

A study to Assess the Effectiveness of Planned Teaching Program on Knowledge Regarding Ill Health Effect of Prolong Use of Commercial Diapers for Toddler, among Mothers at Selected Urban Area, of Nagpur City

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Abstract

One of the most significant of the twentieth century the disposable diaper or ("nappy") continues to explore rapidly in the early twenty-first century becoming smaller, cheaper, easier to use, friendlier to the environment and increasing every year. Today more than nine times of every two diaper changes in the developed world, and growing percentages else where are disposables. Diaper rash, also known as diaper dermatitis, is inflammation of the skin that appears on the skin under a diaper, notably in toddlers from age 1 to 3 years, with the highest incidence found in age of 1 to 5 years. However, this concern may be also seen in adults who wear diapers for incontinence of urine or stool. As one of the most common skin conditions in toddlers, diaper rash was reported to account for approximately 20% of all pediatric office visits. Although the disorders are not usually life- threatening, it may cause erythema and itching in the affected areas of toddlers and may cause significant distress for parents.

Keywords: Disposable diapers; Dermatitis.

Introduction

"Children's are our future and our most precious resources". Health of the future children depends on the practice adopted by the family. The first few

days are very difficult for the toddlers to urinate and defecate.¹ The Middle English word diapers originally refer to a type of cloth used. The first cloth diapers consisted of a specific type of soft tissue sheet, cut into geometric shapes. This type of

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pattern "Diapering" and eventually gave its name to the cloths used to make dippers.

This usage stuck in the "United State" and "Canada" following the "British colorization of North America", but in the "United Kingdom" the word "Nappy" took its place. The first waterproof diaper cover was invented in 1946 by "Marion Donovan", a professional-turned-housewife who wanted to ensure her children's clothing and bedding remained dry while they sleep. She also invented the first paper diaper, but executives did not invest in this idea and it was consequently scrapped for over ten years. Another disposable diaper design was created by "Valerie Huuter" "Gordon" and patented in 1948.²

Background of the Study:

The causes of diaper rash are varied. Some of the causes include yeast infection, irritation from paper diapers-generally to sensitive skin, reaction to the soap used to wash the diaper, then sometimes digestive disturbance from some food that the nursing mother has eaten, and causes also include the reaction to some antibiotic medications.

The symptoms are a red rash, sometimes mild, sometimes a bright red, almost scalded look to the skin around the genitals and bottom of the baby. Parents often incorrectly feel that the rash is a visual representation of poor care taking skills.

However, parents need to understand that the basic causes for this common kind of skin irritation are still under active debate in the field of dermatology and that neglectful parenting is not among the possible factors.³

In the United States, diaper dermatitis represents about 10% to 20% of all skin disorders managed by a general pediatrician. While the rash may develop as early as the before school age, the most frequent time period is between 1 to 3 year of age. Studies have indicated that, at any point of time, between 7%-35% of children in these age range are experiencing such a skin rash.

The skin under the diapered area is continuously threatened by exposure to change in pH levels, over hydration, mechanical friction, faecal enzymes, making diapers rash a common occurrence among babies up to one third of toddlers may exhibit clinical symptoms at diaper rash at any time, and more than half of babies between the ages at 1 to 3 year develop diaper rash.⁴

Objective of the Study

- To evaluate the effectiveness of planned teaching on knowledge regarding ill health effects.
- To assess the knowledge among mothers.
- To evaluate the post-test of mothers.
- To correlate the data with selected demographic variables.

Limitation: Study is limited to mothers of the urban area. Study is limited to 60 mothers only.

Materials and Methods

Research Approach: The research approach used for this study was quantitative research approach. The study was conducted with the primary objective of determining the effectiveness of planned teaching on knowledge regarding ill health effects of prolonged use of commercial diaper in toddler among mothers in selected urban area.

Research Design: Pre-experimental one group pre-test post-test design has been used to find out effectiveness of planned teaching on knowledge regarding ill health effects of prolonged use of commercial diaper in toddler among mothers in selected urban area. A pre-test was administered on day 1 by means of structured questionnaire followed by planned teaching, and post-test was conducted on 7th day.

