



## A study to evaluate the effectiveness of STP on knowledge and attitude regarding lifestyle changes among patient undergoing dialysis in selected hospital at Salem, Tamilnadu

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### Abstract

**Statement of the problem:** A Study Evaluate the effectiveness of structured teaching programme on knowledge and attitude regarding lifestyle modifications among patients undergoing dialysis in selected hospital at salem, Tamilnadu.

### Objectives

- To assess the level of knowledge and attitude regarding lifestyle modifications among patients undergoing dialysis.
- To administer a structured teaching programme on lifestyle modifications among patients undergoing dialysis.
- To assess the effectiveness of structured teaching programme on the level of knowledge and verbal responses structured interview schedule for attitude regarding lifestyle modifications among patients undergoing dialysis.
- To find out the correlation between knowledge and attitude regarding lifestyle modifications among patients undergoing dialysis.
- To find out the association between knowledge and attitude regarding lifestyle modifications among patients undergoing dialysis with selected demographic variables.

**Methodology:** One group pretest and post-test experimental research design. 80 samples were selected using non-probability convenient sampling. A structured Knowledge questionnaire was used to assess the knowledge and modified Likert Scale was used to assess the attitude. Descriptive and inferential statistics were used to analyze the data.

**Conclusion:** The study findings revealed that the structured teaching programme regarding lifestyle modifications improved the knowledge and thereby modified the favorable attitude of chronic kidney disease patients. The obtained 't' value for comparison of knowledge score at  $p < 0.05$  was 16.87 and the obtained 't' value for comparison of attitude scores at  $p < 0.05$  level was 18.87. There was a positive correlation found between the knowledge and attitude scores in the pre-and post test. The study also revealed that that there was an association between the pretest level of knowledge scores and the education, but, other variables like age, sex, religion, occupation. Income, marital status, type of family, dietary pattern, duration of disease, personal habits, associated illness were not associated with the pretest level of knowledge scores. Further, there was no association found between pretest level of attitude scores with the selected demographic variables.

**Keywords:** Effectiveness, knowledge, attitude, life style modification, dialysis patients

### Introduction

In the developed and developing countries, with advance in life expectancy and changes in life style, chronic diseases such as diabetes mellitus, cardiac diseases and End Stage Renal Diseases are increasing steadily. The most common and serious health problems are Acute and Chronic Renal Failure (Reinhard).

According to National Kidney Foundation, Chronic Kidney Disease includes conditions that impair the kidneys and diminish their ability to keep healthy.

Chronic kidney disease is a gradual and progressive loss of the ability of the kidneys to function normally. Chandrasekaran (2014) stated that the prevalence of chronic kidney disease in southern India was 8.6/1000 population. Only about 10% or less receives renal replacement therapy. Hence it is important that most of them are not aware of the proper management of chronic kidney disease, to prevent kidney disease of the entire population is important, Adeera Levin (2017) explained the importance of lifestyle management in care for patients with impaired kidney function, common risk factors of chronic kidney disease includes cardiovascular disease and diabetes, lifestyle modification directed at smoking, obesity, alcohol consumption, exercise, and diet are important, Long-term restriction of protein intake delays the progression of

chronic kidney disease. Thus, a protein-controlled diet is recommended. The benefit of salt reduction is pertaining to control of hypertension.

### Need for the Study

Prabakar (2015) stated that chronic kidney disease is a worldwide health problem. Diseases of the kidney and urinary tract contribute to the global burden with approximately 850,000 deaths every year and 1.15,10,100 disability-adjusted life years. Chronic kidney disease is the 12th leading causes of death and 17th causes of disability. Patients with chronic kidney disease are at high risk for cardiovascular disease and cerebrovascular disease (WHO 2012).

Suresh C. D (2015) stated that chronic kidney disease is a global threat to health in developing countries. In India, 90% of patients are not able to afford the cost. Over 1 million people worldwide are alive on dialysis or with a functioning graft. The incidence of chronic kidney disease as doubled in the last 15 years.

### Statement of the Problem

A Study Evaluate the effectiveness of structured teaching programme on knowledge and attitude regarding lifestyle

modifications among patients undergoing dialysis in selected hospital at salem, Tamilnadu.

### Hypothesis

**H1:** There will be a significant difference between pretest and post-test level of knowledge and attitude scores regarding lifestyle modifications among patients undergoing dialysis.

