

## A Study To Assess The Knowledge Regarding Post Dialysis HomeCare Management Among Caregivers Of Chronic Renal Failure Patients Undergoing Hemodialysis In Selected Hospital At Kasaragod

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### **ABSTRACT**

*Post-dialysis home care management is crucial for individual undergoing dialysis treatment. This type of care involves a set of practices and routines aimed at ensuring the well-being of the patients after they have undergone dialysis. The study was to assess the knowledge regarding post dialysis home care management among caregivers of Chronic Renal Failure patients undergoing hemodialysis in selected hospital at Kasaragod. The main objectives of the study were: to assess the levels of knowledge regarding post dialysis home care among caregivers of Chronic Renal Failure patients undergoing hemodialysis. A descriptive design was adopted for the present study. The study was conducted among caregivers of Chronic Renal Failure patients undergoing hemodialysis from a selected hospital Kasaragod. The purpose of the study was explained to the samples and their written consent was obtained. The samples were ensured about the confidentiality of the information revealed. Based on inclusion criteria, the study participants were selected using a Non – Probability Purposive Sampling Technique. The sample size was 40. The tool was prepared after discussion and seeking opinion from the experts. A Structured Knowledge Questionnaire was prepared and reliability was established by using Karl Pearson Correlation and Co-efficient method Content validity was done by the subject experts and experienced persons. The pilot study was conducted on 17.10.2023 and found that the tool is reliable and feasible to conduct the main study. The data was collected by using a Structured Knowledge Questionnaire. The obtained data was analyzed using Descriptive and Inferential Statistics. Results related to Percentage Distribution of knowledge regarding post dialysis home care management among caregivers. The Mean Knowledge score is 29.17 and Mean Percentage is 72.9%. Results related to Association of knowledge Score with selected demographic variables. The association between knowledge score with selected Socio Demographic Variables was analyzed using Chi-Square test. The calculated value of Chi-Square was found to be less than table values for selected Socio Demographic Variables except the age group. There is no significant association between the knowledge score with selected Socio Demographic Variables such as gender, religion, education, marital status, occupation, history of renal failure among family members, duration as a caregiver, relationship with client.*

**Keywords:** dialysis, home care management, health education, chronic renal failure

## INTRODUCTION

“Health is like money, we never have a true idea of its value, until we lose it”

### -Josh billings

Chronic Renal Failure involves progressive, irreversible loss of kidney function. Although Chronic Renal Failure has many different causes, the leading causes are diabetes and hypertension. Less common etiologies include glomerulonephritis, cystic and urologic diseases. As renal function deteriorates, all body systems become affected. Potential complications include anxiety, depression, hypertension, heart failure, anorexia, gastrointestinal bleeding, hyperparathyroidism, carbohydrate intolerance, hyperlipidemia, anemia, infection, sleep disturbances, pulmonary edema, osteomalacia, restless legs syndrome etc.

Dialysis is a method used to improve the conditions of patients with Chronic Renal Failure. Dialysis is a technique in which substance moves from the blood through a semipermeable membrane and into a dialysis solution [dialysate]. The two methods of dialysis available are 1) Peritoneal dialysis [PD] and 2) Hemodialysis [HD]. Hemodialysis functions as a substitute to renal functions for normal resume of activity of daily living.<sup>1</sup>

Hemodialysis is a medical procedure to remove fluid and metabolic waste products from the blood and to correct the electrolyte imbalances. This is accomplished by using a machine and a dialyzer, also referred to as an artificial kidney. Patients who are undergoing hemodialysis may experience health issues in post dialysis period, so they require support from non-professional healthcare providers, often family members, to manage Chronic Renal Failure, patients at home.<sup>2</sup> Although dialysis is a demanding treatment, which requires considerable personal discipline and care, there is an important role of caregiver for dialysis patients including assistance in daily activities, medication, fluid control, skin care and help to cope with stress.<sup>3</sup> Most of the family members have adequate knowledge about the post dialysis home care. Home care management is a form of health care service to promote, maintain or restore a patient's health and reduces the effects of disease or disability.<sup>4</sup>

## NEED FOR THE STUDY

Chronic Renal Failure has emerged as one of the most prominent causes of death and sufferings of the 21<sup>st</sup> century. Due to rise in risk factors, such as obesity and diabetes mellitus, the number of patients affected by Chronic Renal Failure has also been increasing, affecting an estimated 843.6 million individuals worldwide in 2017. Although mortality has declined in patients with end-stage renal disease, the Global Burden of Disease studies have shown that Chronic Renal Failure has emerged as a leading cause of worldwide mortality.<sup>5</sup>

Caregivers consume an ample amount of time interacting with their care receivers, while providing care in a wide sphere of activities. The role of caregivers has changed over the years. There is an urgent need for additional services to assist them in shouldering the burden of care which can be given through counseling, education, social and psychological support. A patient at the last stage of Renal Failure depends on dialysis to mechanically remove the fluids, waste products, and electrolytes from the blood. Patients with End Stage Renal Disease have to undergo hemodialysis, which is a lifesaving procedure. It is important to provide education and interventions in hospitals and community regarding post dialysis home care to both dialysis patient and caregivers. At home, the patient's relatives should have sufficient information about patient care and prevention of hemodialysis complications.<sup>6</sup> A

growing number of patients with chronic renal failure are receiving home-based care and require support from non-professional health care providers, often family members to manage Chronic Renal Failure. Although dialysis is a demanding treatment, which requires considerable personal discipline and care, there is an important role of caregiver for dialysis patients including assistance in daily activities, taking medication, regular fluid intake etc. The aim of the study was to assess the knowledge regarding post dialysis home care management among caregivers of hemodialysis patients.<sup>7</sup>

#### STATEMENT OF THE PROBLEM

A study to assess the knowledge regarding post dialysis home care management among caregivers of Chronic Renal Failure patients undergoing hemodialysis in selected hospital at Kasaragod.

#### OBJECTIVES ARE TO:

- Assess the levels of knowledge regarding post dialysis home care among caregivers of Chronic Renal Failure patients undergoing hemodialysis.
- Find the association of knowledge regarding post dialysis home care management among caregivers of Chronic Renal Failure patients with selected demographic variables

#### OPERATIONAL DEFINITIONS

##### **Assess**

In this study assess refers to organized and systematic process of collecting data from caregivers of Chronic Renal Failure patients undergoing hemodialysis.

