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A study to evaluate the effectiveness of a planned teaching programme for the primi mothers regarding the importance of massaging the newborns (0 – 28 days) with oil in Mangalore nursing home and lady hill primary health centre at Mangalore

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Abstract

The Pre experimental study with primi mothers of newborn aged between 0 – 28 days selected through purposive sampling technique. One group pre test post test design was used. Data was collected by means of a structured questionnaire schedule which are divided into 2 parts (One Baseline Proforma, the second part structured knowledge questionnaire for the primi mothers regarding the importance of massaging the Newborns (0-28 days) with oil.). The reliability of the tool was established by Split Half Test. The Karl Pearson's coefficient of correlation $r = 0.9247$, and the content validity of the tool was established by a panel of 10 experts in the field of Paediatric Nursing. Data was analysed by using descriptive and inferential statistical in terms of mean, frequency distribution and paired "t" test and chi square test.

It was proved that there was increase in the knowledge of primi mothers of newborn between zero and twenty eight days of age regarding the importance of massaging with oil.

Keywords: Knowledge planned teaching programme, effectiveness, evaluation, primi mother, massage, newborn

Introduction

"The greatest sense in our body is our touch sense. It is probably the chief sense in the process of sleeping and waking; it gives us our knowledge of depth or thickness and form; we feel, we love and hate, are touchy and are touched, through the corpuscles of our skin."

J.L. Taylor (1921)

Massaging neonates and infants has been an important component of infant rearing in many traditions, especially in India. Infant massage is a vital, dynamic interaction that forms the foundation for building up the relationship that will last for lifetime.

In India there is increased neonatal mortality rate of 43.4 per 1000 live births. Almost 50% of neonatal deaths occur within first week of life and majority of them within the first 24 hours of life. Neonatal mortality is directly related to birth weight of the infant; low birth weight is a determinant of neonatal mortality. The increased neonatal mortality rate is due to lack of knowledge of mothers regarding care of newborn babies. The health of a newborn is more dependent upon the health of the mother because she is both the seed as well as the soil. So, if education is given to mothers regarding care of newborn, then we can save lives of newborns and can bring out healthy children to our nation.

Massage provides the opportunity to encompass that infants must be nurtured physically, mentally and emotionally. Infant massage empowers parents and caregivers through confidence and peace of mind, knowing that they themselves can do something that is of great benefit to their child. For an infant to receive all possible benefits from a massage routine, it is vital that parents understand the reasons behind the various methods of strokes, and most importantly, can interpret infant body language during massage.

Massage is an integral part of our lives and is both required as well as desired right from the birth. Massaging an infant also goes a long way in relieving stress in mothers as it provides an outlet and satisfaction of procreation, parentness and helps with craving for a good parent – baby bonding. The powerful tactile stimulation, when given with love and care, is much more soothing and healing.

Touch is the first of the senses to develop in all species studied; as humans, our skin is rich with touch receptors, is our first link to communication; our whole conception of what exists outside us is based on the sense of touch. Massage is the system of repetitious touch that allows healing and balance to develop in the body and mind of the receiver. The intent of therapeutic touch is not to affect change in a specific area of the body, but rather to affect change in the whole body. Thus, every cell of the body after a treatment of therapeutic touch will work more efficiently. Giving a massage to a baby is an exquisite, healthy form of child care – it offers physical and emotional benefits to the babies and to their caregivers.

Need for the study

“Touching is the first communication a baby receives; the first language of its development is through the skin”.

Frederick Leboyer

Touch is vital for the development of attachment behavior and for early social development of the young child, in that both the infant and parent have the capacity to elicit and respond to behaviors, in mutually pleasurable ways. The dynamic of parent – infant interaction is the most important foundation upon which a child learns about self, trust and respect. It is the first relationship that influences the way relationships are perceived. Infant massage is a natural way that parents can learn about parenting and that infants can learn about being loved and honored. Infants communicate through their bodies. When you engage an infant in a massage, you begin to listen to the infant; you listen to the sounds, you watch movements, you listen with your eyes, your ears and your heart. Infant massage or touch communication nurture the most important relationship the child will ever have – the relationship between the parent and infant.

