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Original Research Article

Knowledge, attitude and practice of mothers in infantile skin care

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ABSTRACT

Background: Skin of the newborn is susceptible and sensitive to trauma and infection and requires special care. Though mothers are aware of the infants' skin care, just studying the knowledge and attitude is not enough without studying the practice. The objective of this study was to determine the knowledge, attitude and practices of mothers regarding the infantile skin care.
Methods: A cross sectional study conducted at a tertiary care centre in Bangalore. In a period of 6 months, post-natal mothers with infants attending well baby clinics were interviewed through a semi structure performa.
Results: Among 400 mothers interviewed mean age was 25.44 years, 37.67% belonging to urban and 62.33% to rural area. 96.7% were educated. Only 36.33% practiced correct hand washing practice before handling. 52.4% reported 1st bath to babies on day 3 of life, 64.4% reported 5-10 minutes bathing, and 78.6% reported daily bathing. 78.30% unaware that perfumed soaps cause skin irritation. 84.60% practiced daily oil massage and 86.40% used coconut oil. Reasons stated were better development (59.30%), soft skin (24.70%). 76.2% used talcum powder to absorb moisture. 88% believes Kajal use is safe and most use to ward off evil eyes. 57% used diapers while going outside, 65% changed < 3 per day, 62 % used cloth to wipe the area, 45% used talcum powder while changing diaper.
Conclusion: This study helps us to identify knowledge gaps, cultural beliefs and behavioral pattern of mothers in infantile skin care. It also measures effectiveness of health education in changing health behavior.

Keywords: Newborn, Skin care

INTRODUCTION

The birth of the baby represents a sudden transition from the intrauterine life to the external environment. The time immediately after the birth of the baby, is critical for newborn. Care practices immediately after delivery play a major role in causing neonatal morbidities and mortalities.

Skin of the newborn differs from that of an adult in several ways. It is more susceptible and sensitive to trauma and infection and requires special care.[1] The major functions of the human skin are thermoregulation, maintenance of water and electrolyte homeostasis, antimicrobial defence, protection from trauma, environmental toxins and ultraviolet radiation, synthesis of vitamin, immune surveillance and cosmetic function. It also serves as a sensory organ and facilitates mother-child attachment.[2]

It is emphasized that gentle cleansing, adequate hydration, moisturization of the skin, preventing friction and maceration in body-folds, and protection from irritants and bright sunlight. Skin of newborn is sterile at birth, gradually as the child is exposed to environment; microbial colonization of the skin takes place. Coagulase negative staphylococci (*Staphylococcus epidermidis*), the most commonly found microorganism.[3, 4]

Though mothers are aware of the infants' skin care, just studying the knowledge and attitude is not enough without studying the practice/behavior.

Therefore, it is essential to provide education to mothers regarding appropriate skin care to reduce morbidity. The purpose of this study was to assess the correct knowledge, attitude, and practice of postnatal mothers regarding infant skin care. The objective of this study was to assess the level of knowledge, attitude and practice of mothers in infantile skin care.

Table 1: Differences between infant and adult skin.[5]

	Infant skin	Adult skin
Structural differences		
Corneocytes	Smaller	Larger
Granular cells	Smaller	Larger
Stratum corneum and epidermis	Thinner	Thicker
Pigmentation (melanin)	Less	More
Compositional differen		
Natural moisturising factor concentration	Lower	Higher
pH	Higher (neonates only)	Lower
Sebum	Lower (7-12 months)	Higher
Stratum corneum water content	Higher	Lower
Functional differences		
Rate of water absorption	Higher	Lower
Rate of water desorption	Higher	Lower
Skin barrier function	Competent	Competent
Transdermal water loss	Higher	Lower

METHODS

This study was a cross sectional observational study conducted in a tertiary care centre between January and June 2017 after obtaining approval from Institutional Ethics Committee. 400 post-natal mothers with infants attending well baby clinics were interviewed through a semi structure Performa.

