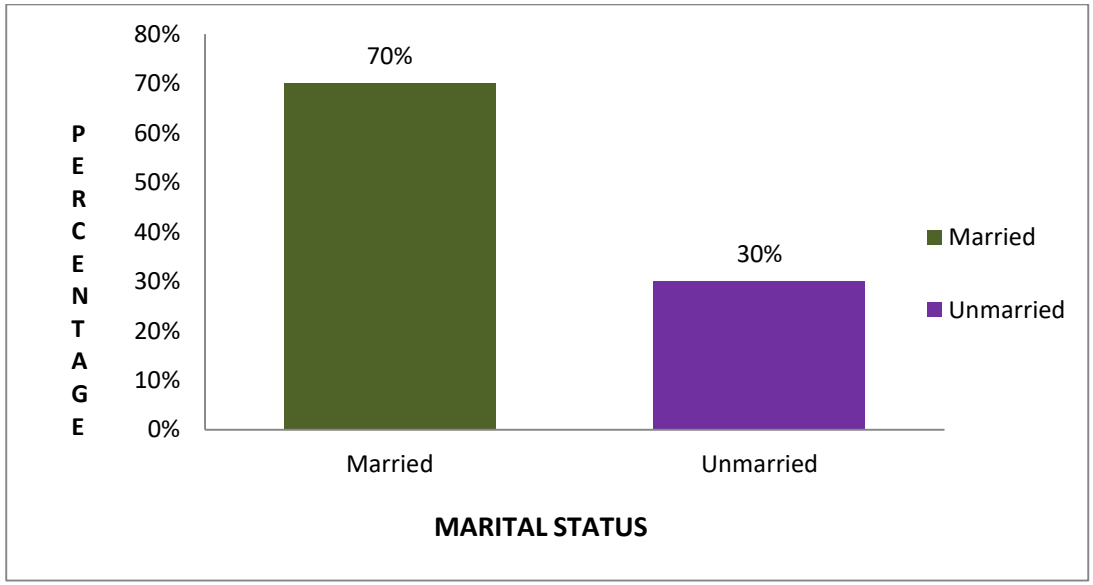


Figure 3: Bar diagram showing distribution of fracture patients based their marital status

The above table and bar diagram shows that majority (70%) of fracture patients were married and only 30% of them were unmarried.

TABLE 4: Distribution of fracture patients based on their religion

N=40

Religion	**Frequency**	**Percentage**
Hindu	28	70%
Muslim	9	22.5%
Christian	3	7.5%
Total	**40**	**100%**

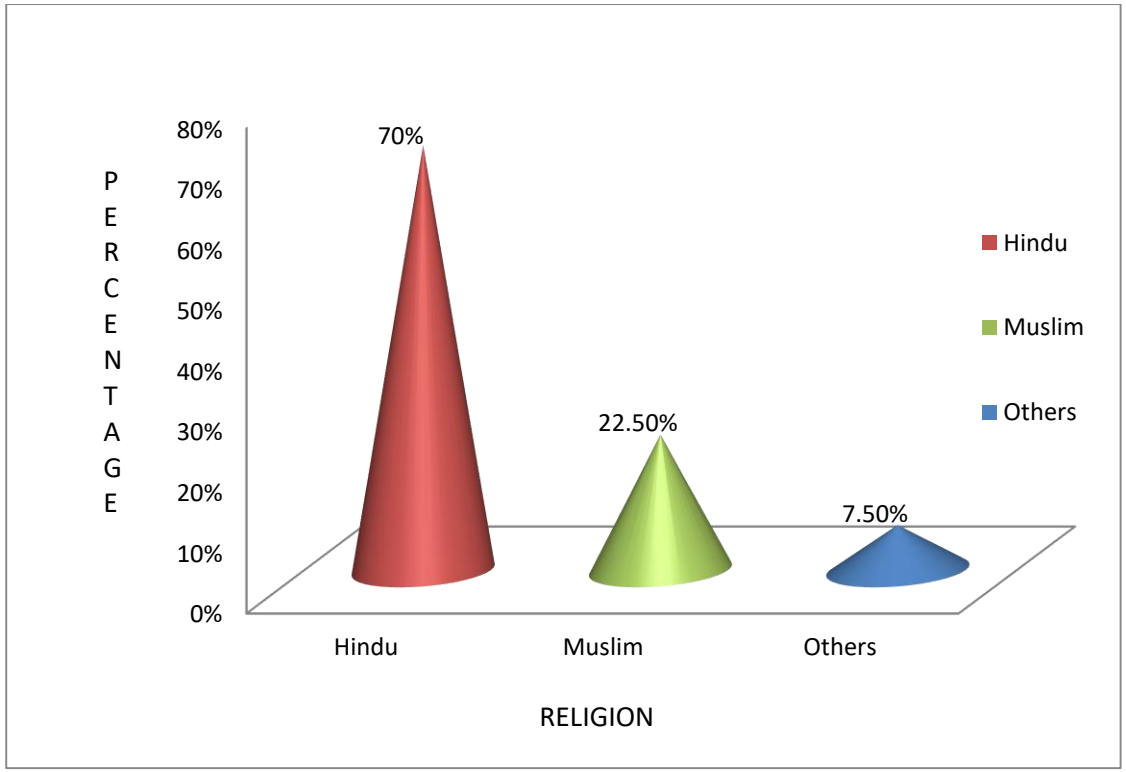


Figure 4: Cone diagram showing distribution of fracture patients based on their religion

The above table and cone diagram shows that majority (70%) of fracture patients were Hindus and 22.5% of them belongs to Muslim and 7.5% of them belongs to Christian, Sikh and Jain community.

TABLE 5: Distribution of fracture patients based on their place of residence.

N=40

Place of residence	**Frequency**	**Percentage**
Rural	32	80%
Urban	8	20%
Total	**40**	**100**

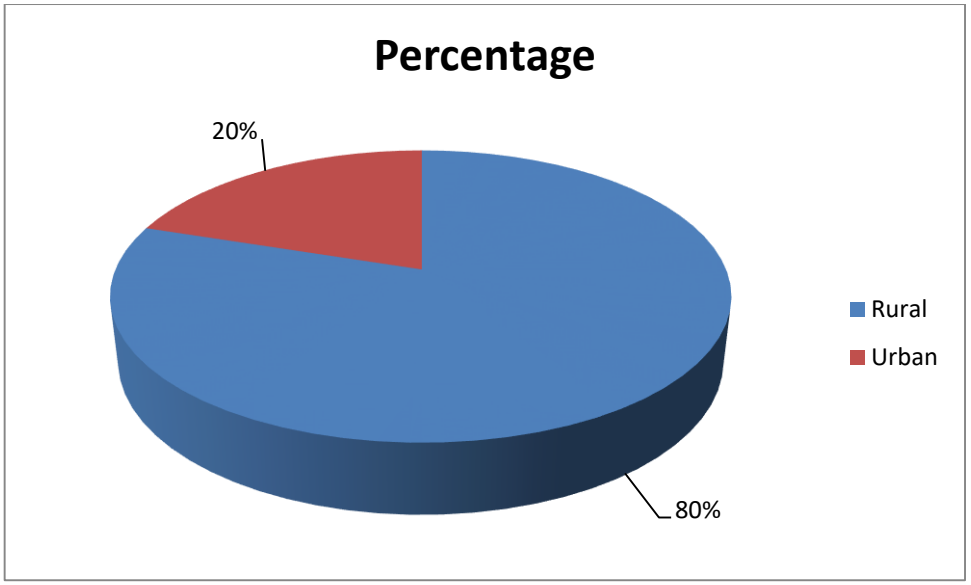


Figure 5: Pie diagram showing distribution of fracture patients based on their place of residence

The above table and pie diagram shows that majority (80%) of fracture patients were residing in rural area and only 20% of them were residing in urban area.

TABLE 6: Distribution of fracture patients based on their qualification

N=40

Qualification	**Frequency**	**Percentage**
Illiterate	12	30%
Primary school	6	15%
High school	13	32.5%
Matriculation	4	10%
Graduation & above	5	12.5%
Total	**40**	**100%**

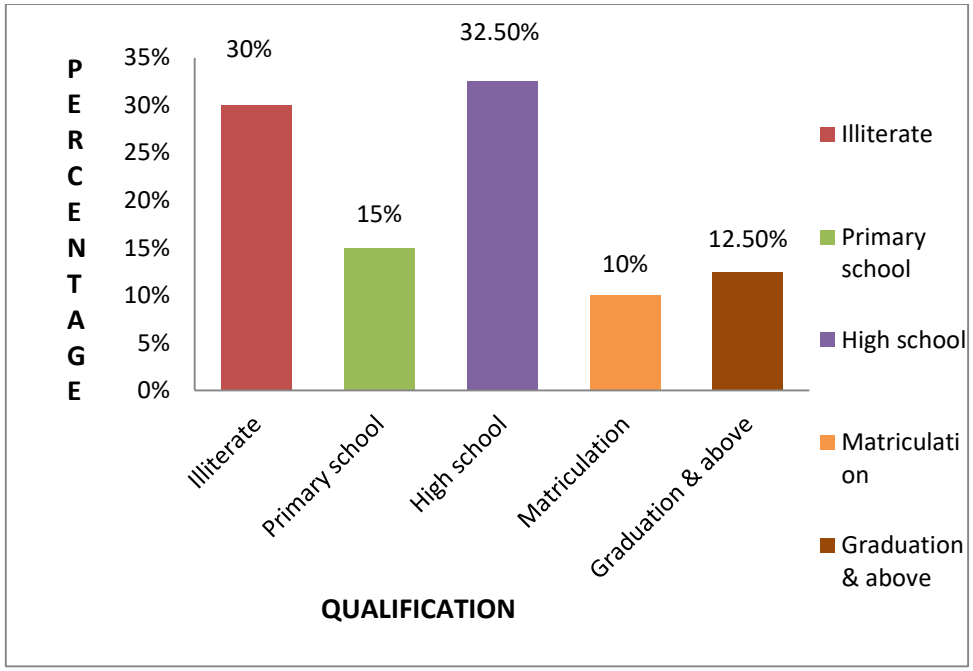


Figure 6: Bar diagram showing distribution of fracture patients based on their educational qualification

The above table and bar diagram shows that majority(32.5%) of fracture patients were with high school qualification, 30% of them were illiterate and only 10% of them had intermediate school education.

TABLE 7: Distribution of fracture patients based on their type of family

N=40

Type of family	Frequency	Percentage
Joint family	26	65%
Nuclear family	14	35%
Total	**40**	**100%**

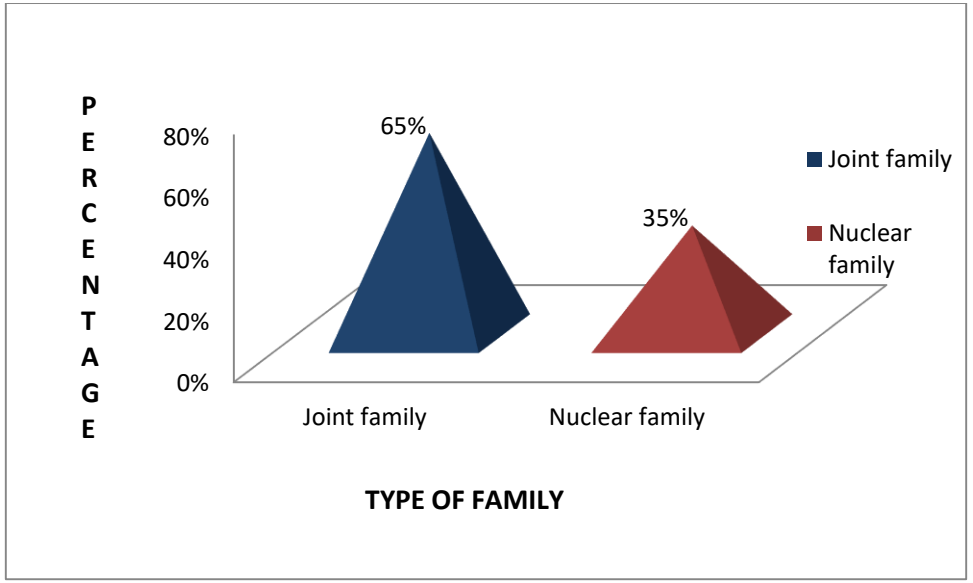


Figure 7: Cone diagram showing distribution of fracture patients based on their type of family

The above table and cone diagram shows that majority (65%) of fracture patients were belongs to joint family and only 35% of them were from nuclear family.

TABLE 8: Distribution of fracture patients based on their occupation

N=40

Sl No	**Occupation**	**Frequency**	**Percentage**
1	Private	6	15%
2	Government	13	32.5%
3	Coolie	21	52.5%
	Total	**40**	**100%**

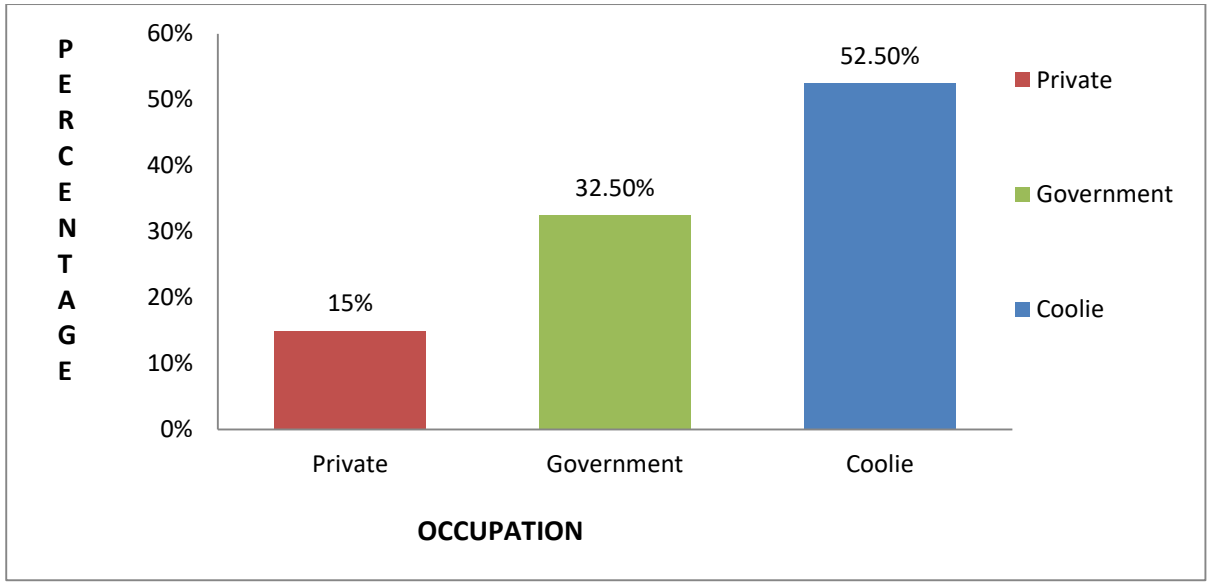


Figure 8: Bar diagram showing distribution of fracture patients based on their occupation

The above table and bar diagram shows that majority (52.5%) of fracture patient's occupation was coolie, 15% of them were having private job and 13% of them were having government job.

TABLE 9: Distribution of fracture patients based on their income

N=40

Sl No	**Income**	**Frequency**	**Percentage**
1	Below 5000	16	40%
2	5001-10,000	11	27.5%
3	10,001-15,000	8	20%
4	Above 15,000	5	12.5%
	Total	**40**	**100%**

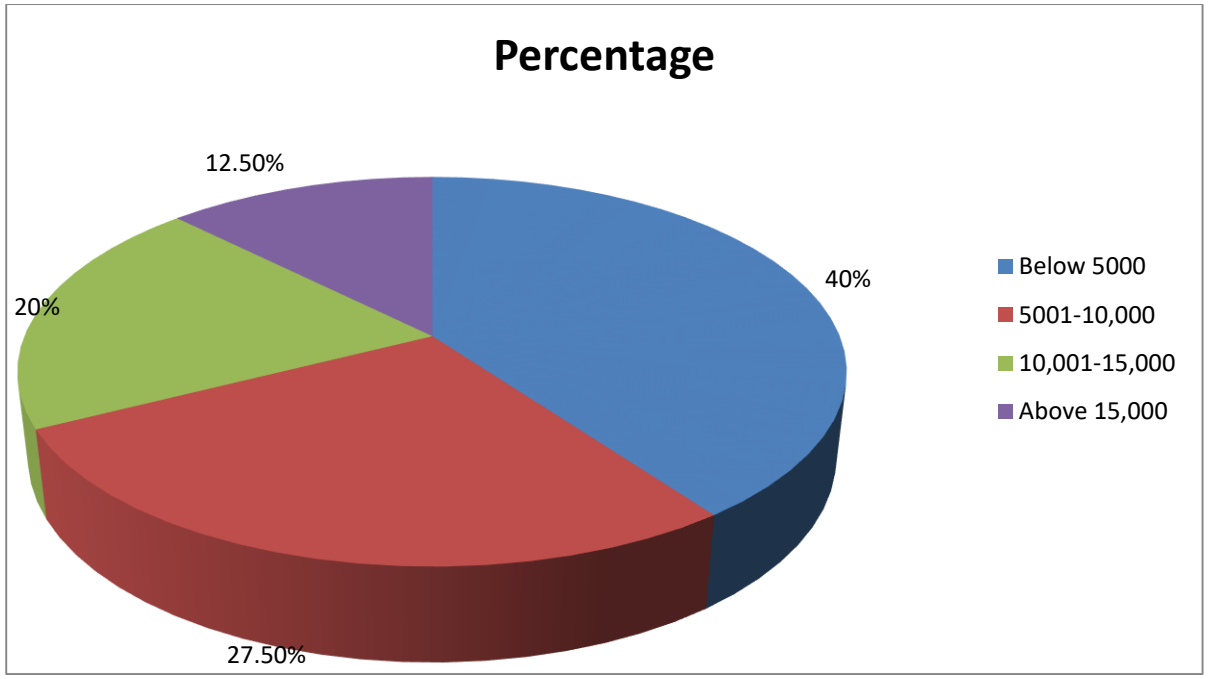


Figure 9: Pie diagram showing distribution of fracture patients based on their income

The above table and pie diagram shows that majority (40%) of fracture patients were having below Rs.5000 of income, 20% of them were having Rs.10,001-15,000 of income, and only 12.5% of them were having above 15,000 of income.

