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Mother's knowledge regarding importance of coconut oil massage among infants in primary health center-effectiveness of structured teaching programme

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Abstract

Background of the study: Massage is the manipulating of superficial and deeper layers of muscle and connective tissue to enhance function, aid in the healing process, and promote relaxation and well-being of infant. It is an ancient tradition of providing nurturing touch as a way of communicating and bonding with baby. Massage can help foster mutual trust and understanding between caregiver and child and also which promotes sleep and weight gain.

Objectives: To assess the effectiveness of structured teaching Programme on knowledge of mothers regarding importance of coconut oil for massage among infants in kumaraswamylayout Primary health center, Bangalore.

Methodology: The design Adopted is Quasi experimental, (one group pre-test post-test design) the samples were chosen by non- probability purposive sampling technique, consist 60 mothers of infant at Kumaraswamy layout Primary health center, Bangalore, and a structured knowledge questionnaire was given to assess the knowledge of mothers of infant regarding importance of coconut oil for massage for infants. Which followed by a structured teaching program on importance of coconut oil for massage and administered the same questionnaire to assess the post test.

Results: The overall mean post-test knowledge score regarding importance of coconut oil for massage among infants 33.75+2.29(97.29%) was significantly higher than overall mean pre-test knowledge scores regarding importance of coconut oil for massage among infants 9.97+_5.23 (25.58%) and the obtained overall 't' value was 69.91 which is higher than table value. There was no significant association found between the pre-test knowledge scores with the demographic variables of mothers of infant.

Keywords: effectiveness, structured teaching programme, knowledge, importance of coconut oil massage, mothers of infant

1. Introduction

Infant massage is a type of complementary and alternative treatment that uses massage therapy for human infants. After delivery during the developmental weeks, visual and physical contact between the mother and baby triggers various mutually rewarding and pleasurable interactions such as the mother touching the infant's extremities and face with her fingertips and encompassing and gently massaging the infant's trunk with her hands. Massage can help foster mutual trust and understanding between caregiver and child. Infant massage stimulates growth and healthy development of baby's body, mind and spirit. Coconut oil is a great moisturizer for all skin types, including very dry skin and highly sensitive skin, such as that of a newborn infant. Coconut oil is the perfect infant massage oil. Coconut oil will boost baby's immune system, improve baby's digestion, soothe cradle cap and other skin disorders and help baby sleep better. Coconut oil massaged babies gain healthy weight better than babies who do not receive massage. Massaging a baby has been shown to encourage them to sleep deeper and for longer periods of time.

Studies shows that 95.6% of all Low Birth Weight babies are born in developing countries. The highest Low Birth Weight of 18.3% is reported in Asia, specifically south-central Asia at 27% [19]. 70% of newborn in India die due to low birth weight, infections and complications of pregnancy. About one-third of newborn children in India are of low-birth weight [20]. According to the latest National Family Health Survey (NFHS-3), infant mortality rate at a national level is 45 per 1000 live births. It stands at 50 in rural and 33 in urban areas. Infant mortality rate in Karnataka, at 55 per 1000 live births, is above the nation's average. The issue is more serious in North Karnataka.21. A quasi experimental study was conducted on effectiveness of coconut oil massage on weight gain among low birth weight newborn. The sample of the study was sixty newborns using convenient sampling technique. Weight gain was assessed through electronic infant weighing scale. The study finding reveals that The mean value was 4.5 with a standard deviation of 3.65 in experimental group and 2.03 mean with the standard deviation of 0.7 in the control group and the calculated't' value was 3.21 which shows that there was significant difference between experimental and control group at P< 0.01 level. The study concluded that there was a significant weight gain among low birth weight newborns who were received coconut oil massage.

A study was conducted to examine the effects of five days of massage therapy on the weight gain and sleep/wake behavior of hospitalized stable preterm infants.

Massage therapy was provided to 16 preterm neonates and their weight gain, formula intake, kilocalories, stooling, and sleep/wake behavior were compared with a group of 16 control infants. Results showed that the massage group averaged 53% greater daily weight gain than the control group. The massage group spent less time sleeping at the end of five treatment days than the control group and more time in the drowsy state. Hence it was concluded that unhealthy low-risk preterm infants gained more weight and slept less with just five days of massage, in contrast to 10 days in previous studies.

A study was undertaken to investigate if massage with oils commonly used in the community for massage in infancy is beneficial. Full terms born healthy were randomly divided into five groups. Infants received (i) herbal oil, (ii) coconut oil, (iii) mustard oil, or (iv) mineral oil for massage daily for 4 wk. The fifth group did not receive massage and served as control. The study results showed that massage improved the weight, length, and mid arm and midleg circumferences as compared to infants without massage. Massage improved the post massage sleep, the maximum being 1.62 h in the oil group as well.

