

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING HOME MANAGEMENT OF NEPHROTIC SYNDROME AMONG MOTHERS OF CHILDREN WITH NEPHROTIC SYNDROME IN SELECTED PEDIATRIC HOSPITALS

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ABSTRACT

Introduction: Nephrotic syndrome is a common chronic renal disorder in children characterized by massive proteinuria, hypoalbuminemia, edema, and hyperlipidaemia. Effective home management—including medication adherence, infection prevention, dietary regulation, and early recognition of relapse—is essential for improving outcomes. Mothers play a central role in the day-to-day care of affected children; therefore, strengthening their knowledge is crucial. This study aimed to evaluate the effectiveness of a structured teaching programme on knowledge regarding home management of nephrotic syndrome among mothers of children with the condition.

Objectives: The objectives of the study are to 1. assess the level of existing knowledge regarding home management of nephrotic syndrome among mothers of children with nephrotic syndrome. 2. Find out the effectiveness of the structured teaching programme regarding home management of nephrotic syndrome among mothers of children with nephrotic syndrome by comparing pretest and post-test knowledge scores. 3. Find out the association between post-test knowledge scores regarding home management of nephrotic syndrome with selected sociodemographic variables of mothers of children with nephrotic syndrome. **Methodology:** A pre-experimental one-group pretest–post-test design was adopted. The study included 60 mothers of children with nephrotic syndrome from selected pediatric hospitals in Bangalore. Participants were selected using a non-probability purposive sampling technique. Data were collected using a structured knowledge questionnaire administered before and after the teaching programme. Descriptive and inferential statistics were used for analysis. **Results:** The findings revealed that post-test knowledge scores were significantly higher than pre-test scores, indicating that the structured teaching programme was effective in improving mothers' knowledge regarding home management of nephrotic syndrome. No significant association was observed between post-test knowledge scores and selected sociodemographic variables. **Conclusion:** The study concluded that structured educational interventions are effective in enhancing mothers' knowledge of nephrotic syndrome and its home management. Incorporating such teaching programmes into routine pediatric care may improve disease management, reduce complications, and promote better health outcomes for affected children.

KEYWORDS: Nephrotic syndrome, Structured teaching programme, Mothers, Paediatric care, Home management.

INTRODUCTION

Nephrotic syndrome is predominantly seen among children. It is 15 times more common in children than in adults, and it differs in many ways from adults in terms of origins, signs, and symptoms, as well as recovery, necessitating specific treatment.^[1] Children represent a nation's future; therefore, safeguarding their health is a global priority.^[2] Child health care includes prevention and management of both acute and chronic illnesses. Among chronic pediatric disorders, nephrotic syndrome is a significant renal condition characterized by massive proteinuria, hypoalbuminemia, hyperlipidemia, and edema due to glomerular damage.^[3]

In India, nephrotic syndrome affects a considerable number of children, with a prevalence of 12–16 cases per 100,000 population and nearly 10,000 new cases annually.^[4] Clinically, it presents with edema, weight gain, fatigue, foamy urine, and metabolic disturbances, and may lead to complications such as infections, hypertension, and thromboembolism if poorly managed. Treatment focuses on controlling protein loss, preventing complications, and ensuring proper diet and long-term monitoring.^[5] Because the disease often follows a relapsing course, effective home care and caregiver awareness are essential.

Shivani Negi et al. conducted a one-group pretest–posttest study to evaluate the effectiveness of need-based education on home care of children with nephrotic syndrome. The findings demonstrated a marked improvement in caregivers' knowledge and practice following the educational intervention. The mean post-test knowledge and practice scores (19.8 ± 2.47 and 15.9 ± 1.99) were notably higher than the pre-test scores (13.9 ± 2.92 and 14.7 ± 1.99). Statistically significant *t* values indicated that structured education substantially enhanced caregivers' competence in managing nephrotic syndrome at home.^[6]