TABLE 10: Distribution of fracture patients based on their previous experience on orthopedic appliances

N=40

Sl No	Previous experience	Frequency	Percentage
1	Yes	9	22.5%
2	No	31	77.5%
	Total	**40**	**100%**

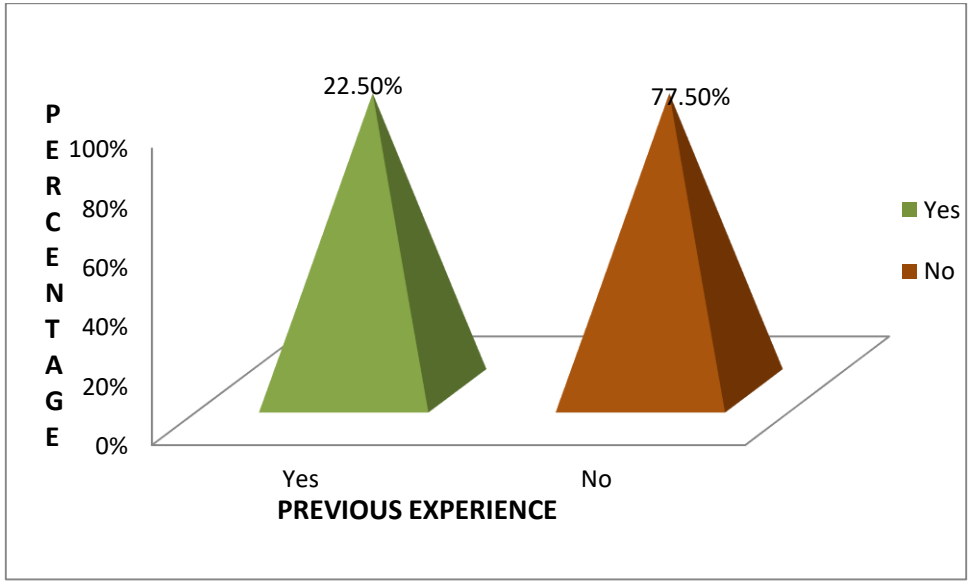


Figure 10: Cone diagram showing distribution of fracture patients based on their previous experience on orthopedic appliances

The above table and cone diagram shows that majority (77.5%) of fracture patients were not having previous experience on use of orthopedic devices and only 5% of them were having previous experience.

SECTION II

DISTRIBUTION OF KNOWLEDGE SCORE AMONG FRACTURE PATIENTS REGARDING MANAGEMENT OF ORTHOPEDIC APPLIANCES

This section deals with first objective that is to assess the knowledge on management of orthopedic appliances. After collecting socio demographic variables fracture patients were assessed for their level of knowledge on management of orthopedic appliances and was presented from table 11 to 12.

TABLE -11: Distribution of fracture patients based on area wise Knowledge score

N=40

Knowledge Area	Mean	SD
Knowledge related to fracture	2.67	1.68
Knowledge related to orthopaedic appliances	**4.42**	2.40
Knowledge related to diet	0.67	0.96
Knowledge related to activity	1.02	0.68
Knowledge related to rest & sleep	**0.4**	0.62
Knowledge related to follow up	0.8	0.74
Overall knowledge	**9.98**	**7.08**

The above table shows that the distribution of area wise knowledge scores among fracture patients. There were 6 areas of knowledge score. The highest mean score (4.42) was seen in the area of orthopaedic appliances with SD 2.40 and the lowest score (0.4) was seen in the area of rest and sleep with SD 0.62. Related to fracture the mean score was 2.67 with SD of 1.68 and in diet the mean score was 0.67 with SD of 0.96 and in activity the mean score was 1.02 with SD of 0.68 and in follow up the mean score was 0.8 with SD of 0.74 and the overall knowledge score was 9.98 with SD of 7.08.

Based on overall knowledge score, fracture patients were classified as inadequate knowledge (who scored less than 50%), moderately adequate knowledge (who scored 51-75%) and adequate knowledge (who scored >75%).

TABLE 12: Distribution of fracture patients based on overall knowledge

N=40

Knowledge score	**Frequency**	**Percentage**
Adequate (>75%)	00	00
Moderately adequate (51-75%)	09	22.5%
Inadequate (<50%)	31	77.5%
Total	**40**	**100%**

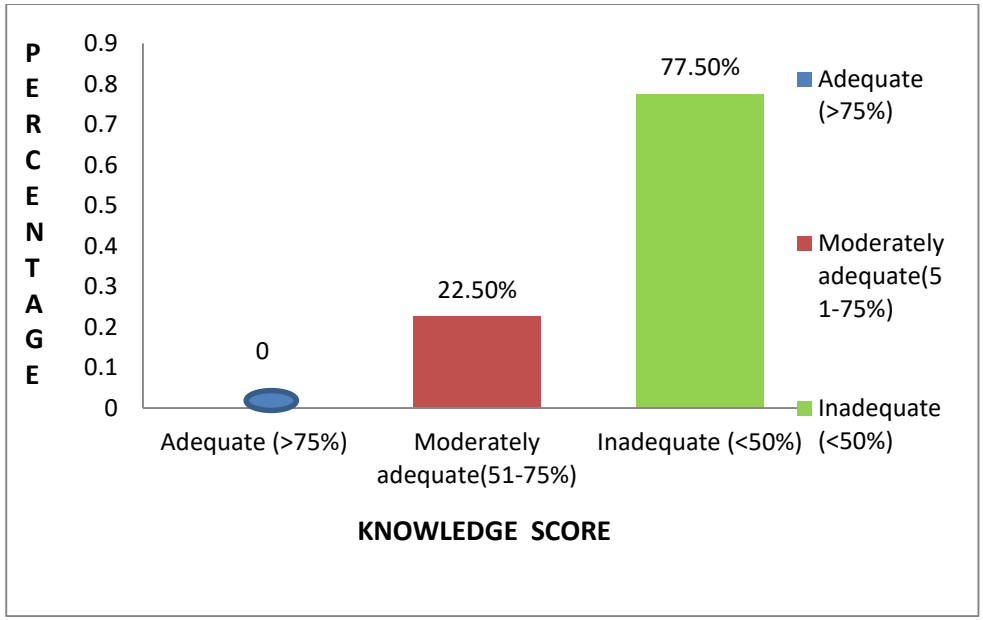


Figure 12: Bar diagram showing distribution of fracture patients based on overall knowledge score

The above table and bar diagram reveals that majority (77.50%) of fracture patients had inadequate knowledge, 22.50 % of them had moderately adequate knowledge and none of them had adequate knowledge.

SECTION 3

EFFECTIVENESS OF HEALTH EDUCATION PROGRAMME ON MANAGEMENT OF ORTHOPEDIC APPLIANCES

This section deals with the second objective that was to evaluate the effectiveness of health education programme on management of orthopedic appliances by comparing pre and post test knowledge scores. This was presented in table 13.

TABLE 13: Comparison of overall pre and post test knowledge scores of fracture patients

N=40

Knowledge	**Mean**	**SD**	**Mean%**	**Paired t test**	**Inference**
Pre test	10.37	4.58	34.56%	3.01	S
Post test	17.37	3.08	57.9%		
Enhancement of knowledge	**7**	_	23.34%	_	_

S- Significant at 0.05 level

The above table shows that the pre test mean knowledge score of fracture patients was 10.37 with SD of 4.58 where as the mean post test knowledge score was 17.37 with SD of 3.08. While enhancing the mean knowledge score is 7. The obtain t value was 3.01 which was significant at 0.05 level. This indicated that health education programme was effective in increasing the knowledge score among fracture patients.

SECTION 4

ASSOCIATION BETWEEN THE KNOWLEDGE SCORES OF FRACTURE PATIENTS WITH SELECTED SOCIO DEMOGRAPHIC VARIABLES

This section deals with the third objective that was to determine the association between post test knowledge score of fracture patients with selected socio demographic variables and presented in table 14.

TABLE 14: Association of knowledge score with selected socio demographic variables

N=40

Sl no	Demographic variables	Knowledge level		X2	Df	Table value	Level of significance
		≤17	≥17				
1	**Age in years** ≤ 40 years	5	12				

	≥ 40 years	9	14	7.91	1	3.84	P<0.05 S
2	**Gender**						
	Male	9	13				
				0.22	1	3.84	P>0.05
	Female	6	12				NS
3	**Religion**						
	Hindu	9	19				
				1.13	1	3.84	P>0.05
	Others	6	6				NS
4	**Education**						
	≤ high school level	7	11				
				0.02	1	3.84	P>0.05
	≥High school and above	8	14				NS
5	**Type of family**						
	Joint	7	19				
				3.53	1	3.84	P>0.05
	Nuclear	8	6				NS

6	**Occupation**						
	Private & Government	10	9				
				3.52	1	3.84	P>0.05
	Coolie	5	16				NS
7	**Income**						
	≤ 10,000	9	18				
				0.6	1	3.84	P>0.05
	≥10,000	6	7				NS

***S Significant at <0.05 level *NS Non significant at >0.05 level**

The above table showed that the association of post test knowledge score of fracture patients with selected socio demographic variables.

- With regard to age, there were two groups, below or equal to 40 years and above 40 years. The obtained x^2 value was 7.91 which was greater than the table value (3.84) at 0.05 levels of significant. Hence there was association of knowledge score with age.
- With regard to gender, there were two groups, male and female. The obtained x^2 value was 0.22 which was less than the table value (3.84) at 0.05 levels of significance. Hence there was no association of knowledge score with gender.

- With regard to religion, there were two groups, Hindu and others. The obtain x^2 value was 1.13 which was less than the table value (3.84) at 0.05 levels of significance. Hence there was no association of knowledge score with religion.
- With regard to educational qualification, there were two groups, below or equal to high school and above high school. The obtained x^2 value was 0.02 which was less than the table value (3.84) at 0.05 levels of significance. Hence there was no association of knowledge score with educational qualification.
- With regard to type of family, there were two groups, joint family and nuclear family. The obtained x^2 value was 3.53 which was less than the table value (3.84) at 0.05 levels of significance. Hence there was no association of knowledge score with type of family.
- With regard to occupation, there were two groups, private and government and coolie. The obtained x^2 value was 3.52 which was less than the table value (3.84) at 0.05 levels of significance. Hence there was no association of knowledge score with occupation.
- With regard to income there were two groups, less than or equal to 10,000 and greater than 10,000. The obtained x^2 value was 0.6 which was less than the table value (3.84) at 0.05 levels of significance. Hence there was no association of knowledge score with income.

SUMMARY

This chapter was dealt with interpretation of findings of the study. The study was analyzed by using descriptive and inferential statistics and presented under various sections like description of demographic variables, description of pre test and post test knowledge scores, comparison of pre test and post test knowledge scores and association of post test knowledge scores with selected demographic variables.

CHAPTER-VI

DISCUSSION

The present study was intended to find out the effectiveness of health education programme on management of orthopedic appliances among fracture patients at R.L. Jalappa hospital, Kolar. Data was collected using simple random technique from 40 patients, were analysed and presented in the form of tables and graphs in chapter-V. The finding of the present study were discussed based on it's objectives as follows.

SECTION-1

SOCIO DEMOGRAPHIC VARIABLES OF FRACTURE PATIENTS

The socio demographic data of fracture patients revealed that;

1. **Age:** With regard to age, majority (37.5%) of fracture patients were in the age group of 20-30 years and only 5% were belongs to age group of 31-40 years. To support this finding there were no studies.
2. **Gender:** With regard to gender, majority (55%) of fracture patients were males and only 45% of them were females. To support this finding there were no studies.
3. **Marital status:** With regard to marital status majority (70%) of fracture patients were married and only 30% of them were unmarried. To support this finding there were no studies.
4. **Religion:** With regard to religion majority (70%) of fracture patients were Hindus and only 7.5% of them were belongs to other groups like Christian, Sikh and Jain . To support this finding there were no studies.

5. **Place of residence :** With regard to place of residence majority (80%) of fracture patients were from rural area and only 20% of them were from urban area. To support this finding there were no studies.
6. **Education :** With regard to education majority (32.5%) of fracture patients had high school qualification and only 10% of fracture them had intermediate qualification. To support this finding there were no studies.
7. **Type of family :** With regard to type of family majority (65%) of fracture patients were belongs to joint family and only 35% of them were from nuclear family. To support this finding there were no studies.
8. **Occupation :** With regard to occupation majority (52.5%) of fracture patient's occupation was coolie and only 15% of them were having private job. To support this finding there were no studies.
9. **Income:** With regard to income majority (40%) of fracture patient's income was Rs <5000 and only 20% of them were having Rs 10,000-15,000 of income. To support this finding there were no studies.

10. **Previous experience to orthopaedic devices :** With regard to previous experience of orthopaedic appliances majority (77.5%) of fracture patients were not having previous experience on use of orthopaedic appliances and only 22.5% of them were having previous experience. This was supported by the study conducted on 100 patients with traumatic fracture of hip and femur bone who were admitted to Kashanshahid- Beheshti Hospital on care of patient with skin or skeletal traction. The results showed that quality of establishing traction was good in 55% of patients.

SECTION- II

DISTRIBUTION OF FRACTURE PATIENTS ACCORDING TO THE LEVEL OF KNOWLEDGE

The first objective of the study was to assess the level of knowledge on management of orthopaedic appliances among fracture patients and it revealed that;

1. **Area wise knowledge**: with regard to area wise knowledge score, the highest mean score 4.42 was seen in the area of orthopaedic appliances with SD of 2.40 and the lowest score 0.4 was seen in the area of rest and sleep with SD 0.62. Related to fracture the mean score was 2.67 with SD of 1.68 and in the diet the mean score was 0.67 with SD of 0.96 and in the activity the mean score was 1.02 with SD of 0.68 and in the follow up the mean score was 0.8 with SD of 0.74. To support this finding there were no studies.

11. **Over all knowledge score**: regarding over all knowledge score of fracture patients, it was grouped under in adequate, moderately adequate and adequate knowledge. Majority (77.5%) had in adequate knowledge, (22.5%) of them had moderately adequate knowledge and none of them had adequate knowledge. To support this finding there were no studies.

SECTION-III

EEFECTIVENESS OF HEALTH EDUCATION PROGRAMME

In the second objective the effectiveness of health education programme regarding management of orthopaedic appliances revealed that the overall knowledge score of pre test was 10.37 with SD of 4.58 whereas the post test mean score was 17.37 with SD of 3.08. The

t value was 3.0199 which was significant at 0.05 level. This was supported by the study conducted in selected hospital at Yelahanka on comprehensive nursing intervention package of long bone fracture of lower limb, showed that 81.6% subjects attained most satisfactory score in post test, against 33.5% subject in the pre test attained this level. This revealed that the health education programme was effective in enhancing the knowledge of long bone fracture of lower limb patients[31].

SECTION-IV

ASSOCIATION BETWEEN THE POST TEST KNOWLEDGE SCORE AND SOCIO DEMOGRAPHIC VARIABLES

The third objective of the study was to know the association of knowledge score of fracture patients with selected socio demographic variables after health education programme revealed that;

- With regard to age there were two groups, below 40 years and above 40 years . The obtained x^2 value was 7.91 which was greater than the table value 3.84 at 0.05 level of significance. Hence there was significant association between knowledge score and age.

- With regard to gender there were two groups, male and female. The obtained x^2 value was 0.22 which was less than the table value 3.84 at 0.05 level of significance. Hence there was no significant association between knowledge score and gender.

