

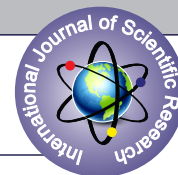
A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING DEVELOPMENTAL MILESTONE AMONG INFANT MOTHERS IN SELECTED HOSPITAL AT AGARTALA, TRIPURA

Nursing

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ABSTRACT

A pre-experimental one group pre-test post-test research design was used to assess the effectiveness of structured teaching programme on knowledge regarding developmental milestone among infant mothers. The objective of the study was to assess the effectiveness of structured teaching programme on knowledge regarding developmental milestone among infant mothers. 50 infant mothers were selected using non probability convenient sampling technique. A structured knowledge questionnaire was prepared to collect the data regarding developmental milestone among infant mothers. Validation of the tool was done by 9 experts and reliability of the tool was 0.75. The data was analysed using descriptive and inferential statistics. The study shows that in pre-test 14 infant mothers (28%) had poor knowledge and 36 infant mothers (72%) had average knowledge. After administrating the structured teaching programme 19 infant mothers (38%) had average knowledge and 31 infant mothers (62%) had good knowledge. Before administrating the structured teaching programme in pre-test mean knowledge score was 11.9 and in post-test it was 21.48. In the pre-test median was 12 and in post-test median was increased to 21. In post-test standard deviation was 2.91, where in pre-test standard deviation was 2.81. The mean difference was 9.58 and standard deviation difference was 0.1. Calculated 't' value was 32.40 that is higher than tabulated value 2.001 which indicates that structured teaching programme was effective. In chi square test shows that there is statistically no significance with age of child, gender of the child, age of mother, maternal education status, occupation of mother, area of residence, type of family with pre-test Knowledge score. This study concludes that the infant mothers need more extensive knowledge regarding developmental milestone. This study can be done with large sample with different population and demographic variables.

KEYWORDS

Structured teaching programme, developmental milestones, infant mothers, maternal knowledge, child development

INTRODUCTION

The first year of an infant's life is a critical period marked by rapid physical, cognitive, social, and emotional development. Developmental milestones such as head control, rolling over, sitting, crawling, and first words—are essential indicators of a child's neurological and physical well-being. Monitoring these milestones helps in the early identification of developmental delays, allowing timely interventions that can improve long-term outcomes.

According to the World Health Organization (WHO), an estimated 43% of children under the age of five in low- and middle-income countries are at risk of not achieving their full developmental potential due to poverty, poor health, and inadequate early stimulation. In India, the National Family Health Survey-5 (2019–21) highlights that although institutional deliveries have increased to 88.6%, and early initiation of breastfeeding has improved to 41.8%, awareness about postnatal care, including developmental milestones, remains insufficient among many mothers.

Inadequate maternal knowledge can result in missed opportunities for early stimulation, delayed seeking of medical advice, and increased risk of developmental disorders going unnoticed. Health education interventions, particularly structured teaching programmes, have been shown to significantly enhance maternal knowledge and practices regarding child development. Structured teaching offers a focused, systematic approach using evidence-based content that is easy for mothers to understand and apply.

Recognizing this gap, the present study was conducted in 2022 at Indira Gandhi Memorial (IGM) Hospital, Agartala, to assess the effectiveness of a structured teaching programme in improving knowledge regarding developmental milestones among primi infant mothers. The goal was to empower mothers with the information needed to monitor and support their child's early development, thereby contributing to improved child health outcomes in the region.

Objectives Of The Study:

- To assess the pre-existing knowledge level about developmental milestone among infant mothers.
- To evaluate the effectiveness of structured teaching programme regarding developmental milestone among infant mothers.
- To find out the association between level of pre-test knowledge score of infant mothers with their selected demographic variables.

Hypothesis:

H₁: The mean posttest knowledge score is significantly higher than the mean pre-test knowledge scores regarding developmental milestone.

H₂: There is a significant association between level of pretest knowledge score of infant mothers regarding developmental milestone with their selected demographic variables.

Research Methodology:

Research Approach And Design: A quantitative evaluative research approach was adopted. The study employed a pre-experimental one-group pre-test post-test design to evaluate the effectiveness of a structured teaching programme on knowledge regarding developmental milestones among infant mothers.

Setting Of The Study: The study was conducted at Indira Gandhi Memorial (IGM) Hospital, Agartala, Tripura. This hospital was selected based on the availability of infant mothers, accessibility, feasibility, and administrative cooperation.

Population And Sample: The population comprised primi mothers of infants aged 1 to 12 months attending or admitted to IGM Hospital during the study period. A total of 50 infant mothers were selected using non-probability convenience sampling.

Inclusion Criteria:

- Primi mothers of infants aged 1–12 months
- Willingness to participate and provide written informed consent
- Availability during data collection

Exclusion Criteria:

- Mothers unwilling to participate
- Mothers of infants with known developmental issues

Tools For Data Collection:

- Tool 1:** Semi-structured questionnaire to collect demographic data (7 items)
- Tool 2:** Structured knowledge questionnaire (30 items) to assess knowledge on developmental milestones, developed based on literature review and expert input

Validity And Reliability: Content validity was ensured by review from 9 experts (pediatric nursing faculty and child health specialists). The tool's reliability was confirmed using the Spearman correlation coefficient ($r = 0.75$), indicating high reliability.

