

**Behavior of nursing mothers towards the perineal hygiene of their infants: A qualitative study**

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**Abstract**

**Background:** Perineal hygiene is an important aspect with regard to the health the baby. Lack of Perineal hygiene by nursing mothers could lead to various the behaviors of nursing mothers concerning the perineal hygiene of their baby diseases affecting the child. Aims and Objectives: This study aims to explore the behavior regarding perineal care among nursing mothers and to find out the association of level of knowledge on perineal care among nursing mothers with their selected demographic variables. The objective of the study is to understand the behaviour of nursing mothers towards perineal hygiene health of their baby.

**Subjects and Methods:** Mothers who had babies aged less than 3.5 months coming for vaccination and who met the inclusion criteria were included for the purpose of the study. A qualitative study of the behavior of these mothers with regard to their child’s perineal hygiene will be recorded through a questionnaire. Results: In the present study nearly 37% of them were educated more than graduate, nearly 75.3% of them used to change the diapers around 4 times a day, 60.4% of the respondents were aware that diapers can be the source of skin infection. 70.4 % of the mothers used Diaper Cream to the baby to avoid the rashes. 91.4% of them stopped using diapers after the appearance of rashes. 46.9% of

them said they never used any applicator to apply powder to the perineal areas. Baby wipes was used by 85.2% of the mothers to clean the perineal area of the baby. 50.6% of the mothers used to look for any skin condition or rashes in the perineal area regularly.

**Conclusions:** The study emphasises the knowledge of the mother towards their infants' perineal hygiene and an improved knowledge may reduce the incidence of diaper dermatitis.

**Keywords:** Nursing Mothers, Perineal Hygiene, Infants, Diaper Dermatitis.

### **Introduction**

Perineal hygiene of infants is a matter of concern for nursing mothers across the globe. Prior research highlights how mothers across social classes express similar beliefs that good parenting adheres to the tenets of intensive mothering by being child-centered, time consuming, and self-sacrificing.

Diaper use for babies has been in practice since decades to prevent soiling and for social convenience. Diaper dermatitis is an irritating condition that develops on the skin that is covered by a diaper which causes discomfort to infants and anxiety to parents and the caregiver. It is a very common cutaneous condition in neonates and infants. It may be due to introduction of new foods which leads to skin irritation, peeling or scaling of the skin, red or pink patches and the rashes may become severe causing bleeding.

Diaper dermatitis can develop as early as one week of age, but it is found that the peak incidence occurs between the age of 9 and 12 months. For an infant the main person who cares is usually the mother. She is one who keeps the baby's skin stay healthy by preventing soreness. Great care has to be taken to establish a routine to maintain the baby's skin as healthy and hygienic,

whether at home or in health centre setting. Diaper dermatitis is a general definition used to describe a range of inflammatory skin reactions in the diapering area. It is a common health problem and is estimated to affect up to 1/3 of nappy wearing infants.

Healthcare providers have traditionally recommended water with cloth wipes or cotton wool for cleaning babies nappy areas, however, two seminal studies have shown no greater skin irritation where baby wipes were used. Moreover, baby wipes were associated with a decrease in skin irritation compared to cloth wipes and parents reported baby wipes were more convenient to use.

Baby wipes have been shown to be safe and effective in maintaining skin integrity when compared to the use of water alone. However, no previous study has compared different formulations of wipes. The aim of the Basic study was to identify any differences in incidence of irritant diaper dermatitis (IDD) in infants assigned to three different brands of wipes, all marketed as suitable for neonates, but which contained varying numbers of ingredients. The behavior of nursing mothers concerning the perineal hygiene of their baby is an important aspect with regard to the health the baby. Lack of Perineal hygiene by nursing mothers could lead to various diseases affecting the child.

This study aims to explore the behavior regarding perineal care among nursing mothers and to find out the association of level of knowledge on perineal care among nursing mothers with their selected demographic variables.

### **Objective**

To understand the behaviour of nursing mothers towards perineal hygiene of their baby.

## Materials and method

The present hospital based Qualitative study is observational cross sectional based study which was conducted by the Department of Dermatology from March 2022 to May 2022.

Assuming 95% confidence interval and 10% allowable error ,the sample size estimated for the study turns out to be 81 Using the formula : $n= \left[ \frac{z}{P(1-P)} \right]^2 \times P(1-P)$  (2.@).

Thus the sample size could be assessed using the formula and the statistical data collected by nursing mothers coming for vaccination along with their infants.

A total of 81 Mothers who had babies aged less than 3.5 months coming for vaccination and who met the inclusion criteria were included for the purpose of the study. The study was approved by the Institutional Ethics Committee.

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Informed consent were obtained from the participants' and participant's guardian, prior to data collection. All procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2013.