- With regard to religion there were two groups, Hindu and other religious groups. The obtained x^2 value was 1.13 which was less than the table value 3.84 at 0.05 level of significance. Hence there was no significant association of knowledge score with religion.

- With regard to educational qualification there were two groups, below high school level and high school and above. The obtained x^2 value was 0.02 which was less than the table value 3.84 at 0.05 level of significance. Hence there was no association between knowledge score and education.

- With regard to type of family there were two groups, nuclear and joint. The obtained x^2 value was 3.53 which was less than the table value 3.84 at 0.05 level of significance. Hence there was no significant association between knowledge score and type of family.

- With regard to occupation there were two groups, private & government and coolie. The obtained x^2 value was 3.52 which was less than the table value 3.84 at 0.05 level of significance. Hence there was no significant association between knowledge score and occupation.

- With regard to income there were two groups, below 10,000 and above 10,000. The obtained x^2 value was 0.6 which was less than the table value 3.84 at 0.05 level of significance. Hence there was no significant association between knowledge score and income.

CHAPTER-VII

SUMMARY

This chapter gives a brief summary of the study, nursing implications, nursing practice, nursing education, nursing administration, nursing research, limitations and recommendations for the future study.

The present study aimed at finding out the effectiveness of health education programme on fracture patients regarding management of orthopedic appliances.

The study had the following objectives that are;

1. To assess the knowledge on management of orthopedic appliances among the fracture patients.
2. To evaluate the effectiveness of health education programme regarding management of orthopedic appliances among fracture patients while comparing pre and post test knowledge scores.
3. To determine the association between post test knowledge scores on management of orthopedic appliances

among fracture patients with selected socio demographic variables.

HYPOTHESIS

$H_0$1: There will be no significant difference between pre test and post test knowledge score of fracture patients regarding management of appliances.

$H_0$2: There will be no significant association between the knowledge regarding orthopaedic appliances and selected demographic variables like age, education, occupation and type orthopaedic appliances.

The data was conducted in the following phases:

The data was collected from 26-06-2014 to 30-07-2014 in the following phases.

Preparatory phase: A written permission was obtained from the Medical Superintendent and Nursing Superintendent of RJJH & Research Centre, Tamaka. Through the random sampling technique 40 study subjects were selected. The data regarding the knowledge on management of orthopedic appliances were assessed by using structured knowledge questionnaire.

Intervention phase: After the pre test, health education programme was administered to the study subjects regarding management of orthopedic appliances in selected orthopedic wards in RLJH & RC.

Closing phase: After 7 days of health education programme, knowledge of fracture patients regarding management of orthopedic appliances were reassessed.

MAJOR FINDINGS OF THE STUDY

The findings were as follows;

- Majority (37.5%) of fracture patients were in the age group of 20-30 years and only 5% were belongs to age group of 31-40 years.
- Majorities (55%) of fracture patients were males and only 45% of them were females.
- Majority (70%) of fracture patients were married and only 30% of them were unmarried.
- Majority (70%) of fracture patients were Hindus and only 7.5% of them were belongs to other groups like Christian.
- Majority (80%) of fracture patients were from rural area and only 20% of them were from urban area.
- Majority (32.5%) of fracture patients had high school qualification and only 10% of fracture them had intermediate qualification.
- Majority (65%) of fracture patients were belongs to joint family and only 35% of them were from nuclear family.
- Majority (52.5%) of fracture patient's occupation was coolie and only 15% of them were having private job.
- Majority (40%) of fracture patient's income was Rs <5000 and only 20% of them were having Rs 10,000-15,000 of income.
- Majorities (77.5%) of fracture patients were not having previous experience on use of orthopedic appliances and only 22.5% of them were having previous experience.

- Area wise knowledge score among fracture patients revealed that the highest mean score (4.42) was seen in the area of orthopedic appliances with SD of (2.40) and the lowest score (0.4) was seen in the area of rest and sleep with SD of (0.62). Related to fracture the mean score was (2.67) with SD of (1.68) and in the diet the mean score was (0.67) with SD of (0.96) and in the activity the mean score was (1.02) with SD of (0.68) and in the follow up the mean score was (0.8) with SD of (0.74).
- Over all knowledge score of fracture patients revealed that (77.5%) had in adequate knowledge whereas (22.5%) of them had moderately adequate knowledge and none of them had adequate knowledge.
- The overall knowledge score of pre test was 10.37 with SD of 4.58 and the post test mean score was 17.37 with SD of 3.08 indicating the health education programme was effective in improving the knowledge score of fracture patients.

- The fracture patients knowledge score with socio demographic variables reveals that there was significant association between knowledge score and age at 0.05 level of significance and there was no significant association between knowledge score and other variables like gender, religion, education, type of family, occupation and income at 0.05 level of significance.

NURSING IMPLICATIONS

The findings of the present study have several implications in nursing administration, nursing practice , nursing education and nursing research.

NURSING PRACTICE:

- Nursing professionals working in the hospital as well as in the community setting play a key role in enhancing client's knowledge regarding management of orthopedic appliances.

NURSING EDUCATION:

- As a nurse educator, there are abundant opportunities for nursing professionals to educate the clients as well as their family members regarding management of orthopedic devices.
- The nurse should be encouraged attend the seminar regarding orthopedic conditions in order to update her knowledge on management of orthopedic appliances

NURSING ADMINISTRATION:

- Nursing administrators may use the study to improve the knowledge of patients. It also highlights the need for nursing administrators to make protocol and guidelines regarding care of client s with orthopedic appliances.

NURSING RESEARCH:

- The findings of the study serve as a basis for nursing profession and nurses to conduct further studies regarding management of orthopedic devices.
- The study helps the nurse researcher to develop insight in to the development of self instructional module for the clients.

LIMITATIONS:

- The knowledge of clients was assessed only through the structured knowledge questionnaire.

- This study was restricted to R.L.Jalappa hospital and research center only .

RECOMMENDATIONS:

- A similar study can done under taken on large scale for making a more valid generalization.
- A study may be conducted in different settings.

CHAPTER-VII

CONCLUSION

A quasi experimental study was aimed to evaluate the effectiveness of health education programme on knowledge regarding management of orthopaedic appliances among fracture patients at R.L.J.H and R.C. Kolar. Using simple random sampling technique data was collected from 40 fracture patients.

The findings of the study revealed that majority (37.5%) of fracture patients were in the age group of 20-30 years, majority (55%) of them were males, majority (70%) of them were married, majority (70%) of fracture patients were Hindus, majority (80%) of fracture patients were from rural area, majority (32.5%) of fracture patients had high school qualification, majority (65%) of fracture patients were belongs to joint family, majority (52.5%) of fracture patient's occupation was coolie, majority (40%) of fracture patient's income was Rs <5000 and majority 77.5 % of them were not having previous experience to use of orthopedic appliances.

Out of 40 fracture patients majority (77.5%) had in adequate knowledge, (22.5%) of them had moderately adequate knowledge and none of them had adequate knowledge.

The pre test mean knowledge score was 10.37 with SD of 4.58 and after health education programme the mean post test knowledge score was 17.37 with SD of 3.08, improving the knowledge score 7 showing that health education programme was effective.

Related to association between level of knowledge score with selected socio demographic variables, it was revealed that there was significant association between knowledge score of fracture patients with age at 0.05 level of significance and there was no significant association between post test knowledge score of fracture patients with other socio demographic variables like gender, religion, education, type of family, occupation and income.

CHAPTER-VIII

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ANNEXURE - A

LETTER REQUESTING PERMISSION FOR CONDUCTING THE STUDY

From,
IV[th] year BSc (N) students
SDUCON
Tamaka, Kolar

To,
The Medical Superintendant
RLJH & RC
Tamaka , Kolar

Sub-Requesting permission to conduct research in RL Jalappa Hospital.
Through the principal, S D U C O N, Tamaka, Kolar

Respected Sir,

We the IV[th] year BSc (N) students are having research project as a part of our curriculum. We kindly request you to grant us the permission to collect data from fracture patients and to give health education regarding management of orthopedics appliances in 17&18, male and female orthopedic wards of RLJH & RC, from 30/6/2014 to 20/7/2014 between 8am to 5pm. We hereby enclosing the problem statement and objectives of our research project for your kind consideration and needful.

Thanking you

Date: 24/6/2014
Place: Tamaka

Yours faithfully,
Anjana Anil
Aswini M V
ChitraThankachan
Jeni John
Lavanya N
Merlin Thampy
Priyamol T P

Forwarded to Medical Superintendent of RLJH & RC for the needful.

ANNEXURE-B

LETTER REQUESTING OPINIONS AND SUGGESTIONS OF EXOERTS FOR ESTABLISHING CONTENT VALIDITY OF RESEARCH TOOL

From,

IV Year B.Sc (N) Students

Sri DevarajUrs College of Nursing

Tamaka, Kolar-563101

To,

Respected Sir/Madam,

Sub: Requesting for opinions and suggestions of experts for establishing content validity of research tool.

We are the IV year B.Sc Nursing students of Sri DevarajUrs College of Nursing, Tamaka, Kolar has selected below mentioned topic for research project to be submitted to Sri DevarajUrs College of Nursing, Tamaka, Kolar, Karnataka, as a fulfillment of Bachelor of Science in Nursing Degree.

Title of the topic:

" A Study to assess the effectiveness of health education programme on knowledge regarding management of orthopedic appliances among fracture patients in a selected hospital,Kolar."

With regards to the above matter we kindly request you to validate our tool for it appropriateness and relevancy, we are enclosing the objectives of the study, criteria rating scale for your consideration. We would be highly obliged and remain thankful for your help preferable if you validate as early as possible.

Thanking You

Encloses:

- Objectives of the study
- Structured knowledge questionnaire

Yours Sincerely,

Anjana Anil
Aswini M V
ChitraThankachan
Jeny John
Lavanya N
Merlin Thampy
Priyamol T P

SRI DEVARAJ URS COLLEGE OF NURSING ,

TAMAKA , KOLAR

STATEMENT OF THE PROBLEM

"A study to Assess the Effectiveness of Health Education Programme on Knowledge regarding Management of Orthopedic appliances among Fracture patients in a selected hospital, Kolar,Karnataka"

OBJECTIVES OF THE STUDY

1. To assess the knowledge on management of orthopedic appliances among the fracture patients.

2. To evaluate the effectiveness of health education programme regarding management of orthopedic appliances among fracture patients while comparing pre and posttest knowledge scores.

3. To determine the association between posttest knowledge scores on management of orthopedic appliances among fracture patients with selected socio demographic variables.

ANNEXURE - C

CRITERIA RATING SCALE FOR VALIDATING THE STRUCTURED KNOWLEDGE QUESTIONAIRE ON MANAGEMENT OF ORTHOPEDIC DEVICES AMONG FRACTURE PATIENTS

Dear madam,

Kindly go through the tool content; give your opinion in the columns given in the criteria table against to each question. Please give your valuable suggestion.

PART- 1 DEMOGRAPHIC DATA

Sl.no	Item	Very relevant	Relevant	Need modification	Not relevant	Remarks
1.1						
1.2						
1.3						

1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
1.10						

PART-2

STRUCTURED KNOWLEDGE QUESTIONAIRE

Sl.no	Item	Very relevant	Relevant	Needs modification	Not relevant	Remarks
A	**General questions related to fracture**					
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
B	**Questions related to orthopedic**					

	appliances					
2.8						
2.9						
2.10						
2.11						
2.12						
2.13						
2.14						
2.15						
2.16						
2.17						
2.18						
2.19						
C	**Questions related to**					

	diet					
2.20						
2.21						
2.22						
D	**Questions related to activity**					
2.23						
2.24						
2.25						
E	**Questions related to sleep and rest**					
2.26						
2.27						

F	**Questions related to follow up**					
2.28						
2.29						
2.30						

General comments:

Date : **Signature of expert:**

Place:

ANNEXURE - D

LIST OF EXPERTS

1. **PROF. ZEANATH C J**

   Chief Nursing Officer

   R L Jalappa Hospital & Research Center

   Tamaka

   Kolar-563101

2. **PROF. RADHA M S**

   Vice Principal

   Sri DevarajUrs College of Nursing

   Tamaka, Kolar-563101

3. **PROF. SILVIA SUREKHA**

   HOD of OBG Dept.

   Sri DevarajUrs College of Nursing

   Tamaka, Kolar-563101

4. **PROF. MARY MINERVA**

   HOD of Community Health Nursing

   Sri DevarajUrs College of Nursing

Tamaka, Kolar-563101

5. **MRS. JAYARAKINI ARUNA**
   HOD of Psychiatric Nursing
   Sri DevarajUrs College of Nursing
   Tamaka, Kolar -563101

6. **DR. ARUN H S**
   Proffesor
   Orthopedic Dept.
   RLJH Hospital & Research Center
   Tamaka, Kolar-563101

7. **DR. ANIL KUMAR**
   Consultant
   Orthopedic Dept.
   R L J hospital &Research Center
   Tamaka, Kolar-563101

ANNEXURE-E

CERTIFICATE FROM STATISTICIAN

We hereby certify that I have provided statistical guidance in analysis to IV year B. Sc Nursing students of Sri Devaraj Urs College of Nursing Tamaka, Kolar for their study titled as **" A Study to Assess the Effectiveness of Health Education Programme on Knowledge regarding Management of Orthopedic Appliances among Fracture patients in a Selected Hospital, Kolar."**

Date:

Place: Tamaka **Signature of Expert**

Mr. S. Ravisankar (Statistician)

Assistant Professor in Biostatistics

Department of Community Medicine

Sri Devaraj Urs Medical College

ANNEXURE-F

STRUCTURED KNOWLEDGE QUESTIONNAIRE ON MANAGEMENT OF ORTHOPEDIC APPLIANCES

INSTRUCTIONS:

Dear participants in this questionnaire, there are questions related to your demographic data and knowledge on management of orthopedic appliances for which there will be four options as answers, one correct answer and three distracters. Kindly read the questions and options which ever you feel appropriate answer for the questions put tick mark against the answer

SECTION-A

SOCIO-DEMOGRAPHIC DATA

1) Age in years
   a) Less than 25 years [ ]
   b) 26-34 years [ ]
   c) 35-44 years [ ]
   d) 45-54 years [ ]

2) Gender of the patient
   a) Male [ ]

b) Female [ ]

3) Marital status
   a) Married [ ]
   b) Unmarried [ ]

4) Religion
   a) Hindu [ ]
   b) Islam [ ]
   c) Others [ ]

5) Place of residence
   a) Rural [ ]
   b) Urban [ ]

6) Educational qualification
   a) No formal education [ ]
   b) Primary school [ ]
   c) High school [ ]
   d) Intermediate school [ ]

e) Graduation & above [ ]

7) Occupation

a) Labour [ ]

b) Agriculture [ ]

c) Other [ ]

8) Type of family

a) Joint family [ ]

b) Nuclear family [ ]

9) Type of diet

a) Vegetarian [ ]

b) Mixed [ ]

10) Family income per month

a) Less than 5000 [ ]

b) 5000-10,000 [ ]

c) 10,000-15,000 [ ]

d) above 15,000 [ ]

11) Previous history of orthopedic appliances

a) Yes [ ]

b) No [ ]

SECTION-B

STRUCTURED KNOWLEDGE QUESTIONNAIRE

I. Questions related to fracture

1) What is fracture?

a) Break in the continuity of muscle [ ]

b) Break in the continuity of tissue [ ]

c) Infection of muscle [ ]

d) Break in the continuity of bone [ ]

2) How fracture occurs ?

a) Falls [ ]

b) Motor vehicle accident [ ]

c) Sports related injuries [ ]

d) All of the above [ ]

3) What are the signs and symptoms of fracture?

a) Pain, swelling , difficulty to move part [ ]

b) Headache , cold , difficulty to eat [ ]

c) Shortness of breath , weakness , loss of blood [ ]

d) None of the above [ ]

4) Which among the following is the specific diagnostic test for fracture?

a) USG [ ]

b) X-ray [ ]

c) Blood examination [ ]

d) Urine examination [ ]

5) What is early sign of infection in the fractured site?

a) Pain [ ]

b) Swelling in the site [ ]

c) Pale fingers and toes [ ]

d) Redness in the site [ ]

6) Which is the factor that enhance fracture healing?

a) Immobilization of fractured fragments [ ]

b) Elevation of affected limbs [ ]

c) Fluid intake [ ]

d) None of the above [ ]

7) Which is the common complication of fracture?

a) Constipation [ ]

b) Respiratory failure [ ]

c) Hemorrhage [ ]

d) Infection [ ]

II. Questions related to orthopedic appliances

8) What do you mean by orthopedic devices?

a) Device used to prevent bleeding from the fracture [ ]

b) Device used to support& align the fractured part of the body [ ]

c) Device used to assess the bone function [ ]

d) Device used to measure the musculoskeletal deformity [ ]

9) What are the types of orthopedic appliances?