Data were collected by a questionnaire which was designed in 2 parts.

First part included demographic characteristics such as age, parity, occupation, educational level, education about prenatal care and place of inhabitants. Second part consisted of questions which evaluate maternal knowledge, attitude and practice of infant skin which included bathe to the child, cleansers/soap, talcum powder and diaper usage and the traditional practice of branding.

RESULTS

Among 400 mothers interviewed mean age was 25.44 years, 37.67% belonging to urban and 62.33% to rural area. 96.7% were educated; 86% of mothers were home maker and 14% working women. Only 36.33 % practice correct hand washing practice before handling. All 400 mothers were aware of the importance of ANC clinics and all of them had a minimum of 3 visits to the ANC. 99.82% of the subjects think that hospital delivery is good for both the mother and baby.

First bath

In the present study majority (52.4%) of the babies was given bath on day 3 of life, followed by 24% on day 5 of life (Figure 1).

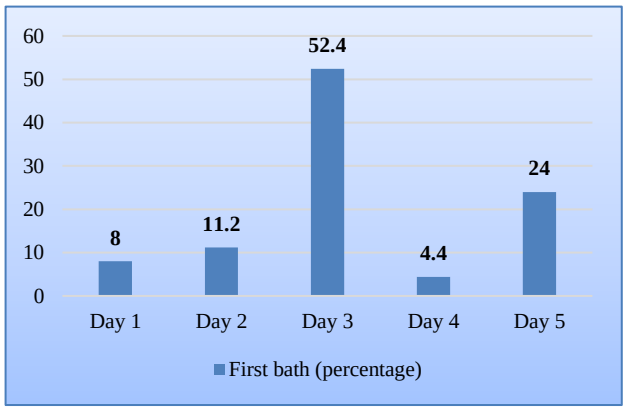

Figure 1: Timing of first bath.

Duration of bath

In the present study 64.4% took 5 to 10 minutes for bathing, and 9.3% took less than 5 minutes for bathing (Figure 2).

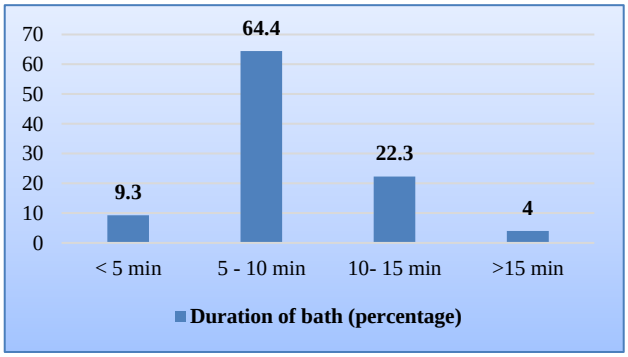

Figure 2: Duration of bath.

Frequency of bathing

In the present study, 78.6% bathed the baby daily and 19.2% bathed the baby on alternate days (Figure 3**).**

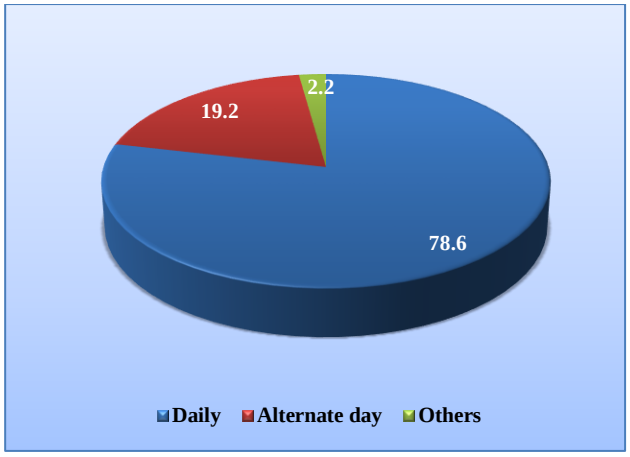

Figure 3: Frequency of bathing.

