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A pre experimental study to assess the effectiveness of information booklet on knowledge among care givers regarding care of child with nephrotic syndrome in selected hospitals of Pune City

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Abstract

Children are the greatest gift of God to humanity. In India children form nearly 40% of the total population. Child survival in India needs sharper focus. This includes better managing neonatal and childhood illnesses and improving child survival, particularly among vulnerable communities. The promotion of healthy child development has become a major focus of world attention over the last 3 to 4 decades. A lot of research needs to be done in the field concerning children, which will enable us to have a better and clear understanding of the issues concerning children and how to deal with them effectively. Children with nephrotic syndrome need to be taken good care by the parents and care takers. Keeping this in view, a study was conducted to evaluate the effectiveness of information booklet regarding care of child with nephrotic syndrome in terms of knowledge among care givers of child with nephrotic syndrome at selected hospitals of Pune city.

Aim of the study: To assess the knowledge among care givers regarding care of child with nephrotic syndrome before and after administration of information booklet and the effectiveness of the booklet on knowledge among caregivers regarding care of child with nephrotic syndrome after administration of information booklet. Also to find the association between care givers regarding care of child and selected demographic variables.

Materials and Methods: The research approach adopted for the study was pre experimental with one group pre-test post-test design. 60 caregivers of Child with nephrotic syndrome were purposely selected. The data related to knowledge among care givers of child with nephrotic syndrome was collected in the month of July and August regarding care of child with nephrotic syndrome among care givers with selected demographic variables.

Results: Findings of the study were the mean post-test knowledge score of care givers of child with nephrotic syndrome was significantly higher than the pre-test knowledge score of the care givers of child with nephrotic syndrome.

Conclusion: The study concluded that the information booklet was effective in terms of enhancing the knowledge of caregivers of child with nephrotic syndrome.

Keywords: experimental study, effectiveness, information booklet, nephrotic syndrome, Pune City

Introduction

Children constitute a major proportion of the global population today. The children of today are the resources of the future. Preservation of their lives will always be a priority. Child health includes the care of the children from infancy to adolescence. Most of the children experience one or more episodes of illness. Many of them may be ill for short time and may not need hospitalization and some of them may need hospitalization and prolong treatment [1].

Healthy children become healthy adults, people who create better lives for themselves, their communities and their countries. Improving the health of children is one responsibility among many in the fight against poverty [2].

The growth and development and even functional capacity of child are hampered by health problems. Some of the illness may make them disable temporarily or permanently. Infection 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 [3].

The genitourinary system commonly seen in children is Nephrotic syndrome. It is one of the several manifestations of glomerulonephritis. Nephrotic syndrome in children differs from that of adults in several aspects like etiology; clinical manifestations, prognosis and outcome, hence require a special consideration [3].

The first recorded description of Nephrotic syndrome dates to the 15th century. Later, Volhard and Fahrl popularised the term Nephrosis, using it to describe a major classification of bilateral renal disease. Today, Nephrotic syndrome is recognised as a common chronic illness in childhood. Although Nephrotic syndrome may be associated with many renal diseases, the most common form in childhood is Primary Nephrotic Syndrome, which develops in the absence of features of nephritis [4].

The prevalence of Nephrotic Syndrome worldwide is approximately 16 cases per 100,000 children with an incidence of 2 to 7 per 100,000 children. (1) Males appear to be more affected than females at a ratio of 2:1 in children.⁵

There is an increased familial incidence, particularly among siblings [3]. The incidence of Nephrotic syndrome is more prevalent in Asian children (6.2-15.6/100 000/year) and Arabian children (9.2/100 000/year) but Rates were lower in children at around 0.1/100 000 / year with the exception of minimal change disease where incidence was reported to be 2.0/100 00/year in Caucasian children [6].

Infection is an important cause of morbidity and mortality in Nephrotic children especially in developing countries. About 5-8 Children with Primary Nephrotic Syndrome (PNS) have increased susceptibility to bacterial infections and various infections may result in relapses or steroid resistance or may trigger the onset of disease. Relapses in steroid sensitive Nephrotic syndrome often follow infections of upper airway or gastrointestinal tract. It is estimated that 52–70% of relapses among children in developing countries chiefly follow the upper respiratory tract infection. Common infections associated with either onset of disease or during the course of disease are acute upper and lower respiratory infections (ARI) including pneumonia with or without emphysema, skin infections including impetigo and cellulites, acute gastroenteritis (watery diarrheal) or dysentery, urinary tract infections (UTI) and primary peritonitis [3].

