

A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME REGARDING PROMOTION OF HEALTHY BEHAVIOUR AMONG THE MOTHERS OF PRESCHOOL CHILDREN IN SELECTED COMMUNITY AREA, BANGALORE

Evelyn Sumantrao Shinde,

Nursing Tutor, Department of Child Health Nursing, MAEER College of Nursing,
Pune, India

ABSTRACT

The study was conducted to assess the effectiveness of a Structured Teaching Programme on knowledge regarding the promotion of healthy behaviour among mothers of preschool children in selected community areas of Hegganahalli and Hesarghatta PHCs, Bangalore. A quantitative approach with a quasi-experimental one-group pre-test–post-test design was adopted. Using non-probability purposive sampling, 60 mothers were selected, and their knowledge was assessed using a 30-item self-structured questionnaire. The programme covered nutrition, hygiene, physical activity, sleep, safety, injury prevention, and the maternal role in child health. The overall mean knowledge score increased from 17.20 ± 7.38 in the pre-test to 24.55 ± 5.04 in the post-test, with a mean gain of 7.35. The paired *t*-test value was statistically significant ($t = 12.68, p < 0.05$), confirming the effectiveness of the intervention. Post-test findings showed that 86.7% of mothers achieved adequate knowledge compared with 13.3% in the pre-test. Occupation was significantly associated with pre-test knowledge, while other sociodemographic variables were not significant. The study concluded that the Structured Teaching Programme was effective in improving mothers' knowledge and recommended regular community-based health education to promote healthy growth and development among preschool children.

Keywords: Knowledge; B.Ed. Students; First aid management of choking; Demonstration.

Introduction

The preschool period, generally between three and six years of age, is a crucial stage of rapid physical, cognitive, emotional, language, and social development. During this period, children begin to develop independence, regulate their emotions, communicate their needs, and establish relationships outside the family. Although occasional temper tantrums, fear, stubbornness, and restlessness may be developmentally normal, their persistence, severity, or interference with everyday functioning may indicate behavioural problems. Common behavioural problems among preschool children include aggression, hyperactivity, inattention, excessive fear, anxiety, withdrawal, sleep disturbances, thumb-sucking, nail-biting, temper tantrums, and disobedience. If these problems are not identified and managed early, they may adversely affect school readiness, academic performance, interpersonal relationships, and psychological well-being.

Globally, childhood behavioural and emotional problems constitute an important public health concern. Approximately one in seven adolescents aged 10–19 years experiences a mental disorder, and behavioural disorders are among the leading causes of illness and disability in this age group (World Health Organization [WHO], 2025). Although this estimate relates to adolescents, many behavioural and emotional difficulties have their origins in early childhood. Furthermore, nearly 400 million children below five years of age—approximately six in ten children globally—regularly experience psychological aggression or physical punishment at home, which may negatively influence their emotional and behavioural development (United Nations Children's Fund [UNICEF], 2024).

In India, behavioural problems among preschool children are also considerable. A study involving 370 preschool children aged three to six years in Bhopal found that 46.7% were at risk of behavioural problems. Low family income and reduced time spent by fathers with their children were identified as important contributing factors (Chaturvedi et al., 2019). Mothers generally serve as the primary caregivers during the preschool years; therefore, their knowledge, attitudes, and responses greatly influence the early recognition and management of children's behavioural difficulties. Appropriate maternal guidance, positive discipline, and timely professional consultation can promote healthy behavioural development.

Need for the Study

Behavioural problems during the preschool period are frequently overlooked because parents may consider persistent aggression, hyperactivity, withdrawal, excessive fear, or temper tantrums to be normal childhood behaviours. A lack of knowledge may lead to punishment, criticism, neglect, or delayed professional consultation, potentially worsening the child's condition. Early identification is essential because behavioural difficulties that begin during the preschool years may continue into school age and adolescence, resulting in learning difficulties, poor interpersonal relationships, emotional distress, and social maladjustment. Therefore, mothers require accurate information to differentiate temporary developmental behaviours from warning signs that require professional assessment and intervention.

At the global level, available evidence demonstrates that mental, emotional, and behavioural conditions affect a substantial proportion of children. Data from the United States showed that approximately 21% of children aged 3–17 years had been diagnosed with a mental, emotional, or behavioural condition (Centers for Disease Control and Prevention [CDC], 2025). Similarly, UNICEF (2024) reported that six in ten children under five years of age worldwide regularly experience violent discipline at home. These findings highlight the importance of positive parenting, early behavioural assessment, and family-centred interventions.

