



A STUDY TO ASSESS THE EFFECTIVENESS OF A STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING KANGAROO MOTHER CARE AMONG POST-NATAL MOTHERS IN A ASRAM HOSPITAL AT ELURU, ANDHRA PRADESH

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ABSTRACT

Background: Kangaroo Mother Care (KMC) improves outcomes for low birth weight infants, yet many mothers lack knowledge about it. This study evaluated the effectiveness of a structured teaching programme on KMC among postnatal mothers. **Methods:** A pre-experimental one-group pre-test and post-test design was used among 50 purposively selected postnatal mothers at ASRAM Hospital, Eluru. A structured questionnaire assessed knowledge before and after a 45-minute teaching session. Post-test was conducted after 7 days. **Results:** Mean knowledge scores improved from 10 (SD = 3.5) to 21 (SD = 5.5) after the intervention. The mean difference was 11, with a t-value of 2.8 ($p < 0.05$), indicating significant improvement. No significant association was found between knowledge and demographic variables, though source of information was near significant ($p = 0.068$). **Conclusion:** The structured teaching programme effectively improved knowledge on KMC. Regular education is recommended to promote its practice among mothers.

KEYWORDS :

INTRODUCTION

Kangaroo Mother Care (KMC) is an innovative and effective method for caring for low birth weight (LBW) infants. Birth weight is a critical indicator of neonatal and infant health, with low birth weight being strongly associated with adverse outcomes. According to the World Health Organization (WHO), low birth weight refers to infants weighing less than 2,500 grams (5 pounds) at birth, regardless of gestational age. Infants weighing less than 1,500 grams are classified as having extremely low birth weight. Alarming, approximately one-third of these vulnerable infants die before stabilization or within the first 12 hours of life.¹

Starting kangaroo mother care immediately after birth has the potential to save up to 150,000 more lives each year, compared with the current recommendation of starting it only once a baby is stable. Current World Health Organization (WHO) recommendations indicate starting kangaroo mother care only after the baby is stabilized in an incubator or warmer, which can take on average 3-7 days.²

In India, the neonatal mortality rate remains alarmingly high, with 40 deaths per 1,000 live births nationally, 44 per 1,000 in Tamil Nadu, and 40 per 1,000 in Karnataka. These figures highlight a critical public health concern, especially considering the "Health for All by 2010" goal which aimed to reduce the infant mortality rate to 20 per 1,000 live births. Neonatal mortality, defined as the death of an infant within the first 28 days of life, continues to be a pressing issue, with approximately 700,000 newborn deaths annually—accounting for 26% of all neonatal deaths globally according to UNICEF. In this context, there is a significant need for low-cost, effective care strategies for preterm infants.³

Kangaroo Mother Care (KMC) emerges as a vital intervention that can improve neonatal outcomes. The success of KMC largely depends on the support provided to parents by healthcare professionals. Caring for a premature baby is often stressful, but healthcare staff can ease the burden by offering emotional support, facilitating 24-hour access to the infant, and assisting with feeding and other care tasks, especially at night. Moreover, providing parents with clear and practical information both verbal and written about KMC can empower them and their support networks to take an active role in the infant's care while ensuring the parents get adequate rest. Given the high percentage of the Indian population living below the poverty line, access to expensive neonatal care is limited, making KMC a highly practical and accessible alternative for improving survival and health outcomes among low birth weight infants.⁴

According to UNICEF (2013), over 20 million infants are born each year weighing less than 2.5 kg, accounting for 17% of all births in the developing world. These low birth weight infants are at a much higher risk of dying during the early months and years of life. Kangaroo Mother Care (KMC) presents a promising alternative to conventional neonatal care, especially in resource-limited settings. However, the practice of KMC is still not widely adopted in India. Successful implementation requires strong motivation, national commitment, and a concerted effort to change existing practices among healthcare professionals and mothers.⁵

Kangaroo Mother Care (KMC) is an innovative and effective method of caring for low birth weight infants. Birth weight is one of the most significant indicators of prenatal, neonatal, and infant health outcomes. According to the World Health Organization (WHO), a low birth weight infant is defined as a newborn weighing less than 2,500 grams (5 pounds), while an extremely low birth weight infant is one who weighs less than 1,500 grams.

Review of Literature

Shivani Masih (2024) conducted a one-group pre-test and post-test study among 50 postnatal mothers at SMI Hospital, Dehradun, to assess the effectiveness of a structured teaching program on Kangaroo Mother Care (KMC). Using convenient sampling, the study found that pre-test knowledge levels were mostly inadequate to moderate. After the intervention, all participants attained moderate knowledge. The findings demonstrated the structured teaching program's effectiveness in enhancing maternal understanding of KMC.

C. Margret (2024) conducted a one-group pre-test and post-test study among 30 postnatal mothers in a Tirunelveli hospital to evaluate a structured teaching program on Kangaroo Mother Care (KMC). Using non-probability purposive sampling, data were collected through a structured knowledge questionnaire. The findings showed significant improvement in maternal knowledge post-intervention. The study highlighted KMC as a simple, low-cost method with multiple benefits for preterm infants and emphasized the need for continuous education to promote sustained practice.