Cleansers/soaps

Present study showed that all used soaps/cleansers. Among that 78.30% of mothers were unaware that perfumed soaps can cause skin irritation to the baby (Figure 4). Amongst the educated mothers only 18.60% were aware and 81.40% were unaware.

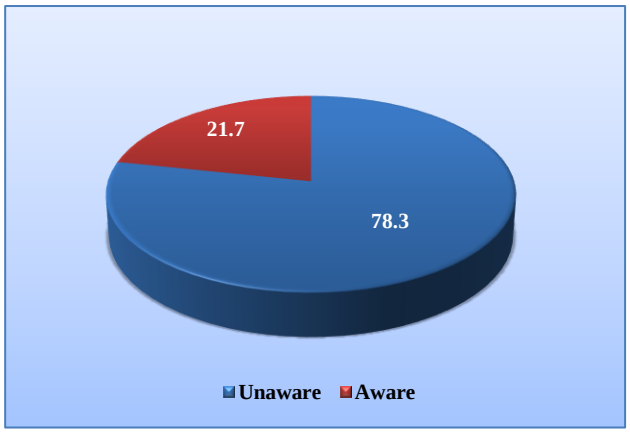

Figure 4: Awareness on harmful effects of perfumed soaps.

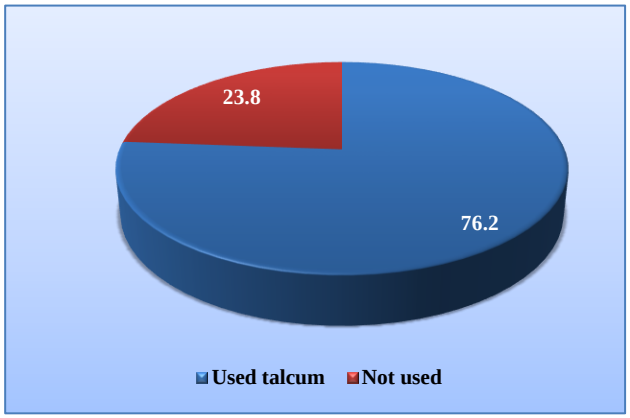

Figure 5: Usage of talcum powder.

Oil massage

In the present study 84.60% practiced daily oil massage and 86.40 % of mothers used coconut oil. Reasons stated were better development (59.30%), soft skin (24.70%), fair complexion (6%) and 10% did not know the benefits.

Baby/talcum powders

In the present study 76.20% used talcum powder regularly. Most common reasons stated were fair complexion, soft skin and for absorbing moisture (Figure 5).

Kajal

In the present study 88% of the mothers said it is safe to use kajal and most of them used it to ward off evil eyes (Figure 6).

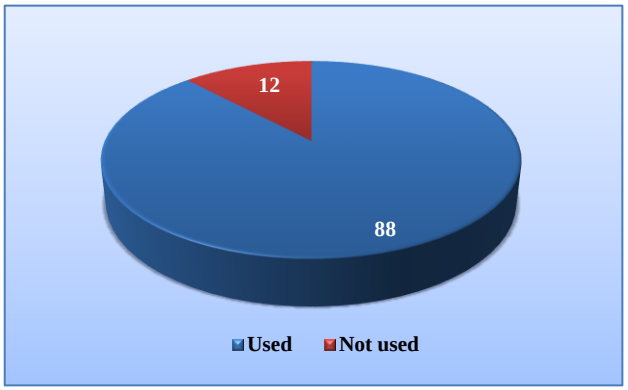

Figure 6: Usage of Kajal.

Care of diaper area

In the present study 22% used diapers regularly, 57% used diapers while going outside, 65% changed <3 per day, 62% used cloth and 32% used 'wipes' to wipe the area, and 45% used talcum powder while changing diaper.