**H2:** There will be a significant correlation between the pre-test level of knowledge and attitude scores regarding lifestyle modifications among patients undergoing dialysis.

### Operational Definitions

#### Effectiveness

In the study, it refers to the extent to which the structured teaching programme on knowledge and attitude regarding life style modifications among patients undergoing dialysis which is able to produce the desired effect as measured in terms of gain in test knowledge score and attitude score.

#### Structured teaching programme

It refers to the teaching programme delivered with the help of PPT and a booklet regarding the lifestyle modifications among patients undergoing dialysis. It includes medication, diet, exercise, and hypertensive management, glycemc control and smoking cessation of alcohol, relaxation technique, and prevention of complication and follows up.

#### Knowledge

It refers to the written response to the knowledge questionnaire on the lifestyle modifications among Patients undergoing dialysis which is assessed by the scores obtained.

#### Attitude

It refers to the feeling and belief of the day to day activities of a patient undergoing dialysis disease on lifestyle modifications, which is explored by the scores of attitude questionnaire.

#### Lifestyle modification

The lifestyle modification involves in the area of medication, diet, exercise and hypertensive, glycemc control, and smoking cessation, avoidance of alcohol, relaxation, technique, prevention of complication and follow up,

#### Assumptions

Patients may not have adequate knowledge and attitude regarding lifestyle modifications, Education will enhance the knowledge and attitude of patients undergoing dialysis regarding lifestyle modifications.

#### Delimitations

- Those who are undergoing dialysis in Shanmuga Multi-Speciality Hospital, Salem.
- Who are willing to participate in the study.
- Who are available at the time of data collection

#### Research Methodology

The methodology is the way to solve the problem systemically that includes the step of procedure and strategies of the data (Polit and Beck).

It includes research approach, research design, the setting of the study, population, sampling size and sampling technique, criteria for the selection of the sample, description of the tool, content validity, reliability, pilot study, data collection procedure and plan for data.

#### Research Approach

The quantitative research approach was selected to assess the effectiveness of structured teaching programme on knowledge and attitude regarding lifestyle modifications among patient with undergoing dialysis.

#### Research Design

One group pretest, the post-test design was adopted for the present study.

Q1 X Q2

**Q1:** Pretest assessment

**X:** Intervention (Structure teaching programme on life style modifications)

**Q2:** Post test assessment

#### Research Variables

The Independent variable was structured teaching programme regarding lifestyle modifications. The dependent variables were knowledge and attitude regarding lifestyle modifications among patient with undergoing dialysis. Influencing variables were demographic variables.

#### The Setting of the Study

The study was conducted among patient with undergoing dialysis in Shanmuga multi-specialty hospital, Salem, consists of 6 bedded dialysis units with the outpatient coverage of 15 patients per day. This is a well-equipped hospital for kidney disorder patients with inpatient and outpatient department.

#### Population

The population of the study includes patients with chronic kidney disease who are attending the outpatient department during the period of data collection.

#### Samples and Sample Size

The sample size is 40 patients with chronic kidney disease.

#### Criteria for the Selection of Sampling

##### Inclusion Criteria

- The patient's age more than 20 years
- Patients diagnosed with chronic kidney disease within 1-2years
- Both female and male patients with chronic kidney disease

##### Exclusion Criteria

- Patients who are not willing to participate in the study
- Patients who are critically ill
- Patients with chronic kidney disease for more than 2 years.

#### Sampling Technique

Non -probability convenient sampling technique was used for selecting the samples.

### Description of the Tool

The researcher had developed a structured questionnaire after reviewing of the literature to assess the knowledge and attitude regarding lifestyle modifications among patient with undergoing dialysis. It consists of 3 sections.

#### Section -A: Demographic Variables

Demographic variables, which include sample number, age, sex, religion, education, occupation, marital status, family income, type of family, dietary pattern, body built, duration of disease, personal habits, associated illness.

#### Section B: Structured Knowledge Questionnaire

It contains 30 multiple choice questions to assess the level of knowledge regarding the lifestyle modifications in the areas of a brief anatomy of kidney, incidence, etiology, signs and symptoms, diagnostic tests, management and lifestyle changes like healthy kidney diet, exercise, smoking cessation, avoidance of alcohol, relaxation technique. Each correct answer carries one mark, and the wrong answer carries zero marks. The possible maximum score was 30, the possible minimum score was 0. Knowledge questions were prepared in the English language.