Achun Rongmei (2022) conducted a pre-experimental study to evaluate the effectiveness of a Structured Teaching Programme on knowledge regarding Kangaroo Mother Care (KMC) among postnatal mothers in Azamgarh, Uttar Pradesh. The study included 30 postnatal mothers whose babies were admitted to the NICU. A pre-test was conducted to assess their baseline knowledge, followed by the implementation of a Structured Teaching Programme, after which a post-test was carried out using a structured knowledge questionnaire. The results revealed that before the intervention, 50% of the mothers had an average level of knowledge, 16.66% had good knowledge, and 33.33% had poor knowledge about KMC. After the teaching programme, 53.3% of the mothers had good knowledge, 46.6% had average knowledge, and none remained in the poor knowledge category. The study concluded that the Structured Teaching Programme was effective in enhancing the knowledge of postnatal mothers regarding Kangaroo Mother Care.

Statement of the Problem

A study to assess the effectiveness of a structured teaching programme on knowledge regarding Kangaroo Mother Care (KMC) among postnatal mothers in ASRAM Hospital, Eluru, Andhra Pradesh.

Objectives

1. To assess the knowledge level of postnatal mothers regarding KMC.
2. To evaluate the effectiveness of a structured teaching programme on KMC knowledge.
3. To identify the association between knowledge scores and selected socio-demographic variables.

Operational Definitions

- **Assess:** Evaluate mothers' knowledge using a structured questionnaire.
- **Effectiveness:** Improvement in knowledge, measured by pre- and post-test score differences.
- **Structured Teaching Programme:** An organized session covering the concept, steps, benefits, and caregiver role in KMC.
- **Knowledge:** Understanding of KMC procedures and benefits, measured through responses.
- **Kangaroo Mother Care:** Skin-to-skin contact method that supports thermoregulation, bonding, breastfeeding, and growth.
- **Postnatal Mothers:** Women who have recently delivered low birth weight infants and are admitted in the hospital.

Hypotheses

- **H₁:** There is a significant difference between pre-test and post-test knowledge scores on KMC.
- **H₂:** There is a significant association between knowledge scores and selected demographic variables.

Assumptions

1. Structured teaching improves mothers' knowledge on KMC.
2. Better KMC practice may reduce LBW infants' hospital stay.
3. Integrating KMC into routine care may reduce neonatal morbidity and mortality.

Limitations

- Study limited to mothers willing to participate.
- Sample size restricted to 50.
- Only literate Telugu-speaking mothers included.
- Conducted only among mothers available during data collection.

Research Methodology

Research Approach

A quantitative approach was adopted to measure knowledge levels and assess the effectiveness of a structured teaching programme on Kangaroo Mother Care (KMC) among postnatal mothers.

Research Design

A pre-experimental one-group pre-test and post-test design was used to evaluate knowledge improvement after the intervention.

Study Setting

The study was conducted at ASRAM Hospital, Eluru, a tertiary care center with maternity and neonatal services.

Population

- **Target Population:** All postnatal mothers with low birth weight (LBW) infants.
- **Accessible Population:** Mothers of LBW babies admitted during data collection.

Sample & Sampling Technique:

- **Sample Size:** 50 postnatal mothers.
- **Sampling Method:** Non-probability purposive sampling based on inclusion criteria.

Variables

- **Independent Variable:** Structured teaching programme.
- **Dependent Variable:** Knowledge level on KMC.
- **Demographic Variables:** Age, education, occupation, income, family type, parity, delivery mode, and prior KMC exposure.

Inclusion Criteria

Mothers of babies <2.5 kg, Apgar ≥6, breastfeeding, Telugu-speaking, and willing to participate.

Exclusion Criteria

Mothers with critically ill infants, prior KMC education, language barrier, or unwilling to consent.

Pilot Study

Conducted with 5 mothers in a nearby hospital to ensure tool clarity and feasibility.

Tool Description

- **Part A:** Demographic details.
- **Part B:** 25 MCQs on KMC.
- o Scoring: Inadequate (0–12), Moderate (13–18), Adequate (19–25).

Validity & Reliability:

- Content validated by experts (CVI).
- Reliability tested using KR-20 ($r = 0.82$).

Data Collection Procedure

1. Ethical and administrative approvals.
2. Pre-test administered.
3. 45-minute structured teaching session (in Telugu).
4. Post-test conducted after 7 days.

Statistical Analysis

- **Descriptive:** Frequency, percentage, mean, SD.
- **Inferential:** Paired t-test for effectiveness; Chi-square for associations with demographics.

