



## TO ASSESS THE EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING DIAPER DERMATITIS AMONG MOTHERS OF CHILDREN IN SELECTED AREAS.

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### ABSTRACT

**Background:** Diaper rashes are a common skin issue in children, with 50% of newborns experiencing a rash, and only 5% having a severe one. Diaper dermatitis is most common between 9 and 12 months, and can be attributed to factors like nutritional transitions from breast milk to formula milk and solid meals. Breastfed babies have less rashes than formula-fed ones. Diaper dermatitis is three to four times more common in newborns with diarrhea. In India, it affects 4 to 35 percent of children under two due to components like humidity, non-breathability, excreta adhesion, poorer skin barrier, and skin rubbing. **Objectives:-** 1. To assess the Pre-test knowledge score regarding diaper dermatitis among mothers of children in selected areas. 2. To assess the effectiveness of the self-instructional module on knowledge regarding diaper dermatitis among mothers of children in the selected areas. 3. To find out association of study findings in selected demographic variables. **Material And Method Used:** The research design used for the study was pre-experimental, one group pre-test post-test design with quantitative research approach. 100 subjects were selected by the simple random sampling technique duration of study is 15 days. The data was collected with the help of a self-structured questionnaire. validity and reliability of tool was determined with appropriate standardized methods. **Result:** the findings suggest that the knowledge of mother of children about diaper dermatitis has improve The mean difference between Pre and Post scores is  $15.33 \pm 0.6108$ , demonstrating a substantial increase in knowledge. The P-value is  $<0.01$ , confirming that the improvement in knowledge scores after the intervention is statistically significant. **Limitation** the study only limited to selected areas. **Conclusion:** Study concluded that it was found that mothers had average knowledge in pre-test. Efforts are made to improve knowledge regarding diaper dermatitis with the help of self-instructional module mothers enhance their knowledge about diaper dermatitis.

**KEYWORDS :** Assess, Diaper Dermatitis, Self-Instructional Module , Knowledge, Mothers.

### INTRODUCTION

One of the most common skin conditions in babies is diaper rash, which can be brought on by long-term contact to feces and urine, irritating brands, and improper diapering practices. Due to the frequent usage of bulky diapers, diaper rash can cause delays in motor abilities, including crawling, walking, and practicing using the toilet. For children who are not yet toilet trained or who are bedwetting, the usage of disposable diapers is rising, although the majority of parents are unaware of the risks associated with using diapers.<sup>1</sup>

### NEED OF THE STUDY

Diaper dermatitis prevalence in India, with a 3-35% incidence in the first two years of life, with the incidence tripled in babies with diarrhea.

The World Health Organization (WHO) reports that 1.7 billion diarrhea cases occur in children under 5 years of age annually. A study from Indonesia found diarrhea is most common in infants under 1 year and 1-4 years old (11.5%). This high incidence of diarrhea and diaper dermatitis in infants prompts researchers to investigate the correlation between diarrhea duration and diaper dermatitis severity in children aged 0-24 months. Diaper dermatitis is prevalent in India, with a 3-35% incidence in the first two years of life, with the incidence tripled in babies with diarrhea<sup>2</sup>

Mrs. Florin Lavina Lasrado, 2022, study was conducted to assess the effectiveness of awareness programs on Knowledge and attitude regarding the use of diaper-related problems among mothers in selected baby Care centers at Mangaluru. The pre-test assessment showed that 51.67% of mothers had inadequate knowledge, while only 5% had adequate knowledge. After the awareness program, 60% had moderate knowledge, 25% had adequate knowledge, and 15% had inadequate knowledge. The post-test results showed that the mean post-test knowledge and attitude scores were

significantly higher than the pre-test scores, indicating that the awareness program was effective in enhancing mothers' knowledge and attitude toward diaper-related problems.<sup>3</sup>

### OBJECTIVES:-

- To assess the Pre-test knowledge score regarding diaper dermatitis among mothers of children in selected areas.
- To assess the effectiveness of the self-instructional module on knowledge regarding diaper dermatitis among mothers of children in the selected areas.
- To find out association of study findings in selected demographic variables.

### HYPOTHESIS

H<sub>0</sub>: There is no significant difference between the pre-test and post-test knowledge score regarding diaper dermatitis among the mothers of children.

H<sub>1</sub>: There is significant difference between the pre-test and post-test knowledge score regarding Diaper dermatitis among Mothers of children.

### MATERIAL AND METHODS

**Study Design:** One group pre-test post-test research design

**Study Setting:** selected areas.

**Sample:** The participants was mothers of children upto 2 years of age

**Sample Size :** 100

Since the population size is finite: N=100, the corrected sample size is:

$$n' = \frac{n * N}{n + N - 1} = \frac{600.2279 * 100}{600.2279 + 100 - 1} = 85.841$$

Rounded up to: 86.

15% drop out of 86 =  $86 \times 15/100$

= 12.9 Rounded up to 13

$86 + 13 = 99$  Rounded up to 100

**Sampling Technique :** simple random sampling technique.

#### Inclusion Criteria:

Mothers who are willing to participate in the study. Mothers of children up to 2 year. Mothers, who can understand, read, write Marathi, Hindi and English language.

**Exclusion Criteria** Mothers who have already participated in training program regarding diaper dermatitis.

Independent variables- self-instructional module.

Dependent variables - knowledge

Demographic variables - The variables are age of mother, religion, education of mother, occupation, family type, monthly family income, number of children .