Baby massage aids growth and development, builds trust and intimacy, creates the foundation for communication that lasts after infancy ends, develops closeness, enhances the bond between the mother and the child, facilitates early infant communication, gives the mother the confidence in her ability to handle and comfort the baby, helps the baby to sleep more soundly and for longer, and helps premature babies to gain weight faster.

A study was conducted on the transcutaneous absorption of topically massaged oil among neonates in the tritrary care NICU and a research laboratory of the University Complex, KEM Hospital, Pune. The method used was comparative randomized controlled study conducted to compare the effects of essential fatty acid [EFA] – rich safflower oil and saturated fat rich coconut oil on fatty acid profiles of massaged babies. 120 babies were randomly selected from NICU to three oil groups as per their gestational ages: <34 weeks, 34-37 weeks and 37 weeks. 5 ml of the designated oil was massaged 4 times a day (6 hourly) for 5 days under controlled conditions of temperature and feeding. Pre and post oil massage samples of blood were analysed for triglycerides and fatty acid profiles using gas chromatography. The result of the study showed that topically applied oil can be absorbed in neonates and is probably available for nutritional purposes. The fatty-acid constituents of the oil can influence the changes in the fatty acid profiles of the massaged babies.

A study was conducted to find the effectiveness of oil

massage on growth and neurobehavioral development in very low birth weight preterm neonates weighing less than 1500 gm at Lok Nayak Hospital; New Delhi in 2004. The method used for the study was a randomized controlled trial. The sample for the study included neonates with low birth weight, receiving enteral feeds of at least 10 ml/kg/day and who are less than 10 days of age. Eligible neonates were randomized to one of the three groups, i.e., massage with oil, massage without oil and no massage. Weight, length, head circumference and triceps skin fold thickness were measured in the three groups at regular intervals. Serum triglyceride levels were measured at enrolment and on completion. Neurobehavioral assessment using Brazelton’s Neonatal behavior assessment scale (NBAS) was done on enrolment and after 10 days of intervention. Weight gain with oil massage group (365.8±165.2 gm) was higher compared to the only massage group (290.0±170.4 gm). The study showed that oil application had a potential to improve weight gain among preterm very low birth weight neonates. Baby massage is culturally accepted in our society and has scientifically proven its benefits. Babies enjoy comfort of touch and oil massage. It promotes bonding with the mother while she talks to her baby during massage. Massage provides active and passive movements of the limbs and improves circulation and tone of muscles. It provides a sense of wellbeing and the baby cries less and sleeps better after the massage. Because the skin of newborn babies is thin, some of the oil gets absorbed and provides nutrition to the baby. Several studies have shown that massaged babies are more alert and responsive and their weight gain velocity is better.

Infant massage is a common child practice in many parts of the world. In India, Infant massage is a daily routine that begins in the first days of life. Some have related the precocious motor development of these infants to daily massage.

So the investigator felt that there is a learning needs existing among primi mothers on the importance of massaging the newborns with oil and a need to develop a teaching strategy to educate primi mothers. Thus in view of this, the researcher went ahead with this study.

Statement of the problem

“A study to evaluate the effectiveness of a planned teaching programme for the primi mothers regarding the importance of massaging the Newborns (0-28 days) with oil in Mangalore Nursing Home and Lady Hill Primary Health Centre at Mangalore.”

Objectives of the study

1. To assess the knowledge of mothers regarding the importance of oil massage in newborns.
2. To administer a planned teaching programme for the mothers regarding the importance of oil massage in newborns.
3. To evaluate the effectiveness of planned teaching programme administered to primi mothers, in terms of gain in post – test knowledge scores.
4. To find the association between pre-test knowledge scores of mothers and selected demographic variables.

Operational definitions

1. **Knowledge:** In this study knowledge refers to the awareness of primi mothers regarding the importance of

massaging the newborns with oil as measured by a structured knowledge questionnaire.