##### **Knowledge**

It refers to the information gained by caregivers of Chronic Renal Failure patients undergoing hemodialysis regarding post-dialysis home care management.

##### **Post-dialysis home care**

It refers to the information pertaining to general information on Chronic Renal Failure and hemodialysis: care of central venous catheter, nutritional requirements, sleep, exercise, skin care, psychosocial care, travel and fluid intake.

##### **Care givers of hemodialysis patients**

In this study caregivers refers to the literate persons who can read and write Malayalam language and provides primary care to hemodialysis patients at home, family members like patient's parents, siblings, partner, children, close relatives or friends who reside with the patient set up.

#### **HYPOTHESIS**

**H1:** There is a significant association of knowledge regarding post dialysis home care management among caregivers of Chronic Renal Failure patients with selected socio demographic variables.

#### **HAPTER 2 REVIEW OF LITERATURE**

“Literature reviews are tutorials in that the authors define and clarify the problem, summarize previous investigations to inform the reader of the state of the research, identify relations, contradictions, gaps and inconsistencies in the literature and suggest the next step in solving the problem” A literature review examines

and critically evaluates scholarly articles, books and other relevant sources to describe and summarize the information related to particular issue / topic or research area. It provides an overview of information relating to a particular topic and explains to the reader how the presence study fits within a larger field of study.

A literature review is an objective, thorough summary and critical analysis of the relevant available research and non-research literature on the topic being studied.<sup>8</sup>

- Hart 1998 cited in Cronin, Ryan and Coughlan 2008

**The review of literature is organized under the following headings.**

- Literature related to home care management of hemodialysis
- **Literature related to hemodialysis**

Literature related to home care management of hemodialysis

A descriptive study was conducted in 2021 to assess the knowledge regarding home management of patients receiving hemodialysis at selected hospital in Hassan district of Karnataka. The researcher selected 50 samples by using the Non-Probability Convenience sampling technique. The researcher used Structured Knowledge Questionnaire to assess the knowledge regarding dietary management among caregivers. The study results revealed that the majority 68% of the participants had adequate knowledge, 26% of the participants had moderately adequate knowledge, and 6% of the participants had inadequate knowledge regarding home management of post hemodialysis cases.<sup>9</sup>

A Descriptive study was conducted in 2020 to assess the knowledge, attitude and practice towards chronic renal disease among caregivers in Jimma Town, Ethiopia. The study was conducted among 326 samples, at Jimma University Specialized Hospital and higher clinics in Jimma Town. The overall knowledge, attitude and practice score of the study participant were 9.0971(8.77, 9.42), 2.53(2.4, 2.65) respectively. The study result reveals that 29.4% of participants had adequate knowledge in dietary pattern and care of vascular access, 28.5% had moderately adequate knowledge, 20.9% of participants had poor knowledge and 21.2% had very poor knowledge in care of vascular access.<sup>10</sup>

A descriptive exploratory study was conducted in 2020 to assess knowledge, attitude and practices of caregivers of children with End Stage Renal Disease on hemodialysis at AbuEl Rish Pediatric University Hospital Egypt. The researcher selected 54 samples by Non- Probability Convenient Sampling Technique. The data was collected by Structured Interview Questionnaire. The study revealed that majority (73.4%) of caregiver's knowledge was satisfactory in the area of total score of practices, and 26.6% caregiver's knowledge was unsatisfied. While assessing the total attitude score of caregivers 66.7% had satisfactory level and 33.3% caregivers were in unsatisfactory status.<sup>11</sup>

A pre-experimental study was conducted at a selected hospital in Bhopal in September 2020 (July) to assess the effect of video assisted teaching regarding knowledge on home care management of hemodialysis among care takers. The researcher selected 40 care givers by Purposive Sampling Technique. The overall pre-test Mean knowledge score was

14.8 and overall post-test knowledge score was 25.8. The difference was statistically proved with paired 't' test

(14.6) and was highly significant at 0.05 and 0.01 level. The response of caretakers regarding level of satisfaction on VAT, most (88%) caregiver's knowledge was satisfactory and 12% had knowledge in moderately satisfied.<sup>12</sup>

A descriptive study was conducted in 2019 to assess the knowledge level regarding home care management among caretakers of patients undergoing hemodialysis in selected rural hospital Kolar, Karnataka. The researcher selected 30 samples by the Purposive Sampling Technique. The collection of data was done by Structured Knowledge Questionnaire. The study results reveal that majority 75% of the caregivers had moderate knowledge and only 25% of them had adequate knowledge in taking care of hemodialysis patients at home.<sup>13</sup>

A pre- experimental study was conducted in June, 2019 to assess the knowledge and attitude regarding post dialysis, home care among care givers of patients undergoing hemodialysis. The researcher selected 60 care givers of patients who were undergoing hemodialysis by Non-Probability Purposive Sampling Technique. The Mean knowledge score in pre-test was 17.4% and, mean post-test was 23.2%. Most (83.3%) of the caregivers had positive attitude and 16.7% had a negative attitude while assessing the attitude of caregivers in pre-test. Whereas after the intervention, all the caregivers had positive attitude.<sup>14</sup>

A non-experimental descriptive study was conducted in 2018 to assess the knowledge of caregivers of patients with chronic kidney disease undergoing hemodialysis at K.L. E'S hospital and MRC Belgaum. The researcher selected 51 Chronic Renal Failure patients by Purposive Sampling Technique. Structured Interview Schedule was used to assess the knowledge and practices of the patients with Chronic Renal Failure who were undergoing hemodialysis regarding the dietary regulation. Only 16.59% (8) subjects had the highest level of knowledge and 56.86% (29) subjects had score between 10- 18 practice scores. As per the Chi-square test result there is not statistically significant relationship between knowledge and practice at 0.05 level of significant ( $p > 0.05$ ). The study concluded that the patients with Chronic Renal Failure undergoing hemodialysis needed education about the importance of dietary regulations from nursing professionals.<sup>15</sup>