a) Plaster cast [ ]

b) Splint [ ]

c) Traction [ ]

d) All of the above [ ]

10) Which is the common problem when an orthopedic appliance is applied?

a) Swelling [ ]

b) Skin breakdown [ ]

c) Cool and clammy skin [ ]

d) All of the above [ ]

11) Why traction is applied to the fractured bone?

a) To assess mobility [ ]
b) To maintain skeletal length and alignment [ ]
c) To measure musculoskeletal system deformity [ ]
d) To prevent bleeding [ ]

12) Which activity will prevent skin breakdown when you are on a traction?
a) Applying oil to the skin [ ]
b) Applying adequate padding to the pressure point [ ]
c) Avoid scratching of the skin [ ]
d) All of the above [ ]

13) What is the purpose of counter traction when traction is applied?
a) To relieve muscle spasm [ ]
b) To prevent the bleeding [ ]
c) To assess the mobility [ ]
d) To improve the circulation [ ]

14) What is the purpose of cast application to the affected extremity?

a) To Prevent bleeding [ ]
b) To treat deformity [ ]
c) To Immobilize the part [ ]
d) To Prevent swelling [ ]

15) Which technique will promote cast drying?

a) Cover the cast [ ]
b) Expose the cast [ ]
c) Rest the cast in the hard surface [ ]
d) Support the cast [ ]

16) What all measures to be followed to prevent swelling when cast is applied?

a) Elevating the fractured limb [ ]
b) Changing the position [ ]
c) Support the affected part [ ]
d) Hot application [ ]

17) Which complication is expected when cast is applied?

a) Compartment syndrome [ ]
b) Infection [ ]

c) Bleeding [ ]

d) Shock [ ]

18) Why splint is applied to fractured limb?

a) To prevent bleeding [ ]

b) To immobilize the affected part [ ]

c) To improve the blood flow [ ]

d) All of the above [ ]

19) What is the reason for decreased blood supply to the splinted part?

a) Blood loss [ ]

b) Pain [ ]

c) Restricted blood flow [ ]

d) Swelling [ ]

III. Questions related to diet

20) Why calcium rich diet is more important for the fractured patients?

a) Helps in repair & regeneration of bone cells [ ]
b) To increase the blood supply [ ]
c) To prevent infection [ ]
d) To improve the mobility [ ]

21) What are the sources of calcium rich diet?

a) Milk & milk products, egg, spinach [ ]
b) Fruits & vegetables [ ]
c) Cereals, pulses, grams, beans [ ]
d) All of the above [ ]

22) What kind of food habits do you require to reduce the formation of hard stools?

a) Avoiding cereals [ ]
b) Reduce fluid intake [ ]
c) Frequent small feeding [ ]
d) Eating of green leafy vegetables [ ]

IV. Questions related to activity

23) What do you mean by active exercise?

a) Exercises that are performed by the patient with assistant [ ]
b) Exercises that are performed by the patient without assistant [ ]
c) Exercises that are performed by the patient with the help of any device [ ]
d) None of the above [ ]

24) What is the benefit of doing exercise?

a) To improve bone healing [ ]
b) To improve blood supply to the affected part [ ]
c) To improve mobility [ ]
d) To prevent infection [ ]

25) Which type of exercise is preferable when fracture site is immobilized with a splint?

a) Deep breathing exercises [ ]
b) Slow contraction & alternative relaxation of the muscles [ ]
c) ROM Exercises [ ]

d) None of the above [ ]

V. Questions related to rest and sleep

26) What are the benefits of rest and sleep?

a) To relieve pain [ ]
b) To reduce the strain of weight bearing [ ]
c) To protect the part while healing [ ]
d) All of the above [ ]

27) What happens when adequate rest and sleep is not taken?

a) Alter the blood circulation [ ]
b) Delay the bone healing [ ]
c) Cause infection [ ]
d) None of the above [ ]

VI. Questions related to follow up

28) Which activity will help to reduce the infection in fractured site?

a) Maintain cleanliness [ ]
b) Application of heat [ ]
c) Adequate bed rest [ ]
d) Plaster application [ ]

29) What you will do to reduce the muscle spasm in your fractured site?

a) Massage the part [ ]
b) ROM Exercises [ ]
c) Support the extremity [ ]
d) Applying heat [ ]

30) What is the measure to take after discharge from the hospital?

a) Adequate food intake [ ]
b) Doing exercises [ ]
c) Avoid excessive use of injured extremity [ ]
d) All of the above [ ]

ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳ ಬಳಕೆಯ ಜ್ಞಾನಾಧಾರಿತ ಪ್ರಶ್ನೆಪತ್ರಿಕೆ

ಪೀಠಿಕೆ :–

ಆತ್ಮೀಯ ಭಾಗಿಗಳೇ ಈ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯಲ್ಲಿ ನಿಮ್ಮ ಸಾಮಾಜಿಕ ವರಧಿ ಮತ್ತು ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳ ಬಗ್ಗೆ ನಿಮಗಿರುವ ತಿಳುವಳಿಕೆಯ ಆಧಾರಿತ ಪ್ರಶ್ನೆಗಳಿವೆ. ಅವುಗಳಿಗೆ ನಾಲ್ಕು ಆಯ್ಕೆಗಳಿವೆ, ಅವುಗಳಲ್ಲಿ ಒಂದು ಸರಿಯಾದ ಉತ್ತರ ಮತ್ತು ಮೂರು ತಪ್ಪಾದ ಉತ್ತರಗಳಿವೆ. ಆದ್ದರಿಂದ ದಯವಿಟ್ಟು ಪ್ರಶ್ನೆಯನ್ನು ಓದಿ ಸರಿಯಾದ ಉತ್ತರವನ್ನು ಆಯ್ಕೆ ಮಾಡಿ ಸರಿ ( ) ಎಂದು ಗುರುತಿಸಿ.

ಸಾಮಾಜಿಕ ವರಧಿ

1. ವಯಸ್ಸು [ ]

1. **20–30** ವರ್ಷಗಳು.
2. **31–40** ವರ್ಷಗಳು.
3. **41–50** ವರ್ಷಗಳು.
4. **51–60** ವರ್ಷಗಳು.

2. ಲಿಂಗ [ ]

1. ಹೆಣ್ಣು.
2. ಗಂಡು.

3. ವಿವಾಹಿತ/ಅವಿವಾಹಿತ. [ ]

1. ವಿವಾಹಿತ.
2. ಅವಿವಾಹಿತ.

4. ಧರ್ಮ. [ ]

1. ಹಿಂದು.
2. ಮುಸ್ಲಿಂ.
3. ಕ್ರಿಷಿಯನ್.
4. ಇತರೆ.

5. ವಾಸ ಸ್ಥಳ. [ ]

1. ಗ್ರಾಮ.
2. ಪಟ್ಟಣ.

6. ವಿದ್ಯಾರ್ಹತೆ. [ ]

1. ಅವಿದ್ಯಾವಂತ.
2. ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣ.
3. ಪ್ರೌಢ ಶಿಕ್ಷಣ.
4. ಪದವಿ ಪೂರ್ವ.
5. ಪದವೀಧರ.

7 ಕುಟುಂಬದ ವಿಧ. [ ]

1. ವಿಭಕ್ತ.
2. ಅವಿಭಕ್ತ.

8. ಉದ್ಯೋಗ. [ ]

1. ಖಾಸಗಿ.
2. ಸರ್ಕಾರಿ.
3. ಕೂಲಿ.

9. ಕುಟುಂಬದ ಆಧಾಯ. (ತಿಂಗಳಿಗೆ) [ ]

1. < 5,000
2. 5,000–10,000
3. 10,000–15,000
4. > 15,000

10. ಈ ಮುಂಚೆ ಯಾವಾಗಲಾದರೂ ಮೂಳೆ ತೊಂದರೆ ಆಗಿದೆಯೇ ? [ ]

1. ಹೌದು.
2. ಇಲ್ಲ.

ವಿಭಾಗ–ಬಿ

ಜ್ಞಾನ ಸಂಬಂಧಿತ ಪ್ರಶ್ನೆಗಳು

I. ಮೂಳೆ ಮುರಿತದ ಬಗ್ಗೆ ಪ್ರಶ್ನಾವಳಿ.

1. ಮೂಳೆ ಮುರಿತ ಎಂದರೇನು ? [ ]
   1. ಮಾಂಸ ಖಂಡಗಳ ಮುರಿತ.
   2. ಜೀವಕೋಶಗಳ ಮುರಿತ.
   3. ಮಾಂಸ ಖಂಡಗಳ ಸೋಂಕು.
   4. ಮಾಳೆಯ ಮುರಿತ

2. ಮೂಳೆ ಮುರಿತಕ್ಕೆ ಕಾರಣಗಳೇನು ? [ ]
   1. ಬೀಳುವುದು.
   2. ವಾಹನಗಳ ಅಪಘಾತ.
   3. ಕ್ರೀಡೆ ಮತ್ತು ಅಪಘಾತ.
   4. ಈ ಮೇಲಿನ ಎಲ್ಲವೂ.

3. ಮೂಳೆ ಮುರಿತದ ಲಕ್ಷಣಗಳೇನು ? [ ]
   1. ನೋವು, ಊತ, ಅಂಗಾಂಗಳ ಕದಲುವಿಕೆಯಲ್ಲಿ ಕಷ್ಟಕರ.
   2. ತಲೆನೋವು, ನೆಗಡಿ, ತಿನ್ನಲು ಕಷ್ಟ.
   3. ಉಸಿರಾಟ ಬಡಿತ ಕಡಿಮೆ, ಬಲಹೀನತೆ, ರಕ್ತಹೀನತೆ.
   4. ಈ ಮೇಲಿನ ಯಾವುದು ಅಲ್ಲ.

4. ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದು ಮೂಳೆ ಮುರಿತಕ್ಕೆ ಸರಿಯಾದ ಪರೀಕ್ಷೆ? [ ]
   1. ಸೋನೋಗ್ರಫಿ.
   2. ಕ್ಷ–ಕಿರಣ.
   3. ರಕ್ತ ಪರೀಕ್ಷೆ.

4. ಮೂತ್ರ ಪರೀಕ್ಷೆ.

5. ಮೂಳೆ ಮುರಿದ ಜಾಗ ಸೋಂಕು ತಗುಲಿದೆ ಎಂದು ಬೇಗನೆ ತಿಳಿಯುವ ಲಕ್ಷಣಗಳೇನು ?
   1. ನೋವು. [ ]
   2. ಊತ.
   3. ಬೆರಳು ಮತ್ತು ಉಗರು ಬಿಳಿ ಬಣ್ಣಕ್ಕೆ ತಿರುಗುವುದು.
   4. ಮೂಳೆ ಮುರಿದ ಜಾಗ ಕೆಂಪಾಗುವುದು.

6. ಮೂಳೆ ಮುರಿತ ಗುಣವಾಗಲು ಮುಖ್ಯವಾದ ಅಂಶಗಳೇನು ? [ ]
   1. ಮುರಿದಿರುವ ಜಾಗವನ್ನು ಕದಲದೇ ಇಡುವುದು.
   2. ಗಾಯಗೊಂಡ/ಮುರಿದಿರುವ ಭಾಗವನ್ನು ಎತ್ತರಡದಲ್ಲಿಡುವುದು.
   3. ಪಾನೀಯಗಳನ್ನು ತೆಗೆದುಕೊಳ್ಳುವುದು.
   4. ಈ ಮೇಲಿನ ಯಾವುದು ಅಲ್ಲ.

7. ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದು ಮೂಳೆ ಮುರಿತದಿಂದ ತೊಡಕು/ಗೊಂದಲ ಉಂಟು ಮಾಡುವುದು ?
   1. ಮಲಬದ್ದತೆ. [ ]
   2. ಉಸಿರಾಟದ ನಿಲುಗಡೆ.
   3. ರಕ್ತಸ್ರಾವ.
   4. ಸೋಂಕು.

II. ಮೂಳೆ ಮುರಿತಕ್ಕೆ ಉಪಯೋಗಿಸುವ ಉಪಕರಣಗಳಿಗೆ ಸಂಬಂಧಿಸಿದ ಪ್ರಶ್ನೆಗಳು.

8. ಮೂಳೆ ಮುರಿತಕ್ಕೆ ಉಪಯೋಗಿಸುವ ವಸ್ತುಗಳೆಂದರೇನು ? [ ]
   1. ಮೂಳೆ ಮುರಿತದಿಂದಾಗುವ ರಕ್ತಸ್ರಾವ ನಿಲ್ಲಿಸಲು ಉಪಯೋಗಿಸುವ ವಸ್ತು.
   2. ಮೂಳೆ ಮುರಿತದ ಭಾಗವನ್ನು ಅಲುಗಾಡಿಸದೇ ಉಪಯೋಗಿಸುವ ವಸ್ತು.

3. ಮೂಳೆಯ ಕಾರ್ಯಗಳನ್ನು ಮಾಪನ ಮಾಡುವ ವಸ್ತು.
4. ಮೂಳೆ ದೌರ್ಬಲ್ಯತೆಯನ್ನು ಅಳತೆ ಮಾಡುವ ವಸ್ತು.

9. ಮೂಳೆ ಮುರಿತದಲ್ಲಿ ಉಪಯೋಗಿಸುವ ಉಪಕರಣಗಳ ವಿಧಗಳು ಯಾವುವು ? [ ]
1. ದಬ್ಬೆಕಟ್ಟು/ಪ್ಲಾಸ್ಟರ್ ಕಾಸ್ಟ್.
2. ಗಚ್ಚು ಗಿರಿ ಅಚ್ಚು/ಸ್ಪ್ಲಿಂಟ್.
3. ಎಳೆತ/ಟ್ರ್ಯಾಕ್ಷನ್.
4. ಈ ಮೇಲಿನ ಎಲ್ಲವೂ.

10. ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳಿಂದ ಆಗುವ ತೊಂದರೆಗಳು ಯಾವುವು? [ ]
1. ಊತ.
2. ಚರ್ಮ ಕಿತ್ತುಬರುವುದು/ಒಡೆಯುವುದು.
3. ಚರ್ಮ ತಣ್ಣಗಾಗುವುದು.
4. ಈ ಮೇಲಿನ ಎಲ್ಲವೂ.

11. ಮೂಳೆ ಮುರಿದ ಭಾಗಕ್ಕೆ ಎಳೆತವನ್ನು ಏಕೆ ಉಪಯೋಗಿಸುತ್ತಾರೆ ? [ ]
1. ಚಲನೆಗೆ ಸಹಾಯವಾಗಲು.
2. ಮೂಳೆಯ ಉದ್ದ ಮತ್ತು ಸ್ಥಿತಿಯನ್ನು ಕಾಪಾಡಲು.
3. ಮೂಳೆಯ ದೌರ್ಬಲ್ಯತೆಯನ್ನು ಅಳೆಯಲು.
4. ರಕ್ತಸ್ರಾವವನ್ನು ತಡೆಯಲು.

12. ಎಳೆತದಲ್ಲಿರುವಾಗ ಯಾವ ಕಾರ್ಯವನ್ನು ಮಾಡುವುದರಿಂದ ಚರ್ಮ ಒಡೆಯುವುದನ್ನು ತಡೆಯಬಹುದು ?
1. ಚರ್ಮಕ್ಕೆ ಎಣ್ಣೆಯನ್ನು ಹಚ್ಚುವುದು. [ ]
2. ಒತ್ತಡವಿರುವ ಜಾಗದಲ್ಲಿ ಹತ್ತಿಯನ್ನು ಇಡುವುದು.

3. ಚರ್ಮದ ಕೆರೆತವನ್ನು ತಡೆಯುವುದು.
4. ಈ ಮೇಲಿನ ಎಲ್ಲವೂ.

13. ಕೌಂಟರ್ ಟ್ರ್ಯಾಕ್ಷನ್ ಮೇಲಿನ ಎಳೆತದ ಉಪಯೋಗವೇನು ? [ ]
1. ಮಾಂಸಖಂಡಗಳ ನೋವನ್ನು ಕಡಿಮೆ ಮಾಡುವುದು.
2. ರಕ್ತಸ್ರಾವ ಕಡಿಮೆ ಮಾಡುವುದು.
3. ಅಂಗಾಂಗಳ ಚಲನೆಯನ್ನು ಗಮನಿಸುವುದು.
4. ರಕ್ತ ಪರಿಚಲನೆಯನ್ನು ಹೆಚ್ಚಿಸುವುದು.

14. ದಬ್ಬೆಕಟ್ಟು/ಕಾಸ್ಟ್ ಉಪಯೋಗಿಸುವುದರಿಂದ ಆಗುವ ಅನುಕೂಲಗಳೇನು ? [ ]
1. ರಕ್ತಸ್ರಾವ ಕಡಿಮೆ ಮಾಡುವುದು.
2. ದೌರ್ಬಲ್ಯತೆಯನ್ನು ಕಡಿಮೆ ಮಾಡುವುದು.
3. ಮುರಿದ ಭಾಗವನ್ನು ಕದಲದಂತೆ ಮಾಡುವುದು.
4. ಊತವನ್ನು ಕಡಿಮೆ ಮಾಡುವುದು.