Similarly, Guntupalli (2025) found that parents of children with relapsing nephrotic syndrome had limited prior knowledge of the disease; although many were aware of relapse, few understood the possibility of multiple relapses, and nearly three-quarters had not been taught home urine monitoring. Maternal education was the only factor significantly associated with parental knowledge ($p = 0.035$), emphasizing the need for accessible educational materials in local languages to improve caregiver awareness.^[7]

Significance for the Study

Nephrotic Syndrome is predominantly seen among children. Its prevalence among children is fifteen times greater than among adults, among children it is different in many ways from adults that are causes, sign, and symptoms, and recovery, therefore require special attention. Parents of children with nephrotic syndrome should be encouraged to support their child's health without becoming overprotective. Children should

continue normal activities such as attending school and interacting with peers, and should be treated like other children in the family. An important aspect of management is home monitoring of urine protein and fluid status; therefore, parents should be trained to check first-morning urine protein using dipstick tests and to observe treatment response, especially during steroid therapy.

Improving parental knowledge and practices regarding home management is essential for early relapse detection and effective disease control. Although numerous studies have examined the etiology, course, and treatment of nephrotic syndrome, limited evidence exists on parental knowledge and home-care practices across different cultural settings. Hence, further research is required to assess caregiver knowledge and develop context-appropriate educational interventions.

OBJECTIVES

The objectives of the study were to:

1. Assess the level of existing knowledge regarding home management of nephrotic syndrome among mothers of children with nephrotic syndrome.
2. Find out the effectiveness of a structured teaching programme regarding home management of nephrotic syndrome among mothers of children with nephrotic syndrome by comparing pretest and post-test knowledge scores.
3. Find out the association between post-test knowledge scores regarding home management of nephrotic syndrome with selected sociodemographic variables of mothers of children with nephrotic syndrome.

Hypothesis

- **H1:** The mean post-test knowledge score of mothers of children with nephrotic syndrome exposed to a structured teaching programme on nephrotic syndrome and its home management would be significantly higher than their mean pretest score.
- **H2:** There would be a significant association between the post-test knowledge regarding nephrotic syndrome and its home management with selected sociodemographic variables of mothers of children with nephrotic syndrome.

MATERIAL AND METHODOLOGY

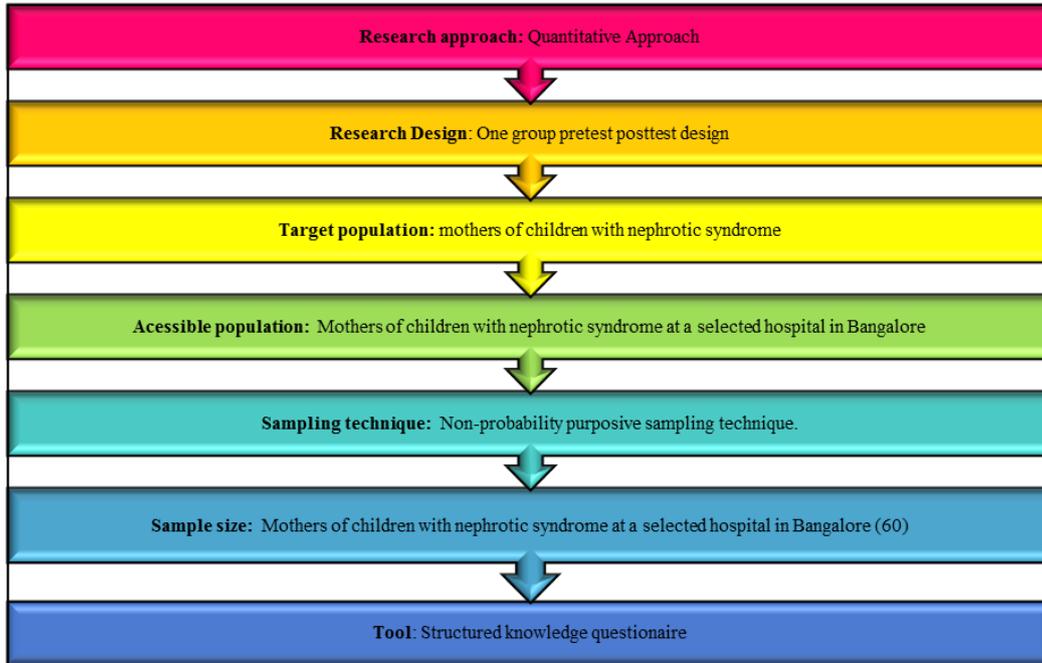


Fig. 1: Research Methodology.