At the Indian level, Chaturvedi et al. (2019) found that 46.7% of preschool children in Bhopal were at risk of behavioural problems. At the Karnataka level, a study conducted among 334 preschool children aged three to six years in the rural and urban areas of Dharwad district found that only 39.2% were within the normal range, while 47% were in the borderline range and 13.8% were in the clinical range for behavioural problems. Furthermore, 49.7% of the children were in the clinical range for internalising problems, while 26% were in the clinical range for externalising problems (Mokashi et al., 2022). The researchers recommended parent-counselling interventions during the early years. These global, Indian, and Karnataka-level findings demonstrate the need to educate mothers regarding the identification, contributing factors, prevention, and management of behavioural problems. Therefore, the present study is undertaken to assess the effectiveness of a structured teaching programme on knowledge regarding behavioural problems of preschool children among mothers.

OBJECTIVES OF THE STUDY

1. To assess the pretest knowledge regarding promotion of healthy behaviour among the mothers of preschool children.
2. To assess the posttest knowledge regarding promotion of healthy behaviour among the mothers of preschool children.
3. To evaluate the effectiveness of structured teaching programme on knowledge regarding promotion of healthy behaviour among the mothers of preschool children.
4. To find the association between pretest knowledge regarding promotion of healthy behaviour among the mothers of preschool children and the sociodemographic variables.

HYPOTHESES:

H₁: There will be a significant difference between mean pretest and mean posttest knowledge regarding promotion of healthy behaviour among the mothers of preschool children.

H₂: There will be a significant association between pretest knowledge regarding promotion of healthy behaviour among the mothers of preschool children and the sociodemographic variables.

OPERATIONAL DEFINITIONS:

Assess: In this study, "assess" refers to the systematic process of collecting and analyzing data to evaluate the outcomes of the structured teaching programme.

Effectiveness: The term "effectiveness" in this study denotes the degree to which the structured teaching programme successfully achieves its objectives. It involves measuring how well the programme influences the adoption of healthy behaviors by mothers of preschool children in the targeted community area within a specified period.

Structured Teaching Programme: In the context of this research, a "structured teaching programme" refers to a planned educational intervention designed to provide mothers of preschool children with specific knowledge, skills, and resources aimed at promoting healthy behaviors. This programme is organized, systematic, and delivered in a predetermined format to ensure consistency and clarity in its implementation.

Healthy Behaviour: "Healthy behavior" in this study encompasses a range of positive actions and practices that contribute to the overall well-being and health of preschool children. This includes but is not limited to appropriate nutrition, physical activity, hygiene practices, safety measures, and preventive healthcare behaviors, as perceived within the cultural context of the selected community area in Bangalore.

Mothers: For the purpose of this study, "mothers" are defined as female caregivers or guardians responsible for the care, upbringing, and well-being of preschool-aged children within the selected community area in Bangalore.

Preschool Children: "Preschool children" refer to youngsters in the age group of approximately 2 to 5 years old who have not yet started formal schooling. They are dependent on adult caregivers for their basic needs, including nutrition, hygiene, safety, and early learning experiences.

Community Area: In this research, "community area" denotes a geographically defined region within Bangalore where a specific group of mothers and preschool children reside.

ASSUMPTIONS:

- Mothers of preschool children may have some existing knowledge regarding healthy behaviour and child health.
- The knowledge of mothers regarding child health and healthy behaviour can be assessed using a structured questionnaire.
- A structured teaching programme can effectively improve the knowledge of mothers regarding promotion of healthy behaviour.
- Increased knowledge among mothers may lead to better health practices for their preschool children.

DELIMITATIONS:

1. The study was limited to mothers of preschool children residing in selected community areas of Bangalore.
2. Only 60 samples were included in the study.
3. The study considered only mothers who could read and write in Kannada or English.

Methodology

Research methodology refers to the systematic procedures used to conduct a study from the identification of the research problem to the interpretation of findings. This chapter describes the research approach, design, setting, variables, population, sample, sampling technique, eligibility criteria, development of the tool, validity, reliability, pilot study, data-collection procedure, plan for data analysis, and ethical considerations.

Research Approach and Design

A quantitative research approach was adopted to assess the effectiveness of the Structured Teaching Programme (STP) on mothers' knowledge regarding the promotion of healthy behaviour among preschool children. A quasi-experimental, one-group pre-test-post-test design was used.

