

## A STUDY TO ASSESS THE LEVEL OF FATIGUE & MUSCLE CRAMP AMONG THE PATIENTS UNDERGOING HEMODIALYSIS IN A SELECTED HOSPITAL, MURSHIDABAD

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### Abstract

A study to assess the level of fatigue and muscle cramp among the patient undergoing hemodialysis in a selected hospital, Murshidabad". The objective of the study are to assess the level of fatigue among the patient's undergoing hemodialysis, to assess the level of muscle cramp among the patient's undergoing hemodialysis, to find out the association between the level of fatigue & muscle cramp among the patients undergoing hemodialysis with their selected demographic variables. In this study descriptive research design is used. In this study hemodialysis patients of GitaRam Hospital, Berhampur, Murshidabad were selected as a sample. 60 (sixty) samples were selected for the study by non-probability purposive sampling technique. Level of fatigue and muscle cramp of the patients undergoing hemodialysis were assessed using Iowa fatigue scale and Ashworth scale for assessing muscle cramp. Reliability of the tool is 0.98 and 0.95 that was checked using Karl Pearson correlation coefficient method. Statistical analysis was done by chi square test and frequency distribution table to assess the level of Fatigue and Muscle Cramp of patients undergoing hemodialysis. The findings of the study revealed that in regarding fatigue and muscle cramp among 60 number of hemodialysis patients, 3% of hemodialysis patients are having no fatigue, 28% of hemodialysis patients are having mild fatigue, 60% of hemodialysis patients are having moderate fatigue and 9% of hemodialysis patients are having severe fatigue along with that 2% of hemodialysis patients are having no muscle cramp, 37% of hemodialysis patients are having mild muscle cramp, 48% of hemodialysis patients are having moderate muscle cramp and 13% of hemodialysis patients are having severe muscle cramp. There is a significant association between the occupation, duration of dialysis treatment and chronic kidney disease since, with fatigue and dialysis treatment and chronic kidney disease since with muscle cramp.

**Keywords:** Fatigue, Muscle Cramp, Hemodialysis

### INTRODUCTION

Chronic renal failure is characterized by gradual and sustained decline in renal clearance or glomerular filtration over many years results in permanent kidney failure. Patient with chronic kidney failure shows so many symptoms like pain, discomfort, restlessness syndrome, weight loss, lethargy, burning fat, high blood pressure, lowered blood cell count, nausea, vomiting, loss of appetite. Chronic renal failure is diagnosed by the observation of combination of symptoms like

physical examination and elevated blood urea, nitrogen and creatinine level those are persistent present over at least 3 months. There are number of potential complications of chronic renal failure, necessate collaborative approach to care. Phase includes anemia, bone disease, hyperkalemia, hypertension and pericarditis.

## BACKGROUND

In the world wide 10% people are diagnosed to chronic renal failure. In India prevalence rate of chronic renal failure is 15- 17%. In 2018 estimate put the number of patients on chronic dialysis in India at about 175000 people prevalence of 129 per million population. 60-97% of hemodialysis patient experiences some level of fatigue compare to patient with normal kidney function. The frequency of muscle cramp is about 35-86% during hemodialysis.

## PURPOSE

To assess the level of fatigue & muscle cramp among the patients undergoing hemodialysis.

## OBJECTIVES

- a) To assess the level of fatigue among the patients undergoing hemodialysis.
- b) To assess the level of muscle cramp among the patients undergoing hemodialysis.
- c) To find out the association between the level of fatigue & muscle cramp among the patients undergoing hemodialysis with their selected demographic variable.

## ASSUMPTIONS

- a) Patients who undergoing hemodialysis may suffer from muscle cramp.
- b) Patient who undergoing hemodialysis may suffer from fatigue.

## DELIMITATION

- a) The study will be limited to the selected hospital.
- b) Duration of study is limited to the allotted period.