Objectives

1. To assess the knowledge among care givers regarding care of child with nephrotic syndrome before administration of information booklet.
2. To assess the knowledge among care givers regarding care of child with nephrotic syndrome after administration of information booklet.

3. To assess the effectiveness of information booklet on knowledge among care givers after administration of information booklet.
4. To find out the association between knowledge score of care givers regarding care of child with nephrotic syndrome and selected demographic variables.

Material & Method

Hypothesis

H₀: There is no significant difference between knowledge of caregivers about care of child with nephrotic syndrome before and after giving the information booklet.

Methodology

In order to achieve the desired objectives of the study pre experimental research approach with single group pre-test, post-test research design was adopted for the present study. Using non- probability purposive sampling 60 caregivers of child with nephrotic syndrome in selected hospital of Pune city. After obtaining administrative approval and written consent from the participants, tool was administered for data collection. Data collection was accomplished by using tool comprised of:

- **Section 1:** Deals with Demographic data of the care givers and child with nephrotic syndrome. It includes Part A and B.

Part A. Demographic data of the care givers of child with nephrotic Syndrome. It includes age of the care givers, gender, education, and relationship with child, family history, and no of times the child is hospitalised with nephrotic syndrome.

Part B. Demographic data of the child with nephrotic syndrome. It includes age of child, gender of child, birth order of the child,

- **Section 2:** This section consists of 24 semi-structured questionnaires regarding care of child with nephrotic syndrome.

On the first day, pre-test knowledge assessment was assessed by using a semi-structured questionnaire. After the pre-test, each study subjects was provided with a copy of information booklet. They were requested to read the information booklet carefully at their convenient time and they were required to give retest after 7th days. Post-test knowledge assessments were taken on the 7th day after administration of information booklet by giving semi-structured questionnaire to each subject.

Result

Section I

Description of (caregivers) based on their demographic variables.

Table 1: Description of (caregivers) based on their demographic variables in terms of frequency and percentages n=60

Demographic variable	Freq	%
Age of care giver in years		
20 to 30	40	66.7%
31 to 40	15	25.0%
41 to 50	5	8.3%
Gender of care givers		
Male	19	31.7%
Female	41	68.3%

Education of care givers		
Primary	24	40.0%
Secondary	35	58.3%
Higher secondary	1	1.7%
Relation with child		
Mother	37	61.7%
Father	17	28.3%
Grandmother	4	6.7%
Grandfather	2	3.3%
Family history with Nephrotic Syndrome		
No	60	100.0%
Yes	00	00%
How many times child Hospitalized with Nephrotic Syndrome		
1st Time	25	41.7%
2nd Time	27	45.0%
3rd Time	8	13.3%

Table 2: Description of child with nephrotic syndrome based on their demographic variables in terms of frequency and percentages

Demographic variable	Freq	%
Age of child with Nephrotic Syndrome		
0-5 years	46	76.7%
6-10 years	14	23.3%
Gender of the Child		
Female	20	33.3%
Male	40	66.7%
Birth Order		
1st	38	63.3%
2 nd	18	30.0%
3 rd	4	6.7%
At what age Child diagnosed as a nephrotic syndrome		
Upto 1 year	47	78.3%
1-2 Years	7	11.7%
2-3 years	2	3.3%
3-4 years	4	6.7%

Table no 1 and 2 depicts majority of the care givers had age 20-30 years, 8.3% of them had age 41-50 years. Majority of them were females.

Majority of care givers had secondary education and 1.7% of them had higher secondary education.

Majority of care givers were mothers, 3.3% of them were grandfathers. None of them had family history of Nephrotic syndrome.

Majority of care givers had their child hospitalized for second time and 13.3% of them had their child hospitalized for third time with nephrotic syndrome.

Majority of care givers children had age up to 5 years and 23.3% of them had age 6-10 years. Majority of them were males and minority of them were females.

Majority of care givers were child with first birth order and 6.7% of them were third child.

Majority of the children were diagnosed as a nephrotic syndrome at age up to one year, and 3.3% of them were diagnosed at age 2-3 years.