## Inclusion criteria

1. Healthy baby
2. Mothers using Diapers for baby
3. Baby below 3.5 months coming for vaccination, as the visit of healthy babies below 3.5 months of age under the National Vaccination Program has a higher frequency and the orientation of the mother to their child is the highest at this period.

## Exclusion criteria

1. Child with GI disorder
2. Mother applying steroid creams, since steroids have been most abused by mothers for diaper rash which can give a false sense of healthiness, thus can alter the nexus in a qualitative based study.
3. Non-compliant patients.

The study will need nursing mothers with their infants coming in for their child's vaccination at the Hospital OPD. A qualitative study of the behavior of these mothers with regard to their child's perineal hygiene will be recorded through a questionnaire. Descriptive and inferential statistical analysis has been carried out in the present study. Results on continuous measurements are presented on Mean±SD (Min-Max) and results on categorical measurements are presented in Number (%). Significance is assessed at 5% level of significance. Chi-square/Fisher Exact test has been used to find the significance of study parameters on categorical scale between two or more groups. Percentage of values will give insight for conducting further randomized controlled trials.

## Results

A total of 81 Mothers with Infants less than 3.5 months were included in the study and analyzed.

Table 1: Social Profile of the study subjects

Social Profile	Frequency	Percentage	
Age group	19 to 20 years	7	8.6%
	21 to 30 years	53	65.4%
	31 to 40 years	21	25.9%
Education	Below 10 <sup>th</sup> Std	8	9.9%
	10 <sup>th</sup> Std	17	21.0%
	12 <sup>th</sup> Class	26	32.1%
	Above Graduate	30	37.0%
Parity	Primiparous	45	55.6%
	Multiparous	36	44.4%

In the present study nearly 65.4% of them were aged between 21 to 30 years of age, 25.9% were aged between 31 to 40 years of age and 8.6% of them were between 19 to 20 years of age. The Mean age of the study subjects was found to be 27.27 ±4.8 Years.

Nearly 37% of them were educated more than graduate, 32.1% of them were educated till 12th class and 9.9% of them were below 10th class .55.6% of the study subjects were primiparous in the present study.

Table 2: Responses of the study subjects regarding Personal Hygiene for the baby

		Frequency	Percentage
What do you use for perineal hygiene of your baby	Disposable Diapers	81	100%
	Cloth	8	9.8%
How often do you change the diapers in 24 hours	4 times	61	75.3%
	5 times	13	16.0%
	7 times	3	3.7%
	8 times	3	3.7%
	>8 times	1	1.2%
Do you Reuse the Diaper	Never	80	98.7%
	Sometimes	1	1.3%
How often do you use diaper to your baby	Only at night	25	24.6%
	Only during the day	9	11.1%
	Through out day and night	40	49.4%
	Only while going out	16	19.7%
Do you consider Diapers as the source of skin infections?	Yes	49	60.4%
	No	18	22.2%
	Not Sure	12	14.8%

In the present study all the mothers had a habit of using diapers to the infants and 9.8% of them also used cloths along with the diapers. Nearly 75.3% of them used to change the diapers around 4 times a day, 16% of them did it for 5 times a day and only 1.2% of them used more than 8 diapers per day. 98.7% of them said that they won't re use the diapers. Nearly half of them used the diaper both in the day and at night and 19.7% of them used only while going out. 60.4% of the respondents were aware that diapers can be the source of skin infection.

Table 3: Responses of the mothers regarding improving Baby's Perineal Hygiene

		Frequency	Percentage
Source the knowledge to improve your baby's perineal hygiene?	From doctor	31	38.2%
	From Parents	46	56.7%
	From internet/virtual methods	4	4.9%
	If any other specify	7	8.6%
Do you use Diaper cream	Yes	24	29.6%
	No	67	70.4%
Do you stop using diapers when there is Rash	Yes	74	91.4%
	No	26	08.6%
Do you use the same powder applicator on the Perineal area as on other parts of the baby ?	Use Separate Applicators	13	16.1%
	Same Applicator	30	37.0%
	Never Use Applicator	38	46.9%
How do you clean the Perineal area of the baby?	Baby wipes	69	85.2%
	Cloth	5	6.0%
	Water	4	4.9%
	Water and Soap	4	4.9%
Do you look out for any skin conditions or rashes in the Perineal area?	No	3	3.7%
	Sometimes	35	43.2%
	Always	41	50.6%
	Only on observation of discomfort of baby	8	9.8%

The source of the knowledge to improve the baby's perineal hygiene was obtained by parents to the study subjects in nearly 56.7% of the subjects, 38.2% from the doctors. 70.4 % of the mothers used Diaper Cream to the baby to avoid the rashes.91.4% of them stopped using the diapers after the appearance of the rash. 46.9% of them said they never used any applicator to apply powder to the perineal areas. Baby wipes was used by 85.2% of the mothers to clean the perineal area of the baby.50.6% of the mothers used to look for any skin condition or rashes in the perineal area regularly.