Branding

In the present study 15% of mother practiced branding and remaining 85% mother thought it was not helpful. Out of the 15%, 73% of mother hailed from rural areas and 50 % said it helps to ward off evil eye.

DISCUSSION

First bath

Skin hygiene plays an important role in overall infant health and wellness. Bathing helps in skin cleansing through the removal of irritants, the promotion of normal exfoliation and skin rejuvenation. Bathing also has

emotional benefits such as the reinforcement of parent-infant bonding through touch.[6]

The initial bath in full term infants can be given once the baby's temperature has stabilized and the baby is hemodynamically stable.[2,4]

In the present study majority (52.4%) of the babies was given bath on day 3 of life, followed by 24% on day 5 of life (Table 1). Other studies done previously emphasized the practice of giving first bath after day 1 of life.[7]

It is important for the mother to know that the first bath to the new born should be given after 24 hours because new born acclimatizes the temperature changes from womb of mother and outside environment during this period any sudden temperature change may cause hypothermia to the neonate and would also be hazardous for the delicate skin. However, in a study by Behring et al it was observed that the timing of the bath, whether 1 hour of birth compared with 4 to 6 hours after birth, did not significantly impact infant temperature.[8]

In few parts of India, it is a very common practice to bathe the new-borns immediately after birth. The reason for behind this practice is the belief that the blood/fluid/vernix which stays on new-born's skin after birth is impure and has to be removed thoroughly. This puts the new-born at risk of hypothermia.[2]

For the initial bath, sterile or potable clean water is sufficient. Gloves can be worn for the initial bath to reduce contact with blood on the infant's skin. Soaps and cleansers are best avoided in the first few weeks of life.[9] The neonate should be bathed in a warm room, and should be dried quickly and thoroughly from head to toe, followed by wrapping in a warm dry towel and placing next to the mother

Duration of bath

The duration of bath should not last more than 5-10 minutes; prolonged bath increases the hydration of the skin and reduces the threshold for friction.[4] In the present study 64.4% took 5 to 10 minutes for bathing, and 9.3% took less than 5 minutes for bathing (Figure 2).

Frequency of bathing

A bathing frequency of 2-3 times per week is recommended. In the present study, 78.6% bathed the baby daily and 19.2% bathed the baby on alternate days (Figure 3).

The literature says that frequent or daily bathing poses potential damage to the maturation of the acid mantle, and causes irritation, drying of the skin and it should be discouraged.[10] It is indicated that babies should not be bathed daily, but 2-3 times a week if necessary, to reduce the potential for skin irritation, absorption of chemicals and pH changes.[11, 12]

Cleansers/soaps

Ideally, a baby soap or cleanser should be devoid of fragrance and colors to avoid irritation. Our study showed that 78.30% of mothers were unaware that perfumed soaps can cause skin irritation to the baby (Figure 4). Amongst the educated mothers only 18.60% were aware and 81.40% were unaware.

The use of soaps or detergents containing surfuctant can have a deleterious effect on the barrier function of the skin, affect skin pH and result in skin dryness, roughness, flakiness and a tightening effect.[12]

Syndets or synthetic detergents are soap substitutes or non-soap surfactants which have a pH closer to normal skin and are less irritating and milder than soaps. A distinct advantage is that as they do not alter the pH of the skin and the skin microflora remains unaltered.[13]

Ideal cleaning agents should be liquid, mild, soap free, fragrance free, with neutral or slightly acidic pH; they should not irritate the skin or eyes of the baby nor change the protective acid mantle of the skin surface.[12,14]

Some studies show that use of these liquid cleaners is better than use of only water in the bath, both in terms of hygiene (faecal matter and urine) and drying of the skin.[15]

Regarding the appropriate time to introduce cleaning agents into the bath of infants, some studies recommend their use soon after the umbilical cord falls, while others specify a time ranging from 2 to 6 weeks after birth.[14,15] However, this time vary according to the personal preference of each mother.