A descriptive study was conducted in 2018 to assess the knowledge and attitude of patients undergoing hemodialysis regarding their dietary management in the district hospital at Karwar (UK), Karnataka with the view to prepare dietary guide. The researcher selected 30 samples by the Purposive Sampling Technique. The data was collected by Structured Knowledge Questionnaire. The study results reveal about the level of knowledge regarding dietary management. The majority (66.6%) had an overall average level of knowledge; while 05 (16.7%) respondent had good and 5 (16.7%) had poor knowledge. The study revealed that the attitude of hemodialysis patients regarding dietary management, majority 16 (53.3%) had an overall good level of attitude, while 12 (40%) respondents had an average attitude, and 02 (6.7%) had poor attitude level.<sup>16</sup>

A randomized clinical trial study was conducted in 2018 to assess the effectiveness of educational program on "quality of life" of family caregivers of patients undergoing hemodialysis. The researcher selected 76 samples. The samples answered demographic information and "quality of life" (SF-36) questionnaire before and 6 weeks after the intervention. The results showed that the majority of caregivers (54%) were in the age group between 35 and 55 years. Majority 68.4% were females and 70% were married. No significant difference was found between the baseline mean scores of "qualities of life" of the intervention and the control groups (45.95+14.94 Vs 45.08+11.02,  $p=0.775$ ). However, the mean scores of qualities of life of the intervention group increased at the end of the study and the samples were significantly different in this regard (63.51+11.55 Vs 41.74+10.51,  $p < 0.001$ ). The study concluded that it was effective in improving the quality of life and compatibility with the responsibility of caregivers and changing their lifestyle<sup>17</sup>.

An exploratory study was conducted in 2015 to assess the caregivers of hemodialysis patients' knowledge regarding post dialysis home care in selected hospital of Mohali. The researcher selected 100 samples by non-probability purposive sampling technique. Collection of data was done by a Self-administered Structured Knowledge Questionnaire. The researcher took around 20 to 30 minutes to collect data from each participant and last 5-10 minutes utilized to clarify their doubts and giving post dialysis home care guidelines to them. The study results revealed that no one possessed excellent knowledge, 19% of them had good knowledge, 50% of them had average knowledge and 29% had very poor knowledge.<sup>18</sup>

#### Literature related to hemodialysis

A cross-sectional study was conducted at the Hospital of Nanjing Medical University China in January 2023 to assess the knowledge, attitude, and practice of patients receiving hemodialysis and its complications. A total of 493 patients were included in the study by purposive sampling technique. The duration of the study was between January 9, 2023 and January 16, 2023. The average knowledge, attitude, and practice score was  $19.33 \pm 7.07$  (possible range, 0–31),  $28.77 \pm 3.58$  (possible range, 8–40), and  $43.57 \pm 6.53$  (possible range, 11–55) points, respectively. A higher knowledge score was associated with younger age ( $P < 0.001$ ), a higher education level ( $P < 0.001$ ), and not living alone ( $p < 0.001$ ). While a higher practice score was associated with a shorter history of hemodialysis ( $P < 0.001$ ). There were positive correlations between the knowledge and practice scores ( $r = 0.220$ ,  $P < 0.001$ ) and between the attitude and practice scores ( $r = 0.453$ ,  $P < 0.001$ ), although the knowledge and attitude scores were not significantly correlated.<sup>19</sup>

A study was conducted in Karthik Hospital at Sivaganga, Tamil Nadu in 2020 to assess the knowledge regarding post hemodialysis home care management among caregivers of Chronic Renal Failure patients. The evaluatory approach was adopted for the study. Pre- experimental one group pre-test post- test design was adopted for the study. Total of 50 samples were included by non-probability purposive sampling technique. Data were collected from the caregivers by using semi structured questionnaire before the self- instructional module. Post test was conducted 1 week after administration of self- instructional module with the same tool to assess, the level of knowledge. The results showed that there was a significant difference in pre-test and post - test level of knowledge on post dialysis home care of hemodialysis patients, tabulated t- value (25.36) was greater than table value at 0.05 level of significance. This study concludes that the self- instructional module was effective in improving the knowledge of caregivers regarding post dialysis home care of chronic renal failure patients undergoing hemodialysis.<sup>20</sup>

#### SUMMARY

This chapter dealt with the study conducted by various researchers. The Review of Literature is organized under two headings, a) Literature related to home care management of hemodialysis and b) Literature related to hemodialysis. Under the literature related to home care management of hemodialysis 10 review of literature of various studies are included. Among the 10 reviews of literature; 7 studies are nationally conducted and 3 were internationally conducted. Under the literature related to hemodialysis 2 review of literature is included.

#### CHAPTER 3 METHODOLOGY

This chapter deals with the methods selected for the study. It includes research approach, research design, variables, setting of the study, population, sample, sampling technique, preparation of data collection tool, pilot

study, data collection procedure and plan for data analysis.

#### Research Approach

The research approach used for the study was a quantitative approach.

#### Research Design

The research design is a blueprint or master plan specifying methods and procedures for conducting a research study involving the description of research setting of the study, sample size, sampling technique, tools and methods of data collection and analysis to answer specific research questions or test the research hypothesis.<sup>21</sup>

A descriptive design was adopted as the research design of the study. The primary objectives of the study were to assess the knowledge regarding post dialysis home care management among caregivers of Chronic Renal Failure patients undergoing hemodialysis.

#### Variables

Variables are factors that can be controlled or changed in an experiment (Wong, 2014)<sup>22</sup>

- Research Variables

#### Knowledge

- Demographic Variables

In this study, the demographic variables include age, gender, religion, education status of caregiver, marital status, occupation, history of renal failure among family members, duration as a caregiver and relationship with the patient.

#### Setting of the Study

Research setting is the specific space where the data collection is to be done. The selection of setting was done on the basis of feasibility of conducting the study, availability of subject and permission from authority<sup>23</sup>. The setting selected for the study was the K.M.C Hospital Dialysis Unit, Kasaragod

#### Population

Population is the aggregation of individuals or objects that possess similar characteristics defined by the researcher.<sup>24</sup>

In the present study, the population comprised of caregivers of hemodialysis patients.

#### Sample and Sampling Technique

A sample is a limited part of a population whose properties are studied to gain information about the whole

(Webster, 1985). The sampling technique is the process of studying the population by gathering information and analyzing the data.<sup>25</sup>

A non-probability purposive sampling technique was used to select the sample of this study and it included the caregivers of Chronic Renal Failure patients undergoing hemodialysis in a selected hospital, Kasaragod.

#### Sample Size

Sample size is the number of observations in a sample (Evans et al, 2000).