ANALYSIS AND INTERPRETATION OF DATA

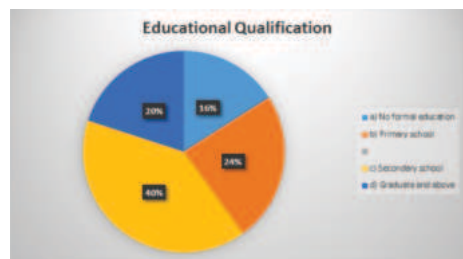
Demographic Frequency and Percentage Table (N = 50)

S. No	Demographic Variables	Category	Frequency (f)	Percentage (%)
1	Age of the Mother	a) Below 20 years	6	12%
		b) 21–25 years	18	36%
		c) 26–30 years	15	30%
		d) Above 30 years	11	22%
2	Educational Qualification	a) No formal education	8	16%
		b) Primary school	12	24%
		c) Secondary school	20	40%
		d) Graduate and above	10	20%
3	Occupation	a) Homemaker	28	56%
		b) Daily wage worker	10	20%
		c) Private employee	7	14%
		d) Government employee	5	10%
4	Type of Family	a) Nuclear family	26	52%
		b) Joint family	18	36%
		c) Extended family	6	12%
5	Monthly Family Income	a) Below ₹5,000	8	16%
		b) ₹5,001–₹10,000	15	30%
		c) ₹10,001–₹15,000	17	34%
		d) Above ₹15,000	10	20%
6	Parity	a) Primipara	20	40%
		b) Multipara	22	44%
		c) Grand multipara	8	16%
7	Source of Information about KMC	a) Health personnel	21	42%
		b) Mass media	10	20%
		c) Family/friends	12	24%
		d) No prior knowledge	7	14%

Frequency and Percentage Distribution of the Sample According to the age in Years



Frequency and Percentage Distribution of the Sample According to the Education



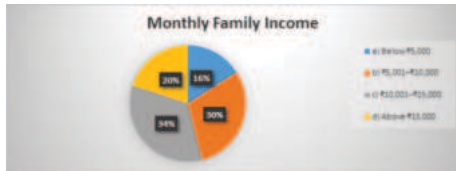
Frequency and Percentage Distribution of the Sample According to the Occupation



Frequency and Percentage Distribution of the Sample According to the Type of Family



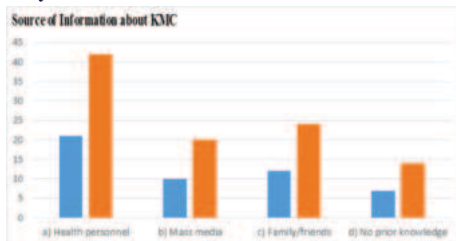
Frequency and Percentage Distribution of the Sample According to the Income



Frequency and Percentage Distribution of the Sample According to the Parity



Frequency and Percentage Distribution of the Sample According to the Parity



Comparison of Pre-Test and Post-Test Knowledge Scores (N = 50)

Test	Mean	Standard Deviation (SD)	Mean Difference	t-value
Pre-Test	10	3.5	11	2.8
Post-Test	21	5.5		

Frequency Distribution of Pre-test Knowledge Levels

Knowledge Level	Frequency (n)	Percentage (%)
Inadequate	16	32%
Moderate	34	68%
Adequate	0	0%

Pre-test Knowledge Level Distribution

Before the intervention, the majority of participants had moderate knowledge regarding the subject matter:

- 34 participants (68%) fell into the moderate knowledge category (scores 7–13).
- 16 participants (32%) had inadequate knowledge (scores 0–6).
- No participants achieved an adequate knowledge level (scores 14–20) during the pre-test phase.

This distribution clearly indicates a general lack of high-level knowledge among the participants prior to the structured teaching intervention

Frequency Distribution of Post-test Knowledge Levels

Knowledge Level	Frequency (n)	Percentage (%)
Inadequate	0	0%
Moderate	3	6%
Adequate	47	94%

Major Findings of the Study

- Most postnatal mothers were aged 21–30 years, had secondary education, were homemakers, and lived in nuclear families.
- In the pre-test, 68% had moderate and 32% had inadequate knowledge; none had adequate knowledge of Kangaroo Mother

Care (KMC).

- After the structured teaching program, 94% achieved adequate knowledge, with a significant rise in mean scores from 10 to 21 ($t = 2.8, p < 0.05$).
- No significant association was found between post-test knowledge and demographic variables such as age, education, occupation, or income.

Major Recommendations

- Replicate the study with a larger sample.
- Conduct similar studies in rural settings or different hospitals.
- Include a control group for comparison.
- Plan long-term follow-up to assess sustained KMC practice.
- Use audiovisual aids and demonstrations to enhance learning.
- Evaluate not just knowledge, but also KMC practice and infant outcomes.

CONCLUSION

The study concluded that a structured teaching program is effective in significantly enhancing postnatal mothers' knowledge of KMC. Most participants showed improvement from moderate/inadequate to adequate knowledge. The program proved effective regardless of mothers' demographic backgrounds, emphasizing the value of structured health education in improving neonatal care practices and promoting better health for low birth weight infants.

Acknowledgement

I extend my heartfelt thanks to the management and staff of ASRAM Hospital, Eluru, for their support in conducting this study. I sincerely thank the participating postnatal mothers for their cooperation. I also express my gratitude to my research guide, faculty, and peers for their constant encouragement and guidance.

Conflict of Interest

The author declares no conflict of interest.

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