

# Effectiveness of Structured Teaching Programme on Knowledge on Selected Post Dialysis Complications and its Prevention among Clients Undergoing Haemodialysis

Varesh G. Chilapur<sup>1</sup>, Shriharsha C<sup>2</sup>, Deelip S. Natekar<sup>3</sup>, Namadev K. Malagi<sup>4</sup>

<sup>1</sup>Associate Professor and HOD, Department of Medical Surgical Nursing,  
Shri B.V.V.Sangha's Sajjalashree Institute of Nursing Sciences,  
Navanagar, Bagalkot.

<sup>2</sup>Associate Professor and HOD, Department of Psychiatric Nursing,  
Shri B.V.V.Sangha's Sajjalashree Institute of Nursing Sciences,  
Navanagar, Bagalkot.

<sup>3</sup>Principal, Shri B.V.V.Sangha's Sajjalashree Institute of Nursing Sciences,  
Navanagar, Bagalkot.

<sup>4</sup>Nursing Officer, Belagavi Institute of Medical Sciences, Belagavi.

Corresponding Author:

Mr. Varesh G. Chilapur

Associate Professor and HOD, Department of Medical Surgical Nursing,  
Shri B.V.V.Sangha's Sajjalashree Institute of Nursing Sciences, Navanagar, Bagalkot.

**Abstract:** End Stage Renal Disease (ESRD) once considered as fatal condition that has been treatable since the introduction of haemodialysis. Dialysis clients are prone to develop all types of infection, mainly due to dysfunction of the host defence system. Hence, there is need for creating greater awareness among regarding all aspects of prevention of infection. **Methodology:** Pre-experimental one group pre-test post-test design was used for the study. A structured interview schedule was used to collect the data. A sample of 50 clients undergoing haemodialysis at dialysis units of Shri B.V.V.Sangha's Hanagal Shri Kumareshwar Hospital and Research Centre, Bagalkot and District Hospital, Bagalkot was selected with convenient sampling technique. The data collected before and after the administration of STP were analyzed using descriptive and inferential statistics. **Results:** Majority (56%) of the respondents had average knowledge. A significant difference was found between the pre-test and post-test knowledge scores [ $t= 19.11$ ,  $p<0.05$ ]. No significant association found between post-test knowledge scores of the clients undergoing haemodialysis and their socio-demographic variables. **Conclusion:** The study proved that structured teaching programme on knowledge regarding selected post dialysis complications and its prevention among clients undergoing haemodialysis was scientific, logical and cost effective strategy.

**Keywords:** Effectiveness, Structured Teaching Programme, Knowledge, Post Dialysis Completions, Prevention, Haemodialysis.

## I. INTRODUCTION

Chronic kidney disease is the gradual loss of kidney function over a time. Mild kidney dysfunction is often called renal insufficiency.<sup>1</sup> Chronic kidney disease (CKD) is a common public health problem, over 50 million people throughout the world are suffering from CKD and more than 1 million require renal replacement therapies such as dialysis and renal transplantation. According to World Health Organization (WHO), Chronic Kidney Disease (CKD) is the 12<sup>th</sup> leading cause of death in the world. Total 10% of the population worldwide is affected by chronic kidney disease (CKD), and millions die each year because they do not have access to affordable treatment. In India, around 800 per million population undergoing hemodialysis, total population undergoing dialysis in India is 1,065,070,607.<sup>2</sup> Over 2 million people worldwide currently receiving treatment with dialysis or a kidney transplant to stay alive, yet this number may only represent 10% of people who actually need treatment to live.<sup>3</sup>