**Research design:** The research design of the study is non-experimental descriptive design.

**Setting:** The settings of the study is GitaRam Hospital.

**Population:** All the patients who undergoing the hemodialysis.

**Sample:** Patients who undergoing hemodialysis in GitaRam Hospital.

**Sample size:** 60 (Sixty) number of patients who all are undergoing hemodialysis procedure.

**Sampling Technique:** Non-probability purposive sampling Technique.

**Sample Criteria:**

### a) Inclusion Criteria -

1. The patients who have muscle cramp and fatigue during hemodialysis.
2. The patients who are willing to participate and available during data collection period.

### b) Exclusion Criteria:

1. The patients undergoing peritoneal dialysis.
2. Patients with lower limb disability.
3. Patients undergoing emergency hemodialysis.

**Variables:**

**Research Variable:** Level of fatigue and muscle cramp among hemodialysis patients.

**Demographic Variable:** Age, gender, religion, educational status, monthly income, duration of

dialysis and period of diagnosed as chronic kidney disease.

#### Development of Research Tool:

The following tool will be developed and utilized for data collection: -

- A. **Tool 1:** - Socio-demographic Questionnaire for collecting the sociodemographic data. The Questionnaire consists of 9 items that is age, gender, religion, educational status, monthly income, duration of dialysis, period of diagnosed as chronic kidney disease.
- B. **Tool 2:** - Iowa Fatigue Scale for assessing the fatigue level.
- C. **Tool 3:** - Ashworth Standardized Scale for assessing the muscle cramp.

#### Plan of data analysis:

- Organising data from master sheet
- Tabulation of data in terms of frequency & percentage.

A. **Descriptive Statistics:** Frequency and Percentage

B. **Inferential statistics:** Chi square test.

## RESULTS

### Sociodemographic characteristics of hemodialysis patients in terms of frequency and percentage distribution:N=60

Frequency and percentage distribution of level of socio-demographic variables among the patients undergoing haemodialysis. According to the table 45% patients belong to 51years and above age,35% patients belong to 36-50 years age group,20% patients belong to 20-35 years age group. In case of gender 57% patients are female and 43% patients are male. In case of religion 63% patients belong to Muslim community and 37% belong to Hindu community. As per the educational status of the patients 37% studied up to primary education level,25% studied up higher secondary and above,23% patients studied up to secondary education level and 15% patients are uneducated. According to their occupation, 82% patients are businessman and others,13% patients are government employees and 5% patients are unemployed. In case of marital status, 88% patients are married,7% patients are unmarried and 5%patients are widow. As per the monthly income, 63% patients earned less than 10,000 rupees 25% patients earned between 10,000-20,000 rupees and 12% patients' monthly income are more than 20,000 rupees.As per data,80% people are having dialysis treatment from more than 12 months,12% patients belong to 6-12month group and 8% patient have taken the dialysis treatment from less than 6 month. In case of diagnosis of chronic kidney disease, 83% people suffered from chronic kidney disease from more than 12 months, 10% patients suffered from chronic kidney disease from 6-12 months and 7% patients were diagnosed with chronic kidney disease from less than 6 months.