Pilot Study: A pilot study was conducted at Bishalgarh Sub-Divisional Hospital with 10 participants. It demonstrated feasibility

and effectiveness, with a significant improvement in post-test scores (mean score increased from 10 to 22.1; $t = 26.40$, $p < 0.05$).

Data Collection Procedure: Pre-tests were conducted using the knowledge questionnaire, followed by a 45-minute structured teaching programme on the same day. Post-tests were administered seven days later using the same tool. Data were collected from 1st to 19th April 2022, with consent and ethical clearance from relevant authorities.

Ethical Considerations: Ethical approval was obtained from the Institutional Ethical Committee. Informed written consent was taken from each participant. Confidentiality and voluntary participation were ensured throughout.

Data Analysis: Data were analyzed using descriptive and inferential statistics. Frequency, percentage, mean, and standard deviation were used for demographic and knowledge score analysis. Chi-square test was used to assess the association between knowledge level and selected demographic variables.

Study Results:

Demographic Findings: The demographic profile of the participants showed that 20% of infants were aged 1–3 months, 28% each were aged 4–6 months and 7–9 months, while 24% were aged 10–12 months. In terms of gender, 42% were male and 58% were female. Regarding the age of mothers, 42% were between 19–21 years, 28% each were between 22–24 and 25–27 years, and 2% were between 28–30 years. Concerning educational status, 28% of mothers had primary education, 44% had secondary education, 18% were graduates, and 10% had post-graduate qualifications. Occupationally, 18% were government employees, 16% were private employees, 58% were homemakers, and 8% were daily wage workers. The majority (68%) resided in urban areas, while 32% were from rural areas. In terms of family structure, 56% belonged to nuclear families and 44% to joint families.

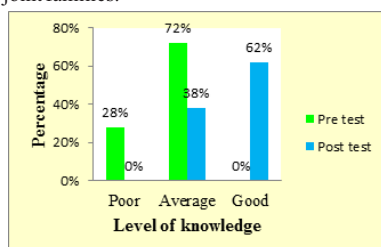


Figure 1: Bar graph representing presenting distribution of pre-test and post-test knowledge score

Presents the frequency and percentage distribution of infant mothers according to their level of knowledge regarding developmental milestones before and after the structured teaching programme. In the **pretest**, 28% of the mothers had poor knowledge, 72% had average knowledge, and none had good knowledge. After the intervention, in the **posttest**, there was a marked improvement—poor knowledge reduced to 0%, average knowledge decreased to 38%, while 62% of mothers demonstrated good knowledge. This indicates that the structured teaching programme was effective in enhancing the knowledge of infant mothers

Table 1: Mean Difference, Standard Deviation And Paired “t” Test Value Of Analysis For The Significance Of Pre-test And Post-test Score Of Infant Mothers

Group	Mean	SD	Mean Difference	t-value	df
Pre-test	11.9	2.81	9.58	32.40*	49 S
Post-test	21.48	2.91			

The analysis revealed that the mean difference was 9.58, SD difference was 0.1, calculated “t” value was 32.40* which was higher than tabulated value “t” value 2.001 at df 49. Thus the finding proved that STP programme was effective in improving the knowledge regarding developmental milestone among infant mothers. Therefore, the paired “t” test was found highly significant at 0.05 level of significance. Hence, research hypothesis (H_0) accepted.

Table no 2: Chi-square showing association between level of knowledge of infant mothers before structured teaching programme with their demographic variables

Demographic Variable	Chi-Square Value	df	P-Value	Sig.
Age of Child (months)	1.07	3	0.78	NS
Gender of Child	0.006	1	0.94	NS
Age of Mother	0.99	3	0.8	NS
Maternal Education Status	4.21	3	0.24	NS
Occupation of Mother	3.79	3	0.29	NS
Area of Residence	1.05	1	0.31	NS
Type of Family	0.28	1	0.59	NS

The association between infant mothers' pre-intervention knowledge levels and their demographic variables was examined using the Chi-square test. Results showed no statistically significant association between knowledge level and any demographic factor, including age of the child, gender of the child, age of the mother, maternal education status, occupation of the mother, area of residence, and type of family (all p-values > 0.05). This indicates that these demographic variables did not significantly influence the baseline knowledge of infant mothers regarding developmental milestones before the structured teaching programme.

CONCLUSION:

The study concluded that the structured teaching programme was effective in significantly improving the knowledge of infant mothers regarding developmental milestones. In the pre-test, 28% of infant mothers had poor knowledge and 72% had average knowledge. After the intervention, 62% demonstrated good knowledge, while 38% had average knowledge. The mean knowledge score increased from 11.9 in the pre-test to 21.48 in the post-test, with the median score rising from 12 to 21. The calculated t-value of 32.40 exceeded the critical value of 2.001, confirming the programme's effectiveness. Additionally, the chi-square test showed no significant association between pre-test knowledge scores and demographic variables such as age of the child, gender, age of mother, maternal education, occupation, area of residence, or family type. Overall, the findings suggest that the structured teaching programme successfully enhanced infant mothers' knowledge about developmental milestones.

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