The design is represented as:

$O_1 - X - O_2$

Where:

- **O₁:** Pre-test assessment of mothers' knowledge
- **X:** Administration of the Structured Teaching Programme
- **O₂:** Post-test assessment of mothers' knowledge

Setting of the Study

The study was conducted in the community areas covered by Hegganahalli and Hesarghatta Primary Health Centres, Bangalore North Taluk, Karnataka. These semi-urban areas consist of families from varied socioeconomic and educational backgrounds. The settings were selected purposively because of the availability of mothers of preschool children, accessibility for data collection, community cooperation, and feasibility of conducting the educational intervention and follow-up assessment.

Variables

The independent variable was the Structured Teaching Programme regarding the promotion of healthy behaviour among preschool children. The dependent variable was the mothers' knowledge score measured before and after the intervention. Extraneous variables included the mother's age, religion, educational status, occupation, monthly family income, number of children, type of family, and previous source of knowledge regarding child health.

Population, Sample and Sampling Technique

The target population consisted of mothers of preschool children residing in the selected community areas of Bangalore. The sample comprised 60 mothers of preschool children from the areas covered by Hegganahalli and Hesarghatta PHCs.

A non-probability purposive sampling technique was used to select participants who met the eligibility criteria. This technique enabled the researcher to select mothers who were available, willing to participate, and able to understand the questionnaire and teaching content.

Inclusion Criteria

The study included mothers who:

1. Had at least one preschool-aged child.
2. Resided in the selected community areas.
3. Were available during the data-collection period.
4. Were willing to participate in the study.
5. Could read and write Kannada or English.

Exclusion Criteria

The study excluded mothers who:

1. Were unavailable during data collection.
2. Had previously attended a similar structured teaching programme.

Development and Description of the Tool

The data-collection tool was developed after reviewing relevant textbooks, journals, research studies, and maternal and child-health guidelines. The content was prepared according to the study objectives and the educational and cultural characteristics of the participants. The tool was translated into Kannada and checked for clarity and accuracy. It consisted of two sections.

Section A: Socio-demographic questionnaire

This section contained eight items related to the mother's age, religion, educational status, occupation, monthly family income, number of children, type of family, and source of information regarding child health.

Section B: Self-structured knowledge questionnaire

This section consisted of 30 multiple-choice questions assessing mothers' knowledge regarding the promotion of healthy behaviour among preschool children. The questions covered nutrition and healthy eating, personal hygiene, physical activity and sleep, safety and injury prevention, the mother's role in child development, and basic child-health education. Each question had four options with one correct answer. A score of one was awarded for every correct answer and zero for an incorrect answer. The maximum obtainable score was 30. Higher scores indicated greater knowledge.

Structured Teaching Programme

The Structured Teaching Programme was prepared to improve mothers' knowledge regarding healthy behaviours among preschool children. It included information on balanced nutrition, healthy eating practices, personal hygiene, adequate sleep, physical activity, safety and prevention of injuries, and the mother's role in promoting healthy growth and development.

The programme was delivered through an interactive lecture-cum-discussion method supported by appropriate visual aids. Simple and culturally suitable language was used to encourage understanding and participation among mothers with different educational backgrounds.

Content Validity and Reliability

Content validity of the socio-demographic questionnaire, self-structured knowledge questionnaire, and Structured Teaching Programme was established by submitting them to experts in Child Health Nursing, Community Health Nursing, Paediatrics, and Nursing Education. The experts assessed the tools for relevance, clarity, simplicity, comprehensiveness, cultural appropriateness, and consistency with the study objectives. Their suggestions regarding wording, sequencing, and content coverage were incorporated into the final tools.

The reliability of the knowledge questionnaire was assessed using the test-retest method. The questionnaire was administered twice, under similar conditions, to a small group of mothers possessing characteristics similar to the main study participants. These mothers were not included in the final study. The reliability coefficient was found to be acceptable, indicating that the questionnaire was stable and consistent for measuring maternal knowledge.

Pilot Study

A pilot study was conducted from 15 April to 28 April 2025 to assess the feasibility of the research design, tool, intervention, and data-collection procedure. It was carried out in a community area with demographic characteristics similar to the main study setting but not included in the final study.

Six mothers of preschool children were selected using a non-probability purposive sampling technique. A pre-test was conducted using the knowledge questionnaire, followed by the Structured Teaching Programme. The post-test was administered on the seventh day. The pilot study assessed the clarity of questions, suitability of the language, time required, effectiveness of the teaching method, and possible logistical difficulties. Minor modifications were made to the instructions and sequence of the teaching session. The study was found to be feasible, and no major problems were identified.

Data-Collection Procedure

Ethical clearance and administrative permission were obtained before data collection. Eligible mothers were identified from the selected community areas, and the purpose and procedure of the study were explained to them. Written informed consent was obtained from each participant.