The sample size was determined on the basis of type of the study, variables being studied, availability of the sample and feasibility of conducting the study.<sup>26</sup> The sample size of this study was decided to be 40 caregivers of Chronic Renal Failure patients undergoing hemodialysis in a selected hospital, Kasaragod, who fulfilled the inclusion criteria as well as who were available at the time of data collection.

#### Sample Selection Criteria

It is a criterion defined by the researcher which states who can or cannot participate in the study. Inclusion criteria are the characteristics that each sample elements must possess to be included in the sample. Exclusion criteria are the characteristics that could contaminate the results of the study; therefore, such participants are excluded from the study.<sup>27</sup>

#### Inclusion Criteria

The inclusion criteria of the study include the caregivers of Chronic Renal Failure patients undergoing hemodialysis in a selected hospital, Kasaragod who are:

- Willing to participate in the study.
- Literate caregivers both male and females.

#### Exclusion Criteria

The exclusion criteria of this study include the caregivers of Chronic Renal Failure patients undergoing hemodialysis in a selected hospital, Kasaragod who are:

- Caregivers of patients who have recent knowledge on hemodialysis.

#### Tools / Instruments

Data collection tools are the procedures or instruments used by the researcher to observe or measure the key variables in the research problem.<sup>28</sup>

The tool used to assess the knowledge in this study is a Structured Knowledge Questionnaire which consists of 40 items.

## Development / Selection of Tool

The investigator performed an extensive literature review for selecting the tool. Discussion with the experts and investigators own professional experiences helped in selecting the tool. The tool was prepared on the basis of objectives of the study.

The following steps were adopted in the development of the tool: -

- Review of literature.
- Books, journals and articles, published and unpublished research studies were reviewed and this provided adequate content for the tool preparation.
- Internet search.
- Discussion with the nursing experts.
- Personal experiences and discussions with friends and colleagues.

### Description of the tool:

The tool prepared was a Structured Knowledge Questionnaire, for obtaining the data from the subjects. The tool consists of two sections. Section A and Section B.

#### Section A: Socio Demographic Variables

Socio Demographic variables included to know the sample characteristics. The items included are patient's age in years, gender, religion, education status, marital status, occupation, history of renal failure in family, duration as a caregiver and relation with client.

#### Section B: Structured Knowledge Questionnaire on post dialysis home care management

The Section B contains 40 items related to post dialysis home care management. The knowledge regarding post dialysis home care management among samples were collected using this questionnaire. The development of knowledge questionnaire was done by the guidance of experts and information's from journals, books, internet and previous research studies. The score interpretation was shown in the following **table 1**

Score	Level of knowledge
0-10	Very poor
11-20	Poor
21-30	Good
31-40	Very good

**Table 1: Score Interpretation of Knowledge**

### Validity of the Tool

The tool prepared for the data collection was tested for its content validity. Content validity refers to the degree to which an instrument measures what it is supposed to measure.<sup>29</sup> To ensure the content validity the instrument was given to five experts from different departments of Nursing along with the description of home care management among caregivers of hemodialysis patients and objectives of the study. The experts included one from Medical Surgical Nursing, one from Child Health Nursing and three from Community Health Nursing.

### Reliability of the Tool

Reliability is the degree of consistency and accuracy which an instrument measures the attribute to be measured.<sup>30</sup> The reliability of the tool was established by using Karl-Pearson Correlation and Co-efficient method. The value was 0.86 which indicates positive correlation and tool was found to be reliable for the study.

### Ethical Considerations

The study was conducted after obtaining the permission from the principal of the college and proprietor of the K.M.C Dialysis unit, Kasaragod. The participants were clearly explained about the study purpose and written consent was obtained from the subjects. The participants were assured that the data will be used only for the Research purpose.

### Pilot Study

The pilot study is a miniature trail run of the study planned for the major research study. This is done to provide the researchers with an opportunity to try out the procedures, methods and tool for data collection.<sup>31</sup> After obtaining formal permission from the Chief Operating Officer of K.S Abdullah Hospital, Kasaragod as well as taking consent from 5 subjects, the pilot study was conducted on 17.10.2023 at second floor in front of the dialysis unit of K.S Abdullah Hospital, Kasaragod. The purpose of the study was explained and knowledge questionnaire was given to them and level of knowledge was assessed.

### Data collection process of Main Study

The main study was conducted after getting formal permission from the proprietor of K.M.C Dialysis Unit, Kasaragod.

Data collection procedure was done on 20.10.2023. The study was conducted in K.M.C Dialysis Unit, Kasaragod. 40 caregivers who met the inclusion criteria, they were gathered in front of K.M.C Dialysis Unit and made them seated comfortably and conducted the study.

The purpose of the study was explained and the written consent was taken from the caregivers. Knowledge questionnaire was given to them and level of knowledge was assessed. Each sample has taken 15-20 minutes to complete the questionnaire and the time taken for the entire process was 6 hours.

### Plan for data analysis

Data was planned to be analyzed on the basis of the objectives and hypothesis using descriptive and inferential

statistics.

## Summary

This chapter dealt with the methodology adopted for the study including Research approach, Research design, Variables, Setting of the study, Population, Sample and Sampling Technique, Inclusion criteria, Exclusion criteria, Tool or Instrument, Pilot study, Data collection process and plan for data analysis.

## CHAPTER 4

### ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of the data collected from 40 caregivers of hemodialysis patient in KMC Dialysis Centre through knowledge questionnaires to assess the level of knowledge regarding post dialysis home care management among caregivers of Chronic Renal Failure patients undergoing hemodialysis.

Analysis is the process of organizing and synthesizing the data in such a way that research questions can be answered and hypotheses can be tested. The purpose of analysis is to reduce data to an interpretable form, so that the relation of research problem can be studied and tested. The collected data was analyzed based on the objectives of the study using descriptive and inferential statistics.<sup>32</sup>

Objectives of the study were to:

- assess the levels of knowledge regarding post dialysis home care among caregivers of chronic renal failure patients undergoing hemodialysis.
- find the association of knowledge regarding post dialysis home care management among caregivers of chronic renal failure patients with selected demographic variables.