2. **Planned teaching programme:** In this study the planned teaching programme refers to a systematically planned teaching strategy designed to provide information to mothers regarding the importance of oil massage in newborns.
3. **Effectiveness:** In this study effectiveness refers to improvement of knowledge of mothers after the administration of the planned teaching programme regarding the importance of massaging the newborns with oil as analysed by the comparison of pre and post test knowledge scores.
4. **Evaluation:** In this study evaluation is the measurement of difference in knowledge of primi mothers regarding the importance of massaging the newborns with oil before and after the planned teaching programme.
5. **Primi mother:** In this study primi mothers refers to those mothers who have given birth for the first time to live neonate.
6. **Massage:** In this study massaging refers to kneading and rubbing the body of the newborn with oil.
 - **Kneading:** Geniculate or act of working into a dough.
 - **Rubbing:** Friction encountered in moving one's body in contact with another.
7. **Newborn:** In this study newborn refers to babies from birth to 28 days of life.
8. **Oil:** In this study oil refers to fatty soluble substance applied over the skin during massage. The names of the

oils used are safflower, coconut, sesame, mustard, olive, sunflower, vegetable, meadow foam.

Hypothesis

H₁: The mean post-test knowledge scores of the primi mothers will be significantly higher than their mean pre-test knowledge scores.

H₂: There will be a significant relationship between pre-test knowledge scores of mothers and selected demographic variables.

Assumptions: The study assumes that

1. Primi mothers are lacking in knowledge regarding the importance and technique of massaging the newborn with oil.
2. Teaching strategy will be effective in improving the knowledge of mothers regarding the importance of massaging the newborn with oil.

Delimitation

1. Mothers having newborns aged 0-28 days.
2. Mothers who were able to read or write Kannada or English.
3. Mothers who were willing to participate in the study.

Conceptual framework

Modified model of open system theory by J.W.Kenney as shown in fig.1

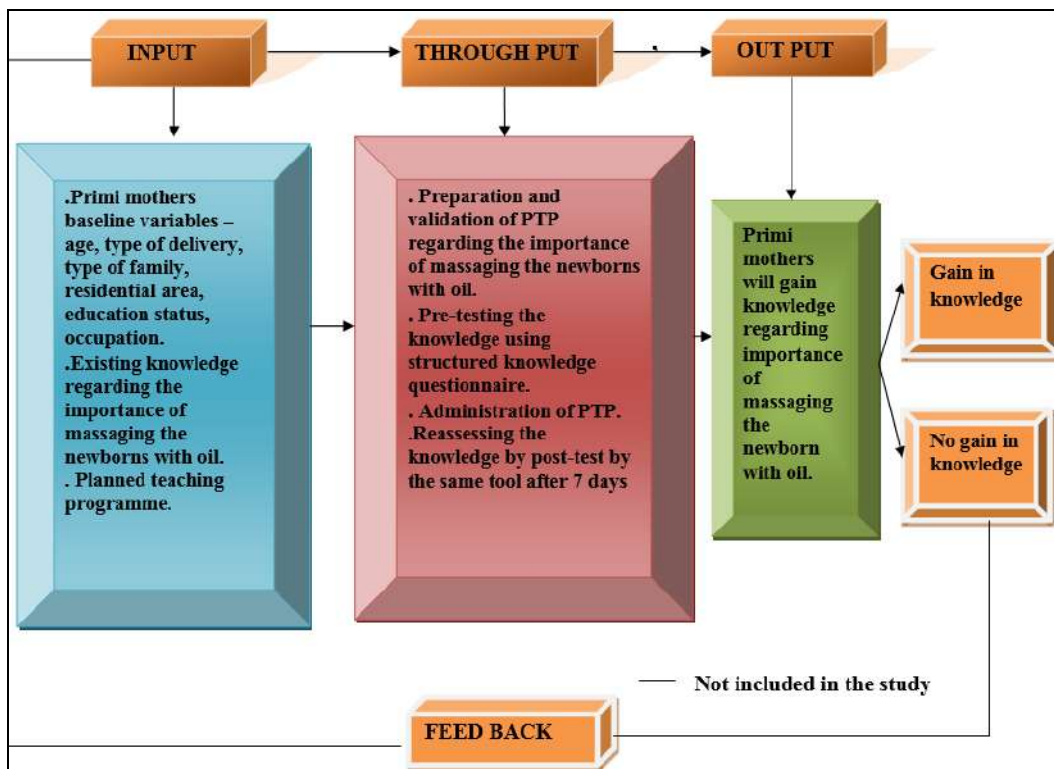


Fig 1: Modified open system model

Research methodology

Research Approach: Pre-experimental design was adopted in this study.