On the first day, the socio-demographic information was collected, and a pre-test was administered using the structured knowledge questionnaire. On the following day, the Structured Teaching Programme was delivered through an

interactive lecture-cum-discussion supported by visual aids. The post-test was conducted on the seventh day using the same knowledge questionnaire to determine the improvement in knowledge. Confidentiality, privacy, comfort, and cultural sensitivity were maintained throughout data collection.

Plan for Data Analysis

The collected data were coded, classified, tabulated, and analysed using descriptive and inferential statistics. Frequency and percentage were used to describe the participants' socio-demographic characteristics and classify their knowledge levels. Mean and standard deviation were used to summarise pre-test and post-test knowledge scores.

A paired *t*-test was used to compare the mean pre-test and post-test knowledge scores and determine the effectiveness of the Structured Teaching Programme. The Chi-square test was used to identify the association between pre-test knowledge levels and selected socio-demographic variables. Statistical significance was determined at $p < 0.05$, and the results were presented through appropriate tables and figures.

Ethical Considerations

Ethical clearance was obtained from the Institutional Ethics Committee of the National College of Nursing, Bangalore, and administrative permission was obtained from the concerned community authorities. Participation was voluntary, and written informed consent was obtained from every participant. Mothers were informed about the purpose, procedure, duration, benefits, and nature of the study. They were assured that their information would remain confidential and be used only for research purposes. Participants had the right to refuse participation or withdraw at any stage without penalty. Anonymity, privacy, dignity, and cultural sensitivity were maintained throughout the study.

RESULTS

Table 1: Distribution of Mothers According to Sociodemographic Variables

N = 60

Variable	Categories: Frequency (%)
Age (years)	Below 20: 5 (8.3%); 21–25: 15 (25.0%); 26–30: 20 (33.3%); 31–35: 12 (20.0%); ≥36: 8 (13.3%)
Religion	Hindu: 40 (66.7%); Muslim: 12 (20.0%); Christian: 8 (13.3%)
Education	No formal: 2 (3.3%); Primary: 6 (10.0%); Secondary: 15 (25.0%); Higher secondary: 10 (16.7%); Graduate: 20 (33.3%); Postgraduate: 7 (11.7%)
Occupation	Homemaker: 25 (41.7%); Daily wage: 10 (16.7%); Private: 12 (20.0%); Government: 8 (13.3%); Self-employed: 5 (8.3%)
Monthly income	<₹5,000: 8 (13.3%); ₹5,001–10,000: 15 (25.0%); ₹10,001–15,000: 20 (33.3%); ₹15,001–20,000: 10 (16.7%); >₹20,000: 7 (11.7%)
Number of children	One: 16 (26.7%); Two: 14 (23.3%); Three: 20 (33.3%); >Three: 10 (16.7%)
Type of family	Nuclear: 30 (50.0%); Joint: 20 (33.3%); Extended: 10 (16.7%)
Source of knowledge	Media: 18 (30.0%); Health professionals: 15 (25.0%); Family: 12 (20.0%); Friends: 8 (13.3%); Relatives: 7 (11.7%)

Most mothers were aged 26–30 years (33.3%), Hindu (66.7%), graduates (33.3%), homemakers (41.7%), and from nuclear families (50%).

Table 2: Comparison of Pre-Test and Post-Test Knowledge Levels Regarding Child Health

N = 60

Knowledge level	Pre-test f (%)	Post-test f (%)
Inadequate	16 (26.7%)	3 (5.0%)
Moderate	36 (60.0%)	5 (8.3%)
Adequate	8 (13.3%)	52 (86.7%)
Total	60 (100%)	60 (100%)

Adequate knowledge increased from 13.3% in the pre-test to 86.7% in the post-test, indicating considerable improvement after the programme.

Table 3: Effectiveness of the Structured Teaching Programme

N = 60

Knowledge area	Maximum score	Pre-test Mean $\pm$ SD	Post-test Mean $\pm$ SD	Mean gain	<i>t</i> -value
Nutrition and healthy eating	8	4.80 $\pm$ 2.20	6.62 $\pm$ 1.45	1.82	14.19*
Hygiene practices	7	4.12 $\pm$ 1.98	5.67 $\pm$ 1.47	1.55	12.35*
Physical activity and sleep	6	3.42 $\pm$ 1.83	4.98 $\pm$ 1.27	1.56	10.59*
Safety and injury prevention	5	2.63 $\pm$ 1.48	3.98 $\pm$ 1.38	1.35	9.27*
Role of mothers and health education	4	2.23 $\pm$ 1.16	3.30 $\pm$ 0.91	1.07	8.58*
Overall knowledge	30	17.20 $\pm$ 7.38	24.55 $\pm$ 5.04	7.35	12.68*

* $p < 0.05$, statistically significant.