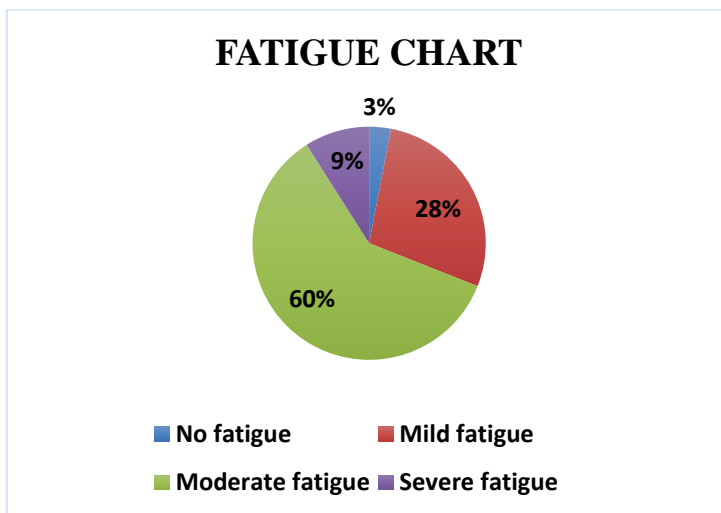
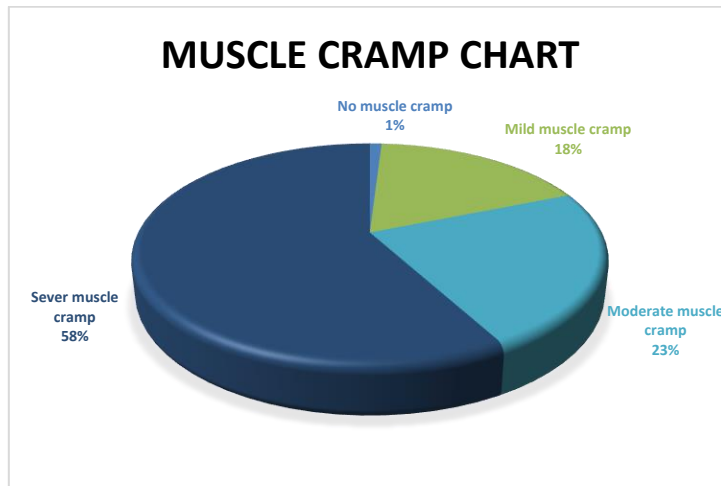
### Frequency and percentage distribution of level of fatigue among the hemodialysis patients.

N=60

Level of fatigue	Frequency	Percentage
No Fatigue (<25)	2	3%
Mild Fatigue (25-29)	17	28%
Moderate Fatigue (30-39)	36	60%
Severe Fatigue (40-55)	5	9%

**Frequency and percentage distribution of level of muscle cramp among the patient undergoing hemodialysis. N=60**

Level of muscle cramp	Frequency	Percentage
No Muscle cramp (0)	1	2%
Mild muscle cramp (1-5)	22	37%
Moderate muscle cramp (6-10)	29	48%
Severe muscle cramp (11-15)	8	13%



**Association between the level of fatigue among the patients undergoing hemodialysis with their selected demographic variables N=60**

The association of fatigue with their selected demographic variables where we have calculated the chi square value for all the socio- demographic variables. It is found that there is significant association between fatigue with occupation that is 5.88, duration of dialysis treatment that is 15.28 and chronic kidney disease diagnosed since that is 15.26, as the value is more than 3.84 hence these respective values are found to be having significant association between fatigue and

mentioned demographic variable.

### **Association between the level of muscle cramp among the patients undergoing haemodialysis with their selected demographic variables**

The association of the muscle cramp with their selected demographic variables, where we have calculated chi square value for all the 9 socio-demographic variables. It is found that there is significant association between muscle cramp and duration of dialysis that is 16.6, muscle cramp and chronic kidney disease since that is 4.53, as the values are more than tabulated P value 3.84 hence muscle cramp has significant association with the two mentioned sociodemographic variables.

### **Association between fatigue and muscle cramp among the patients undergoing haemodialysis**

The correlation between fatigue & muscle cramp undergoing the hemodialysis patients. Spearman Brown Correlation Coefficient Formula is used to evaluate the value of the data. The calculated value is 0.98 which denotes that there is very strong correlation between fatigue & muscle cramp as it is more than 0.70.

### **CONCLUSION**

Since cramps are a common intra dialysis event the discomfort leads to premature termination of the treatment noncompliance with the prescription and therefore under dialysis. This interfering with the muscle cramps and even preventing the occurrence become a major responsibility of the personal in charge of the patient. Since Nurses are taking care of hemodialysis patients almost everywhere it becomes pre dominantly the nurse's role to find the remedial measure to alleviate all muscle cramps.

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