Hence, from the above studies coconut oil massage has been proposed as a way of facilitating growth and development of infant. Needless to say, the benefits are overwhelmingly positive and the research indicates that infant massage is increasingly recognized as a legitimate health care treatment.

Based on the available literature on the benefits of oil massage for infant, the researcher felt the need for assessing the knowledge of mothers in this regard and to bring awareness about coconut oil massage and its effectiveness and hence has selected this study so as to bring about its better utilization in the medical scenario.

2. Methods and Materials

2.1 Design and Setting

An institutional based Quasi experimental, one group pretest posttest design study was conducted with an objective to assess the effectiveness of structured teaching program on knowledge regarding importance of coconut oil for massage among infants in kumaraswamy layout Primary health center, Bangalore. May 2013.

2.2 Sample and Sampling Techniques

A purposive sampling technique was used to take a total number of 60 mothers of infant during immunization day in Kumaraswamy layout primary health center, Bangalore. Age of mother, educational qualification, family monthly income, number of children, type of family, residential area, previous knowledge, and source of information and method of bath practiced were demographic variables of the study. The structured teaching program was the independent variable, whereas knowledge regarding importance of coconut oil for massage among infants was the dependent variable for the study respectively.

2.3 Data collection

A pretest was conducted on knowledge regarding importance of coconut oil for massage among infants using structured knowledge questionnaire consists of 35 items developed by after an extensive review of literature, discussion with the guide and various experts in the field of Pediatric nursing and based on investigator's personal experience. After checking the validity and reliability administration of structured teaching Programme was carried out. Post test was conducted by using same questionnaire by lapse 7 days.

2.4 Data analysis

After data collection each questionnaire was checked for completeness, and data was entered and analyzed by using SPSS version 20 statistical package. Demographic proforma containing the sample characteristics was analyzed using frequency and percentage. The knowledge of mothers regarding importance of coconut oil for massage among infants before and after administration of structured teaching Programme was calculated using mean, mean percentage and standard deviation.

The significant difference between the mean pre-test and posttest knowledge scores was calculated using paired't' test. The association between pre-test knowledge scores with selected demographic variables was determined by Chi-square (χ^2) test. Level of significance was set at a level of 0.05 to interpret the hypothesis and findings. Based on the reviews of various research articles related to the coconut oil massage among infants the knowledge scores are operationally defined as Adequate knowledge was above 75% of correct answers followed by, 51% - 75 is Moderately adequate knowledge and Below 50% was considered as Inadequate knowledge.

2.5 Ethical Consideration

The proposal was approved by ethical review committee of Dayananda Sagar College of nursing. verbal and written consents was obtained from the study subjects after explaining the study objectives and procedures and their right to refuse to participate in the study any time they want to. For this purpose a page consent letter was attached to the cover page of each questionnaire stating about the general purpose of the study and issues of confidentiality which was discussed by the researcher before filling the questionnaire.

3. Results

Section I: Finding of demographic variables of mothers of infant. 60 mothers of infant were participated in the study. Regarding the age of mothers, majority of them 33% (41) belongs to the age group of 20-25 years, 21.67% (13) belongs to the age group of 26-30 years, 10% (6) belongs to the age group of 31-35years and none of them belongs to the age group of above 36years. regarding the educational qualification of the mothers of infant majority 36.67% (22) were illiterate, 33.33% (20) were completed primary school education, 16.67% (10) were completed high school education and 13.33% (8) were degree and above. Regarding occupation of the mothers of infant majority 53.33% (32) were house wife, 31.67% (19) were Govt. /private employee, 8.33% (5) were unemployed and 6.67% (4) were self-employed. Regarding the family monthly income, majority of the mother's 55% (33) <5000, 33.33% (20) have5001-12,000 and 11.67% (7) have 12,001-20,000 and No mother's family income is >20,000. Regarding the number of children majority 58.33% (35) were with only one child, 38.33% (23) were with 2-3 children and 3.34% (2) with 4 or more child. Regarding type of family, majority 75% (45) of them are nuclear family and 25% (15) of them are joint family. Regarding the residential area, majority 75% (45) of them from rural area and 25% (15) of them

from urban area. Regarding the previous knowledge majority 61.67% (37) of them had previous knowledge on infant coconut oil massage and 38.33% (23) of them were not having previous knowledge on infant oil massage. Regarding the source of information majority 70% (42) got information through family members, 3.33% (2) through mass media, and 26.67% (16) through health personal and there was no responds through friends as source of information. Regarding the method of bath practiced to child, majority 65% (39) of them were practicing oil bath and 35% (21) of them were not practicing the oil bath to child.