SAMPLING CRITERIA

Inclusion criteria

Mothers of children with nephrotic syndrome who

1. Were willing to participate in the study.
2. Were available during the time of data collection.

Exclusion criteria

Mothers of children with nephrotic syndrome who

1. Were sensitized to any research study on home management of nephrotic syndrome in the last three months.
2. Psychologically and physically unfit during the time of data collection.

Data Collection Tool

Section A: Socio-Demographic Data It contained a sociodemographic profile which includes personal and professional characteristics of mothers of nephrotic syndrome, i.e., age, religion, qualification, occupation,

types of family, no of children, income, knowledge on home management of nephrotic syndrome, and its source of information.

Section B: Structured knowledge questionnaire. It consisted of a structured self-administered questionnaire consisting of 30 items related to meaning, definition, incidence, signs and symptoms, diagnosis, treatment, and knowledge of home management of nephrotic syndrome. All questions in the questionnaire will have only one right answer. A score of 1 was assigned for each correct response and 0 for each incorrect response. The total score ranged from 0 to 30.

Scoring Interpretation

- **Adequate knowledge:** 21–30
- **Moderate knowledge:** 11–20
- **Inadequate knowledge:** 0–10

RESULT

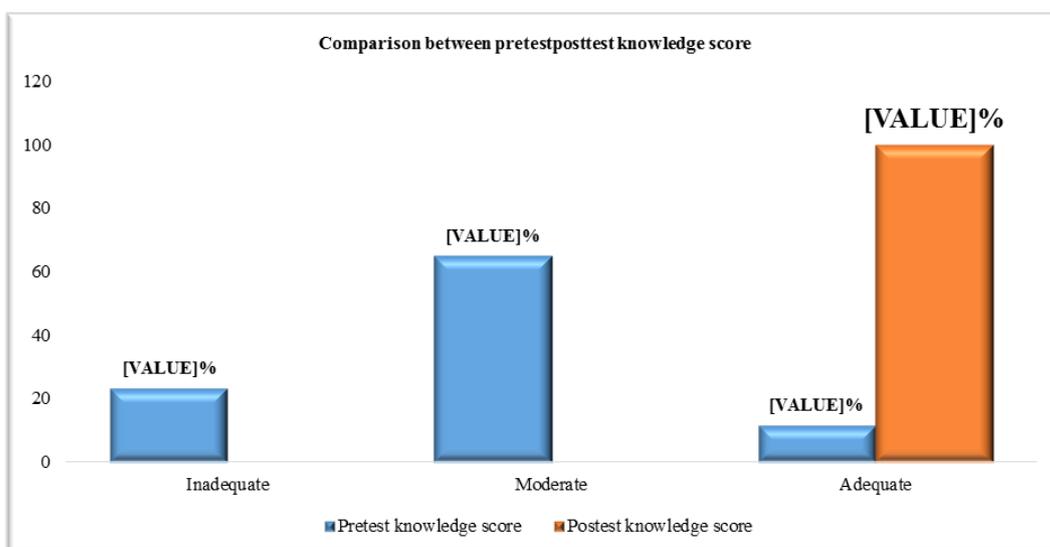
Table 1: Description And Analysis of Sample Characteristics.