#### Section- C: Structured Attitude Questionnaire

It consists of 14 statements to assess the attitude regarding lifestyle modifications. Both positive and negative statements are formed based on modified Likert attitude scale. The maximum score is 70 and the minimum score is 1.

#### Tool Validity and Reliability

##### Content Validity

The tool was given to 5 experts in the field of nursing and medicine for content validity. All comments and suggestion given by experts were duly considered and corrections were made after discussion with the research guide. The modifications were incorporated in the preparing of final tool.

##### Reliability

The reliability of the tool was obtained by the Spearman split half method to make sure the reliability of the tool. The value of knowledge scorer was 0.93 and for attitude, score was 0.9. This tool was highly reliable.

#### Pilot Study

It was conducted among 4 samples for a period of one week. The pre-test result of this study showed that the patient with undergoing dialysis had inadequate knowledge and attitude. Structured teaching programme was given for 45 minutes and the post-test was conducted on the 7th day. The post-test score showed a significant increase in the knowledge and attitude regarding the lifestyle modifications among patient with undergoing dialysis. The pilot study revealed that the present study was feasible to conduct.

#### Data Collection Procedure

Formal permission was obtained from the Managing Director of Shanmuga Multi-Specialty Hospital, Salem. The study was carried out for a period of four weeks from 1st January 2022 to 30th January 2022. Confidentiality and anonymity of the subjects were maintained. Informed consent was obtained from the respondent and the respondent was selected on the basis of the selection

criteria. On the first day, demographic data were collected by a structured questionnaire and pre-test was conducted to assess the knowledge and attitude regarding lifestyle modifications among patients with chronic kidney disease by using a questionnaire. After the pre-test, structured teaching was given for 45 minutes about lifestyle modifications among patient with undergoing dialysis. The patients were encouraged to clarify their doubts. Post-test was conducted on the 15th day by using the same questionnaire to assess the effectiveness of structured teaching programme on improving the knowledge and attitude regarding lifestyle modifications. At the end of the session, booklets were distributed to the patients, those who have participated in the teaching programme.

#### Plan for Data Analysis

Data were analyzed by using descriptive and inferential statistics. Descriptive statistics were used to analyze the frequency, percentage, mean, standard deviation. Inferential statistics, paired 't' test was used to assess the effectiveness of knowledge and attitude of patient with undergoing dialysis. Karl Pearson's Co-efficient was used to assess the relationship between knowledge and attitude of reading lifestyle modifications among patient with undergoing dialysis and the  $\chi^2$  test was used to find out the association between the selected demographic variables with the pre-test knowledge and attitude scores.

#### Data Analysis and Interpretations

This chapter deals with the analysis and interpretation of the data collected from patient with undergoing dialysis at Shanmuga Multi-specialty Hospital, Salem regarding lifestyle modifications. The findings, based on the descriptive and inferential statistical analysis tabulated as follows

**Section- I:** Description of demographic variables patient with undergoing dialysis:

- Among the respondents, 2 (5%) were aged between 21-30 years, 8 (20%) were aged between 31-40 years, 16(40%) were aged between 41-50 years, 14 (35%) were >50 years of age.
- Regarding gender, the respondents 28(70%) were males and 12(30%) were females. Considering the religion, 31(77.5%) were Hindu, 6(15%) were Muslims and 3(7.5%) were Christian. Regarding education, 2(5%) were illiterate, 18(45%) had primary education, 12(30%) had secondary education and 8(20%) were graduates and diploma holders.
- Regarding occupation 10 (25%) were unemployed, 8 (20%) were self-employed, 5(12.5%) were government employees, 11 (27.5%) were private employees and 6(15%) were coolie workers.
- Regarding the monthly income of the family 10 (25%) were earning more than Rs. >5000, 9 (22.5%) were earning between Rs. 5001-15000, 11(27.5%) were earning between Rs. 15001-25000, 10 (25%) were earning more than Rs. 25001.
- Regarding marital status 34 (85%) were married, 4 (10%) were unmarried, 2(5%) were others.
- Regarding the type of family 12 (30%) were belongs to the joint family, 28 (70%) belonged to a nuclear family.
- Regarding dietary pattern 6(15%) were vegetarian, 34(85%) were non vegetarian.

