

# Effectiveness of Structured Teaching Programme Regarding Home Care Management of Children with Nephrotic Syndrome in Terms of Knowledge among the Care Givers in a Selected Hospital at Kolkata, West Bengal

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**Abstract:** *This study is entitled to assess the effectiveness of structured teaching program on home care management of children with nephrotic syndrome in terms of knowledge among care givers of children with nephrotic syndrome, in selected hospital at Kolkata, West Bengal. The objective of the study was to determine the effectiveness of the structured teaching program in terms of difference in knowledge on home care management of children with nephrotic syndrome. The investigator adopted pre experimental research approach with one group pre-test post- test design. She selected 50 care givers by non probability purposive sampling technique. Data was collected with valid and reliable structured interview schedule. The findings of the study revealed that mean post test knowledge score of care givers is significantly higher than the mean pretest knowledge score with a mean difference of 7.2 evident from t value 14.27 at 0.05 level of significance after their exposure to structured teaching program on home care management of children with nephrotic syndrome and there was significant association with pretest knowledge score and number of hospitalization due to nephrotic syndrome (8.58,  $p < 0.05$ ), duration of suffering from nephrotic syndrome (10.09,  $p < 0.05$ ). Therefore the structured teaching program was an effective method of imparting knowledge of care givers. Study has implications on clinical Nursing practice and Nursing research. This study can be repeated with a larger sample in another setting with other teaching strategies.*

## 1. Introduction

The growth and development and even functional capacity of children are hampered by health problems. Some of the illness may make them disable temporarily or permanently. Infections are responsible for high morbidity and mortality due to severe infections such as pneumonia, primary peritonitis and septicemia leading to multi organ failure. The milder forms of infections like upper ARI, diarrhoea and urinary tract infections may be responsible for exacerbation of proteinuria and recurrent relapses of Nephrotic syndrome.<sup>1</sup>

Nephrotic syndrome is a common renal disease all over the world. It is primarily a pediatric disorder and is 15 times more common in children than adults.<sup>2</sup>

Jerome C Lane, in his article Pediatric Nephrotic Syndrome, published in 2014, mentioned that Nephrotic syndrome, or nephrosis, is defined by the presence of nephrotic-range proteinuria, edema, hyperlipidemia, and hypoalbuminemia. While nephrotic-range proteinuria in adults is characterized by protein excretion of 3.5 g or more per day, in children it is defined as protein excretion of more than 40 mg/m<sup>2</sup>/h or a first-morning urine protein/creatinine of 2-3 mg/mg creatinine or greater.<sup>3</sup>

It is a common chronic disorder, characterized by alteration of permeability at the glomerular capillary wall, resulting in its inability to restrict the urinary loss of protein. Nephrotic range proteinuria is defined as proteinuria exceeding 100 mg/m<sup>2</sup> per day or spot urinary protein to creatinine ratio exceeding 2 mg.<sup>4</sup>

Estimation on the annual incidence of nephrotic syndrome range from 2-7 per 100,000 children, and prevalence from 12-16 per 100,000.<sup>5</sup>

Navin Jaipaul in his article, 'Overview of Nephrotic Syndrome' published in Merck Manual in 2013, stated that Nephrotic syndrome occurs at any age but is more prevalent in children, mostly between the ages 1½ and 4 yr.<sup>6</sup>

Marlow D. in her —Text Book of Pediatric Nursing stated that parents frequently reported that the child had puffiness of the face (especially the eyes), which decreased during the day but then appeared in the abdomen and lower extremities. Some children might have been admitted with massive oedema, resulting in respiratory distress and diarrhea due to edema of intestinal mucosa. These children might also have marked oedema of the labia or scrotum. In addition, the child was pale and irritable and had lost appetite but gained weight.<sup>7</sup>

Common infections associated with either the onset of the disease or during the course of disease were acute upper and lower respiratory tract infection including pneumonia with or without empyema, skin infections including impetigo and cellulites, acute gastroenteritis or dysentery, urinary tract infection and primary peritonitis.<sup>1</sup>

Parental motivation and involvement was essential in the long-term management of these children. They should be provided information about the disease, its expected course and risk of complications.<sup>2</sup>

## 2. Need for the Study

As in any long term chronic illness, the child may be unsuccessful in reaching the age of the appropriate developmental stages. Frequent hospitalization may prevent the child from developing independent actions for self care, resulting in dependence on significant others. At the same time, parental anxiety and the need to care for the child may contribute to the child dependent role. Prior to discharge, the nurse should teach and make certain that the parents understand the importance of the aspects of home care. The nurse in the hospital or the community health nurse should answer any questions the parents may have about the child's home care. The nephrotic syndrome, as a chronic illness, creates anxiety in both patients and family. Frequent Hospitalization and relapses place a severe strain on all family members.<sup>11</sup>

Training of the parents as regards use of safe drinking water, hand washing, avoiding crowded areas and public functions and contact with infectious patient is very important. Parents should be counseled and a positive approach and a detailed information helps them to take care of nephrotic children with confidence.<sup>15</sup>

## 3. Research Methodology

By adapting one group pre-test post-test research design structured interview schedule was applied as a data collection tool. Non probability purposive sampling technique was adopted to select 50 respondents.