Section A: Distribution of socio demographic variables in terms of frequency and percentage

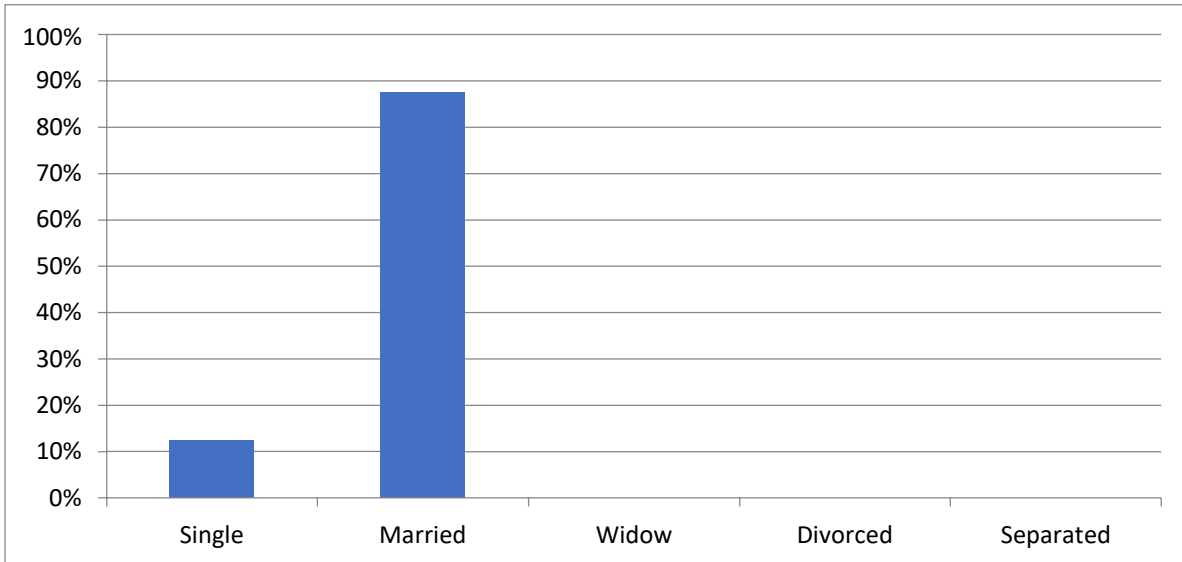
**Section B: Percentage distribution of knowledge regarding post dialysis home care management among caregivers of hemodialysis patients at KMC Dialysis Centre.**

Section C: Association of knowledge score with socio demographic variables.

**Section A: Distribution of socio demographic variables in terms of frequency and percentage.**

DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE
<b>• Age</b>		
20-30years	6	15%
31-40years	10	25%
41-50years	13	32.5%
50 years and above	11	27.5%
<b>• Gender</b>		
Male	17	42.5%
Female	23	57.5%
Transgender	0	0
<b>• Religion</b>		
Hindu	23	57.5%
Christian	2	5%
Islam	15	37.5%
<b>• Education</b>		
Primary	8	20%
High School	16	40%
Higher Secondary	9	22.5%
Degree and above	7	17.5%

Figure .1 Graph showing the percentage distribution of marital status of caregivers



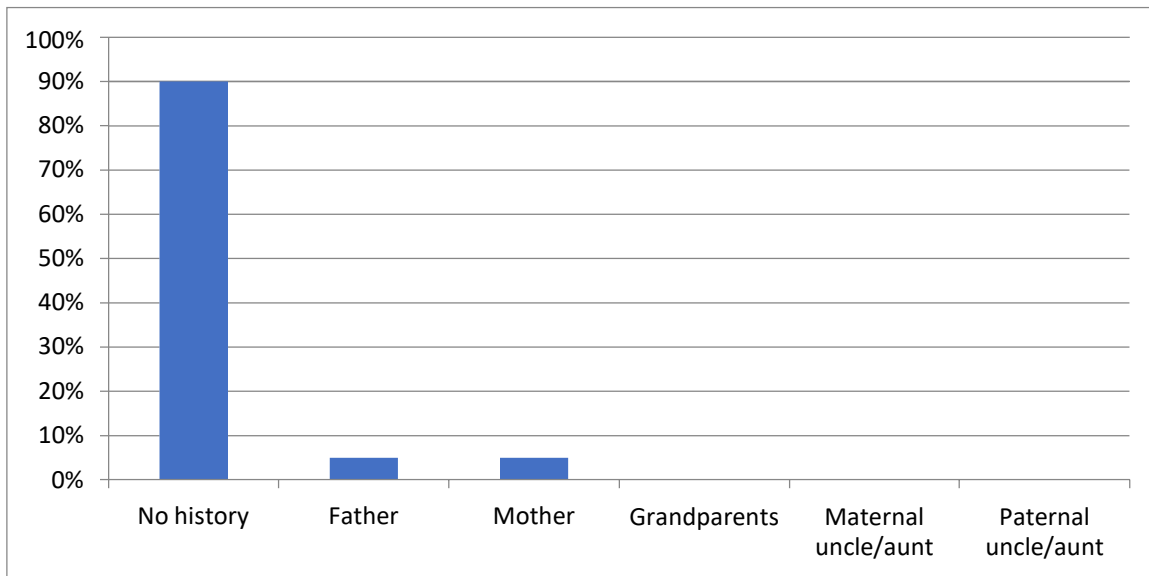
The data present in figure 1 depicts that 5 (12.5%) of the samples were single and 35(87.5%) of the samples were married and none was in other categories.

Figure .2 Graph showing the percentage distribution occupation of the caregivers.