Sample Size: In this study samples size was 60 mothers in selected urban area.

Result and Discussion

The present study has been taken up to assess the effectiveness of planned teaching on knowledge among mothers regarding ill-effects of prolonged use of commercial diaper for toddler in selected urban area. Analysis and interpretation are based on the objectives of the study. A structured questionnaire to collect the knowledge score was used for data collection. The analysis was done with the help of inferential and descriptive statistics. The analysis and interpretation of the observations are given in the following section:

Section A: Distribution of mothers with regards to demographic variables.

Table 1: Percentage wise distribution of mothers according to their demographic characteristics

n = 60

Demographic variables	No. of mothers	Percentage (%)
Age (years)		
18–21 years	0	0.0
22–25 years	9	15.0
26–30 years	31	51.7
>30 years	20	33.3
Educational level		
Illiterate	0	0.0
10 th	7	11.7
12 th	28	46.7
Graduate	25	41.7
Occupation		
Homemaker	40	66.7
Private Job	13	21.7
Govt. Job	0	0.0
Other	7	11.7
Gravida		
First	15	25.0
Second	33	55.0
Third	8	13.3
Fourth	4	6.7
Income of the family (₹)		
<₹5000	2	3.3
₹50001–10000	7	11.7
₹10001–15000	34	56.7
>₹15000	17	28.3

Section B: Assessment of level of knowledge regarding ill-effects of prolonged use of commercial diaper for toddler among mothers from selected urban area.

The Table 2 shows that 75% of the mothers in pre-test had average level of knowledge score, 25% in pre-test and 90% in post-test had good level of knowledge score and 10% of the mothers

in post-test had excellent level of knowledge score. Minimum knowledge score in pre-test was 8 and in post-test it was 16, maximum knowledge score in pre-test was 21 and in post-test it was 25. Mean knowledge score in pre-test was 12.73 ± 2.95 and in post-test it was 19.51 ± 1.98 and mean percentage of knowledge score in pre-test was 45.47 ± 10.53 and in post-test it was 69.70 ± 7.09 .

Table 2: Assessment with level of knowledge

n = 60

Level of knowledge	Score range	Level of knowledge score	
		Pre-test	Post-test
Poor	1–7 (0–25%)	0 (0%)	0 (0%)
Average	8–14 (26–50%)	45 (75%)	0 (0%)
Good	15–21 (51–75%)	15 (25%)	54 (90%)
Excellent	22–28 (76–100%)	0 (0%)	6 (10%)
Minimum score	8	16	
Maximum score	21	25	
Mean knowledge score	12.73 ± 2.95	19.51 ± 1.98	
Mean % Knowledge Score	45.47 ± 10.53	69.70 ± 7.09	

Section C: Effectiveness of planned teaching programme on knowledge regarding ill-effects of prolonged use of commercial diaper for toddler

among mothers from selected urban area.

The table 3 shows the comparison of pre-test and post-test knowledge scores of mothers regarding ill

health effects of prolong use of commercial diapers for toddler. Mean, standard deviation and mean difference values are compared and student's paired *t*-test is applied at 5% level of significance. The tabulated value for $n = 60-1$, i.e. 59 degrees of freedom was 1.98. The calculated *t*-value, i.e. 21.75 are much higher than the tabulated value at 5%

level of significance for overall knowledge score of mothers which is statistically acceptable level of significance. Hence it is statistically interpreted that the Planned Teaching Programme on overall knowledge regarding ill health effects of prolong use of commercial diapers for toddler was effective. Thus the H1 is accepted.

Table 3: Significance of difference between knowledge score in pre- and post-test of mothers

Overall	Mean	SD	Mean difference	<i>t</i> -value	<i>p</i> -value
Pre-test	12.73	2.95	6.78 ± 2.41	21.75	0.0001 S, $p < 0.05$
Post-test	19.51	1.98			

$n = 60$

Section D: Association of post-test knowledge scores regarding ill-effects of prolonged use of commercial diaper for toddler among mothers with their selected demographic variables.

Reliability Analysis: Parallel Form method of reliability. By using Parallel form method of reliability, it is found to be 0.8378% and hence tool is reliable and valid.