N=60

Sl no.	Socio-demographic variables	Categories	N	%
1	Age(in years)	Below 20 years	2	3.3
		20-29 years	28	46.7
		30-39 years	24	40
		40-49 years	4	6.7
		50 years and above	2	3.3
2	Religion	Hinduism	26	43.3
		Islam	11	35
		Christianity	21	18.3
		Sikhism	1	1.7
		Other (please specify):	1	1.7
3	Educational Qualification	No formal education	4	6.7

		Primary education	8	13.3
		Secondary education	8	13.3
		Higher secondary education	12	20
		Graduate	22	36.7
		Postgraduate	6	10
4	Occupation	Homemaker	12	20
		Government employee	10	16.7
		Private sector employee	16	26.7
		Self-employed	10	16.7
		Unemployed	11	18.7
		Other (please specify):	1	1.7
5	Type of family	Nuclear	39	65
		Joint	18	30
		Extended	3	5
6	No of children	One	27	45
		Two	20	33.3
		Three	11	18.3
		Four or more	2	3.3
7	Monthly Income	Below ₹10,000	2	3.3
		₹10,000 - ₹20,000	7	11.7
		₹20,000 - ₹30,000	13	21.7
		₹30,000 - ₹50,000	17	28.3
		Above ₹50,000	21	35
8	Residence	Urban	16	26.7
		Semi-Urban	34	56.7
		Rural	10	16.7
9	Knowledge on Home Management of Nephrotic Syndrome:	Poor	19	31.7
		Fair	23	38.3
		Good	16	26.7
		Excellent	2	3.3
10	Source of Information on Home Management of Nephrotic Syndrome	Healthcare providers	19	31.7
		Internet	18	30
		Books and brochures	7	11.7
		Support groups	5	8.3
		Family and friends	11	18.3

N=60



The graph showed that there was a significant rise in the post-test knowledge scores, with all 60 of the sample scoring in the range of 21 – 30 points after the structured

teaching programme, when compared to the pre-test score of 14 mothers scoring 0-10, 39 of them scoring 11-20, and only 7 having scores between 21-30.

Table 11: Range, mean, median, and standard deviation of pre- and post-knowledge scores.

Knowledge Scores	Range	Mean	Median	SD
Pre-test	22	14	13	5.00508216
Post-test	8	28.033333	29	1.74634404

N=60

The pre-test knowledge scores showed a range of 22, with a mean score of 14, a median of 13, and a standard deviation of 5.00, indicating low baseline knowledge with considerable variability among the sample.

The post-test knowledge scores demonstrated a reduced range of 8, with a markedly higher mean score of 28.03, a median of 29, and a standard deviation of 1.75, suggesting a substantial improvement in knowledge levels along with greater consistency among the sample following the intervention.

DISCUSSION

A study by Rekha G. Patil, Umesh Nandgaon, and Mahaling Hulagbali demonstrated that a structured teaching programme significantly improved mothers' knowledge and caregiving practices in managing children with nephrotic syndrome. The intervention enhanced mothers' ability to monitor symptoms, ensure medication adherence, and follow dietary and infection-prevention measures at home, supporting the effectiveness of planned caregiver education in pediatric nephrotic syndrome management.

Similarly, Mamatha M., Chandrashekar M., and Sheela Williams (2015) reported a significant improvement in parental knowledge after providing an information booklet on nephrotic syndrome and home care management among parents in selected hospitals of Mysuru. Their findings further emphasize that structured educational interventions effectively strengthen caregivers' understanding and preparedness for home management.

These findings are consistent with the present study, reinforcing the importance of structured teaching in improving mothers' knowledge and home management practices for children with nephrotic syndrome.

CONCLUSION

The result of this study showed that there was a significant increase in knowledge scores among mothers of children with nephrotic syndrome after giving a structured teaching programme on knowledge regarding home management of nephrotic syndrome. The results highlight the importance of integrating structured, evidence-based educational interventions into routine pediatric care to strengthen caregiver competence and promote better clinical outcomes. Empowering mothers through systematic health education not only improves home management practices but also contributes to long-term disease control and improved quality of life for affected children.

Recommendations

- The study may be replicated in different settings with a larger sample size to enhance the validity and generalizability of the findings.
- A true experimental study can be undertaken to further evaluate the effectiveness of a structured teaching programme on mothers' knowledge regarding home management of nephrotic syndrome.
- Future studies may explore alternative educational interventions with varied content, teaching methods, and delivery modes to determine the most effective approach for improving mothers' knowledge of home management of nephrotic syndrome.

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