

## Assess the quality of life perceived by the patients with chronic renal failure undergoing Haemodialysis

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**Abstract:** Chronic kidney disease is a global health problem facing a high economic cost to health care systems. It is a slow and progressive reduction of kidney function over a period of several years. CKD is having high prevalence, mortality and morbidity rates. Eventually, a person will develop permanent or chronic kidney failure<sup>(1)</sup>. Hemodialysis is the most common method used to treat advanced and chronic kidney failure<sup>(2)</sup> Chronic kidney disease (CKD) is a global health burden with a high economic cost to health systems Aim: the aim of the study is to “assess the quality of life perceived by the patients with chronic renal failure undergoing Haemodialysis”. Setting: the study was conducted in the Haemodialysis unit of G. Kuppasamy Naidu Memorial Hospital, Coimbatore. Materials and methods: A descriptive survey design was adopted for the present study. Sample: the sample size composed of 30 patients who were suffering with chronic renal failure undergoing Haemodialysis. The convenience sampling technique was used for this study. The tool used for the data collection were in the form of structured questionnaire consist of 5 parts. Data analysis done with using descriptive and inferential statistics Results: in total score of 15,6,7,7 the mean physical factor score is 3.8(25.3%), mean psychological factor score is 2.26(37.66%), mean socioeconomic factor score is 3.7(52.85%), mean spiritual factor score is 2.83(40.42%). Conclusion: the data findings show that there was statistical significance of various factors such as the physical, psychological, socioeconomic and spiritual factors influencing the quality of life of the patients with chronic renal failure undergoing Haemodialysis.

**Keywords:** chronic renal failure, Hemodialysis, quality of life.

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### I. Introduction

A healthy adult eating normal diet needs a minimum daily urine output of approximately 0.5ml/kg/hr to excrete the body's waste products through kidneys<sup>(3)</sup>. The Healthy kidneys are cleaning the blood by removing excess fluid, minerals, and wastes. It also makes hormones that help to keep our bones strong. When the kidneys fail, harmful wastes build up in our body, leads to a wide variety of symptoms which will affect our all systems of the body. The total functional capacity and the quality of life highly impaired. We need a treatment to replace the work of failed kidneys<sup>(2)</sup>. Hemodialysis, is a treatment process to remove unwanted fluid and waste products from the body through a synthetic semi permeable membrane and to correct electrolyte imbalances. It also referred to as an artificial kidney<sup>(1)</sup>.

Whatever may be the condition of health, the patient always expect a positive outcome in their quality of life and that is the main reason to seek medical treatment. There are a variety of factors such as physical, psychological, socioeconomic and spiritual influencing their quality of life of the patient suffering with chronic renal failure undergoing Haemodialysis. All the stages of CRF compromising the total health and decreasing the quality of life. The Quality of life is a broad multidimensional concept which includes subjective evaluation of both positive and negative aspects of their own life. The current study intend to evaluate the quality of life of patients with chronic renal failure undergoing Haemodialysis and how it significantly associated with the various impact factors such as the physical, psychological, socioeconomic and spiritual.

Diana Laila et.al conducted Cohort observational study to evaluate the Quality of Life among Patients Undergoing Hemodialysis in Penang, Malaysia. The study findings showed that the scoring of work status, cognitive function, quality of social interaction, sleep, social support, patient satisfaction, physical functioning, general health, and role emotional were low than standard form<sup>(4)</sup>.

### II. Materials and Methods

#### Objectives of the study:

- Identify the physical, psychological, socioeconomic and spiritual problems experienced by the patients undergoing Haemodialysis.
- Analyze the quality of life of patients based on the problems experienced by them.

**Hypothesis:**

H<sub>1</sub>- there will be significant physical, psychological, socioeconomic and spiritual problems affecting the quality of life of the patients with chronic renal failure undergoing Haemodialysis.

H<sub>2</sub>- the physical, psychological, socioeconomic and spiritual factors influencing the quality of life identified in patients with chronic renal failure undergoing Haemodialysis is not a chance.