#### Data Collection Tool

**Section A :** Demographic data sheet

**Section B:** self- structured knowledge questionnaire total 25 questions was taken for data collection.

#### Validity And Reliability Of Tool

The content validity of tool was established using the content validity index ( CVI )which was found to be 0.89, indicating strong agreement among experts regarding the relevance and clarity of the items.

Construct validity was assessed through exploratory factor analysis (EFA) using principal component analysis (PCA) .

#### Reliability

Reliability of the questionnaire was calculated by using cronbach's alpha test. The reliability of tool was  $r = 0.858$  hence tool was valid for study. pilot study conducted before main study result shown that the tool is valid and reliable

#### Description Of Intervention

Self-instructional module on diaper dermatitis distribution is an interactive learning experience designed to enhance the knowledge of mothers of children in selected areas. The module contains images of diaper rash. from introduction to prevention about diaper dermatitis and this module contains useful preventive measures for diaper dermatitis. And it is very useful for mothers to gain knowledge for diaper rash.

The module contains

- Definition of diaper dermatitis
- Causes of diaper dermatitis
- Sign and symptoms of diaper dermatitis
- Prevention and management of diaper dermatitis

#### STUDY PROCEDURE AND DATA COLLECTION

The study was conducted only after the approval of Institutional Ethical Committee. Investigators visit the research area and obtained the necessary permission from the concerned authorities. Mothers of children who fulfill inclusion criteria was taken for study pretest paper was given to mother for 30 min to solve questionnaire after 30 min pretest paper was collected and self- instructional module administered to mothers and Post-test was conducted on the 7<sup>th</sup> day with the same questionnaire.

#### Details Of Pilot Study Conducted :

Pilot study was conducted to check feasibility and for calculating sample size .

Sample size taken 10 as estimated on the basis of 10 % of sample size

#### Statistical Analysis.

Overall results for the outcome variables was listed in tables and graphs for both descriptive

( Mean, mean percentage, standard deviation ), and inferential ( paired t-test used and association result was analyzed using chi-square test ).

#### RESULT

**Table No. 1 : Table Showing Assessment Of The Level Of Pre-Test Score Regarding Diaper Dermatitis Among The Mothers Of Children In Selected Areas.**

| Pre Test Score       | Level of Knowledge Score |                |
|----------------------|--------------------------|----------------|
|                      | Frequency (f)            | Percentage (%) |
| Poor Score           | 25                       | 12.4           |
| Average Score        | 62                       | 30.8           |
| Good Score           | 13                       | 6.5            |
| Minimum Score        | 4                        |                |
| Maximum Score        | 12                       |                |
| Mean Knowledge Score | $5.980 \pm 1.842$        |                |

**Table No 2 Showing Assessment Of The Level Of Post Test Score Regarding Diaper Dermatitis Among The Mothers Of Children In Selected Areas**

| Post Test Score      | Level of Knowledge Score |                |
|----------------------|--------------------------|----------------|
|                      | Frequency (f)            | Percentage (%) |
| Poor Score           | 1                        | 0.5            |
| Average Score        | 52                       | 25.9           |
| Good Score           | 47                       | 23.4           |
| Minimum Score        | 18                       |                |
| Maximum Score        | 23                       |                |
| Mean Knowledge Score | $21.33 \pm 12.31$        |                |

The mean Pre score is 5.98 with a standard deviation (SD) of 1.8422, while the mean Post score is significantly higher at 21.33 with an SD of 1.2314, indicating less variability in the Post scores. The mean difference between Pre and Post scores is  $15.33 \pm 0.6108$ , demonstrating a substantial increase in knowledge. The P-value is  $< 0.01$ , confirming that the improvement in knowledge scores after the intervention is statistically significant.

#### DISCUSSION

According to premise, the level of p-value is 0.022 indicating s, and the statistically significant association between age groups and knowledge categories at the 0.05 significance level. While the focus of the present study was on improving knowledge, and the specific group of participants was mothers, the outcomes are in harmony with the findings from the study by Aparna kale in 2020. The final study was conducted in Hospital Data collection was done on 70 mothers. that knowledge of the mothers of pre-test mean score was 8.08, standard deviation was 1.79 and in post-test mean score was 12.17 standard deviation was 1.65  $t = -35.64$  and  $P = 0.000$ , that is, it is highly significant as  $P < 0.005$ ; therefore, there is increase in the knowledge score after planned teaching program.<sup>4</sup>

#### CONCLUSION

It is statistically interpreted that self- instructional module on knowledge regarding diaper dermatitis was effective. The degrees of freedom ( df ) for the analysis is 97, and the calculated T-test value of -70.69 indicates a significant difference between the two groups. The P-value is  $< 0.01$ , conforming that the improvement is statistically significant .There is significant difference between pretest and posttest thus the  $H_1$  is accepted and  $H_0$  is rejected.

#### CONSENT AND ETHICAL APPROVAL

The study was conducted after approval of institutional ethics committee of GMCH Nagpur in 23/02/2024 with reference no 2084. Written consent was taken from each participants. Freedom to withdraw from the study at any point of time was

assured.

**Limitations :** the study is only limited to selected areas.

**Recommendations :**

1. Further studies can be conducted on a large population.
2. Further studies can be conducted in comparative manner between urban and rural areas

**Conflict Of Interest**

There is no conflict of interest in this study.no any risk factors to the subjects of the study.

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