

Effectiveness of “Need Based Education on Homecare of Nephrotic Syndrome” on Knowledge and Practice among Care Givers of Children with Nephrotic Syndrome

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ABSTRACT

Introduction: Nephrotic Syndrome predominately seen among children. It is different in many ways from adults that are causes, sign and symptoms, and recovery, therefore require special attention. Regular admission in hospital and relapse can be responsible for distress among family members, motivating and involving parents in the care of these children is extremely important, necessary information about the condition, its treatment course and risk of adverse effects must be provided to them.

Methodology: Quantitative approach with one group pretest posttest design was selected for this study. Total 53 participants were selected through total enumeration sampling technique. Structured knowledge questionnaire and self-reported practice checklist were used to collect the data which were analyzed by differential and inferential statistical methods.

Result: The findings of the study reveals that the mean posttest knowledge score (19.8 ± 2.47) and practice score (15.9 ± 1.99) was higher than the mean pretest knowledge score (13.9 ± 2.92) and practice score (14.7 ± 1.99). The calculated “t” value for knowledge ($t = 10.2$) and practice ($t = 8.00$) at $p < 0.05$ was higher than the tabulated value ($t_{52} = 2$), indicates highly significant result. The knowledge and practice has been improved after administering need based education.

Conclusion: The study concluded that the need based education on home care of nephrotic syndrome was highly beneficial for enhancing the knowledge and practice of caregivers.

Key words: Nephrotic Syndrome, Knowledge, Practice, Children and Care givers.

INTRODUCTION

Nephrotic Syndrome is predominately seen among children.¹ Its prevalence among children is fifteen times greater than adults, among children it is different in many ways from adults that are causes, sign, and symptoms, and recovery, therefore require special attention.²

Nephrotic syndrome first present with edema initially seen around eyes afterwards on feet's and legs which is pitting in nature, slowly whole body become edematous, along with accumulation of fluid in peritoneal and thoracic cavity. Elevated

blood pressure seen in up to 25% of nephrotic syndrome children, pain in abdomen, loss of appetite, and malaise are also present.

The first line treatment for primary Nephrotic Syndrome is steroid therapy; it may be started without kidney biopsy if child has classic attributes of Nephrotic Syndrome.³ Ultimately majority of children will attain remission (absence of albumin in urine of early morning samples), but 80% experiences relapse during the course of treatment.⁴ Upper respiratory tract infection caused by virus has been identified for more

than fifty percent of relapses. Urinary tract infections are also responsible for relapse along with inadequate reaction to treatment.⁵

Though steroid therapy has reduced mortality, but on another side they leave various side effects on children such as Cushing disease, increase in weight, growth suppression, and elevated blood pressure, alteration in the metabolism of glucose, emotional distress and behavior changes.⁶

NEED OF THE STUDY

Nephrotic syndrome is a long term illness which affects both patient as well as family members. Along with the drugs, supportive management of Nephrotic Syndrome requires regular follow up and involvement of family members in monitoring of prognosis.⁷

There are certain aspects which care givers should know and practice at home while caring a child. These are:

Diet: Diet of child should have all nutrients in adequate amount especially protein. Consumption of salt, fat and saturated fatty acids should be avoided. Snacks containing high salt should not be given to the child. Care givers should be aware that steroid therapy triggers appetite, so they should provide adequate diet to child and also ensure that child should perform adequate physical activities and exercises to prevent weight gain.

Monitoring: Monitoring of urine protein is very integral part of treatment of Nephrotic syndrome. All parents must be trained to monitor urine protein at home with dipstick so that they can check child's response towards steroid treatment. They should record the following values such as urine protein, medication, blood pressure, urine output and any sign of infection in a diary.

Prevention of infection: Infection is a major cause of relapse and morbidity among children, so to prevent this every child should be immunized properly. Children

who are on steroid therapy, have low immunity so live vaccines should not be given to them (can be given after 4 weeks of completion of steroid therapy). Parents should be thought about importance of hand washing, safe drinking water and maintaining personal hygiene.

If parents have adequate knowledge and follow healthy practices, it can contribute towards healthy outcomes among children and foster prognosis, prevent relapse and encourage healthy behavior.¹¹

MATERIALS AND METHODS

Research design used for this study was quasi experimental design. The study was conducted in the outpatient department of a private hospital of Dehradun, Uttarakhand. 53 participants were selected by total enumeration sampling technique who fulfilled the selection criteria of the study. Data was collected by administering structured knowledge questionnaire and self-reported practice checklist by interview method. Maximum score for knowledge was 28 and practice was 21 each correct response contains 1 mark and wrong consist 0. Further it was categories in to good, average and poor. Collected data was analyzed by using descriptive and inferential statistical methods according to the objectives of the study.