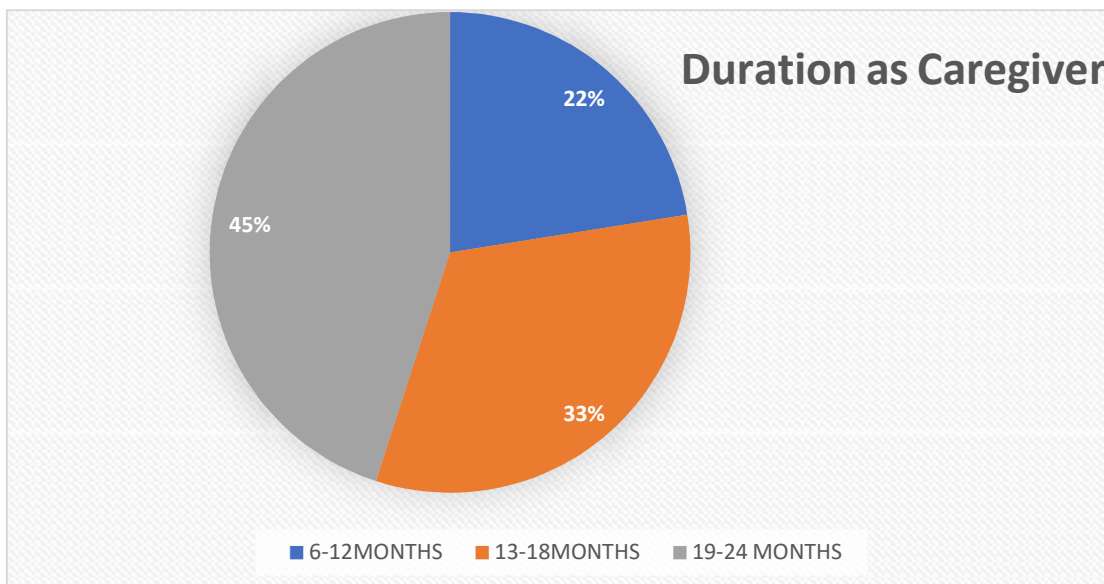
The data showing in above bar graph reveals that 15 (37.5%) of the samples were unemployed, 15 (37.5%) of the samples were self-employed and 8 (20%) of the samples were private employees. 2 (5%) of the samples were coolie.

Figure .3 Graphs showing the percentage distribution of history of renal failure in the family.



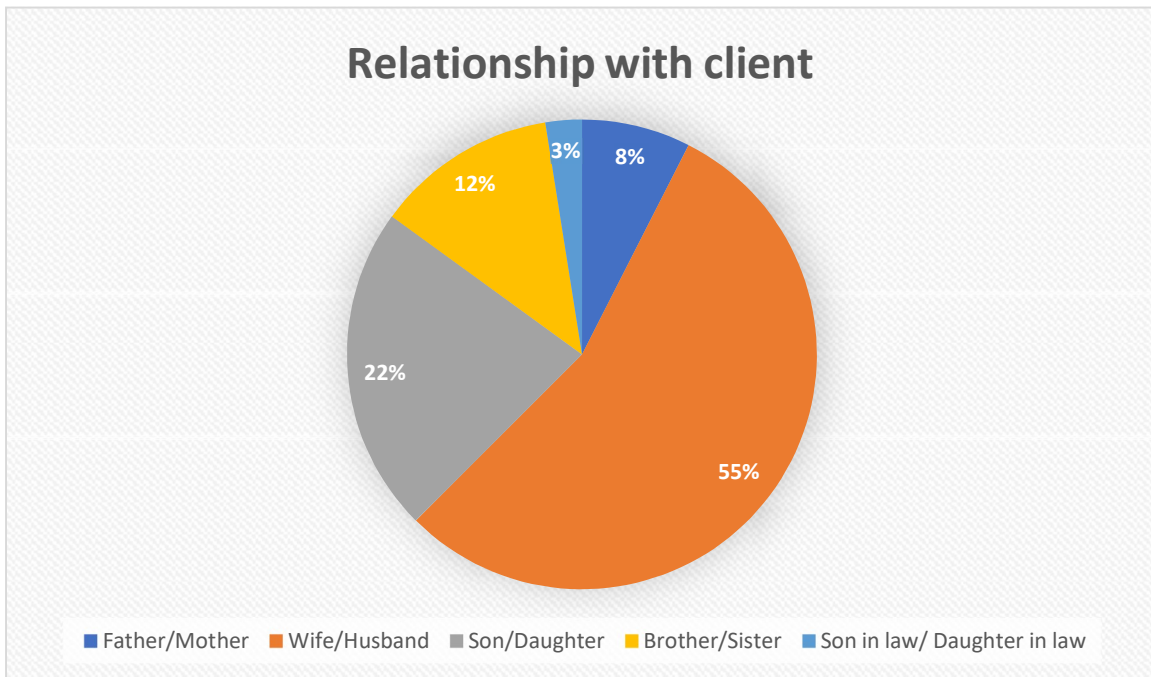
The data present in above graph shows that 36 (90%) of the samples had no history of renal disease in the family, 2 (5%) of the samples had history of renal failure from father, and 2 (5%) of the samples had history of renal failure for the mothers.

Figure 4. Pie Chart showing the percentage distribution of respondent's duration as caregiver.



The data present in figure 4 depicts that 18 (45%) of the samples had an experience of 19- 24 months of duration as a caregiver, 13 (32.5%) of the samples had an experience of 13- 18 months of duration as a caregiver and 9 (22.5%) of the samples had an experience of 6- 12 months of duration as a caregiver.

Figure 5. Pie Charts showing the percentage distribution of relationship of respondent with client.



The data present in figure 5 depicts that 22 (55%) of the samples had a relationship as wife/husband, 9 (22.5%) of the samples had relationship as daughter/son with client and 5 (12.5%) of the samples had relationship as brother/sister with client, 3 (7.5%) of the samples had relationship as father/mother with the client. 1 (2.5%) of the samples had a relationship as son-in-law or daughter-in-law with the client.

Section B: Percentage distribution of knowledge regarding post dialysis home care management among caregivers of hemodialysis patients at KMC Dialysis Centre

MEAN

MEAN PERCENTAGE

29.175

72.9%

The above table shows that the Mean level of knowledge score was 29.175 and the Mean Percentage was 72.9%.

Section C: Association of knowledge score with socio demographic variables (n=40)

Socio Demographic Variables	Calculated Chi Square Value	df	Table Value	Inference
Age	43.932	6	12.59	Significant
Gender	3.007	4	49	Not Significant

<b>Religion</b>	0.327	4	9.49	Not Significant
<b>Education</b>	7.02	6	12.59	Not Significant
<b>Marital Status</b>	2.44	8	15.51	Not Significant
<b>Occupation</b>	7.902	8	15.1	Not Significant
<b>History of Renal</b>				
<b>Failure in Family</b>	0.617	10	18.31	Not Significant
<b>Duration as Caregiver</b>	0.029	4	9.49	Not Significant
<b>Relationship with client</b>	1.539	8	15.51	Not Significant

The data presented in above table shows that knowledge score with socio demographic variables was analyzed by using Chi-square test. There was no significant association between the knowledge score and socio demographic variables such as Gender, Religion, Education, Marital status, Occupation, History of Renal Failure in family and Relationship with Client. And there is significant association between the knowledge score and Age. Therefore, the null hypothesis (H01) is accepted and concluded that there was no significant association between knowledge score and selected demographic variables.