15. ದಬ್ಬೆಕಟ್ಟು/ಕಾಸ್ಟ್ ಒಣಗುವುದನ್ನು ತಡೆಯಲು ಉಪಯೋಗಿಸುವ ರೀತಿ. [ ]
1. ಕಾಸ್ಟ್/ದಬ್ಬೆಕಟ್ಟನ್ನು ಮುಚ್ಚಿಡುವುದು.
2. ಕಾಸ್ಟ್/ದಬ್ಬೆಕಟ್ಟನ್ನು ತೆರೆದಿಡುವುದು.
3. ನೆಲದ/ಗಟ್ಟಿಯಾದ ಜಾಗದಲ್ಲಿ ಕಾಸ್ಟ್/ದಬ್ಬೆಕಟ್ಟನ್ನು ವಿಶ್ರಾಂತಿಯಾಗಿಡುವುದು.
4. ಕಾಸ್ಟ್/ದಬ್ಬೆಕಟ್ಟನ್ನು ಸಹಾಯ ನೀಡುವುದು.

16. ಕಾಸ್ಟ್/ದಬ್ಬೆಕಟ್ಟನ್ನು ಉಪಯೋಗಿಸುವಾಗ ಊತ ಕಡಿಮೆ ಮಾಡಲು ಏನು ಮಾಡಬೇಕು ?

1. ಮೂಳೆ ಮುರಿದ ಭಾಗವನ್ನು ಎತ್ತರದಲ್ಲಿಡಬೇಕು. [ ]
2. ಸ್ಥಿತಿಯನ್ನು ಬದಲಿಸಬೇಕು.
3. ಮುರಿತದ ಭಾಗಕ್ಕೆ ಸಹಾಯ ನೀಡಬೇಕು
4. ಬೆಚ್ಚಗೆ ಮಾಡಬೇಕು.

17. ಕಾಸ್ಟ್/ದಬ್ಬೆಕಟ್ಟನ್ನು ಉಪಯೋಗಿಸುವುದರಿಂದ ಉಂಟಾಗುವ ತೊಂದರೆಗಳೇನು ?
1. ಕಂಪಾರ್ಟ್ ಮೆಂಟ್ ಸಿಂಡ್ರೋಮ್. [ ]
2. ಸೋಂಕು.
3. ರಕ್ತಸ್ರಾವ.
4. ಮತಿ ಸ್ಥೀಮಿತ/ಜ್ಞಾನ ತಪ್ಪುವುದು.

18. ಮೂಳೆ ಮುರಿತದ ಭಾಗಕ್ಕೆ ಸ್ಪ್ಲಿಂಟ್/ಅಚ್ಚನ್ನು ಏಕೆ ಉಪಯೋಗಿಸುತ್ತಾರೆ. [ ]
1. ರಕ್ತಸ್ರಾವ ಕಡಿಮೆ ಮಾಡಲು.
2. ಮುರಿದ ಭಾಗವನ್ನು ಅಲುಗಾಡಿಸದೇ ಇಡುವುದು.
3. ರಕ್ತ ಪರಿಚಲನೆಯನ್ನು ಹೆಚ್ಚಿಸಲು.
4. ಈ ಮೇಲಿನ ಎಲ್ಲವೂ.

19. ಸ್ಪ್ಲಿಂಟ್/ಅಚ್ಚು ಇರುವ ಭಾಗಕ್ಕೆ ರಕ್ತಪರಿಚಲನೆ ಕಡಿಮೆಯಾಗಲು ಕಾರಣವೇನು ?
1. ರಕ್ತ ಕಡಿಮೆ ಇರುವುದರಿಂದ. [ ]
2. ನೋವಿನಿಂದ.
3. ನಿಯಮಿತ ರಕ್ತ ಪರಿಚಲನೆಯಿಂದ.
4. ಊತದಿಂದ.

III. ಆಹಾರಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಪ್ರಶ್ನೆಗಳು.

20. ಕ್ಯಾಲ್ಸಿಯಂ ಹೊಂದಿರುವ ಆಹಾರವನ್ನು ಮೂಳೆ ಮುರಿತದ ರೋಗಿಗೆ ಏಕೆ ಕೊಡಬೇಕು ? [ ]

1. ಮೂಳೆಯ ಕಣಗಳ ಮರುಹುಟ್ಟುವಿಕೆಗೆ ಸಹಾಯವಾಗುತ್ತದೆ.
2. ರಕ್ತ ಪರಿಚಲನೆಯನ್ನು ಹೆಚ್ಚಿಸುತ್ತದೆ.
3. ಸೋಂಕು ಕಡಿಮೆ ಮಾಡುತ್ತದೆ.
4. ಚಲನೆಯನ್ನು ಹೆಚ್ಚಿಸುತ್ತದೆ.

21. ಕ್ಯಾಲ್ಸಿಯಂ ಹೆಚ್ಚಾಗಿ ಇರುವ ಆಹಾಅರ ಪದಾರ್ಥಗಳು ಯಾವುವು ? [ ]

1. ಹಾಲು ಮತ್ತು ಹಾಲಿನ ಉತ್ಪನ್ನಗಳು.
2. ಹಣ್ಣು ಮತ್ತು ತರಕಾರಿಗಳು.
3. ಕಾಳುಗಳು, ಬೇಳೆ, ಹುರುಳಿ.
4. ಈ ಮೇಳಿನ ಎಲ್ಲವೂ

22. ಮಲಬದ್ದತೆಯನ್ನು ಕಡಿಮೆ ಮಾಡಲು ಯಾವ ರೀತಿಯ ಆಹಾರ ಪದಾರ್ಥಗಳನ್ನು ಉಪಯೋಗಿಸುತ್ತೀರಾ ?

1. ಕಾಳುಗಳನ್ನು ತಿನ್ನದೇ ಇರುವುದು. [ ]
2. ಕಡಿಮೆ ನೀರನ್ನು ತೆಗೆದುಕೊಳ್ಳುವುದು.
3. ಪದೇ ಪದೇ ಆಹಾರ ಸೇವಿಸುವುದು..
4. ಹಸಿರು ತರಕಾರಿಗಳನ್ನು ಸೇವಿಸುವುದು.

IV. ದಿನನಿತ್ಯದ ಚಟುವಟಿಕೆಗಳಿಗೆ ಸಂಬಂಧಿಸಿದ ಪ್ರಶ್ನೆಗಳು.

23. ಸ್ವಯಂ ವ್ಯಾಯಾಮ ಎಂದರೇನು ? [ ]

1. ರೋಗಿಯು ಇತರರ ಸಹಾಯದೊಂದಿಗೆ ಮಾಡುವ ವ್ಯಾಯಾಮ.
2. ರೋಗಿಯು ಇತರರ ಸಹಾಯವಿಲ್ಲದೇ ಮಾಡುವ ವ್ಯಾಯಾಮ.
3. ಇತರೆ ವಸ್ತುಗಳ ಸಹಾಯದಿಂದ ರೋಗಿಯು ಮಾಡುವ ವ್ಯಾಯಾಮ.
4. ಈ ಮೇಲಿನ ಎಲ್ಲವೂ.

24. ವ್ಯಾಯಾಮದ ಉಪಯೋಗಗಳೇನು ? [ ]

1. ಮೂಳೆ ಮುರಿತವನ್ನು ಗುಣಪಡಿಸುವುದು.
2. ಮುರಿದ ಭಾಗಕ್ಕೆ ರಕ್ತ ಪರಿಚಲನೆಯನ್ನು ಹೆಚ್ಚಿಸುವುದು.
3. ಚಲನೆಯನ್ನು ಹೆಚ್ಚಿಸುವುದು.
4. ಸೋಂಕನ್ನು ಕಡಿಮೆ ಮಾಡುವುದು.

25. ಮೂಳೆ ಮುರಿದಿರುವ ಅಂಗವನ್ನು ಕದಲಿಸಲು ಆಗದೇ ಇರುವಾಗ ಯಾವ ರೀತಿ ವ್ಯಾಯಾಮ ಉಪಯೋಗಕರವಾದುದು ?
[ ]

1. ಉಸಿರಾಟದ ವ್ಯಾಯಾಮ.
2. ಮಾಂಸಖಂಡಗಳ ಹಿಡಿತ ಮತ್ತು ವಿರಾಮದ ವ್ಯಾಯಾಮ.
3. ಮಿತಿ–ಚಲನೆ ವ್ಯಾಯಾಮ.
4. ಈ ಮೇಲಿನ ಯಾವುದೂ ಅಲ್ಲ.

V. ವಿಶ್ರಾಂತಿ ಮತ್ತು ನಿದ್ದೆಗೆ ಸಂಬಂಧಿಸಿದ ಪ್ರಶ್ನೆಗಳು.

26. ವಿಶ್ರಾಂತಿ ಮತ್ತು ನಿದ್ದೆಯ ಪ್ರಾಮುಖ್ಯತೆ ಏನು ? [ ]

1. ನೋವನ್ನು ಕಡಿಮೆ ಮಾಡುವುದು.
2. ಹೆಚ್ಚಿನ ತೂಕ ಹೊರುವುದನ್ನು ತಡೆಯುವುದು.
3. ಮುರಿದಿರುವ ಭಾಗವನ್ನು ಸಂರಕ್ಷಿಸುವುದು.
4. ಈ ಮೇಲಿನ ಎಲ್ಲವೂ.

27. ಬೇಕಾಗುವಷ್ಟು ವಿಶ್ರಾಂತಿ ಮತ್ತು ನಿದ್ದೆ ತೆಗೆದುಕೊಳ್ಳದಿದ್ದಲ್ಲಿ ಏನಾಗುತ್ತದೆ ? [ ]

1. ರಕ್ತ ಪರಿಚಲನೆ ಏರಿಳಿತವಾಗುತ್ತದೆ.
2. ಮೂಳೆಯು ಬೇಗ ವಾಸಿಯಾಗದೇ ಇರುವುದು.
3. ಸೋಂಕಿಗೆ ಕಾರಣವಾಗುತ್ತದೆ.
4. ಈ ಮೇಲಿನ ಎಲ್ಲವೂ.

VI. ಮನೆಯಲ್ಲಿ ಪಾಲಿಸಬೇಕಾದ ನಿಯಮಗಳಿಗೆ ಸಂಬಂಧಿಸಿದ ಪ್ರಶ್ನೆಗಳು.

28. ಯಾವ ವ್ಯಾಯಾಮದಿಂದ ಕೈ/ಕಾಲು ಮುರಿತ ಸೋಂಕನ್ನು ತಡೆಯಬಹುದು ? [ ]

1. ಪರಿಶುದ್ಧವಾಗಿರುವುದು.
2. ಬಿಸಿ ತಾಗಿಸುವುದು.
3. ವಿಶ್ರಾಂತಿ ತೆಗೆದುಕೊಳ್ಳುವುದು.
4. ಕಾಸ್ಟ್/ದಬ್ಬೆಕಟ್ಟು ಉಪಯೋಗಿಸುವುದು.

29. ಈ ಕೆಳಗಿನ ಯಾವ ವಿಧದಿಂದ ಮಾಂಸಖಂಡಗಳ ಬಿಗಿಹಿಡಿಯುವಿಕೆ ಕಡಿಮೆಯಾಗುತ್ತದೆ ?

1. ಲೇಪನ ಮಾಡುವುದು. [ ]
2. ಮಿತಿ–ಚಲನೆ ವ್ಯಾಯಾಮದಿಂದ.
3. ಕೈ–ಕಾಲುಗಳಿಗೆ ಸಹಾಯ ನೀಡುವುದರಿಂದ.
4. ಬಿಸಿ ತಾಗಿಸುವುದರಿಂದ.

30. ಮೂಳೆ ಮುರಿತದ ರೋಗಿಯು ಮನೆಯಲ್ಲಿ ಪಾಲಿಸಬೇಕಾದ ನಿಯಮಗಳು ಯಾವುವು ?

1. ಸರಿಯಾದ ಆಹಾರ ತೆಗೆದುಕೊಳ್ಳುವುದು. [ ]
2. ವ್ಯಾಯಾಮ ಮಾಡುವುದು..
3. ಅತಿಯಾಗಿ ಮುರಿದ ಭಾಗವನ್ನು ಉಪಯೋಗಿಸದಿರುವುದು.
4. ಈ ಮೇಲಿನ ಎಲ್ಲವೂ.

ANSWER KEY

1. d	11. b	21. a
2. d	12. b	22. d
3. a	13. a	23. b

4. b	14. c	24. c
5. d	15. b	25. b
6. a	16. a	26. d
7. d	17. a	27. b
8. b	18. b	28. a
9. d	19. c	29. d
10.d	20. a	30.d

ANNEXURE-G

LESSON PLAN

Name of the teacher : ANJANA ANIL, ASWINI M V, CHITRA THANKACHAN, JENI JOHN, LAVANYA N, MERLIN THAMPY, PRIYAMOL T P

Topic : Management of orthopedic appliances

Group : Fracture patients

Place : RL Jalappa Hospital

Duration : 45 min

Method of teaching : Health education

A V aids : Flash cards

Previous knowledge : Study participants will not have any knowledge about Management of orthopedic appliances.

General objectives : By the end of the teaching , the study participants will acquire some knowledge regarding management of orthopedic appliances.

Specific objectives : At the end of the teaching the participants will be able to;

1. Know the meaning of fracture
2. Identify the types of different orthopedic appliances
3. Identify the purposes of orthopedic appliances
4. Gain knowledge regarding self care management of orthopedic appliances
5. Identify the type of diet for fracture patients

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ANNEXURE-H

FORMULA'S USED FOR DATA ANALYSIS

1. Mean

$$\overline{x} = \frac{\Sigma x}{n}$$

2. Standard deviation

$$SD = \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$$

3.Paired t test

$$t = \frac{\bar{D}}{S_{\bar{D}}}$$

n= No. of paired observation

SD- Standard deviation

4.Chi- square test for contingency tables

$$\chi^2 = \Sigma \frac{(o - e)^2}{e}$$

O= Observed frequency

E= Expected frequency

5. Correlation coefficient

$$r = \frac{n\sum xy - \left(\sum x\right)\left(\sum y\right)}{\sqrt{n\left(\sum x^2\right) - \left(\sum x\right)^2}\sqrt{n\left(\sum y^2\right) - \left(\sum y\right)^2}}$$

6. Spearman's Brown prophecy formula for reliability

r' = 2r/1+r

r= Correlation coefficient

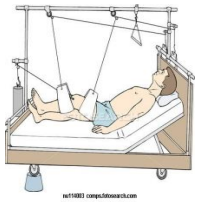
r'= Estimated reliability of the entire test [114]

Specific Objectives	Time	Content	Teacher's activity	Learner's activity	AV aids	Evaluation
Introduces the topic	3 min	**INTRODUCTION** A fracture is a disruption or break in the	Teacher introduces the topic	Learners listens carefully		

		continuity of bone. Traumatic injuries account for the majority fracture, although some fracture are secondary to a disease process. Fracture occurs where the bone is subjected to stress greater than it can absorb. Fracture can be caused by a direct blow, crushing force, sudden twisting motion and even extreme muscle contraction. When the bone is broken, adjacent structures are also affected, resulting in soft tissue edema, hemorrhage in to the muscle and the joints, joint dislocations, ruptured tendons, damaged blood vessels. The overall goals of fracture treatment are anatomic realignment of the bone fragments, immobilization to maintain realignment, and restoration of normal or near normal function of the injured part.				

Defines the Term fracture	2 min	**DEFINITION** "A fracture is defined as a disruption or break in the continuity of the structure of the bone." (Lewis) "A fracture is a complete or incomplete disruption in the continuity of bone structure and is defined according to it type and extent." (Brunner& Suddarth)	Teacher defines the topic.	Leaners listens carefully	Flash cards	What is fracture?
Defines the topic	2 min	**ORTHOPEDIC APPLIANCES** **DEFINITION** " An orthopedic appliances or apparatus is used to support, align, prevent or correct deformities or to improve the function of movable parts of the body." Orthopedic appliances are	Teacher defines the topic	Learners listens carefully	Flash card	What is orthopedic appliances?

		also called orthotics used for both short term and long term treatments. There are numerous splints, appliances, braces and other pieces of apparatus used in orthopedics. An orthopedic appliances is usually used to; 5. To relieve pain. 6. To allow a fracture to unite. 7. To compensate for weakness of muscles, ligaments or bones during weight bearing or other function. **TYPES OF ORTHOPEDIC DEVICES** There are various types of orthopedic appliances used for fracture patients. They are: 1.Splints-eg:Thomas splint, BB frame, cervical collar 2.Traction				

Lists out the types of Orthopedic Appliances Enumerates the care of patients with splints	2 min 5 min	3. Plaster cast 4. Walking appliances like crutches, walking frame etc.. **CARE OF PATIENTS WITH SPLINTS** Splints are the devices used to immobilize the fractured site. It prevents the excessive movement of the injured limb and thus avoid further injury to the damaged tissue. **PURPOSES OF SPLINTS** 3. To immobilizeand give rest to a diseased or injured part. 4. To prevent deformity. 5. To control unwanted movement. 6. To relieve weight. 7. To stabilize a joint. **CARE OF PATIENTS**	Teacher lists out the types of orthopedic appliances	Learners listens Learners listens and clarifying doubts	Flash card 	What are the types of orthopedic devices? What are the care of patient with splints?