Research Design: Pre experimental with one group pre test post test was used for the study.

Setting of the study: The study was conducted in Mangalore Nursing Home and Lady Hill Primary Health Center at Mangalore.

Population: The population of the study were primi mothers of newborns aged 0-28 days.

Sample and sample size: 30 Primi mothers of newborn aged 0-28 days.

Sampling technique: Non probability sampling technique was used in this study.

Variables of the study

- **Influencing variable:** In this study influencing variables were age of the mother, type of delivery, type of family, residential area, education status and occupation of the mother.
- **Dependent variables:** Knowledge score of primi mothers of newborn 0-28 days regarding the importance of massaging the newborn with oil.
- **Independent variables:** Planned teaching programme on the importance of massaging the newborn with oil.
- **Extraneous variables:** Its refers to disturbance by the newborn, visiting hours, timing of the teaching hours, mothers health condition and previous knowledge regarding massaging the newborn with oil.

Results: The Data was presented under the following headings:

Part I: Description of demographic variables of primi mothers under study.

Findings revealed that out of 30 subjects

- Percentage distribution of primi mothers of newborns according to their age in completed years shows that the highest percentage (46.6%) were aged 26-30 years and the least (10%) were aged 31-35 years.
- Analysis reveals that the highest (56.7%) of the sample were Hindu and the least (13.3%) were Christian.
- Percentage distribution of primi mothers of newborns between zero and twenty eight days of age in relation to the type of delivery shows that 70% of the sample had undergone caesarean section and 30% had normal delivery.
- In relation to primi mothers type of family highest (46.6%) percentage were from the nuclear family and least (23.4%) were from extended family.
- All the mothers were living in urban areas and none were living in rural areas.
- Percentage distribution of primi mothers in relation to educational qualification shows that the highest percentage (60%) of the sample was graduate and the least (13.3%) had studied up to high school.
- In relation to primi mothers' family income, highest percentage (56.6%) of the sample had the income above Rs. 5,001 and the least (43.4%) had an income between Rs. 4001-5000.
- In relation to primi mothers' occupation, highest percentage (56.6%) of the sample was housewives and the least (43.4%) were employed.

Part II: Analysis of pre test knowledge of primi mothers of newborns between 0 and 28 days of age regarding the importance of massaging the newborns with oil.

Level of knowledge of primi mothers regarding the importance of massaging the newborns with oil.

Assessment of the level of knowledge of the primi mothers reveal that highest of the respondents (93.4%) had average knowledge whose range of score was 11-20 and 3.3% each of the sample had poor (range of score: 0-10) and good

(score range: 21-30) regarding the importance of massaging the newborns with oil.

Part III: Evaluation of the effectiveness of the PTP regarding the importance of massaging the newborns with oil among primi mothers and testing of hypothesis.

Quartile distribution of the pre-test and post-test knowledge scores of primi mothers.

There was an increase in the knowledge score of primi mothers after the administration of PTP. In the pre-test maximum number of primi mothers (n=28) had average knowledge (range of score: 11-20), where as in the post-test the maximum number of primi mothers (n=29) had good knowledge (range of score: 21-30). In the pre-test one of them scored above 21, where as in the post-test most of the mothers scored above 21. The median (24.8, 16) of post-test ogive and post-test ogive indicate that the primi mothers achieved higher scores in the post-test. Hence, findings show the effectiveness of PTP.

Range, Mean, Median and SD of pre-test and post-test knowledge scores of primi mothers regarding the importance of massaging the newborns with oil.

The data shows that the range of scores in the pre-test (21-9) was apparently less as compared to the post-test (30-21). The data also shows that the mean post-test scores (24.70) was higher than that of mean pre-test scores (15.66). Hence, it is clear that there was considerable gain in the knowledge of primi mothers regarding the importance of massaging the newborns with oil.

Aspect wise effectiveness of the planned teaching programme regarding the importance of massaging the newborns with oil.