## 4. Theoretical framework

The conceptual framework adopted for the study was based on the Shannon Weaver's S.M.C.R model (1949).

**Table 2:** Chi-square values computed between pretest knowledge score regarding home care management of children with nephrotic syndrome and selected variables, N=50

Sl no.	Selected variables	Knowledge score equal or above median	Knowledge score below median	Calculated Chi square	df	P value at the 0.05 level of significance	Remarks
1	No. of hospitalization due to nephrotic syndrome			8.58*	3	7.82	Significant Association
	Never	1	4				
	One time	3	2				
	2-7 times	10	1				
>7 times	1	2					
2	Duration of suffering			10.09 *	2	4.30	Significant association
	Less than 1 year	13	17				
	1-3 years	13	3				
	>4 years	2	2				

The data presented in table 9 showed that there was no association between pretest knowledge score and selected variables of care givers as well as children except number of Hospitalization due to nephrotic syndrome and duration of suffering from nephrotic syndrome

## 5. Conclusion

The following conclusions are drawn from the present study.

### Analysis:

Findings related to the effectiveness of structured teaching program on home care management of children with nephrotic syndrome in relation to knowledge of care givers.

**Table 1:** Mean, Median, Mean difference, Standard Deviation and t value of pretest and post test knowledge scores of care givers regarding home care management of children with nephrotic syndrome, N=50

S No.	Knowledge score	Mean	Mean Difference	Median	SD	t
1	Pre-test	13.28	7.2	13	3.45	14.27*
2	Post-test	20.48		20	2.66	

The data presented in table 10 showed that the mean post-test knowledge score (20.48) after exposure to the structure teaching program was significantly higher than the mean pre-test knowledge score (13.28) with the mean difference of 7.2 which is found to be statistically significant as evident from  $t'$  value (14.27) for df 60 at 0.05 level of significance. The data also presented that the S.D. of pre-test knowledge score (3.45) was higher than the SD of the post-test knowledge score (2.66) of care givers. It indicates that the post test knowledge score was more homogenous in the subjects.

This showed that the obtained mean difference is a true difference not by chance.

Hence null hypothesis is rejected and the research hypothesis is accepted.

This indicates that structured teaching program is effective in increasing the Knowledge.  
 $t'(60) = 2, P < 0.05$

Findings related to association between pretest knowledge score and selected variables.

1) From the study it can be concluded that the structured teaching program on home care management of children with nephrotic syndrome is effective in increasing knowledge of care givers as the computed t test is significant at 0.05 level.

2) The structured teaching program on home care management of children with nephrotic syndrome can be used as effective teaching strategy to improve knowledge.

- 3) This concludes that care givers were motivated to gain knowledge through the structured teaching program.

## 6. Recommendation

On the basis of findings, the following recommendations have been made:

- A similar study can be conducted in a different setting.
- A similar study can be conducted with a large sample size
- A similar study can be conducted with random sampling technique
- A similar study can be conducted using other teaching strategies like video-based teaching, self instructional module, and information booklet.
- A comparative research study can be conducted among private and Government Hospitals.
- A similar study can be done using a control group.

## References

- [1] Khemchand N M, Mukesh R. Spectrum of infection in children with newly diagnosed primary nephrotic syndrome. Pakistan journal of medical research, 2012 January-March; 35(4): 213-19.
- [2] Chowdhury EUA, Huq MN , Jaigirdar MA . Pattern of nephrotic syndrome in children admitted in banglades medical college hospital'. Banglades medical college journal, 2010; vol 15(2): 67-73.
- [3] Jerome C L. 2014 October; Available at: <http://emedicine.medscape.com/article/982920-overview>.
- [4] Arvind B , Mukta M . Nephrotic syndrome in children. Indian J Med. July2005; Indian Res 122: pp- 13-28
- [5] Nephcure kidney international . 2015 ; Available at: @ [nephcure.org](http://nephcure.org) : Home / Living with Kidney Disease / Understanding Nephrotic Syndrome /
- [6] Marlow Dorthy R, Redding B. Textbook of Paediatric Nursing. South Indian Edition . New Delhi: Elsevier Publication ; 2007. Nephrotic Syndrome Facts
- [7] Mehta KP. Disease of the kidney in children diagnosis and management. 1<sup>st</sup> edition. Mumbai: Bhalani publishing house; 2004