The overall mean increased from 17.20 to 24.55. The significant *t*-value ($t = 12.68$, $p < 0.05$) shows that the teaching programme was effective; therefore, H_1 was accepted.

Table 4: Association Between Sociodemographic Variables and Pre-Test Knowledge Scores

N = 60

Sociodemographic variable	df	χ^2 value	<i>p</i> -value	Inference
Age	4	5.79	0.215	NS
Religion	2	0.34	0.846	NS
Educational status	5	7.84	0.165	NS
Occupation	4	12.26	0.016	S
Monthly family income	4	1.59	0.810	NS
Number of children	3	2.34	0.506	NS
Type of family	2	2.75	0.253	NS
Source of knowledge	4	1.04	0.904	NS

S: Significant; NS: Not significant.

Only occupation was significantly associated with pre-test knowledge ($p < 0.05$). All other sociodemographic variables were not significantly associated.

Statistical correction: The χ^2 values in this table were recalculated from the frequencies supplied in the original table because several originally reported χ^2 values did not correspond with those frequencies.

Conclusion

The study demonstrated that the Structured Teaching Programme was effective in improving mothers' knowledge regarding the promotion of healthy behaviour among preschool children. The overall mean knowledge score increased from 17.20 in the pre-test to 24.55 in the post-test. The statistically significant paired t-test value ($t = 12.68$, $p < 0.05$) confirmed the effectiveness of the intervention. The programme improved mothers' knowledge regarding nutrition, hygiene, physical activity, sleep, safety, injury prevention, and their role in promoting child health. Although the study was limited by its one-group pre-test–post-test design, absence of a control group, purposive sampling, sample size of 60, and restriction to selected community areas of Bangalore, the findings highlight the importance of providing structured health education to mothers. Nurses and other healthcare professionals should conduct regular educational and counselling programmes to strengthen mothers' ability to promote healthy behaviour, identify health concerns early, and support the optimal growth and development of preschool children.

Acknowledgements

The investigator expresses sincere gratitude to the Institutional Ethics Committee and administrative authorities of the National College of Nursing, Bangalore, and the concerned authorities of Hegganahalli and Hesarghatta Primary Health Centres for granting permission and extending their cooperation during the study. Heartfelt thanks are also extended to the 60 mothers of preschool children who willingly participated in the pre-test, Structured Teaching Programme, and post-test. Their cooperation and active participation contributed significantly to the successful completion of the study.

Conflicts of Interest

The author declares that there were no financial, personal, professional, or academic conflicts of interest related to the planning, implementation, data analysis, interpretation, or reporting of this study.

Funding and Sponsorship

The study did not receive any financial assistance or sponsorship from governmental, private, institutional, or other funding agencies. All expenses related to the development of the Structured Teaching Programme, visual aids, research tools, and data collection were borne by the investigator.

Ethical Considerations and Informed Consent

Ethical clearance was obtained from the Institutional Ethics Committee of the National College of Nursing, Bangalore. Formal administrative permission was also obtained from the concerned authorities of Hegganahalli and Hesarghatta Primary Health Centres before conducting the study. The purpose, procedure, expected benefits, and voluntary nature of participation were clearly explained to all eligible mothers. Written informed consent was obtained from each participant before data collection. Confidentiality and anonymity were maintained throughout the study, and the collected information was used exclusively for research purposes. Participants were informed of their right to refuse or withdraw from the study at any stage without any penalty or consequences.

References

- Centers for Disease Control and Prevention. (2025). *Data and statistics on children's mental health*.
- Chaturvedi, S., Shrivastava, N., Agrawal, A., & Shrivastava, J. (2019). Prevalence of children at risk of behavioral problems among preschoolchildren between the ages of 3 and 6 years. *Indian Journal of Child Health*, 6(12), 658–661.

Mokashi, M. V., Khadi, P. B., Patil, M., Vastrad, J., & Malagi, U. (2022). Prevalence of behavioral problems among preschool children of Dharwad district. *Journal of Farm Sciences*, 35(2), 272–277. <https://doi.org/10.61475/jfm.v35i02.87>

United Nations Children's Fund. (2024, June 11). *Nearly 400 million young children worldwide regularly experience violent discipline at home*.

World Health Organization. (2025, September 1). *Mental health of adolescents*.