Table 4: Association of post-test knowledge score regarding ill health effects of prolong use of commercial diapers in relation to age.

Age (years)	No. of mothers	Mean post-test knowledge score	<i>F</i> -value	<i>p</i> -value
18-21 years	0	0 ± 0	0.05	0.94 NS, $p > 0.05$
22-25 years	9	12.44 ± 3.08		
26-30 years	31	12.74 ± 3.06		
>30 years	20	12.85 ± 2.85		

$n = 60$

Table 5: Method of reliability Analysis

Pearson's Correlation Coefficient	0.721
Reliability (%)	0.8378%

Discussion

Diaper dermatitis also known as diaper rash, is one of the most common skin disorders in toddlers and toddlers. It is commonly caused by irritation in the diaper area, friction, wetness, inappropriate skin care, microorganisms, antibiotics, and nutritional defects which are important.⁵ The rash is usually evident in the abdomen, genitalia and inside the skin folds of the thighs and buttocks and mostly affects toddlers between the ages of 4 to 15 months Diaper (napkin) dermatitis is an acutely presenting inflammatory irritant contact dermatitis of the diaper region. such as friction, wetness, inappropriate skin care, microorganisms, antibiotics, and nutritional defects, as stated above.⁶ The investigator has selected this study keeping in mind the necessity to address this situation and therefore the purpose of the study was assessment of the effectiveness of planned teaching on knowledge regarding ill

health effects of prolong use of commercial diaper in toddler among mothers in selected urban area. A pre experimental study with one group pre-test and post-test was conducted on 60 mothers in selected urban area to the assessment of the effectiveness of planned teaching on knowledge regarding ill health effects of prolong use of commercial diaper in toddler among mothers in selected urban area. A one group pre-test post-test design was used for the assessment of the existing knowledge and improvement after the implementation of planned teaching within the interval of 7 days.

Conclusion

After the detailed analysis, this study leads to the following conclusion, planned teaching on ill health effects of prolong use of commercial diaper in Toddler, among mothers, was found to be

effective in improving the knowledge of mothers of Toddler. Mothers of Toddler had a significant gain in knowledge regarding ill health effects of prolong use of commercial diaper in Toddler. The demographic variables did not show any association with the knowledge score. Hence, based on the above cited findings it was concluded undoubtedly that the written prepared material by the researcher in the form of the planned teaching helped participants to improve their knowledge regarding ill health effects of prolong use of commercial diaper in Toddler. In comparison of pre and post-test knowledge level showed that there was significant increase in the knowledge score of subject regarding ill health effects of prolong use of commercial diaper in Toddler. Hence, in this study H0 is rejected and H1 is accepted.

Implications of the Study

Conducting research was a way of improving the existing knowledge among subjects. The implication of the study can be discussed under four broad areas, nursing practice, nursing education, nursing administration and nursing research.

Nursing Service

1. Regular health education program should be carried out by hospital Nurse, in maternity and pediatric wards.
2. The community health educators can assess needs of the mothers of Toddler regarding various aspects of ill health effects of prolong use of commercial diaper in Toddler and provide services to them through organizing health checkup camps at urban area.
3. Mothers of the Toddler should be provided with a secure & healthy environment to avoid toddler disorder related complications.

Nursing Education

1. Nurse educators need to lay emphasis on diaper dermatitis which should include causes, clinical manifestation, treatment and preventive aspects.
2. Nurse educators need to lay emphasis on education regarding ill health effects of prolong use of commercial diaper in Toddler by using various A-V aids etc. Charts, puppet shows, flip charts and the actual devices, so that they can be used for health teaching to community people.

Nursing Research: Nursing Research is a systematic attempt to obtain meaningful answers to phenomenon or events through the application of scientific procedures. It is an objective, impartial, empirical and logical analysis and according to controlled observations that may lead to the development of generalizations, principles or theories resulting to some extent in prediction and control of events that may be the consequences or cause of specific phenomenon. The finding of the study would add to the existing body of knowledge in the nursing profession. It would also provide a baseline data to educate mothers of Toddler, staff and student nurses regarding ill health effects of prolong use of commercial diaper in Toddler and can be used for conducting further studies.

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