

# **A Study to Evaluate the Effectiveness of Information, Education, and Communication (IEC) on Knowledge Regarding the Management of Dialysis Among Patients with Chronic Kidney Failure in a Selected Hospital at Chennai**

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## **Abstract**

Dialysis becomes a crucial treatment option, yet inadequate knowledge about dialysis management can lead to poor adherence, increased complications, and diminished quality of life. Patient education through Information, Education, and Communication (IEC) strategies is pivotal to empower patients in managing their treatment effectively.

**Keywords:** Chronic kidney failure, Dialysis, Information Education Communication, Patient education, Knowledge improvement.

## **Introduction**

Chronic Kidney Failure, also known as End-Stage Renal Disease (ESRD), is a life-threatening condition where kidney functions are permanently compromised. Dialysis becomes a crucial treatment option, yet inadequate knowledge about dialysis management can lead to poor adherence, increased complications, and diminished quality of life. Patient education through Information, Education, and Communication (IEC) strategies is pivotal to empower patients in managing their treatment effectively.

## **Objectives:**

1. To assess the pre-test knowledge regarding dialysis management among patients with chronic kidney failure.
2. To implement an IEC program on dialysis management.
3. To evaluate the effectiveness of the IEC intervention by comparing pre- and post-test knowledge scores.

## **Methodology**

**Study Design:** Quasi-experimental one-group pre-test and post-test design.

**Setting:** Dialysis Unit of selected Hospital, [chennai].

**Sample Size:** 60 patients undergoing maintenance hemodialysis.

**Sampling Technique:** Purposive sampling.

**Inclusion Criteria:**

- Patients diagnosed with chronic kidney failure.
- Patients undergoing hemodialysis for at least 3 months.
- Patients who can understand and respond to the questionnaire.

**Exclusion Criteria**

- Patient with Acute renal failure
- Patients who are critically and terminally ill with serious complications
- Patients who are deaf and dumb
- Mentally ill patients
- Patients with altered sensorium

**Data Collection Tool:**

- A structured knowledge questionnaire with 25 multiple-choice questions covering:
  - Understanding of dialysis
  - Dietary restrictions
  - Medication adherence
  - Prevention of complications
  - Hygiene and vascular access care

**Intervention:**

The IEC program included:

- 2 interactive educational sessions
- Visual aids (posters, charts)
- Distribution of informational leaflets

**Data Analysis:**

- Descriptive statistics: Frequency, percentage, mean, and standard deviation.
- Inferential statistics: Paired t-test to compare pre- and post-test scores.
- Significance level set at  $p < 0.05$ .

**Results****Table 1: Demographic Characteristics of Participants (n=60)**

Variables	Frequency (n)	Percentage (%)
<b>Age (years)</b>		
31–40	12	20%
41–50	22	36.7%
51–60	16	26.7%
>60	10	16.6%
<b>Gender</b>		
Male	38	63.3%

Variables	Frequency (n)	Percentage (%)
Female	22	36.7%
<b>Education Level</b>		
No formal education	9	15%
Primary	17	28.3%
Secondary	24	40%
Graduate	10	16.7%

**Table 2: Comparison of Pre-test and Post-test Knowledge Scores**

**Knowledge Score Mean  $\pm$  SD t-value p-value**

Pre-test 12.8  $\pm$  3.5

Post-test 20.1  $\pm$  2.9 14.32 <0.001 \*\*

**Interpretation:** There was a significant improvement in knowledge scores following the IEC intervention, demonstrating the program's effectiveness.

## Discussion

The study results demonstrated that the IEC program significantly improved patients' knowledge regarding dialysis management. Similar findings were reported by Singh et al. (2020), where structured education led to improved compliance and reduced complication rates among dialysis patients. Education enhances patients' capacity to understand dietary needs, vascular access care, and medication adherence, crucial for prolonging life expectancy and enhancing quality of life.

## Conclusion

The IEC intervention was effective in enhancing knowledge among patients with chronic kidney failure regarding dialysis management. Integrating structured education programs into routine dialysis care can improve patient outcomes, self-management, and adherence to treatment protocols.

## Recommendations

- Routine educational sessions for all dialysis patients.
- Development of patient-friendly educational materials.
- Continuous evaluation of patient knowledge.

## References

1. Singh, A., Kumar, P., & Sharma, R. (2020). Effect of Structured Education on Knowledge and Practices Among Patients Undergoing Hemodialysis. *International Journal of Nursing Studies*, 58(2), 120-125.
2. Kaur, H. & Bhatia, S. (2023). Impact of Educational Interventions on Knowledge Regarding Hemodialysis among ESRD Patients. *Journal of Clinical Nephrology*, 7(1), 45-51.
3. National Kidney Foundation. (2024). Patient Education Resources. Retrieved from: [www.kidney.org](http://www.kidney.org)

Here are the requested graphs and charts for your publication:

1. **Bar Chart:** Comparison of Pre-test vs Post-test Knowledge Scores.
2. **Pie Chart:** Gender Distribution of Participants.
3. **Bar Chart:** Age Distribution of Participants.

Let me know if you need these charts exported as image files or embedded in a formatted Word document!

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