Table 1: Distribution of mothers of infants according to their demographic characteristics. N=60

	Variable	Frequency	Percentage
Age (in years)	20-25	41	68.33
	26-30	13	21.67
	31-35	6	10
	Above 36	0	00
Educational qualification	Illiterate of mother	22	36.67
	Primary school	20	33.33
	High school	10	16.67
	Degree and above	8	13.33
occupation	Govt./ private employee	19	31.67
	Self employed	4	6.67
	Unemployed	5	8.33
	House wife	32	53.33
Family monthly income	<5000	33	55.00
	5001-12,000	20	33.33
	12001-20,000	7	11.67
	>20000	0	00
No: of children's	Only one	35	58.33
	2-3	23	38.33
	4 or more	2	3.34
Type of family	Nuclear	45	75
	Joint	15	25
Residential area	Rural	45	75
	Urban	15	25
Previous knowledge	yes	37	61.67
	No	23	38.33
Source of information	Mass media	2	3.33
	Health personnel	16	26.67
	Family members	42	70.00
	Friends	0	00
Method of bath practiced	Oil bath	39	65
	Other bath	21	35

Section II: Analysis of pre-test scores of knowledge of mothers regarding importance of coconut oil for massage among infant

Table 2: Assessment of pre-test knowledge scores regarding importance of coconut oil for massage**.** N =60

Knowledge level	category	Respondents	
		frequency	percentage
Inadequate	≤50% score	47	78.33
Moderate	51-75% score	13	21.66
Adequate	≥ 75% score	0	00

The data in Table 2 shows that majority of the respondents 78.33% (47) had inadequate knowledge, 21.66% (13) had moderate knowledge and none of them had adequate knowledge on importance of coconut oil for massage.

Table 3: Analysis of pre-test scores of knowledge regarding importance of coconut oil for massage N =60

Maximum possible score	Mean	Standard deviation	Mean percentage
35	9.97	5.23	25.58

Table 2.1 reveals that the total mean percentage of the pre-test knowledge scores was 25.58% with total mean and standard deviation of 9.97 and 5.23 respectively.

Section III: Analysis of post-test scores of knowledge of mothers regarding importance of coconut oil for massage among infant.

Table 4: Assessment of post-test knowledge scores regarding importance of coconut oil for massage N =60

Knowledge level	category	Respondents	
		frequency	percentage
Inadequate	≤50% score	0	00
Moderate	51-75% score	15	25
Adequate	≥ 75% score	45	75

The data in Table 3 shows that majority of the respondents 75% (45) had adequate knowledge, 25% (13) had moderate knowledge and none of them had inadequate knowledge on importance of coconut oil for massage.

Table 5: Analysis of post-test scores of knowledge regarding importance of coconut oil for massage N =60

Maximum possible score	Mean	Standard deviation	Mean percentage
35	33.75	2.29	97.29

Table 2.1 reveals that the total mean percentage of the post-test knowledge scores was 97.29% with total mean and standard deviation of 33.75 and 2.29 respectively.

Section IV: Evaluation of the effectiveness of structured teaching Programme regarding knowledge of mothers regarding importance of coconut oil for massage among infants.

Table 4: Difference between pre - test and post - test scores of knowledge regarding importance of coconut oil for massage. N =60

Area	Mean knowledge scores		Mean difference	SD of difference	't' value	Level of significance
	Pre test	Post test				
Knowledge regarding importance of coconut oil for massage.	9.97	33.75	23.78	2.94	69.91	0.001

t (0.001, 59df) = 3.46

The data presented in Table 4 shows that the mean post-test knowledge scores of mother regarding the importance of coconut oil for massage higher than the mean pre-test knowledge scores. The obtained 't' value is also higher than the table value indicating significant difference between the pre-test and post-test scores regarding knowledge of mother regarding the importance of coconut oil for massage.

Section V: Association between pre-test scores of knowledge of mother regarding the importance of coconut oil for massage with selected demographic variables.

There was no significant association between knowledge of mothers regarding the importance of coconut oil for massage among infants with their selected demographic variables.