Complications of hemodialysis (HD) are of concern to the renal specialists, the healthcare system and especially for individuals living with end stage renal disease. Complications of chronic kidney disease include thrombosis, infection, ischemic steal syndrome, aneurysms, venous hypertension, hematomas, heart failure, and prolonged bleeding and result in frequent interventions and increased morbidity and mortality. In addition, interventions are often costly, challenging and may require specialized surgical expertise.<sup>4</sup> There is a great need for good education and preparation of the individual and the family at all stages of chronic renal failure. It is essential that the patient and renal staff work in collaboration not only

to ensure the best care possible for the patient, but also for the renal team to understand the care outcomes the patient has in mind. <sup>5</sup>The researcher has teaching experiences to the patients .It has been noticed that most of the patients used to regularly absent themselves due to some physical and psychological problems, especially during hemodialysis. This significantly affected their routine activity performance which resulted in poor results and death. Even though counselling was provided, but it could not result in much improvement.<sup>6</sup> Therefore the investigator felt to conduct structure teaching programme on knowledge regarding selected post dialysis complications and its prevention among the patients undergoing hemodialysis.

➤ *Statement of the Problem:*

1. To assess the knowledge regarding selected post dialysis complications and its prevention among clients undergoing haemodialysis.
2. To find the effectiveness of structured teaching programme on knowledge regarding selected post dialysis complications and its prevention among clients undergoing haemodialysis.
3. To associate post test knowledge of selected post dialysis complications and its prevention with their selected socio-demographic variable among clients undergoing haemodialysis.

➤ *Hypothesis:*

- H<sub>1</sub>: There is a significant difference between pre test and post test knowledge scores of post dialysis complications and its prevention among clients undergoing haemodialysis.
- H<sub>2</sub>: There is a significant association between post test knowledge scores with their selected socio-demographic variables.

**II. METHODOLOGY**

- *Research approach:* A quantitative approach was used for the present study.
- *Research design:* Pre-experimental one group pre-test, post-test design.

➤ *Variables under the Study*

- **Dependent Variable:** Knowledge of clients undergoing haemodialysis regarding prevention of selected post dialysis complications.
- **Independent Variable:** Structured teaching programme on knowledge regarding selected post dialysis complications and its prevention among clients undergoing haemodialysis.
- **Socio-demographic Variables:** In this study socio-demographic variables refer to age, gender, religion, education, occupation, income, Area of residence, duration of illness, attending any health education programme related to selected post dialysis complications and its prevention.

- **Setting of the Study:** The present study was conducted at Shri. B.V.V.Sangha’s Hanagal Shri Kumareshwar Hospital And Research Centre, Bagalkot and District Hospital, Bagalkot.

➤ *Population:*

- **Universal Population:** The target population of the study is the clients undergoing haemodialysis at various Hospitals of Bagalkot, Karnataka.
- **Accessible Population:** The accessible population of the study is the clients undergoing haemodialysis at dialysis units in Shri B.V.V.Sangha’s Hanagal Shri Kumareshwar Hospital, and Research Centre, Bagalkot and District Hospital, Bagalkot.
- **Sample size:** The sample for the present study composed of 50 clients undergoing haemodialysis at dialysis units of selected hospitals of Bagalkot.

➤ *Criteria for Selection of Sample*

**Inclusive criteria:** The study includes the clients who are undergoing dialysis;

- At Shri. B.V.V.Sangha’s Hanagal Shri Kumareshwar Hospital and Research Centre, Bagalkot and District Hospital, Bagalkot.
- Able to read, write and understand Kannada or English
- Available at the time of data collection.
- Willing to participate in the study.

**Exclusive criteria:** The study excludes the clients who are undergoing dialysis;

- Not able to co-operate during the study.
- Extremely sick at the time of data collection.

**Sampling Technique:** Convenient sampling technique.

**Description of the final Tool:** The structured interview schedule was used for this study which consists of two parts:

**Part I:** Consists of items seeking information regarding socio-demographic characteristics of clients undergoing dialysis.  
**Part II:** Consists of 50 items pertaining to knowledge of clients undergoing haemodialysis regarding selected post dialysis complications and its prevention.

**Scoring of the Items:** The maximum obtainable scores were 50. To find out the association between the selected socio-demographic variables and knowledge scores, respondents are categorized in to five groups.