**Discussion**

In the study done by Prithiba G et al 19 revealed that nearly 70% mothers had inadequate knowledge, 28% mothers had moderate knowledge, 2% mothers had adequate knowledge regarding diaper rashes in infants in rural community. The study aimed at assessing the knowledge of mothers on diaper rashes, a descriptive

research design. Whereas the present study assesses the behavior of nursing mothers towards the perineal hygiene of the infants through a qualitative study. The sample size consisted of 144 mothers and here the sample size consists of 81 mothers. A statistically significant association was found between mother's knowledge and number of children, educational status, occupational status, usage of diapers and source of information at  $p > 0.005$ . In the present study the mean age of the study subjects was found to be  $27.27 \pm 4.8$  Years. Nearly 37% of them were educated more than graduate, 32.1% of them were educated till 12th class and 9.9% of them were below 10th class. 55.6% of the study subjects were primiparous in the present study.

In another study by Vinitha D Souza et al., 2018, in which only 20% of mothers had inadequate knowledge, 54% mothers had moderate knowledge and 25% mothers had adequate knowledge. Methods: A cross sectional study was conducted among 100 mothers of infants between the age group 0-12 months, attending selected hospitals of Mangaluru by non-probability purposive sampling. The data was collected using a valid semi structured knowledge questionnaire. The data was collected from January 2017 to March 2017. In the present study a qualitative analysis of 81 nursing mothers towards the perineal hygiene of their infants below the age group of 3.5 months has been assessed through a self-administered Questionnaire from March 2022 to May 2022. Here the source of the knowledge to improve the baby's perineal hygiene was obtained by their parents in nearly 56.7% of the subjects and 38.2% from the doctors.

In another study done by Maya K S et al 14 to assess the degree of knowledge, attitude and practice on prevention and management of diaper dermatitis showed that

mother knowledge could be improved significantly by giving proper health education and training regarding the handling of perineal hygiene among the infants. The study was conducted in Kasturba Hospital, Manipal, Karnataka, India, among 42 mothers of children of age 0 to 1 year. The samples were selected through purposive sampling. Initially the level of knowledge, attitude and practice on prevention and management of diaper dermatitis were assessed by administering a structured questionnaire to mothers. Awareness program was conducted on the second day and on 8th day a posttest was carried out and a significant improvement in knowledge ( $t=13.813$ ,  $p=0.02$ ), attitude ( $t=8.34$ ,  $p=0.01$ ) and practice ( $t=11.32$ ,  $p=0.01$ ) were identified. In the present study all the mothers had a habit of using diapers to the infants and 9.8% of them also used cloths along with the diapers. Nearly 75.3% of them used to change the diapers around 4 times a day, 16% of them did it for 5 times a day and only 1.2% of them used more than 8 diapers per day. 98.7% of them said that they won't reuse the diapers. Nearly half of them used the diaper both in the day and night and 19.7% of them used only while going out. 60.4% of the respondents were aware that diapers can be the source of skin infection. Awareness programs imparting health education should be conducted for the unaware 39.6% of mothers.

In another study done by Kim J S et al 15 the findings of the knowledge of mother was found to be similar to the study findings of our study about the knowledge of the mother regarding perineal hygiene among the infants. The percent of correct answer for knowledge about DD was 59.7%. Almost half of the participants' children had experienced at least 1 episode of DD during the last 6 months. Inappropriate diaper hygiene practices, such as using talcum powder on DD and rubbing with a

dry towel after cleansing, were reported. Moreover, only 37% of mothers used the recommended skin barrier to prevent DD. Although many children suffer from DD, levels of educational experience and perceived need for education on this topic were low. Almost 70% of mothers obtained DD-related information through internet sites. In the present study, 70.4 % of the mothers used Diaper Cream to the baby to avoid the rashes. 91.4% of them stopped using diapers after the appearance of rashes. 46.9% of them said they never used any applicator to apply powder to the perineal areas. Baby wipes was used by 85.2% of the mothers to clean the perineal area of the baby. 50.6% of the mothers used to look for any skin condition or rashes in the perineal area regularly. Thus emphasising early detection of nappy rash by daily examination

### **Conclusion**

Our study emphasises the knowledge of mothers towards their infant's perineal hygiene and improved knowledge may reduce the incidence of diaper dermatitis. Our study is one of the few studies done on qualitative analysis of mother's knowledge regarding their infant's perineal hygiene. Parents should be given choices on how to get health information, websites or smartphone applications may be excellent tool for Diaper Dermatitis prevention, treatment and education. Further before getting discharged from the hospital post-delivery the nursing supervisor should educate the mother about the proper handling of perineal hygiene. The importance of Perineal Hygiene in Infants should be imparted to mother at par as breast feeding for infants.

### **Limitations**

1. Its "Qualitative" study about the knowledge of mothers regarding their infant's perineal hygiene.

2. The study is backed by a small sample size of 81 mothers.

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