- Regarding body built 10(25%) had a thin body built, 20(50%) were moderately built, 7(17.5%) were obese and 3(7.5%) were very obese.
- With regards of the duration of chronic kidney disease in 1-5 months were no cases, 5(12.5%) were having during of 6-10 months, 14(35%) were having during of 11- 15 months, 21 (52.5%) were having during of 16-24 months.
- About personal habits 10(25%) were having a habit of alcohol, 9(22.5%) were having a habit of smoking, 7(17.5%) were having habits of alcohol and smoking, no one is having a habit of tobacco and 14(35%) were none of the above.
- Regarding associated illness 11(27.5%) respondents were having diabetes, 15(37.5%) were having hypertension, 8(20%) were having cardiovascular disease, no one is having an obesity-associated illness and 6(15%) were coming under none of the above categories.

### Section – II

Mean, standard deviation and  $t^*$  value of Pre-test and Post-test knowledge Scores Regarding lifestyle modifications Among patient with undergoing dialysis. Above Table shows that the mean score of knowledge in pre- test was 15.77 and post-test was 22.82. The calculated  $t^*$  value 16.87 at df (39) was greater than the table value at 0.05 level of significance. It reveals that there was a significant difference between the pre-test and post-test knowledge scores. So the results are concluded that structured teaching programme has a significant effect on improving the level of knowledge among patient with undergoing dialysis.

### Section – III

Mean, standard deviation and  $t^*$  value of Pre-test and Post-test attitude Scores Regarding lifestyle modifications Among patient with undergoing dialysis. Above Table shows that the mean score of attitude in pre-test was 41.25 and post-test was 53.8. The calculated  $t^*$  value 18.87\* at df (39) was greater than the table value at 0.05 level of significance. It reveals that there was a significant difference between the pre-test and post-test attitude scores. So the results are concluded that structured teaching programme has a significant effect on the improvement of attitude regarding lifestyle modification among patients with chronic kidney disease.

### Section-IV

Correlation of pretest scores of the knowledge and attitude regarding life style modification among patient with undergoing dialysis. Mean, standard deviation and correlation of pretest scores of the knowledge and attitude regarding life style modification among patient with undergoing dialysis. Mean, standard deviation and correlation of post test scores of the knowledge and attitude regarding life style modification among patient with undergoing dialysis.

### Section – V

Association of Demographic Variables with Pretest Scores of Knowledge Regarding Life Style Modifications Among patient with undergoing dialysis. The association of knowledge with demographic variables with pretest knowledge score on lifestyle modification

among patient with undergoing dialysis. The obtained " $\chi^2$ " value of education was 13.45 at 4 (df) significant at 0.05 level. It shows that there was an association between education score with a knowledge score of the pre-test. The other variables like age, sex, religion, occupation. Income, marital status, type of family, dietary pattern, duration of disease, personal habits, associated illness were not associated with a knowledge score of the pre-test.

### Section – VI

Association of Demographic Variables with Pretest Scores of Attitude Regarding Life Style Modifications Among patient with undergoing dialysis. The association of attitude with demographic variables by  $\chi^2$  test. It reveals that the age, sex, religion, occupation, income, marital status, type of family, body built, duration of chronic kidney disease, personal habits, associated illness obtained had no significant association with a pretest attitude score of subjects. So there is no association between attitude and selected demographic variables.

### Conclusion

- This educative measure shows that there is a significant improvement in knowledge and attitude regarding lifestyle modification among chronic kidney disease patients. The post-test score of knowledge and attitude were highly significant when compared with pretest score. Hence the alternative hypothesis is accepted. Karl Pearson coefficient of correlation was used to correlate knowledge and attitude score of study subjects. There was a positive correlation between knowledge and attitude score in pre-test and post-test. Results Show that the improvement in knowledge which develops the favorable attitude towards the lifestyle modifications of chronic kidney disease patient.
- The  $\chi^2$  test was used to find out the association between selected demographic variables with knowledge and attitude regarding lifestyle modifications of patients with chronic kidney disease. The result revealed that the educational status has the significant association with pre-test knowledge score. Other variables were not associated with pre-test knowledge score. The demographic variables were not associated with attitude pretest score.

### Nursing Implications

The findings of the study have implications for various areas of nursing practice, nursing education, nursing administration and nursing research.

### Nursing Education

- The nursing curriculum is a mean through which future nurses are prepared. The emphasis needs to be planned on preventive and promotive health practice.
- A video-assisted teaching programme regarding lifestyle modifications must be emphasized in the nursing curriculum.

### Nursing Practice

- The study can emphasize on improving the knowledge and attitude regarding lifestyle modifications by educative measures.