Category	Score
Very good	29-36
Good	22-28
Average	15-21
Poor	8-14
Very poor	0-7

Table 1

Data collection procedure: Pretest was administered on day one. Then STP was administered on the same day after one hour of pre-test. On the 8<sup>th</sup> day after the administration of STP the post test was conducted using the same interview schedule.

Plan of Data Analysis: The data were analyzed in terms of achieving the objectives of the study using descriptive and inferential statistics.

### III. RESULTS

➤ *Part I: Assessment of knowledge of clients regarding selected post dialysis complications and its prevention*

Level of knowledge	Range of scores	Number of respondents	Percentage (%)
Very good	29-36	0	0
Good	22-28	10	20
Average	15-21	28	56
Poor	8-14	12	24
Very poor	0-7	0	0
Total		50	100

Table 2: Percentage wise distribution of study subjects according to levels of knowledge in pre test. N=50

Percentage wise allocation of study subjects in pre-test reveals that out of 50 subjects 10 (20%) had good knowledge followed by 28 (56%) had average knowledge

followed by 12 (24%) subjects with poor knowledge no subjects had very poor knowledge regarding selected post dialysis complications and its prevention.

➤ *Part II: Difference between the pre-test and post-test knowledge scores of the clients undergoing haemodialysis.*

Knowledge area	Test	Mean	SD	Paired t-value
Post dialysis complication and its prevention	Pre test	18.2	6.93	
	Post test	30.38	4.04	19.11*

Table 3: Difference between the pre-test and post-test knowledge scores of the clients undergoing haemodialysis.

\*Significant (p<0.05)

Findings reveal that the difference between mean pre-test (18.19±6.93) and post-test (30.42±4.04) knowledge scores

of clients undergoing haemodialysis found to be statistically significant at 0.05 level of significance [t= 19.11, p<0.05].

➤ *Part III: Association between posttest knowledge scores and selected socio demographic variables.*

Sl. No.	Socio demographic variables	Df	Chi-square value	Table value	Level of significance
1	Age	1	2.14	3.84	0.05 NS
2	Gender	1	0.045	3.84	0.05 NS
3	Religion	1	0.0006	3.84	0.05 NS
4	Educational status	1	0.12	3.84	0.05 NS
5	Occupation	1	0.87	3.84	0.05 NS
6	Family income	1	1.13	3.84	0.05 NS
7	Area of Residence	1	1.81	3.84	0.05 NS
8	Duration of Treatment	1	1.04	3.84	0.05 NS
9	Attending Any Health Education Campaign	1	0.52	3.84	0.05 NS

Table 4: Association between post test knowledge scores and selected socio demographic variables. Df – Degree of freed NS – Not significant

Findings reveal that, no significant association was found between the post test knowledge scores of post dialysis complications and its prevention among clients undergoing haemodialysis and their socio-demographic variables such as age, gender, religion, education, occupation, family monthly income, area of residence, duration of treatment, attending any health education programme.

#### IV. DISCUSSION

The results of the study were discussed according to the objectives which were stated. The present study has showed that the difference between mean pre-test ( $18.19 \pm 6.93$ ) and post-test ( $30.42 \pm 4.04$ ) knowledge scores of clients undergoing haemodialysis found to be statistically significant at 0.05 level of significance [ $t = 19.11$ ,  $p < 0.05$ ]. A similar experimental study was conducted to assess the effectiveness of teaching programme regarding knowledge of clinical practice guidelines on prevention of infection among the dialysis clients (professionals and non-professionals) at America. Results showed that the obtained value [ $23.29$ ,  $P < 0.05$ ] was higher than the table value indicating the effectiveness of clinical practice guidelines. The study concluded that the teaching was found to be effective in improving the knowledge of the clients' care.<sup>7</sup>

#### V. CONCLUSION

From the present study it was found that STP was very effective teaching method. The investigator as a nurse felt the need that student nurses should be educated well before they are posted to wards, so that they could act responsibly to practice the catheter care meticulously to prevent urinary tract infection.

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