		3. Check the pressure points every day for abnormal pressure which may cause skin break down. 4. Care of back is very important to prevent bed sores from happening. 5. Sponge bath the patient every day. 6. Arrange and supply proper diet for the patients being treated on splints. eg: Calciumrich diet like milk & milk products, egg etc.. 7. The patient should carry out active exercises of the unaffected joints. 8. Isometric exercises like alternative contraction & relaxation of muscle for the immobilized joints. 9. Should change the splints if the canvas get soiled. 10. Cleanliness of the skin should be maintained adequately. 11. The bandage should not be too tight to prevent pressure sores.	Teacher enumerates the care of patients with splints		Flash card	

		CARE OF PATIENT WITH CAST It is a type of orthopedic appliances used to; 5. Hold the bone fragments in reduction and alignment. 6. To permit early ambulation and weight bearing. 7. To improve function by stabilizing a joint. 8. To correct and prevent deformities. **IMMEDIATE CARE OF PATIENT IN PLASTER CAST** 3. Place the patient on a firm bed. Protect bony prominences from pressure which might cause a sore. 4. Lift and turn the patient and cast as a whole. 5. Expose the cast so that it dries evenly. 6. Observe the patient for;				

Explains about care of patients with cast	8 min	6. General appearance 7. Signs of respiratory, circulatory complications. 8. Blood stains through plaster. 3. Test the circulation by pressing the nails; blood should return quickly when pressure is released. 4. Elevate the foot end of the bed. 5. The cast should be well supported to prevent sagging. 6. To prevent pressure on bony prominences, the affected part should be rested on pillows with water proof coverings. 7. The cast must be exposed to the air in a warm dry atmosphere and not covered by the clothing or bed cloths. 8. Patient in large casts should change position by turning every few hours so the complete cast dried. 9. Limbs in casts should be elevated using pillows. 10. The cast should be observed		Learners listens carefully	 Flash card	What is the care of patient with cast?

		regularly for cracking, softening and breakdown at the edge and acute angles. **CARE OF PATIENT IN TRACTION** Traction place a multiple roles like providing stretching effect on the muscles, ligaments and other soft tissue ruptures including the bones and the disks. **PURPOSES** 4. To relieving pain over coming muscle spasm. 5. To maintain correct anatomical alignment and length of a limb. 6. To correct a mild deformity. **CARE OF PATIENT** 5. Adequately pad the pressure points to prevent skin damage. 6. Leave sufficient gap in between the wooden spreader and the feet so that the patient can himself remove the spreader while	Teacher explains about care of patients with cast			

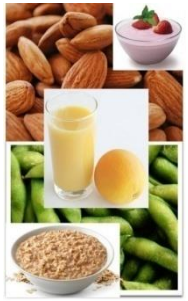
		going to bathroom. 7. Keep the bed elevated to provide the counter traction. 8. Clean the skin and pin sites every day. 9. A short foot board or small flexion pillow for the uninvolved foot helps the patient maintain the desired position. 10. Inspect the weight, it must always hang free. 11. Exercises for the uninvolved positions of the body should include, 3. Flexion and extension of the hip and knee of the unaffected leg. 4. Ankle-pumps and range of motion at the ankle. 5. Plantar and dorsiflexion. The patient should be on a firm based bed to give full support and comfort and which will allow efficient action of a traction system. **DIET FOR FRACTURE**				

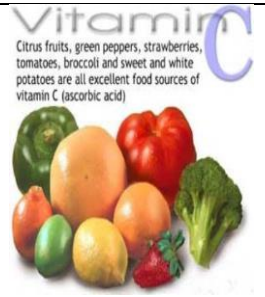
Explains about care of patients with traction	8 min	**PATIENT** Nutrition is of vital importance to the healing of diseased or injured tissues. Orthopedic patients require a supplementary iron and vitamins and a high fluid intake to prevent any complications. The diet includes; **CALCIUM RICH FOODS** It is a mineral that is necessary for prepare and regeneration of bone cells and fracture healing. **Sources**:-milk and milk products, spinach, salmon, egg yolk, beans, leafy vegetables, fish. **VITAMIN K RICH FOODS** It helps in preventing excessive bleeding, healing of complete and incomplete bone fracture and strengthen the existing bone cells.				

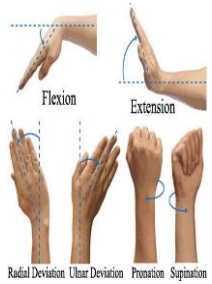
		Sources:-cabbage, cauliflower, tomatoes, spinach and other green vegetables. **VITAMIN C RICH FOODS** It helps in enhance the immune system function and helping your body from infectious illness like common cold and also helps to strengthen the connective tissues and muscles that hold bones in place during healing. **Sources**:-citrus fruits, berries, mangos, green peas, guava, green vegetables (cabbage, spinach), potatoes. **LYSEINE RICH FOODS** It helps in proper metabolism and use of protein which is a building block for cellular repair. It may help to repair bone cells, strengthen muscles and ligaments surrounding bones. **Sources**:-dairy products, fish, chick peas, pork etc.. The well balanced meal	Teacher explains about care of patients with traction	Learners listens carefully	 Flash card	What is the care if patient with traction?

		should be supplemented by a fluid intake of 2000-3000 ml /day to promote optimal bowel and bladder function. **EXERCISE FOR FRACTURE PATIENTS** Exercise increases the circulation and maintains the muscle tone for the patients. The exercise are performed by the patient without outside assistant is called active exercises. The exercise that are suitable for a patient confined to bed by a splint or traction and unable to lie prone includes:- 5. **Deep breathing exercises**. Raise the arms above the head on inspiration lower them on expiration. Repeat3-6 times. **6. Exercises for abdominal muscles:-** With the arms to sides raise the				

Provides information about diet for fracture patients	5 min	head and shoulders from the bed and lower slowly. Repeat 3-4 times. **7. Setting exercise for hip extensors:-** With trunk and limbs in good alignment, squeeze buttocks together. Repeat 3-6 times. **8. Exercise for lower leg muscles:-** Foot not immobilized is actively dorsiflexed and plantar flexed, inverted and everted. Repeat 3-6 times at least twice daily. **9. Exercise for muscles of foot and toes:-** Flex, extent and separate toes. Repeat 3-6 times atleast twice daily. For the patients who cannot perform a joint movement, either because the joint is stiff from disease or because it is immobilized in a splint or traction,		Learners listen and clarifying doubts	 Flash card	What are the dietary pattern for fracture patients?

Provides information about the importance of rest and sleep	3 min	the exercise consist of strong contraction of the muscle alternating with relaxation. To be effective, exercises must be performed correctly, regularly and progressively and exercise can be performed more frequently and for long periods. **REST AND SLEEP** Rest and sleep are essential to orthopedic patients, so that the bodies on natural resources will be helped in overcoming the effects of disease or injury. The general rest in bed is used; 5. To rest vital organs such as	Teacher provides information about diet for fracture patients			

Explains about rehabilitation and follow up	2 min	heart. 6. To relieve pain. 7. To relieve the strain of weight bearing. 8. To protect a part while healing takes place. Rest for the injured part is given in the form of traction, splints and plaster cast in order to prevent the injured part from moving. **REHABILITATION AND FOLLOW UP FOR FRACTURE PATIENTS** The rehabilitation and follow up programme for fracture patients consist of muscle exercise and instruction regarding mobilization of limb and gait training. After removal of an immobilization the joints are moved to regain the range of motion by hot fomentation and joint mobilizing exercise. After getting discharge from the hospital the patient should				

Explains about exercises for fracture patients	3 min	follow certain measures to improve the independent living skills and to regain normal function. That are; 5. Adequate ROM exercises. 6. Proper rest and sleep. 7. Adequate food and fluid intake. 8. Avoidance of excessive use of injured extremity. **CONCLUSION** Orthopedic appliances are used for the fracture patients to support and immobilize the fractured part and to prevent the deformities. Teaching the patients, his relatives and attenders about the use and care of orthopedic appliances is a very important task in management of fracture.		Learners listens and clarifying doubts		What are the exercises for fracture patients?

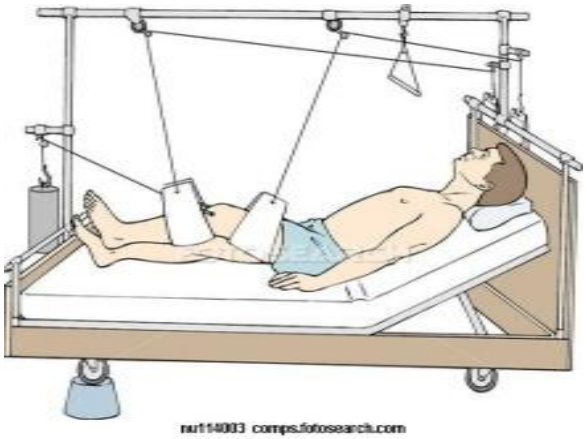
			Teacher explains about exercise for fracture patients			

					Flash card	

				Learners listens carefully	 Flash card	What is the importance of rest and sleep for fracture patients?

				Learners listens		What are the follow up for fracture patients after getting discharge?

ಮೂಳೆಯ ವಿವಿಧ ಕಟ್ಟುಗಳು ಹಾಗೂ ನಿರ್ವಹಣೆಯ ಯೋಜನೆಗೆ ಸಂಭಂದಿಸಿದಂತೆ ಪಾಠ ಯೋಜನೆ



ಶಿಕ್ಷಕರ ಹೆಸರು : ಅಂಜನ ಅನೀಲ್, ಅಶ್ವಿನಿ.ಎಂ.ವಿ, ಚಿತ್ರಾ ತಂಗಚನ್,
ಲಾವಣ್ಯ.ಎನ್, ಜನೀಜಾನ್,
ಮರ್ಲಿನ್ ತಂಬಿ, ಪ್ರಿಯಾಮೋಳ್.ಟಿ.ಪಿ.

ವಿಷಯ : ಮೂಳೆಯ ವಿವಿಧ ಕಟ್ಟುಗಳು ಹಾಗೂ ನಿರ್ವಹಣೆಯ
ಯೋಜನೆ.

ಗುಂಪು : ಮೂಳೆ ಮುರಿತದ ರೋಗಿಗಳು.

ಸ್ಥಳ : ಆರ್.ಎಲ್.ಜಾಲಪ್ಪ ಆಸ್ಪತ್ರೆ.

ಸಮಯ : 45 ನಿಮಿಷಗಳು.

ತಿಳಿಸುವ ವಿಧ : ಆರೋಗ್ಯ ವಿಷಯ.

ಮುಂಚಿತ ತಿಳುವಳಿಕೆ : ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳ ನಿರ್ವಹಣೆ ಬಗ್ಗೆ
ಭಾಗವಹಿಸುವವರಿಗೆ ತಿಳಿದಿರುವುದಿಲ್ಲ.

ಉದ್ದೇಶ : ತರಗತಿಯ ನಂತರ ಭಾಗಿಗಳು ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳ ನಿರ್ವಹಣೆ ಬಗ್ಗೆ
ಜ್ಞಾನವನ್ನು ಪಡೆಯುವುದು.

ಮುಖ್ಯ ಉದ್ದೇಶ : ತರಗತಿಯ ನಂತರ ಭಾಗಿಗಳು ಈ ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರವನ್ನು ಹೇಳುವ
ಸಾಮರ್ಥ್ಯವನ್ನು ಪಡೆದಿರಬೇಕು.

- ಮೂಳೆ ಮುರಿತದ ಅರ್ಥ.
- ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳ ವಿದಗಳನ್ನು ಗುರುತಿಸುವುದು.
- ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳ ಉಪಯೋಗಗಳಾವುವು.
- ಸ್ವತಃ ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳ ನಿರ್ವಹಣೆ ಮಾಡುವುದರ ಸಾಮರ್ಥ್ಯ ಹೊಂದುವುದು.
- ಮೂಳೆ ಮುರಿದವರಿಗೆ ಯಾವ ರೀತಿಯ ಆಹಾರ ನೀಡಬೇಕು.

ಗ್ರಂಥಗಳ ವಿವರ ಪಟ್ಟಿ:–

1. ಬಿ.ಟಿ. ಬಸವಂತಪ್ಪ. ಎಲುನೇರ್ಪಿಕ ಬಗ್ಗೆ ಶುಶ್ರೂಷಕಿಯರಿಗೆ. ಜಾಯ್ ಪಿ ಪ್ರಕಟಣೆ; ಪುಟ.116–121. 121–132.
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4. ಜಾನ್ ಎಬ್‌ನಿಜಾರ್. ಎಲುನೇರ್ಪಿಕ ಪುಸ್ತಕ. 8ನೇ ಆವೃತ್ತಿ. ಜಾಯ್ ಪಿ ಪ್ರಕಟಣೆ; ಪುಟ 58.78.

ಮುಖ್ಯ ಉದ್ದೇಶ	ಸಮಯ	ವಿಷಯ	ಶಿಕ್ಷಕರ ಕರ್ತವ್ಯ	ವಿದ್ಯಾರ್ಥಿಯರ ಕರ್ತವ್ಯ	ದೃಕ್–ಶ್ರವಣೋಪಕರಣಗಳು	ಪರಿಶೀಲನೆ
ಪ್ರಕರಣವನ್ನು ಪರಿಚಯ ಮಾಡಿಸುವಿಕೆ	3 ನಿಮಿಷ	**ಪೀಠಿಕೆ:** ಮೂಳೆ ಮುರಿತ ಎಂದರೆ ಸೀಳುವಿಕೆ ಅಥವಾ ತುರ್ತುಗಾಯದ ಪರಿಣಾಮದಿಂದಾಗಿ ಮೂಳೆ ಮುರಿಯುವುದು. ಮೂಳೆ ಮುರಿತವು ಬೇರೆ ರೋಗದ ಪರಿಣಾಮದಿಂದಲೂ ಬರುತ್ತದೆ. ಮೂಳೆ ಮುರಿತ ಸಾಮಾನ್ಯವಾಗಿ ಮೂಳೆಯ ಮೇಲಿನ ಒತ್ತಡದಿಂದ ಆಗುತ್ತದೆ. ಮೂಳೆ ಮುರಿತವು ನೇರವಾಗಿ ತಾಗುವುದರಿಂದ, ಒತ್ತಡದ ರಭಸದಿಂದ, ವೇಗವಾಗಿ ತಿರುಗುವುದರಿಂದ, ಸ್ನಾಯುಗಳು ಹೆಚ್ಚಾಗಿ ಹಿಡಿಯುವುದರಿಂದ ಮೂಳೆ ಮುರಿತದಿಂದ ಅಕ್ಕಪಕ್ಕದ ಭಾಗಗಳಿಗೂ ತೊಂದರೆಯಾಗುತ್ತದೆ. ಇದರ ಪರಿಣಾಮವಾಗಿ ಮೃದುವಾದ ಅಂಗಾಂಗಗಳು ಊದುವುದು, ಸನಾಯುಗಳಲ್ಲಿ ಮತ್ತು ಕೀಲುಗಳಲ್ಲಿ ರಕ್ತಸ್ರಾವವಾಗುವುದು, ಕೀಲುಗಳ ಜಾಗ ಬದಲಾವಣೆ ಮತ್ತು ರಕ್ತನಾಳಗಳು ನಾಶವಾಗುವುದು.	ಶಿಕ್ಷಕರು ವಿಷಯವನ್ನು ಪರಿಚಯಿಸುವುದು.	ಕಲಿಯುವವರು ಜಾಗರೂಕತೆಯಿಂದ ಕೇಳಿಸಿಕೊಳ್ಳುತ್ತಾರೆ.		