Section II

Analysis of data related to the knowledge among caregivers before administration of information booklet regarding care of child with nephrotic syndrome. n=60

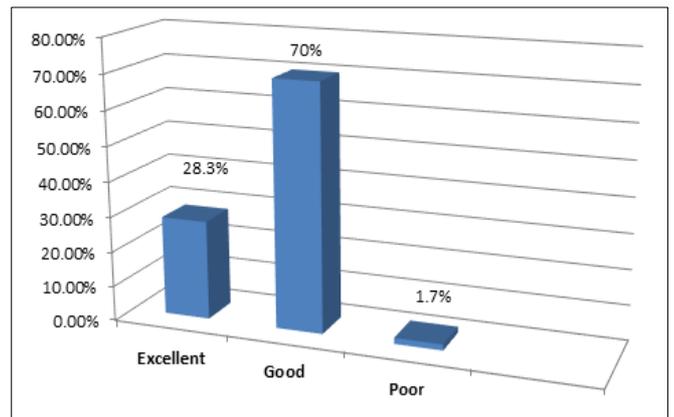


Fig 1: Pre-Test Knowledge among Care Givers of child of Nephrotic syndrome

Bar diagram show the knowledge of care givers before administration of information booklet, majority of the caregivers had good knowledge and 1.7% of them had poor knowledge regarding care of child with nephrotic syndrome.

Section III

Analysis of data related to the knowledge among caregivers after administration of information booklet regarding care of child with nephrotic syndrome n=60

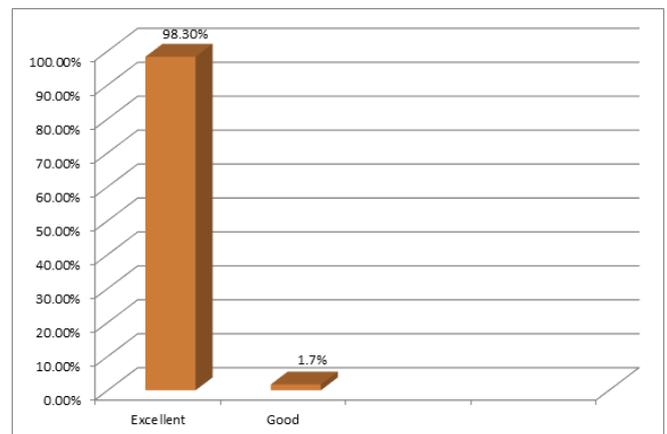


Fig 2: Post-test knowledge among caregivers of child of Nephrotic syndrome.

Bar diagram show the knowledge of caregivers after administration of information booklet, majority of the caregivers had excellent knowledge and only 1.7% of them had good knowledge regarding care of child with nephrotic syndrome.

Section IV

Analysis of data related to the effectiveness of information booklet on knowledge among caregivers after administration of information of information booklet regarding care of child with nephrotic syndrome n=60

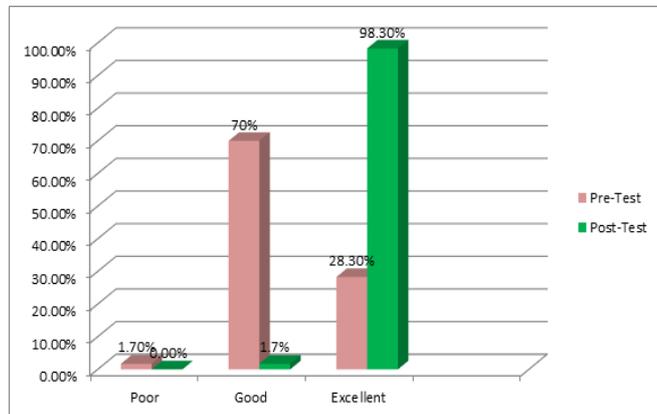


Fig 3: Effectiveness of information booklet on knowledge among caregivers after administration of information of information booklet regarding care of child with nephrotic syndrome

Before administration of information booklet, majority of the caregivers had good knowledge and 1.7% of them had poor knowledge regarding care of child with nephrotic syndrome. After administration of information booklet, majority of the caregivers had excellent knowledge and 1.7% of them had good knowledge regarding care of child with nephrotic syndrome. This indicates that there is remarkable improvement in the knowledge of caregivers regarding care of child with nephrotic syndrome.