H<sub>0</sub>- there is no significant influence of selected demographic and background information on physical, psychological, socioeconomic and spiritual factors identified.

**Assumption:**

There are certain physical, psychological, socioeconomic and spiritual problems arising in chronic renal failure patients undergoing Haemodialysis.

**Delimitation:**

The present study was limited to

- Patients undergoing Haemodialysis with chronic renal failure.
- Patients who are interested and co-operative
- Patients who are admitted in the dialysis unit in selected hospitals.

**Research Methodology:**

Research Design: descriptive survey design was adopted for the present study

**Variables:**

- Independent variable: are physical, psychological, socioeconomic and spiritual factors
- Dependent variable: is the quality of life of patients with chronic renal failure undergoing Haemodialysis.

**Population:** composed of patients with chronic renal failure undergoing Haemodialysis in GKNM hospital.

**Sample and Sampling technique:** the sample size composed of 30 patients who were undergoing Haemodialysis. The convenience sampling technique was used for this study.

**Setting:** the study was conducted in the Haemodialysis unit of G. Kuppusamy Naidu Memorial Hospital, Coimbatore.

**Criteria for sample selection:**

Inclusion criteria: this include following,

- Patients who were diagnosed as chronic renal failure.
- Patients who were undergoing Haemodialysis.
- Patients who were willing to participate in this study
- Patients who were undergoing treatment in GKNM hospital

Exclusion criteria: this include

- Patients who were not diagnosed as chronic renal failure.
- Patients who were not undergoing Haemodialysis
- Patients who were not willing to participate in this study

**Description of the tool:**

The tool used for the data collection were in the form of structured questionnaire consist of 5 parts.

Part I consist of demographic data, items for obtaining personal information which include age of the client, sex, educational qualification, occupation, income, marital status, family history, period of chronic renal failure, duration of Haemodialysis, frequency of Haemodialysis, artificial connection of arteries, veins made by fistula/graft.

Part II contains 15 questions for assessing the physical factors affecting the quality of life of patients with chronic renal failure undergoing Haemodialysis.

Part III consist of 6 questions for assessing the psychological factors affecting the quality of life of patients with chronic renal failure undergoing Haemodialysis.

Part IV consists of 7 questions for assessing the socio economic factors affecting the quality of life of patients with chronic renal failure undergoing Haemodialysis.

Part V consists of 7 questions for assessing the spiritual factors affecting the quality of life of patients with chronic renal failure undergoing Haemodialysis.

**Score interpretation:**

The questions of the part 2,3,4,5 are awarded a score of 1 for every positive answer and score 0 for each negative answer.

**Validity and Reliability of tool:**

The tool was given to 6 experts were from different department which include doctors, psychologists, and experts in nursing, modifications made as per suggestions of the experts. The reliability of the tool was determined by doing test retest method.

**Data collection procedure:**

The formal permission was obtained from the consent authority from department in college and Hospital. Informed consent was obtained from the sample. There were no ethical issues confronted while conducting study. The investigator explained the purpose of the study and help needed for the study. The sample who met the criteria explained the cooperation needed and confidentiality of the responses was assured. The questionnaire was given to them and them and the responses were collected from the sample.

**Data analysis:**

The data analysis was planned to include descriptive and inferential statistics. Frequency, percentage distribution were used to describe sample characteristics and related variables. Chi-square test would be computed between selected demographic and background information with physical, psychological, socioeconomic and spiritual factors. To identify the statistical significance of various factors influencing the quality of life of patients with chronic renal failure undergoing Haemodialysis the Paired ‘t’ test was used.

**III. Results and Discussion**

Table 1 shows frequency and percentage distribution of selected demographic variables, the data presented shows that majority of patients were males and affected people were mostly between the age group of 52-61 years (30%), 26.6% were under age group of 22-31 years. Majority of people were have secondary education (46.6%), majority of patients have monthly income (26.6%), (76.6%) patients were married.