STATISTICAL ANALYSIS

Sample characteristics of children

Most of the children were male (66%) and belongs to preschoolers (41.5%) category. 81% lived in rural area. Out of total children 83% attends school. Regarding diet 85 % were vegetarian. Majority 96% was diagnosed as nephrotic syndrome within last 2 to 6 years and no one has the family history of nephrotic syndrome and any other illness. 70% children was a case of remission and 62% had the history of recurrent hospitalization.

Sample characteristics of caregivers

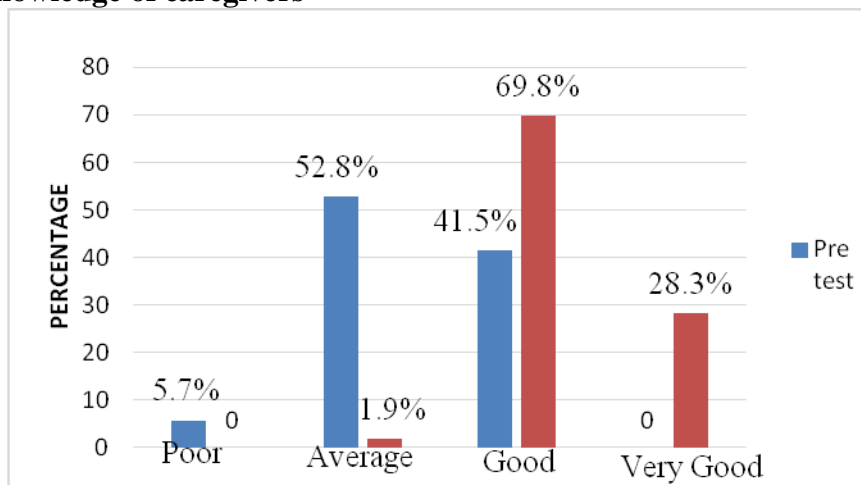
Most of the informants (89%) were father, between the age group of 32 to 35

(34%) and had primary education (37%). 43% mothers belongs between 25 to 26 year of age group and had primary level of education (43%). 80% belongs from joint family. Regarding occupation 46% father were working as labour and all mothers were home makers. 92% caregivers were aware about nephrotic syndrome.

Clinical profile of child

At the time of follow up in the OPD 79% children were afebrile followed by presence of edema 21%, increase level of urine protein (21%). Out of total sample only 9 got tested for serum protein and creatinine and all had low level of both.

Levels of Knowledge of caregivers



Bar Diagram No 1: Levels of Knowledge

Bar diagram illustrate that in pre-test, most of (52.8%) of participants had average and good (41.5%) knowledge. No one was in the category of very good. While in post-test, most (69.8%) of them had good

knowledge regarding Nephrotic Syndrome followed by very good (28.3%) and average (1.9%). In post-test there was no one in the category of poor level of knowledge.

Table no 1: Comparison of pre-test and post-test knowledge Score (n=53)

S.NO	Knowledge score of caregivers	Range	Max score	Mean ± SD	t value	P value
1	Pre-test	6-20	28	13.9±2.92	10.2	0.001
2	Post- test	14-25		19.8±2.47		

df= 52, t tab = 2, p<0.05

Table no. 1 depicts that the mean posttest knowledge score (19.8 ±2.47) after need based education was greater than the mean pretest knowledge scores (13.9±2.92). The calculated “t” value (t = 10.2, p < 0.05) was higher than the tabulated value (t₅₂ = 2, p < 0.05). Hence, it can be interpret that the intervention was beneficial for caregivers in terms of improving their knowledge of home care of Nephrotic Syndrome child.