Table 3: Effectiveness of information booklet on knowledge among caregivers after administration of information booklet regarding care of child with nephrotic syndrome n=60

knowledge	Mean	SD	t	df	P value
Pre test	14.2	3.1	15.6	59	0.000
Post test	20.5	1.7			

Researcher applied paired t-test for the comparison of pre-test and post-test knowledge of caregivers regarding care of child with nephrotic syndrome. Average knowledge score of caregivers in pre-test was 14.2 which increased to 20.5 in post-test. T-value for this comparison was 15.6 with 59 degrees of freedom. Corresponding p-value was 0.000, which is small (than 0.05), null hypothesis is rejected. Information booklet was found to be significantly effective in improving the knowledge of the caregivers regarding care of child with nephrotic syndrome.

Section V

Table 4: Fisher’s exact test for association on knowledge of caregivers regarding care of child with nephrotic syndrome with selected demographic variables n=60

Demographic variable		Poor	Average	Good	p-value	Inference
Age of care Giver	20 to 3years	0	31	9	0.023	Significant
	31 to 4years	1	10	4		
	41 to 5years	0	1	4		
Gender of care Givers	Male	1	13	5	0.466	Not significant
	Female	0	29	12		
Education of care givers	Primary	0	17	7	1.000	Not significant
	Secondary	1	24	10		
	Higher secondary	0	1	0		
Relation with Child	Mother	0	27	10	0.091	Not significant
	Father	1	13	3		
	Grandmother	0	2	2		
	Grandfather	0	0	2		
How many times child Hospitalized with Nephrotic Syndrome	1st Time	0	18	7	0.440	Not significant
	2nd Time	1	20	6		
	3rd Time	0	4	4		
Age of Child with Nephrotic Syndrome	0-5 years	1	32	13	1.000	Not significant
	6-10 years	0	10	4		
Gender of the Child	Female	0	14	6	1.000	Not significant
	Male	1	28	11		
Birth Order	1 st	0	26	12	0.385	Not significant
	2 nd	1	12	5		
	3 rd	0	4	0		
At what age Child diagnosed as a nephrotic syndrome	Up to 1 year	1	32	14	0.814	Not significant
	1-2 Years	0	6	1		
	2-3years	0	1	1		
	3-4 years	0	3	1		

Since p-value corresponding to demographic variable age of care giver in years is small (than 0.05),so due to the age increase there is increased in knowledge of the caregivers because the caregivers are spending more time with the child who is suffering from nephrotic syndrome. It was

found to have significant association with knowledge of the caregivers regarding care of child with nephrotic syndrome.

Discussion

The findings of the study have been discussed with

reference to the objectives. The present study was undertaken to determine the effectiveness of information booklet about care of child with nephrotic syndrome among caregivers. In this section the major findings of the study have been discussed with reference to the objectives and hypothesis.

The pre testing of caregivers on knowledge regarding child with nephrotic syndrome shows only 28.3%, care givers have excellent knowledge score. Which indicate the need for imparting necessary education and information on care of child with nephrotic syndrome.

Based on the objectives the investigator tried to evaluate the existing level of knowledge of 60 caregivers and found the effectiveness of the information booklet on caregivers of child with nephrotic syndrome.

In the pre-test majority of caregivers had a good knowledge i.e 70%. Whereas in the post-test majority of caregivers had excellent knowledge score.

In the pre-test care giver's mean score of knowledge regarding awareness about care of child with nephrotic syndrome is 14.2 whereas in the post test, it is increased up to 20.5.

These findings indicate the information booklet was effective to increase the knowledge of the care givers regarding the care of child with nephrotic syndrome.

In the present study the value calculated to find out the association knowledge of caregivers regarding care of child with nephrotic syndrome with selected demographic variables and increase in knowledge level is $<0.05\%$, with relation to age, education, gender, relationship, age group of child, gender of child and birth order of the child.