## CHAPTER 5 – RESULTS

The study intended to assess the knowledge regarding post dialysis home care management among caregivers of hemodialysis. The investigators found out that the subjects have adequate knowledge regarding post dialysis home care management. The findings of the present study are to be discussed with objectives, hypothesis and results.

Objectives of the study are to:

- assess the levels of knowledge regarding post dialysis home care among caregivers of Chronic Renal

Failure patients undergoing hemodialysis.

- find the association of knowledge regarding post dialysis home care management among caregivers of Chronic Renal Failure patients with selected demographic variables.

Research Hypothesis

**H1:** There is a significant association of knowledge regarding post dialysis home care management among caregivers of Chronic Renal Failure patients with selected demographic variables.

Results

### **Distribution of Socio Demographic Variables in terms of frequency and percentage.**

The data regarding various age group depicted that 15% of the sample belongs to the age group between 20-30 years, 25% were between 31-40 years, 32.5% were between 41-50 years and 27.5% were above 51 years.

In the study, the sample included 42.5% males and 57.5% were females.

The data regarding religion depicted that 57.5% were Hindus, 5% were Christians and 37.5% were following Islam.

The data regarding educational status depicted that 20% were completed only primary education, 40% had High school level education, 22.5% were Higher secondary passed/failed and 17.5% were completed Degree and above.

The data regarding marital status revealed that 12.5% of the samples were single and 87.5% of the samples were married and was in other categories.

The data regarding the occupational status depicted that 37.5% of the samples were unemployed, 37.5% of the samples were self-employed and 20% of the samples were private employees. 5% of the samples were Coolies.

The data regarding the history of Renal Failure among family members showed that 90% of the samples had no history of Renal Failure in the family, 5% of the samples had history of Renal Failure from father, and 5% of the samples had history of Renal Failure from mother.

The data regarding duration as a caregiver showed that 45% of the samples had experience of 19-24 months of duration as the caregiver, 32.5% of the samples had experience of 13- 18 months of duration as the caregiver and 22.5% of the samples had experience of 6-12 months of duration as the caregivers.

The data regarding relationship with client revealed that 55% of the samples had a relationship as wife/husband with client, 22.5% of the samples had relationship as daughter/son with client and 12.5% of the samples had relationship as brother/sister with client, 7.5% of the samples had relationship as father/mother with the client. 2.5% of the samples had a relationship as son-in-law or daughter-in-law with the client.

Results related to Percentage Distribution of knowledge regarding post dialysis home care management among caregivers.

The Mean knowledge score is **29.17** and Mean Percentage is **72.9%**.

Results related to Association of knowledge score with selected demographic variables.

The association between knowledge score with selected Socio Demographic Variables was analyzed using Chi-Square test. The calculated value of Chi-Square was found to be less than table values for selected Socio Demographic Variables except the age group. There is no significant association between the knowledge score with selected Socio Demographic Variables such as gender, religion, education, marital status, occupation, history of renal failure among family members, duration as a caregiver, relationship with client.

### Summary

This chapter dealt with the results of the study. The results related to the Distribution of Socio Demographic Variables in terms of frequency and percentage, percentage distribution of knowledge regarding post dialysis home care management among caregivers of hemodialysis patients and the association of knowledge score with selected socio demographic variables were presented.

## CHAPTER 6

### DISCUSSION, SUMMARY, CONCLUSION AND IMPLICATIONS

In this chapter the researcher discusses, summarizes and concludes the major findings of the study and correlates the results with the results of other similar study.

#### Discussion

We live in a world in which manmade chemicals have become part of everyday life and these along with life style changes contributes to a number of health problems among individuals. Hemodialysis is a medical treatment for patients with kidney failure. This process helps to maintain the body's balance of electrolytes and fluids; which kidney would normally do. It's important for patients undergoing hemodialysis to have a strong support system. Overall, home care management of hemodialysis requires a collaborative approach between patient's caregivers and health care providers to ensure that patients receive the support they need to successfully manage their treatment at home. With proper education, training and support, many patients can effectively manage their hemodialysis treatments at home and experience an improved quality of life.

The findings of the study were discussed under following sections.

**Section A:** Distribution of socio-demographic variables in terms of frequency and percentage.

**Section B:** percentage distribution of knowledge regarding post dialysis home care management among caregivers of hemodialysis patients at KMC Dialysis Centre.

**Section C:** Association of knowledge score with socio-demographic variables.

The findings related to Demographic Performance

The present study revealed that 32.5% of the sample belongs to the age group between 41 and 50 years, 27.5% were 50 years and above, 25% were between 31-40 years and only 15% were between 20-30 years. The data regarding gender revealed that the 57.5% of samples were females and 42.5% were males. The data regarding religion showed that 23 (57.5%) of the sample were Hindus, 15 (37.7%) were following Islam and 2 (5%) were Christians. The data regarding educational status showed that majority 16 (40%) of the sample had high school education, 9 (22.5%) had higher secondary education, 8 (20%) had primary education and only 7 (17.5%) had degree and above. The Marital Status of caregivers revealed that 5 (12.5%) of samples were single and 35 (87.5%) of the samples were married. The data regarding occupational status showed that 15 (37.5%) of the samples were unemployed, 15 (37.5%) of samples were self-employed, 8 (20%) were private employees and only 2 (5%) of the samples were coolies. The data regarding history of renal failure in the family revealed that the majority 36 (90%) of the samples had no history of renal failure in the family, 2 (5%) of samples had history of renal failure of both mother and father. The data regarding duration as a caregiver showed that 18 (45%) of samples had experience of 90-24 months of duration as a caregiver, 13 (32.5%) had experience of 13-18 months of duration as a caregiver and 9 (22.5%) had an experience of 6-12 months of duration as a caregiver. The data regarding relationship of respondent with client revealed that 22 (55%) of sample had relationship as wife or husband with client, 9 (22.5%) had relationship as daughter or son with client, 5 (12.5%) of sample had relationship as brother or sister with client, 3 (7.5%) had relationship as mother or father and only 1 (2.5%) had a relationship as son in law or daughter in law with client.