Oil massage

Topical oil application has been shown to improve the skin barrier function, thermoregulation and also is suggested to have a positive effect on growth. Absorption of fats through the thin skin of the preterm has also been proposed.

It is safe and effective way to decrease neonatal peeling and scaling dermatitis, maintains barrier function, reduces irritation in the napkin area, and also has a role in massage. Oil may cause adverse effects such as skin rashes and bacterial colonization.[2]

In the present study 84.60% practiced daily oil massage and 86.40 % of mothers used coconut oil. Reasons stated were better development (59.30%), soft skin (24.70%), fair complexion (6%) and 10% did not know the benefits.

Coconut oil is the most preferred oil as it is time tested and is ideal for dry skin and improves barrier function. Olive oil is also useful but nut-based oils like almond oil are better avoided for the massaging purpose. Mustard oil contains allylisothiocyanate, an antigen, which is a volatile chemical capable of causing contact dermatitis.[16]

However, oils should be used cautiously during hot weather as they may cause occlusion of sweat pores in newborns, and irritant folliculitis.

Baby powders

Powders are useful to absorb moisture during hot and humid weather and prevent maceration in folds. They are best avoided in the newborn period as excessive use can lead to blockade of sweat duct pores resulting in miliaria formation and irritant folliculitis. Accidental inhalation is another potential hazard.[4,17]

In the present study 76.20% used talcum powder regularly. Most common reasons stated were fair complexion, soft skin and for absorbing moisture. (Figure 5).

Kajal

'Kajal' (Kohl) is a popular eye care product and its use in neonates has been reported since ancient times. Most commercially produced 'kajal' contain high levels of lead. US FDA does not permit its use in a cosmetic or in any other FDA-regulated product. In our study 88% of the mothers said it is safe to use kajal and most of them used it to ward off evil eyes (Figure 6).

Care of diaper area

The diaper area represents a large moist and humid environment and is more prone for maceration and infections. The skin is also in contact with strong alkalinizing agents and the high pH damages the skin integrity.

In our study 22% used diapers regularly, 57% used diapers while going outside, 65% changed <3 per day, 62 % used cloth and 32% used 'wipes' to wipe the area, and 45% used talcum powder while changing diaper.

Mother should be advised to frequently change napkins using water and should be dried thoroughly. If feasible home laundered or super absorbent variety of diapers are preferred. Skin should be dried and aired between napkin changes. Mineral oil can be applied on buttocks to form a physiologic barrier.[2, 4]

Warm water and soft cotton wool can be used to wipe napkin area. Soaps are best avoided. However, for stools, mild soap can be used.[2] Despite the fact that cleaning wipes are practical and have a pleasant smell, they are not recommended by most authors due to the risk of removing the lipid film of the skin and causing sensitization.[18]

Branding

Branding or inflicting burns over the body as a remedy for various illnesses is a harmful practice prevalent in rural India. Children including neonates, are worst affected by this superstitious practice.

In the present study 15% of mother practiced branding and remaining 85% mother thought it was not helpful. Out of the 15%, 73% of mother hailed from rural areas and 50 % said it helps to ward off evil eye.

CONCLUSION

The birth of the baby represents a sudden transition from intrauterine life to the external environment. Certain principles of skin care have to be emphasized to the mothers and care givers, such as gentle cleansing, adequate hydration and moisturization of the skin, preventing friction and maceration in body folds, and protection from irritants and bright sunlight to prevent morbidity in infants.

In our study we found that the level of attitude and practices were better when compared to the level of knowledge in the mothers. It is essential to promote proper and regular ANC, health facility delivery, and postnatal care. We should also strive toward helping removing myths and wrong practices, which are rampant in the community. This study helps us to identify knowledge gaps, cultural beliefs and behavioral pattern of mothers in infantile skin care.

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