		ಮೂಳೆ ಮುರಿತದ ಚಿಕಿತ್ಸೆಯ ಮೂಲ ಉದ್ದೇಶವೆನೇಂದರೆ ಮೂಳೆಯನ್ನು ಮೊದಲಿನಂತೆ ಸರಿಪಡಿಸುವುದು. ಇದನ್ನು ಮಾಡಲು ರೋಗಿಯು ತನ್ನ ತೊಂದರೆಗೀಡಾದ ಭಾಗವನ್ನು ಅಲುಗಾಡಿಸದಂತೆ ನೋಡಿಕೊಳ್ಳಬೇಕು. ಇದರಿಂದ ತೊಂದರೆಗೀಡಾದ ಭಾಗವೂ ಸರಿಯಾದ ಕಾರ್ಯ ನಿರ್ವಹಿಸಲು ಸಹಾಯವಾಗುತ್ತದೆ.				
ಮೂಳೆಮುರಿತವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸುವುದು.	2 ನಿಮಿಷ	**<u>ಅರ್ಥ:-</u>** ಮೂಳೆ ಮುರಿತ ಎಂದರೆ ಸೀಳುವುದು ಅಥವಾ ಮೂಳೆಯ ಭಾಗಗಳು ಮುರಿಯುವುದು. **<u>ಮೂಳೆಯ ವಿವಿಧ ಕಟ್ಟುಗಳು</u>**	ಬೋಧಕರು ಮೂಳೆಮುರಿತವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸುತ್ತಾರೆ.	ಕಲಿಯುವವರು ಜಾಗರೂಕತೆಯಿಂದ ಕೇಳಿಸಿಕೊಳ್ಳುತ್ತಾರೆ.	ಮಿಂಚು ಪಟ್ಟಿಗಳು	ಮೂಳೆ ಮುರಿತವೆಂದರೇನು
ವ್ಯಾಖ್ಯಾನಿಸುವುದು	2 ನಿಮಿಷ	**<u>ಅರ್ಥ:-</u>** ಮೂಳೆ ಮುರಿತವನ್ನು ಸರಿಪಡಿಸುವ ಉಪಕರಣಗಳ ಉಪಯೋಗಗಳೆಂದರೆ ಸಹಾಯ ಮಾಡಲು, ಸರಿಯಾದ ಜಾಗ, ತಡೆಯಲು ಅಥವಾ ಜಾಗ ಬದಲಾವಣೆಯನ್ನು ಸರಿಮಾಡಲು	ಬೋಧಕರು ವಿಷಯವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸುತ್ತಾರೆ.	ಕಲಿಯುವವರು ಜಾಗರೂಕತೆಯಿಂದ ಕೇಳಿಸಿಕೊಳ್ಳುತ್ತಾರೆ	ಮಿಂಚು ಪಟ್ಟಿಗಳು	ಎಲುನೇರ್ಪಿಕ ಉಯಪಕರಣಗಳು ಎಂದರೇನು?

		ಅಥವಾ ದೇಹದ ಭಾಗಗಳ ಕೆಲಸವನ್ನು ಹೆಚ್ಚಿಸಲು ಉಪಯೋಗಿಸುವರು. • ಮೂಳೆ ಮುರಿತವನ್ನು ಸರಿಪಡಿಸಲು ಉಪಯೋಗಿಸುವ ಉಪಕರಣವನ್ನು ಕಡಿಮೆ ಅವಧಿ ಮತ್ತು ದೀರ್ಘಾವಧಿಯ ಚಿಕಿತ್ಸೆಯಲ್ಲಿ ಬಳಸುವರು. • ಇದರಲ್ಲಿ ವಿಧವಾದ ದಬ್ಬೆಕಟ್ಟು ಉಪಕರಣಗಳು ಬಿಗುಪಟ್ಟು ಮತ್ತು ಬೇರೆ ಉಪಕರಣಗಳನ್ನು ಬಳಸುವರು. • ಮೂಳೆ ಮುರಿತವನ್ನು ಸರಿಪಡಿಸಲು ಬಳಸುವ ಉಕರಣವನ್ನು ಸಾಂಆನ್ಯವಾಗಿ ಕೀಲುಗಳನ್ನು ಮತ್ತು ಕೈ ಕಾಲುಗಳನ್ನು ಸ್ಥಿತಿಯಲ್ಲಿಡಲು ಬಳಸುವರು.				

		1 ನೋವಿನಿಂದ ಗುಣಪಡಿಸಲು. 2 ಮೂಳೆ ಮುರಿತವನ್ನು ಸರಿಪಡಿಸಲು.				
ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳನ್ನು ಪಟ್ಟಿ ಮಾಡುವುದು.	2 ನಿಮಿಷ	**<u>ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳ ವಿಧಗಳು</u>** 1. ದಬ್ಬೆಕಟ್ಟು, ಉದಾ:ಥಾಮಸ್ ದಬ್ಬೆಕಟ್ಟು, ಬಿ.ಬಿ ಫ್ರೇಮ್, ಕತ್ತಿಗೆಯ ಪಟ್ಟಿ. 2. ಎಳೆತ 3. ಗಚ್ಚುಗಿರಿ ಅಚ್ಚು 4. ಕಂಕುಳು ಕೋಲು	ಬೋಧಕರು ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳನ್ನು ವಿಂಗಡಿಸುತ್ತಾರೆ.	ಕಲಿಯುವವರು ಜಾಗರೂಕತೆಯಿಂದ ಕೇಳಿಸಿಕೊಳ್ಳುತ್ತಾರೆ	ಮಿಂಚು ಪಟ್ಟಿಗಳು	ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳ ವಿಧಗಳಾವುವು?
ಮುರಿದ ಎಲುಬುಗಳನ್ನು ಹೊಂದಿಸಲು ಉಪಯೋಗಿಸುವ ಕಟ್ಟಿಗೆಯನ್ನು ಬಳಸುವಂತಹ ರೋಗಿಯ ಶುಶ್ರೂಷೆಯನ್ನು ನಮೂದಿಸಿ.	5 ನಿಮಿಷ	**<u>ದಬ್ಬೆಕಟ್ಟು ಹಾಕಿಕೊಂಡಿರುವ ರೋಗಿಗಳ ಸೇವೆ:–</u>** ದಬ್ಬೆಕಟ್ಟು ಎಂಬುವುದು ಒಂದು ಉಪಕರಣ ಇದನ್ನು ಮುರಿತವಾಗಿರುವ ಭಾಗವನ್ನು ಅಲುಗಾಡಿಸದಂತೆ ತಡೆಯಲು ಉಪಯೋಗಿಸುವರು. ಇದು ತೊಂದರೆಗೀಡದ ಕೈ ಮತ್ತು ಕಾಲುಗಳನ್ನು ಹೆಚ್ಚಾಗಿ	ಬೋಧಕರು ಮೂಳೆಮುರಿಯುವಿಕೆಯಲ್ಲಿ ಉಪಯೋಗಿಸುವ ಕಟ್ಟಿಗೆಯನ್ನು ಬಳಸುವಂತಹ ರೋಗಿಯ ಶುಶ್ರೂಷೆಯ ಬಗ್ಗೆ ನಮೂದಿಸುತ್ತಾರೆ.	ಕಲಿಯುವವರು ಜಾಗರೂಕತೆಯಿಂದ ಕೇಳಿಸಿಕೊಳ್ಳುತ್ತಾರೆ	ಮಿಂಚು ಪಟ್ಟಿಗಳು 	ಮೂಳೆಮುರಿಯುವಿಕೆಯಲಲಿ ಉಪಯೋಗಿಸುವ ಕಡ್ಡಿಗೆಯನ್ನು ಬಳಸುವಂತಹ ರೋಗಿಯ ಶುಶ್ರೂಷ ಕಾರ್ಯಗಳೇನು?

		ಅಲ್ಲಾಡಿಸದಂತೆ ತಡೆಯಲು ಮತ್ತು ತೊಂದರೆಯಾಗದಂತೆ ತಡೆಯಲು ಉಪಯೋಗಿಸುವರು. **<u>ಉದ್ದೇಶ :–</u>** • ತೊಂದರೆಗೀಡಾದ ಭಾಗವನ್ನು ಅಲ್ಲಾಡಿಸದಂತೆ ಮತ್ತು ಅದಕ್ಕೆ ವಿಶ್ರಾಂತಿ ನೀಡಲು. • ಬೇಡದಿರುವ ಚಲನೆಗಳನ್ನು ತಡೆಯಲು. • ತೂಕವನ್ನು ಕಡಿಮೆ ಮಾಡಲು. • ಕೀಲುಗಳನ್ನು ಸರಿಯಾಗಿ ಇರಿಸಲು. **<u>ರೋಗಿಯ ಸೇವೆ :–</u>** • ಯಾವಾಗಲೂ ಒತ್ತಡದ ಜಾಗಗಳನ್ನು ಗಮನಿಸಬೇಕು. • ಬಹುಮುಖ್ಯವಾಗಿ ಒತ್ತಿನ ಹುಣ್ಣುಗಳಾಗದಂತೆ				

		ತಡೆಯಬೇಕು ಮತ್ತು ಪ್ರತಿದಿನ ಪರೀಕ್ಷಿಸಬೇಕು. • ಸ್ಪಂಜ್ ಉಪಯೋಗಿಸಿ ದಿನಾಲೂ ಸ್ನಾನ ಮಾಡಿಸಬೇಕು. • ಸರಿಯಾದ ಊಟವನ್ನು ನೀಡಬೇಕು. ಉದಾ:– ಕ್ಯಾಲ್ಸಿಯಂ ಹೆಚ್ಚಯಳ್ಳ ಆಹಾರ ಅವುಗಳೆಂದರೆ ಹಾಲು ಮತ್ತು ಹಾಲಿನ ಉತ್ಪನ್ನಗಳು, ಮೊಟ್ಟೆ ಇತ್ಯಾದಿ. • ತೊಂದರೆಗೊಳ್ಳಾದ ಕೀಲುಗಳಿಂದ ವ್ಯಾಯಾಮಗಳನ್ನು ಮಾಡಬೇಕು. • ದಬ್ಬೆಕಟ್ಟಿಗೆ ಉಪಯೋಗಿಸಿದ ಬಟ್ಟೆ ಕೊಳೆಯಾಗಿದ್ದರೆ ಬದಲಾಯಿಸಬೇಕು. • ಚರ್ಮವನ್ನು ಸರಿಯಾಗಿ ಶುಚಿಗೊಳಿಸಬೇಕು. • ಬ್ಯಾಂಡೆಜ್‌ನ್ನು ತುಂಬಾ ಗಟ್ಟಿಯಾಗಿ ಕಟ್ಟಬಾರದು. ಏಕೆಂದರೆ				

		ಇದರಿಂದ ಒತ್ತಡದ ಹುಣ್ಣುಗಳಾಗುತ್ತವೆ.				
ಕಾಸ್ಟ್ ಅನ್ನುಯ ಉಪಯೋಗಿಸುವ ರೋಗಿಗಳ ಶುಶ್ರೂಷೆಯ ಬಗ್ಗೆ ವಿವರಿಸಿ.	8 ನಿಮಿಷ	**<u>ಅಚ್ಚು ಹಾಕಿರುವ ರೋಗಿಯ ಸೇವೆ:–</u>** ಇದು ಒಂದು ರೀತಿ ಉಪಕರಣ. • ಇದು ಮೂಳೆಯನ್ನು ಸರಿಯಾಗಿ ಇರಿಸಲು ಸಹಾಯಮಾಡುತ್ತದೆ. • ಬೇಗ ಓಡಾಡಲು ಮತ್ತು ತೂಕವನ್ನು ತಡೆಯಲು. • ಕೀಲನ್ನು ಅಲುಗಾಡದಂತೆ ಇರಿಸುವುದರಿಂದ ಕಾರ್ಯವನ್ನು ಹೆಚ್ಚಿಸಬಹುದು. **<u>ಗಚ್ಚುಗಿರಿ ಅಚ್ಚು ಹೊಂದಿರುವ ರೋಗಿಯ ತಕ್ಷಣದ ಸೇವೆ :–</u>** • ರೋಗಿಯನ್ನು ಮೃದುವಾದ ಹಾಸಿಗೆಯಲ್ಲಿ ಮಲಗಿಸಿ ಮೂಳೆಯನ್ನು ಒತ್ತಡದಿಂದ ರಕ್ಷಿಸಬೇಕು.	ಬೋದಕರು ಕಾಸ್ಟ್ ಉಪಯೋಗಿಸುವ ರೋಗಿಗಳ ಶುಶ್ರೂಷೆಯ ಬಗ್ಗೆ ವಿವರಿಸುವರು.	ಕಲಿಯುವವರು ಜಾಗರೂಕತೆಯಿಂದ ಕೇಳಿಸಿಕೊಳ್ಳುತ್ತಾರೆ	ಮಿಂಚುಪಟ್ಟಿಗಳು 	ಕಾಸ್ಟ್ ಅನ್ನು ಬಳಸುವಂತಹ ರೋಗಿಯ ಶುರ್ಶರೂಷ ಕಾರ್ಯಗಳೇನು?

		• ರೋಗಿಯನ್ನು ತಿರುಗಿಸುವಾಗ ಅಚ್ಚನ್ನು ಜೊತೆಯಲ್ಲಿ ತಿರುಗಿಸಬೇಕು. • ರೋಗಿಯ ಉಸಿರಾಟ, ಹಿಟ್ಟಿಗೆ ಸಂಬಂದಿಸಿದಂತಹ ತೊಂದರೆಗಳನ್ನು ಗಮನಿಸಬೇಕು. • ರಕ್ತದ ಕಲೆಗಳು ಅಚ್ಚಿನ ಮೇಲೆ ಇರದಂತೆ ನೀಡಿಕೊಳ್ಳಬೇಕು. • ರಕ್ತದ ಚಲನೆಯನ್ನು ಪರೀಕ್ಷೆ ಮಾಡಲು ಉಗುರಿನ ಮೇಲೆ ಒತ್ತಡವನ್ನು ಕೊಟ್ಟು ರಕ್ತದ ವೇಗವನ್ನು ಗುರುತಿಸಬೇಕು. • ರೋಗಿಯ ಕಾಲಿನ ಬಾಗದ ಮಂಚವನ್ನು ಮೇಲಕ್ಕೇರಿಸಬೇಕು. • ಮೂಳೆಯ ಮೇಲೆ ಒತ್ತಡವನ್ನು ತಡೆಗಟ್ಟಲು ತಲೆದಿಂಬುಗಳನ್ನು ಹಾಗೂ ನೀರಿನ ಹಾಸಿಗೆಯನ್ನು ಸಹಾಯವಾಗಿ				

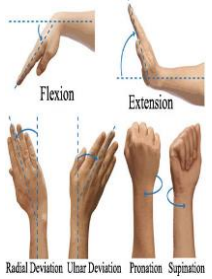
		ಕೊಡಬೇಕು. • ಅಚ್ಚಿನ ಜಾಗದಲ್ಲಿ ಗಾಲಿ ಹೋಗಲು ಬಿಡಬೇಕು. ಅದರ ಮೇಲೆ ಯಾವುದೇ ರೀತಿಯ ಬಟ್ಟೆಯನ್ನು ಹಾಕಬಾರದು. • ಅಚ್ಚು ಹಾಕಿರುವ ಕಾಲುಗಳನ್ನು ದಿಂಬಿನ ಮೇಲಿಡಬೇಕು. • ಅಚ್ಚನ್ನು ಆಗಾಗ ಪರಿಶೀಲನೆ ಮಾಡಬೇಕು. • ಅಚ್ಚು ಹಾಕಿಕೊಂಡಿರುವ ರೋಗಿಗಳು ಪ್ರತೀ ಎರಡು ಗಂಟೆಗಳ ನಂತರ ತಮ್ಮ ಸ್ಥಿತಿಯನ್ನು ಬದಲಾಯಿಸಬೇಕು.				

ಎಳೆತವನ್ನು ಹೊಂದಿರುವ ರೋಗಿಗಳ ಶುಶ್ರೂಷತೆಯನ್ನು ವಿವರಿಸುವುದು.	8 ನಿಮಿಷ	**<u>ಎಳೆತವನ್ನು ಹೊಂದಿರುವ ರೋಗಿಯ ಸೇವೆ:-</u>** • ಒತ್ತಡದ ಭಾಗಗಳಿಗೆ ಸಾಕಷ್ಟು ಪ್ರಮಾಣದ ಹತ್ತಿಯನ್ನು ಇಡಬೇಕು. • ಮರದ ಪೀಠ ಮತ್ತು ಪಾದದ ಮಧ್ಯೆ ಜಾಗವನ್ನು ಬಿಡಬೇಕು. ಆದ್ದರಿಂದ ರೋಗಿಯು ತನ್ನಷ್ಟಕ್ಕೆ ತಾನೇ ಮರದ ಪೀಠವನ್ನು ತೆಗೆದು ಶೌಚಾಲಯಕ್ಕೆ ಹೋಗಬಹುದು. • ಮಂಚವನ್ನು ಎತ್ತರಗೊಳಿಸಬೇಕು. • ಪ್ರತೀದಿನ ಚರ್ಮವನ್ನು ಶುಚಿಗೊಳಿಸಬೇಕು. • ಗಾಯಗೊಳ್ಳದಿರುವ ಪಾದಕ್ಕೆ ಪಾದ ಫಲಕವನ್ನು ಇಡಬೇಕು. ಇದರಿಂದ ಪಾದದ ಸ್ಥಿತಿಯನ್ನು ಕಾಪಾಡುತ್ತದೆ. • ಎಳೆತದ ತೂಕವನ್ನು	ಎಳೆತವನ್ನು ಹೊಂದಿರುವ ರೋಗಿಗಳ ಶುಶ್ರೂಷತೆಯ ಬಗ್ಗೆ ಬೋಧಕರು ವಿವರಿಸುವರು.	ಕಲಿಯುವವರು ಜಾಗರೂಕತೆಯಿಂದ ಕೇಳಿಸಿಕೊಳ್ಳುತ್ತಾರೆ	ಮಿಂಚು ಪಟ್ಟಿಗಳು 	ಎಳೆತವನ್ನು ಹೊಂದಿರುವ ರೋಗಿಗಳ ಶುಶ್ರೂಷ ವಿಧಾನಗಳನ್ನು ವಿವರಿಸಿ.