A similar study was conducted in Kolar, Karnataka on 2019, To assess the knowledge regarding home care management among caretakers of hemodialysis patients in a selected rural hospital at Kolar, Karnataka. Sample size was 30 and non-experimental descriptive study was adopted. The results revealed that majority 23 (89%) of the people were males. Majority 18 (70%) were literate. Majority 10 (60%) had family history of chronic renal failure. The study findings on overall level of knowledge and the study revealed that majority 75% of samples had moderate knowledge and only 25% had adequate knowledge and none of them belonged to the category of inadequate knowledge.

The findings related to knowledge regarding home care management among caregivers of patient undergoing hemodialysis at KMC Dialysis Centre.

The knowledge of 40 samples were assessed and analyzed by descriptive statistics such as Mean and Mean Percentage. The level of knowledge score of home care management among caregivers of patient undergoing hemodialysis was found using Mean and Mean Percentage. The Mean level of knowledge score is 29.17 and Mean Percentage was 72.9.

A similar study was conducted in Kolar, Karnataka on 2019, To assess the knowledge regarding home care management among caretakers of hemodialysis patients in a selected rural hospital at Kolar, Karnataka. Sample size was 30 and non-experimental descriptive study was adopted. The study findings on overall level of knowledge and the study revealed that majority 75% of sample had moderate knowledge and only 25% had adequate knowledge and none of them had inadequate knowledge.

The findings related to association of knowledge score and practice with socio- demographic variables.

The association between knowledge score with selected Socio-Demographic Variables was analyzed using chi-square test. The calculated value of Chi-square found to be less than table values for selected Socio-

Demographic Variables. So, there was no significant association between the knowledge score and selected Socio-Demographic Variables except the age group. There was no significant association between knowledge score with selected Socio-Demographic Variables such gender, religion, education, marital status, occupation, history of renal failure among family members, duration as a caregiver, relationship with client.

### Summary

The Descriptive approach was used in the present study to assess the knowledge regarding post dialysis home care management among caregivers of chronic renal failure patients undergoing hemodialysis in a selected hospital Kasaragod. The research variables of the study were knowledge and demographic variables include age, gender, religion, education status of caregiver, marital status, occupation, history of renal failure among family members, duration as a caregiver and relationship with client.

The tool was prepared with the help of various resources of literature and opinion from the subject experts ascertain the effectiveness and to bring about the correct items in the tool. The tool used for the data collection had two sections; Section A: Socio-Demographic Variables and Section B: Structured Knowledge Questionnaire on post dialysis home care management of hemodialysis.

The content validity and reliability of the tool was established. The pilot study was conducted in KS. Abdullah Hospital Kasaragod on 17/10/2023. The main study was conducted on 20/10/2023 at KMC Dialysis Unit Kasaragod. Then 40 samples who met the inclusion criteria were selected by non-probability purposive sampling. Data collection was done on 20/10/2023. The collected data was analyzed based on objectives of the study using Descriptive Statistics Frequency, Mean, Mean Percentage and Inferential statistics and Chi-square test.

### Conclusion

The main aim of the study was to assess the knowledge regarding post dialysis home care management among caregivers of Chronic Renal Failure patients undergoing hemodialysis.

The following conclusions were drawn from the study:

1. The samples had very good knowledge regarding post dialysis home care management.
2. There was no significant association of knowledge regarding post dialysis home care management among caregivers of Chronic Renal Failure patients with selected demographic variables such as age, gender, religion, educational status, marital status, occupation, history of renal failure in the family, duration as a caregiver, relationship with the client.

### Nursing Implications

The findings of the present study have implications in the field of Nursing Education, Nursing Practice, Nursing Research and Nursing Administration.

### Nursing Education

The Nursing curriculum must include the topics important for health promotion. The findings of present study contribute to evidence-based practices in nursing education, guiding curriculum development and instructional

strategies. By assessing the knowledge of caregiver, the nurse educators can refine educational interventions, fostering competence in managing complex home care scenario. Ultimately, this process aids in establishing a comprehensive and patient-centered approach in nursing education, with a focus on preparing caregivers to navigate the challenges associated with hemodialysis patient home care.

### Nursing Practice

This research study could have significant implications for nursing practice by enhancing the understanding of caregivers' knowledge regarding home care management for hemodialysis patients. The findings might inform tailored educational interventions, improving patient outcomes and overall care giving experience. Additionally, healthcare professionals can utilize this knowledge to develop targeted support strategies for caregivers, fostering collaborative and effective care environment. The findings may contribute to the development of evidence-based guidelines for training and supporting caregivers in hemodialysis home care. This could lead to improved patient safety, better management of complications, and all increased confidence among caregivers. Nurses, must equip with adequate knowledge and skill from the experiences, that play a pivotal role in facilitating communication between healthcare providers and caregivers, ensuring a holistic and well-coordinated approach to patient care in the home setting.

### RNursing Administration

The Nurse who owes the administrative power should take the front steps to implement modifications in the nursing care rendered in both- the community and hospital clients. This research study holds significant implications for nursing administration. Understanding caregivers' knowledge about home care management for hemodialysis patients can inform tailored interventions, enhance patient outcomes, and optimize resource allocation within healthcare systems. Improved caregiver education may contribute to better patient care and reduced healthcare costs. The findings could guide the development of targeted training programs for caregivers, ensuring they possess the necessary skills for effective home care. Enhanced caregiver knowledge may lead to increased patient safety, reduced hospital readmissions, and improved overall quality of life for hemodialysis patients. Nursing administrators can use this information to shape policies that support ongoing education and support for caregivers, fostering a more comprehensive and patient-centered approach to care management.

### Nursing Research

As the field of Nursing Research is getting more acceptance than other disciplines, the Nurses can provide evidences by conducting research studies including variety of Alternative therapies which are currently on high demand in the society. Findings from present study can inform tailored education programs for caregivers, potentially improving patient outcomes and reducing healthcare burdens. Additionally, identifying gaps in knowledge may guide healthcare professionals in developing targeted interventions to enhance the overall quality of home care for hemodialysis patients.

### Limitations of the study

- The study was limited only to one hospital in Kasaragod.
- The study was limited to only 40 samples.

- The study was limited only to literate caregivers who can read and write.

## Recommendations

Based on the findings of the study;

- A descriptive study can be conducted on post dialysis home care management among caregivers of chronic renal failure patients undergoing hemodialysis.
- The study can be replicated on a large sample; thereby findings can be generalized for a large population.

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