- Comparison of mean percentage of the knowledge scores of the pre-test post-test reveals an increase of 27.26% in the mean knowledge score of the primi mothers after PTP.
- Comparison of aspect wise mean and SD knowledge scores in the aspect of 'introduction' shows that the pre-test mean knowledge score was 78% (1.56±0.49) where as post-test mean knowledge score was 95% (1.9±0.3). This shows an increase of 17% (0.34±0.19) in the mean knowledge score of primi mothers.
- The aspect of 'definition of massage' shows that pre-test mean knowledge score was 44.5% (1.78±0.71) whereas the post-test knowledge score was 74% (2.96±0.94). This shows an increase of 29.5% (1.18±0.23) in the mean knowledge score of primi mothers.
- The aspect of 'framework of massage' shows that the pre-test knowledge score was 71% (2.13±0.33) whereas the post-test knowledge score was 88% (2.64±0.54). This shows an increase of 17% (0.51±0.21) in the mean knowledge score of primi mothers.
- The aspect of 'massaging babies' shows the pre-test knowledge score was 35.3% (1.06±0.35) whereas the post-test knowledge score was 80% (2.4±0.71). This shows an increase of 44.7% (1.34±0.36) in the mean knowledge score of primi mothers.
- The aspect of 'oil required for massage' shows that the pre-test knowledge score was 28.6% (0.86±0.49) whereas the post-test knowledge score was 76.66% (2.3±0.68). This shows an increase of 48.06%

(1.44±0.19) in the mean knowledge score of primi mothers.

- In the aspect of 'tips for massage' the pre-test mean knowledge score was 89% (1.78±0.49) whereas the post-test knowledge score was 95% (1.9±0.3). This shows an increase of 6% (0.12±0.19) in the mean knowledge score of primi mothers.
- The aspect of 'steps in massage' shows that the pre-test mean knowledge score was 22.5% (0.9±0.59) whereas the post-test knowledge score was 72.5% (2.9±1.04). This shows an increase of 50% (2±0.45) in the mean knowledge score of primi mothers.
- In the aspect of 'importance of massaging babies' the pre-test mean knowledge score was 77% (1.54±0.67) whereas the post-test knowledge score was 90% (1.8±0.39). This shows an increase of 13% (0.26±0.28) in the mean knowledge score of primi mothers.
- In the aspect of 'benefits of massage' the pre-test mean knowledge score was 50.6% (2.53±1.45) whereas the post-test knowledge score was 80% (4±1.06). This shows an increase of 29.4% (1.47±0.39) in the mean knowledge score of primi mothers.
- In the aspect of knowledge on 'contraindications of massage' the pre-test mean knowledge score was 77% (1.54±0.61) whereas the post-test knowledge score was 95% (1.9±0.3). This shows an increase of 18% (0.36±0.31) in the mean knowledge score of primi mothers.

Testing of hypothesis

Findings revealed that the mean post-test knowledge score of primi mothers of newborn 0-28 days of age was significantly higher than the mean pre-test score. The calculated 't' value was greater than the table value 0.05 level of significance. Hence the null hypothesis was rejected indicating that the gain in knowledge was not by chance. Therefore, it is concluded that the gain in knowledge of primi mothers of newborn between 0-28 days of age after administering the planned teaching programme on the importance of massaging the newborns with oil was significant.

Part IV: Analysis of association between pre-test knowledge scores of primi mothers and selected demographic variables.

To analyse the association between pre-test knowledge scores of primi mothers and selected demographic variables chi square test was used age ($\Sigma^2=1.63, df=1$), religion ($\Sigma^2=0.36, df=1$), type of delivery ($\Sigma^2=0.01, df=1$), type of family ($\Sigma^2=1.09, df=1$), residential area ($\Sigma^2=0.00, df=1$), education status ($\Sigma^2=3.06, df=1$), family income ($\Sigma^2=0.28, df=1$), occupation ($\Sigma^2=1.83, df=1$). There was no significant correlation between the pre-test knowledge score of primi mothers and selected demographic variables.

The above findings of the data collected from 30 primi mothers of newborns between 0-28 days of age revealed that the mean knowledge scores of the primi mothers in pre-test was 57.35%, whereas the post-test mean knowledge score was 84.61%. The paired 't' test shows that there was a significant difference in the knowledge of primi mothers regarding the importance of massaging the newborns with oil after administration of PTP.

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