		ಪ್ರತೀದಿನ ಪರೀಕ್ಷಿಸಬೇಕು ಮತ್ತು ಆರಾಮವಾಗಿ ತೂಗಾಡಬೇಕು. • ಮೂಳೆ ಮುರಿತದಿಂದಾಗುವ ಅಂಗಾಂಗಳಿಗೆ ವ್ಯಾಯಾಮ ಮಾಡಿಸಬೇಕು. **<u>ಅವು ಯಾವುವೆಂದರೆ;</u>** • ಸೊಂಟ ಮತ್ತು ಮೊಣಕಾಲುಗಳನ್ನು ಮಡಚುವುದು ಮತ್ತು ನೀಟುವುದು. • ಕಾಲುಗಳಿಗೆ ಮಿತಿ–ಚಲನೆ ವ್ಯಾಯಾಮವನ್ನು ಮಾಡಿಸಬೇಕು.				
ಮುಳೆ ಮುರಿತ ರೋಗಿಗಳಿಗೆ ನೀಡುವ ಆಹಾರ ಕ್ರಮದ ಬಗ್ಗೆ ವಿವರಿಸುವುದು.	5 ನಿಮಿಷ	**<u>ಮೂಳೆ ಮುರಿತ ರೋಗಿಗೆ ಕೊಡಬೇಕಾದ ಆಹಾರ:–</u>** ಪೋಷಕಾಂಶಗಳುಳ್ಳ ಆಹರವು ಗಾಯಗಳನ್ನು ಬೇಗ ಗುಣಪಡಿಸಲು ಸಹಾಯವಾಗುತ್ತದೆ.	ಬೋಧಕರು ಮೂಳೆ ಮುರಿತ ರೋಗಿಗಳಿಗೆ ನೀಡಬೇಕಾದ ಆಹಾರ ಕ್ರಮದ ಬಗ್ಗೆ ವಿವರಿಸುವರು.	ಕಲಿಯುವವರು ಜಾಗರೂಕತೆಯಿಂದ ಕೇಳಿಸಿಕೊಳ್ಳುತ್ತಾರೆ	ಮಿಂಚು ಪಟ್ಟಿಗಳು 	ಮೂಳೆ ಮುರಿತ ರೋಗಿಗಳಿಗೆ ನೀಡುವ ಆಹಾರ ಪಧಾರ್ಥಗಳು ಯಾವುವು?

		ಎಲುನೇರ್ಪಿಕ್ ರೋಗಿಗಲಿಗೆ ಪೂರಕವಾದ ಕಬ್ಬಿಣಾಂಶ, ವಿಟಮಿನ್ ಮತ್ತು ಹೆಚ್ಚು ನೀರನ್ನು ತೆಗೆದುಕೊಳ್ಳುವಂತೆ ಹೇಳಬೇಕು. **ಆಹಾರಗಳು ಯಾವುವೆಂದರೆ :–** **ಕ್ಯಾಲ್ಸಿಯಂ ಒಳಗೊಂಡ ಆಹಾರಗಳು :–** ಇದರಿಂದ ಗಾಯಗುಣಪಡಿಸಲು ಮತ್ತು ಜೀವ ಕೋಶಗಳ ಮರರುಹುಟ್ಟುವಿಕೆಯಲ್ಲಿ ಸಹಾಯವಾಗುತ್ತದೆ. **ಪದಾರ್ಥಗಳು:–** ಹಾಲು ಮತ್ತು ಹಾಲಿನ ಉತ್ಪನ್ನಗಲಾದ ಮೊಸರು, ಬೆಣ್ಣೆ, ಕೋವಾ ಮತ್ತು ತುಪ್ಪಾ, ಪಾಲಕ್ ಸೊಪ್ಪ, ಮೊಟ್ಟೆ, ಹುರಳೀಕಾಯಿ, ಮೀನು, ಸೊಪ್ಪು ಮತ್ತು ಹಸಿರು ತರಕಾರಿಗಳು. **ವಿಟಮಿನ್– ಕೆ ಆಹಾರಗಳು:–** ಹೆಚ್ಚಿನ ರಕ್ತಸ್ರಾವವನ್ನು ಕಡಿಮೆಮಾಡುತ್ತದೆ. ಮೂಳೆ ಮುರಿತವನ್ನು ಗುಣಪಡಿಸಲು ಮತ್ತು ಜೀವ ಕೋಶಗಳನ್ನು				

		ಗಟ್ಟಿಗೊಳಿಸುತ್ತದೆ. ಪದಾರ್ಥಗಳು:– ಎಲಕೋಸು, ಹೂಕೋಸು, ಟೊಮೊಟೋ, ಪಾಲಕ್ ಸೊಪ್ಪು ಮತ್ತು ಹಸಿರು ತರಕಾರಿಗಳು. **<u>ವಿಟಮಿನ್–ಸಿ ಆಹಾರಗಳು:–</u>** ಈ ಆಹಾರಗಳು ಸೋಂಕುಗಳಿಂದ ತಡೆಯುತ್ತದೆ. ಹಾಗೂ ರೋಗನಿರೋಧಕ ಶಕ್ತಿಯನ್ನು ಹೆಚ್ಚಿಸುತ್ತದೆ. **<u>ಪದಾರ್ಥಗಳು:–</u>** ಹುಳಿಯಾದ ಪದಾರ್ಥಗಳು, ನೆಲ್ಲಿಕಾಯಿ, ಮಾವು, ದ್ರಾಕ್ಷಿ, ಚೇಪೆಕಾಯಿ, ಹಸಿರು ತರಕಾರಿಗಳು. **<u>ಲೈಸಿನ್ ಆಹಾರಗಳು :–</u>** ಜೀವಸ್ತುಕರಣದಲ್ಲಿ ಸಹಾಯಮಾಡುತ್ತದೆ. ಹಾಗೂ ಪ್ರೋಟೀನ್ ಉಪಯೋಗಿಸಿಕೊಂಡು ಜೀವ ಕೋಶಗಳನ್ನು ಬಲಪಡಿಸುತ್ತದೆ. ಮಾಂಸಖಂಡಗಳನ್ನು ಮತ್ತು			ಮಿಂಚು ಪಟ್ಟಿಗಳು 	

		ತಂತಿಗಟ್ಟಿಗಳನ್ನು ಬಲಪಡಿಸುತ್ತದೆ. ಪದಾರ್ಥಗಳು:– ಹಾಲಿನ ಉತ್ಪನ್ನಗಳು, ಮೀನು, ಹಂದಿ ಮಾಂಸ ಇತ್ಯಾದಿ. ಪೌಷ್ಟಿಕಾಂಶದ ಆಹಾರದ ಜೊತೆಗೆ 2 ರಿಂದ 3 ಲೀಟರ್ ನೀರನ್ನು ಕೊಡಬೇಕು ಇದರಿಂದ ಮಲ ಮೂತ್ರ ವಿಸರ್ಜನೆಗೆ ಸಹಾಯವಾಗುತ್ತದೆ.				
ಮೂಳೆ ಮುರಿತ ರೋಗಿಗಳು ಮಾಡಬೇಕಾದ ವ್ಯಾಯಾಮದ ಬಗ್ಗೆ ವಿವರಿಸುವುದು.	3 ನಿಮಿಷ	**<u>ಮೂಳೆ ಮುರಿದ ವ್ಯಕ್ತಿಯು ಮಾಡಬೇಕಾದ ವ್ಯಾಯಾಮಗಳು:–</u>** ವ್ಯಾಯಾಮದಿಂದ ರೋಗಿಯ ದೇಹದಲ್ಲಿ ರಕ್ತಪರಿಚಲನೆ ಮತ್ತು ಸ್ನಾಯು ಸೆಳೆತದಲ್ಲಿ ಸಹಾಯವಾಗುತ್ತದೆ. ರೋಗಿಯು ಯಾರ ಸಹಾಯವು ಇಲ್ಲದೆ ಮಾಡುವ ವ್ಯಾಯಾಮವನ್ನು ಸ್ವತಃ ಮಾಡಬಹುದು. ದಬ್ಬೆಕಟ್ಟು ಮತ್ತು ಎಳೆತ ಇರುವ ರೋಗಿಯು ಹಾಸಿಗೆಯ ಮೇಲೆ ನೇರವಾಗಿ ಮಲಗಿ ಮಾಡಬಹುದಾದ ವ್ಯಾಯಾಮಗಳೆಂದರೆ,	ಬೋಧಕರು ಮೂಳೆ ಮುರಿತ ರೋಗಿಗಳು ಮಾಡಬೇಕಾದ ವ್ಯಾಯಮದ ಬಗ್ಗೆ ವಿವರಿಸುವುದು.	ಕಲಿಯುವವರು ಜಾಗರೂಕತೆಯಿಂದ ಕೇಳಿಸಿಕೊಳ್ಳುತ್ತಾರೆ	ಮಿಂಚು ಪಟ್ಟಿಗಳು  	ಮೂಳೆ ಮುರಿತ ರೋಗಿಗಳು ಯಾವ ವ್ಯಾಯಾಮಗಳನ್ನು ಮಾಡಬೇಕು?

		<u>1 ದೀರ್ಘ ಉಸಿರಾಟದ ವ್ಯಾಯಾಮ :–</u> ತಲೆಗಿಂತ ಕೈಯನ್ನು ಮೇಲಕ್ಕೆ ಎತ್ತಿ ಉಸಿರನ್ನು ಒಳತೆಗೆದುಕೊಂಡು ನಿದಾನವಾಗಿ ಹೊರಬಿಡಬೇಕು ಇದನ್ನು ದಿನಕ್ಕೆ ಮೂರರಿಂದ ಆರು ಸಲ ಮಾಡಬೇಕು. • **ಹೊಟ್ಟೆಯ ಸ್ನಾಯುಗಳ ವ್ಯಾಯಾಮ:–** ಕೈನ ಸಹಾಯದಿಂದ ತಲೆ ಮತ್ತು ಭುಜಗಳನ್ನು ಮೇಲಕ್ಕೆ ಎತ್ತಿ ನಿಧಾನವಾಗಿ ಬಿಡಬೇಕು. ಇದನ್ನು ಮೂರರಿಂದ ನಾಲ್ಕುಸಲ ಮಾಡಬೇಕು. • **ಕುಳಿತುಕೊಂಡು ಸೊಂಟ ಎತ್ತುವ ವ್ಯಾಯಾಮ :–** ಸೊಂಟ ಮತ್ತು ಕಾಲನ್ನು ಸರಿಯಾಗಿ ಇಟ್ಟು, ಕೊಂಡಿಯನ್ನು ಜೊತೆಯಾಗಿ ಹಿಡಿದಿಟ್ಟುಕೊಳ್ಳಬೇಕಿ. ಇದನ್ನು 3–6 ಸಲ ಮಾಡಬೇಕು.				

		• **ಕೆಳ ಕಾಲುಗಳ ಸ್ನಾಯುವಿನ ವ್ಯಾಯಾಮ :–** ಪಾದವನ್ನು ಅಲುಗಾಡಿಸುತ್ತಿರಬೇಕು. ಮತ್ತು ಕಾಳಿನ ಬೆರಳುಗಳನ್ನು ಹಿಂದಕ್ಕೆ ಬಾಗಿಸಬೇಕು ಇದನ್ನು 3–6 ಸಲ ಅಥವಾ ಕನಿಷ್ಟ 2 ಸಲ ಮಾಡಬೇಕು. **<u>2 ಬೆರಳು ಮತ್ತು ಪಾದದ ಸ್ನಾಯುವಿನ ವ್ಯಾಯಾಮ :–</u>** ಬೆರಳುಗಳನ್ನು ಮುಂದಕ್ಕೆ ಮತ್ತು ಹಿಂದಕ್ಕೆ ಭಾಗಿಸಬೇಕು ಹಾಗೂ ಅಗಲವಾಗಿ ತೆಗೆಯಬೇಕು. ಇದನ್ನು 3–6 ಸಲ ಅಥವಾ ಕನಿಷ್ಟ 2 ಸಲ ಮಾಡಬೇಕು. ಯಾವ ರೋಗಿಯು ತನ್ನ ರೋಗ ಲಕ್ಷಣಗಳಿಂದ, ಕೀಲು ಹಿಡಿದುಕೊಂಡಿರುವುದರಿಂದ ಅಥವಾ ದಬ್ಬೆಕಟ್ಟಿನ ಉಪಯೋಗದಿಂದ ತೊಂದರೆಗೀಡಾದ ಭಾಗವನ್ನು				

		ಅಲುಗಾಡದಂತೆ ಮಾಡಿರುತ್ತಾರೋ ಅಂತಹ ರೋಗಿಯು ಕೀಲುವಿನ ಚಲನೆ ಮಾಡಲು ಸಾಧ್ಯವಿಲ್ಲ. ಆದ್ದರಿಂದ ವ್ಯಾಯಾಮವನ್ನು ಮಾಡಬೇಕು. ವ್ಯಾಯಾಮವನ್ನು ಸರಿಯಾಗಿ ಪ್ರತೀದಿನ ಮಾಡಬೇಕು. ವ್ಯಾಯಾಮವನ್ನು ಪದೇಪದೇ ಮತ್ತು ದೀರ್ಘಕಾಲ ಮಾಡಬೇಕು.				
ವಿಶ್ರಾಂತಿ ಮತ್ತು ನಿದ್ದೆಯ ಪ್ರಾಮುಖ್ಯತೆಯನ್ನು ವಿವರಿಸುವುದು.	3 ನಿಮಿಷ	**<u>ನಿದ್ದೆ ಮತ್ತು ವಿಶ್ರಾಂತಿ</u>** :– ಮೂಳೆ ಮುರಿದ ರೋಗಿಗೆ ನಿದ್ದೆ ಮತ್ತು ವಿಶ್ರಾಂತಿ ಅತಿ ಮುಖ್ಯ. ಇದರಿಂದ ರೋಗಿಯು ತೊಂದರೆಗಳಿಂದ ಹೊರಬರರಬಹುದು. ವಿಶ್ರಾಂತಿ ತೆಗೆದುಕೊಳ್ಳುವುದರಿಂದಾಗುವ ಉಪಯೋಗಗಳು:– • ಹೃದಯಕ್ಕೆ ವಿಶ್ರಾಂತಿ ನೀಡಲು. • ನೋವನ್ನು ನಿವಾರಿಸಲು.	ಬೋಧಕರು ವಿಶ್ರಾಂತಿ ಮತ್ತು ನಿದ್ದೆಯ ಪ್ರಮುಖ್ಯತೆಯನ್ನು ವಿವರಿಸುವರು.	ಕಲಿಯುವವರು ಜಾಗರೂಕತೆಯಿಂದ ಕೇಳಿಸಿಕೊಳ್ಳುತ್ತಾರೆ	ಮಿಂಚು ಪಟ್ಟಿಗಳು	ಮೂಳೆ ಮುರಿತ ರೋಗಿಗಳಿಗೆ ವಿಶ್ರಾಂತಿ ಮತ್ತು ನಿದ್ದೆಯ ಪರಾಶಮುಖ್ಯತೆ ಏನು?

	2 ನಿಮಿಷ	• ತೂಕವನ್ನು ಕಡಿಮೆ ಮಾಡಲು. **<u>ಉಪ ಸಂಹಾರ:–</u>** ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳನ್ನು ಮೂಳೆ ಮುರಿತ ರೋಗಿಗಳಿಗೆ ಮುರಿದ ಭಾಗವನ್ನು ಅಲುಗಾಡದಂತೆ ಮತ್ತು ಆಧಾರವಾಗಿ ಉಪಯೋಗಿಸುತ್ತಾರೆ. ಎಲುನೇರ್ಪಿಕ ಉಪಕರಣಗಳ ಉಪಯೋಗಗಳು ಮತ್ತು ಶುಶ್ರೂಷತೆಯನ್ನು ರೋಗಿಗಳಿಗೆ ಹಾಗೂ ಸಂಬಂಧಿಕರಿಗೆ ವಿವರಿಸುವುದು ಮೂಳೆ ಮುರಿತ ನಿರ್ವಹಣೆಯಲ್ಲಿ ಮುಖ್ಯ ಅಂಶವಾಗಿದೆ.				