The background information data showed that in duration of disease 30% of patients were 12-24 months , 30% of patients were 24-36 months,26.6% of patients were 1-12 months.36.6% of patients had duration of Haemodialysis as 1-6 months, 33.3% had 6-12 months,16.6% had as 18-24 months, 13.3% had as 12-18months. In frequency of Haemodialysis 66.6% of patients had twice a week, 33.3% had thrice a week. 53.3% of patients had hypertension as associated disease, 26.6% had DM as associated disease, 13.3% of patients had congestive heart failure as associated disease.

**Table 1**

| Sl.no | Demographic variable  | frequency | percentage |
|-------|-----------------------|-----------|------------|
| 1     | <b>Age</b>            |           |            |
|       | 22-31 years           | 8         | 26.6       |
|       | 32-41 years           | 1         | 03.3       |
|       | 42-51 years           | 6         | 20.0       |
|       | 52-61 years           | 9         | 30.0       |
|       | 62-71 years           | 5         | 16.6       |
| 2     | <b>Sex</b>            |           |            |
|       | Male                  | 21        | 70         |
| 3     | <b>Education</b>      |           |            |
|       | Literacy              | 2         | 6.6        |
|       | Primary               | 1         | 3.33       |
|       | Secondary             | 14        | 46.6       |
|       | Degree                | 7         | 23.3       |
|       | Postgraduate          | 1         | 3.33       |
|       | Professionals         | 4         | 13.3       |
|       | Others                | 1         | 3.33       |
| 4     | <b>Occupation</b>     |           |            |
|       | Farmer                | 5         | 16.6       |
|       | Businessman           | 4         | 13.3       |
|       | House wife            | 8         | 26.6       |
|       | Accountant            | 3         | 10         |
|       | Teacher               | 2         | 6.6        |
|       | others                | 8         | 26.6       |
| 5     | <b>Monthly income</b> |           |            |
|       | 500-2500              | 3         | 10         |
|       | 2500-4500             | 5         | 16.6       |

|   |                        |    |      |
|---|------------------------|----|------|
|   | 4500-6500              | 8  | 26.6 |
|   | 6500-8500              | 2  | 6.6  |
|   | 8500 above             | 3  | 10   |
| 6 | <b>Marital status:</b> |    |      |
|   | Married                | 23 | 76.6 |
|   | Un Married             | 6  | 20.0 |
|   | widow                  | 1  | 3.3  |

**Table 2:** shows mean, median, standard deviation and percentage distribution of various factors influencing the quality of life of patients with chronic renal failure undergoing Haemodialysis.

**Table 2**

| Factors influencing | Total score | Score perceived by the sample |        |     |            |
|---------------------|-------------|-------------------------------|--------|-----|------------|
|                     |             | mean                          | median | SD  | percentage |
| Physical            | 15          | 3.8                           | 4      | 1.9 | 25.3       |
| Psychological       | 6           | 2.26                          | 2      | 1.4 | 37.66      |
| Socioeconomic       | 7           | 3.7                           | 4      | 1.4 | 52.85      |
| spiritual           | 7           | 2.83                          | 3      | 1.7 | 40.42      |

Table 3: shows statistical significance of various factors influencing the quality of life of the patients with chronic renal failure undergoing Haemodialysis. The study findings of 't' value is greater than table value at 0.05 level. The obtained results revealed that the physical, psychological, socioeconomic and spiritual factors indicating a decrease in quality of life of patients with chronic renal failure undergoing Haemodialysis is not a chance.

**Table 3**

| Factors influencing the quality of life | Mean value | SD  | 't' value |
|---|------------|-----|-----------|
| Physical                                | 3.8        | 1.9 | 20.01     |
| Psychological                           | 2.26       | 1.4 |           |
| Socioeconomic                           | 3.7        | 1.4 |           |
| spiritual                               | 2.83       | 1.7 |           |

#### IV. Conclusion

The present study findings lead to final conclusion that the various factors such as physical, psychological, socioeconomic and spiritual factors experienced by the patients with chronic renal failure undergoing Haemodialysis have significant influence on their quality of life and impairing the quality of life of affected patients.

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Conflict of interest: Nil

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