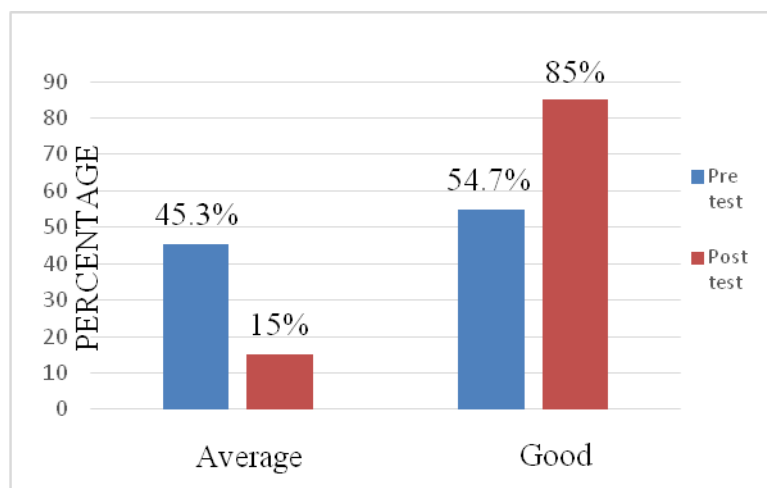
Levels of practice of caregivers

Bar Diagram 2 depicts that in pre-test most (54.7%) of participants had good home care practice of Nephrotic Syndrome, and 45.3% had average practices. While in post-test majority (85%) of participants had good level of practice followed by average (15%) regarding home care of Nephrotic Syndrome.

Table no 2: Comparison of pre test and post test practice score (n=53)

S.NO	Practice score of caregivers	Range	Max score	Mean ± SD	t value	P value
	Pre-test	10-19	21	14.7±1.99	8.00	0.001
	Post- test	11-20		15.9±1.99		

df= 52, t tab= 2 p<0.05



Bar Diagram 2: Levels of Practice

Table no 2 shows that the mean posttest practice score (15.9 ± 1.99) after need based education was greater than the mean pretest practice score (14.7 ± 1.99). The calculated “t” value ($t = 8.00, P < 0.05$) was higher than the tabulated value ($t_{52} = 2, P < 0.05$). Hence, it can be interpreted that intervention was beneficial in improving the practice of caregivers regarding Nephrotic Syndrome.

Association between pretest levels of knowledge and selected demographic variables of care givers

There was no statistical significant association was found between pre-test levels of knowledge and selected socio-demographic variables of caregivers such as age, relationship with child, educational status, types of family and occupation of caregivers.

Association between pretest levels of practice and selected demographic variables of caregivers

There was statistical significant association were found between levels of practice and selected demographic variables such as relationship with child (fathers) (0.023) and type of family (0.035). Other variables such as age, educational status and occupation of caregivers were found not significant.

DISCUSSION

This study was conducted to enhance knowledge and practice of the caregivers of children who were suffering with nephrotic syndrome. The findings of the study revealed that nephrotic syndrome was most commonly found among (41.5%) children belong to the preschool age group and male (66%) suffers more. Findings are supportive by a study done by Mamatha. M et al; (2015) among nephrotic syndrome children. Result shows that this disease is common among children between 1-5 years (65%).⁸ Another study done by Khider. I. S et al; (2017) supports that male child (76%) suffers most.⁹

Regarding residence, in the present study most of the participants (81.1%) reside in rural area. The result is consistent with the study conducted by Sarika (2017) in which findings showed that 83% were belongs to rural area.⁷

Finding shows that 96% of participants diagnosed with Nephrotic syndrome at the age of 2-6 years which was similar to the findings of investigation carried by Pandya NK et (2018) which identified that more number (79%) of first attack of Nephrotic Syndrome was noticed between the age of 3-6year.¹⁰

Findings of the study reveal that majority (52.8%) of study subject had average knowledge and 41.5% had good knowledge. Consistency was seen with the study done by Mamatha. M et al; (2015)

where it was found that majority of parents 75% had inadequate knowledge 21.3% had moderately adequate knowledge.⁸ Regarding home care practices of caregivers (45.3%) of studied subject had average practices. The findings were similar to the study conducted by Verma C; (2019) which showed that (43%) of the participants had good level of practice.¹¹

In terms of knowledge present study revealed that mean posttest knowledge score (19.8 ± 2.47) after need based education was greater than the mean pretest knowledge scores (13.9 ± 2.92). This result was similar to the study conducted by Laldinpuii C. et al; (2019) which shows that the mean pre-test (11) knowledge score was lower than mean post-test (21) knowledge score.¹² Regarding practice findings shows that the mean posttest practice score (15.9 ± 1.99) after need based education was greater than the mean pretest practice score (14.7 ± 1.99). The result were consistent with the findings of the study carried by Verma C; (2019) which revealed that the mean post-test practice score (14) was greater than mean pre-test practice score (8).¹¹

CONCLUSION

Findings of the study conclude that nephrotic syndrome was most common among males and preschool children. Most of the participant had average knowledge regarding nephrotic syndrome and the need based education on home care was found effective as an intervention in enhancing the knowledge and practices of caregivers regarding home care of nephrotic child. All the children had experienced relapse during their course of treatment. Therefore, Health care providers must counsel the caregivers about home care of child.

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