4. Discussion

In pretest knowledge level among 60 respondents, majority 83.335% (47) had inadequate knowledge score, 16.67% (13) had moderate knowledge score and no subject had adequate knowledge. The overall mean value was 9.97 with standard deviation 5.23. The post-test knowledge scores among 60 respondents revealed that majority 85% (45) had adequate knowledge score, 15% (15) had moderate knowledge and no subject had inadequate knowledge. In the post- test the overall mean value was 33.75 with standard deviation 2.29. In the present study, the overall posttest mean score was 33.75 (97.29%) with standard deviation 2.29. and the respondent's post-test knowledge score were significantly higher than the mean pre-test knowledge scores 9.97 (25.58%) with standard deviation 5.23. The overall 't' value was 69.91. which is higher than table value 3.46, which shows the structured teaching Programme was effective at P<0.001 level. The study result revealed that the structured teaching Programme was effective in terms of gain in knowledge of mothers of infant regarding importance of coconut oil for massage.

The findings of the present study consistent with the findings of the study conducted at Najran City on Effect of educational program for new mothers about infant massage. The sample of the study was 62 new mothers. The study findings revealed that in pretest knowledge level majority had inadequate knowledge. The majority of new mother's post program was improved their knowledge, practice and attitude. A statistically significant positive correlation was found between total scores of knowledge, practice, and attitude of new mothers with their age, education level and working.

The findings regarding the association between selected demographic variables with pretest knowledge scores of mothers of infant on importance of coconut oil for massage, which shows there was no significant association between selected demographic variables like age of mother with computed χ^2=3.82 at 2df, educational qualification with computed χ^2=1.39 at 3df, occupation with computed χ^2=3.42 at 3df, family monthly income with computed χ^2=0.55 at 2df, numbers of children with computed χ^2=0.48 at 2df, type of family with computed χ^2=1.6 at 1df, residential area with computed χ^2=1.6 at 1df, previous knowledge with computed χ^2= 3.79 at 1df, source of information with computed χ^2= 1.56 at 2df and method of bath practiced to child with computed χ^2= 2.59 at 1df with pretest knowledge scores at P >0.05 level of significance. Hence, there was no association between selected demographic variables like age of mother, educational qualification, occupation, family monthly income, number of children, type of family, residential area, previous knowledge, source of information and method of bath practiced at P>0.05.

5. Recommendations

Based on the findings of the study the following recommendations are forwarded

- The study can be replicated on a larger sample; thereby findings can be generalized for a larger population.
- A similar study can be conducted to assess the knowledge level of fathers regarding importance of coconut oil for massage.
- A self-instructional module can be prepared to enhance the knowledge of mothers of infant on importance of coconut oil for massage.
- A similar study can be conducted to compare the effectiveness of two oils like coconut and mustard oil.
- A similar study can be conducted to compare the knowledge level between rural and urban mothers of infant.
- Pamphlets or information booklets can be prepared with the guidance of this structured teaching programme and distributed among the mothers of infant to get awareness about importance of coconut oil for massage.

6. Implications of the study

The findings of the study have the following implications in the areas of nursing practice, nursing education, nursing administration, and nursing research.

6.1 Nursing practice

Nurses working in the community, play a vital role in providing care to the neonate and infant. The nursing personnel can perform regular home visit to impart knowledge about coconut oil massage and its importance among mothers of infant. Nurses can guide the mothers of infant regarding importance of coconut oil for massage will help to gain weight, improve sleeping pattern and reduce skin infection.

6.2 Nursing education

The students should be able to give education to the mothers of infant regarding the importance of coconut oil for massage when they posted in the clinical and community area. The nursing student should be aware of their responsibility to focus on massage of neonate and infant with low weight, disturbed sleep and skin infection. The present study helps the community health nurse to plan for the health education Programme.

6.3 Nursing administration

Nurses are challenged to play the role of efficient administrators as well as practitioners. Administration in both private and government sectors should take initiative action to update the knowledge of health personnel regarding the infant massage by in-service education. Administrators must provide adequate supply of audio-visual aids for conducting awareness Programme.

6.4 Nursing research

The importance of research in nursing is to build the body of knowledge. The findings of the present study serve as the basis for the professionals and the students to conduct further studies. In depth research studies on mothers of infant regarding importance of coconut oil for massage can be conducted in a large scale, to reduce the incidence and risk factors of infant mortality rate, like encouraging regular check-ups and creating awareness about the importance of coconut oil for massage among the mothers of infant.

7. Conclusion

This research revealed that the mothers of infant gained adequate knowledge regarding coconut oil massage among infants after administering a structured teaching program. Today's children are tomorrow's citizens- take care of them if you wish to have a strong India, ever ready to meet various challenges. Healthy children are the greatest resource and a nation's pride, investment for the future of the nation". So it is important to promote the health and prevent disease among infants, and mothers play vital role in preventing harm to their infant, so it is necessary for the mothers to learn about the coconut oil massage for infants and should be practiced by them to make the life of the infant healthier.

8. Acknowledgments

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