The association of age of care givers and knowledge about care of child with nephrotic syndrome among care givers, the p value is 0.023. P-value is less than 0.05. So there is a significant relation between age group of care givers and knowledge about care of child with nephrotic syndrome. While the association between education of caregivers and knowledge, the p value is 1.000, p value is greater than 0.05 so there was no significant relation between education of care givers and knowledge regarding care of child with nephrotic syndrome. Similarly the association between the gender of care givers and knowledge of care of child with nephrotic syndrome, the p value is 0.466; p value is greater than 0.05 so there is no significant relation between gender of care givers and knowledge about care of child with nephrotic syndrome.

The same way the association between relation of child with caregivers and knowledge level of care of child with nephrotic syndrome, p value is 0.091, p value is greater than .05 so there was no significant relation between relation of child with caregivers and knowledge of caregivers about care of child with nephrotic syndrome.

The same way the association between age of child of caregivers and knowledge level of care of child with nephrotic syndrome, p value is 1.000, p value is greater than .05 so there was no significant relation between age of child of caregivers and their knowledge about care of child with nephrotic syndrome.

The association between gender of child and knowledge level of care of child with nephrotic syndrome, p value is 1.000, p value is greater than .05 so there was no significant relation between age of child and knowledge about care of child with nephrotic syndrome.

The association between birth order of child of caregivers with nephrotic syndrome and knowledge level of caregivers, p value is 0.385; p value is greater than .05 so there was no significant relation between birth order of child of caregivers and knowledge of caregivers regarding care of child with nephrotic syndrome.

The association between at what age child diagnosed as a nephrotic syndrome and knowledge level of care of child with nephrotic syndrome, p value is 0.814; p value is greater than .05 so there was no significant relation between diagnosed child at what age as a nephrotic syndrome and knowledge about care of child with nephrotic syndrome.

Calculated p value is greater than the table value at 5% level, that means there is no significant relationship of the age group, education, relation with child, how many times child hospitalized with nephrotic syndrome, birth order of child, at what age child diagnosed as a nephrotic syndrome with pre-test score regarding care of child with nephrotic syndrome.

From all the above findings it can be concluded that in pre test most of the caregivers had good knowledge score and in post test most of the caregivers had excellent knowledge regarding care of child with nephrotic syndrome in children. After administration of the information booklet.

This clearly indicates that the information booklet was effective in increasing the knowledge of the care givers regarding care of child with nephrotic syndrome.

This finding of the study is supported by a similar study conducted by Ashrafalsadat Hakim, SiminMadhooshi, EhsanValavi in the year 2013. This study was to assess the knowledge of parents of children with nephrotic syndrome toward recurrence of disease in Iran. The result shows that only 18.2 % had good knowledge about their child's recurrence of symptoms. The study reveals that the quantity of parental information concerning symptoms of Nephrotic syndrome disease recurrence is insufficient so upgrading parental awareness and knowledge through educational courses and providing comprehensive and necessary information concerning disease, signs and symptoms, and its complications can greatly improve the quality of the cares levels.⁷

Also, Finding of the present study also show that the age group, education, Relation with Child, How many times child Hospitalized with Nephrotic Syndrome, birth order Child, At what age Child diagnosed as a nephrotic syndrome, At what age Child diagnosed as a nephrotic syndrome and care of child with nephrotic syndrome .

Conclusion

On the basis of the findings of the present study, it can be concluded that the knowledge of caregivers were improved after providing information booklet. Hence, information booklet was found effective in improving the knowledge of caregivers regarding care of child with nephrotic syndrome. Educating people on childhood diseases like care of child with nephrotic syndrome, by the use of information booklet has shown significant effect in improving the knowledge of care givers. Thus, this helps in better child caring practices and lessens the problems faced by parents as well as caregivers in raising their children.

Recommendations

Keeping in view the findings of the study, the following recommendations are made

- A similar study can be done on a larger sample.
- A study can be conducted to assess the attitude and practices of caregivers of child with nephrotic syndrome.
- A study may be conducted to evaluate the effectiveness of Information booklet versus other methods of health teaching on the similar problem.
- A study can be done on the association between various demographic variables, which are significant or larger samples.
- Similar study can be conducted in home management of care of child with nephrotic syndrome in community setting.

Limitation

1. Sample selected for the study was limited to setting only.
2. The assessment of effect of the information booklet is limited to one post-test conducted on the seventh day of dissemination of the information booklet.
3. Data was collected only in one month's there was limited of time period.
4. The study was limited to the experience level of the researcher.

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