- Education about lifestyle modifications to reduce the progression of chronic kidney disease and increase the quality of life.

### Nursing Administration

- Nurse administrators should take interest in formulating guidelines and various modalities of treatment of chronic kidney disease. Through in-service education programmes, nurses can be motivated to learn and practice the lifestyle modifications for chronic kidney disease.
- The nursing administrators should be able to motivate and initiate the health personnel in organizing and participating in various educational programmes and improve their skill and knowledge.

### Nursing Research

- Extensive research must be conducted in this area to identify the effectiveness of video assisted teaching programme which would be beneficial to the chronic kidney disease.
- This study can be the baseline for the further studies to build upon. Research should be done to find out various innovative methods of effective teaching to improve the knowledge and attitude on lifestyle modifications.
- Researches can be done with the help of the teaching programme in various other issues of health.
- It can be used for evidence-based practice as a new trend in treatment modality for chronic kidney disease.

### Limitations

- The limited sample size places a limitation on the generalization of the study findings.
- The researcher could not use randomized sampling technique in this study.

### Recommendations

- A similar study can be used as a comparative study between the effectiveness of medical management and complementary therapies.
- A similar study can be done to assess the stress level of chronic kidney disease.
- A Similar kind of study can be conducted for a large group.

### References

- Agarwal LP. Medical Surgical Nursing. (1<sup>st</sup> edition). New Delhi: Jaypee Brothers Medical Publishers, 2006.
- Basavanthappa BT. Medical Surgical Nursing. (15<sup>th</sup> edition). New Delhi 5 Jaypee Brothers Medical Publishers, 2008.
- Black JM, Jacobs EM. Medical Surgical Nursing. (5<sup>th</sup> edition). Philadelphia: W.B. Saunders Company, 2006.
- Burns N, Grove SK. Understanding Nursing Research. (2<sup>th</sup> edition). Philadelphia: W.B. Saunders Company, 2006.
- Carrill A Lutz. Nutrition and Diet Therapy. Evidence Based Application. (4<sup>th</sup> edition). Delhi: Jaypee Brothers, Medical Publication, 2008.
- Cotran Kumar, Robins. Pathologic basis of disease. (5<sup>th</sup> edition). W.B. Saunders company Philadelphia.
- Davidson. Principles and Practice of Medicine. (19<sup>th</sup> edition). New York: Churchill Livingstone Publishers, 2002.
- Darshan Sohi A. A Text Book of Nutrition. (2<sup>nd</sup> edition). Jalandhar: S.Vikas & Co. Publishing House, 2009.
- Gupta. Statistical Methods. (32<sup>nd</sup> edition). New Delhi: Sultan Chand & Sons Education Publishers, 2005.
- Holloway NM. Medical Surgical Nursing Care Planning. (3<sup>rd</sup> edition). Pennsylvania: Spring house publishers, 1999.
- Chow WL. Effectiveness of limited knowledge of chronic kidney disease patient. Best Practice Journal, 2012;7(3):1271-132.
- David W Johnson, *et al.* Chronic kidney disease and measurement of albuminuria or proteinuria: A position statement. The Medical Journals of Australia, 2014;197(4):224- 225.
- Devi ES, Bhanumathi. Patients undergoing haemodialysis. Nitte Nursing Journal, 2016;1(1):33-6.
- Dr John Schollum. Acute -On-chronic kidney disease; prevention diagnosis, management and referral in primary care. Best practice journal, 2014;7(4):52.
- Emilia Rusu *et al.* Effective of life style changes including specific dietary intervention and physical activity in the management of patients with chronic kidney disease. Nutrition Journal, 2013;119(12):1475-2891.
- Agarwal R, *et al.* Home blood pressure measurement for managing hypertension in Hemodialysis patient. American Journal of. Nephrology, 2013;30(2):126-134.
- Ann Bonner *et al.* Article first symptom burden in chronic kidney disease: a review of recent literature. Journal of European Renal Care Association, 2016;39:140-150.
- Asumnn Ugurlu Yildiz, Mehmet ali Kuree. Life style education and counselling improved quality of life and renal function in patient with chronic kidney disease. Journal Management, 2014, 667-672.
- G K Modi, V Jha. The incidence of end stage renal disease: a population based study. Kidney International, 2016;70:2131-2133.
- Gros Manro. Effectiveness of teaching programme on life style modification of chronic kidney disease patient. Journal of Nursing Research, 2009;81(6):78-101.