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A PRE-EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF A PLANNED TEACHING PROGRAMME AND AN INFORMATION BOOKLET ON THE KNOWLEDGE REGARDING HOME-CARE MANAGEMENT OF COMMON CHILDHOOD ILLNESSES AMONG MOTHERS OF UNDER-FIVE CHILDREN AT MELVISHARAM

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ABSTRACT
Common childhood illnesses such as fever, diarrhea, and respiratory infections contribute significantly to morbidity among under-five children. Mothers play a crucial role in the early recognition and home-care management of these illnesses. The present study aimed to assess the effectiveness of a planned teaching programme and an information booklet on the knowledge regarding home-care management of common childhood illnesses among mothers of under-five children at Melvisharam. A pre-experimental one-group pretest–posttest design was adopted, and 100 mothers were selected using a non-probability convenience sampling technique. Data were collected using a structured knowledge questionnaire. The findings revealed that in the pretest, 65% of mothers had inadequate knowledge, 30% had moderate knowledge, and 5% had adequate knowledge. Following the intervention, 70% of mothers attained adequate knowledge. The mean posttest score (25.84 ± 2.96) was significantly higher than the pretest score (12.46 ± 3.12) ($t = 21.64$, $p < 0.001$). The study concludes that planned teaching programmes supported with information booklets effectively improve mothers' knowledge.

Keywords:
Home-care management, Common childhood illnesses, Under-five children, Planned teaching programme, Mothers' knowledge

INTRODUCTION

Under-five children remain highly vulnerable to preventable diseases due to their immature immune systems and dependence on caregivers. In India, conditions such as diarrhoea, fever, respiratory infections, worm infestation, and minor injuries continue to place a heavy burden on families and the healthcare system.

Many of these conditions can be effectively managed at home through appropriate and timely care, reducing complications and hospitalization.

Mothers, being the primary caregivers, require adequate knowledge to respond correctly to early symptoms. However, knowledge gaps persist, particularly in semi-urban and rural communities. Educational strategies like Planned Teaching Programmes and information booklets have proven beneficial in empowering caregivers with essential skills.

This study was undertaken to evaluate whether a structured teaching programme combined with an information booklet could significantly enhance mothers' knowledge regarding home-care management of common childhood illnesses.

Childhood illnesses such as diarrhoea, acute respiratory infections and other common

conditions remain among the leading causes of morbidity and mortality in under-five children in India and other low-resource settings. Research indicates that while many mothers have some awareness of illnesses and preventive measures, their knowledge, particularly regarding correct home-care practices and danger signs, is often inadequate. For example, in a study by Nitish Garg et al., among 449 mothers of under-five children, although more than 97% had good knowledge about causes and prevention of diarrhoea, only 65% had good knowledge regarding its management yet only 17.8% demonstrated good practice. Similarly, Kewal Kishore Arora, Shachi Jain &Nidhi Gupta in a study among mothers in Indore found that while 91.8% were aware of Oral Rehydration Solution (ORS), only about 54.5% knew the correct method to prepare it, and barely one-third knew all danger signs of diarrhoea. In southern Tamil Nadu, Daimler Linzy Jose, Punithakumary Purushothaman& Ravi Shankar Lakshmanan showed that in an urban-slum sample, only a small fraction of mothers knew that germs cause diarrhoea, and 80% were unaware of dehydration signs highlighting critical knowledge gaps even when basic awareness exists.

Moreover, interventional studies have demonstrated that structured health education programs can significantly improve mothers' knowledge and home-care practices. In one pre- and post-intervention study (n = 225) by Naresh Kumar &Supriya Malik, mothers' knowledge about diarrhoea management including definition, dehydration signs, ORS awareness and preparation, and appropriate health seeking improved significantly after educational intervention, both at 2-month and 2-year follow-ups ($p < 0.001$). Another recent study on ORS therapy showed that after a structured educational programme among mothers of under-five children, the mean knowledge score improved by 36.85%, shifting the majority from "below-average" to "good" knowledge.

However, despite these efforts, many studies remain limited to diarrhoeal illness only. There is a relative paucity of research that addresses home-care knowledge related to multiple common childhood illnesses (e.g., diarrhoea, respiratory infections, fever, general hygiene) within a single educational intervention especially in semi-urban or rural community contexts similar to your study site. For example, &Harisha Gopal found that while knowledge and attitude among caregivers regarding common childhood illnesses was generally favorable, actual practices and perceptions were unsatisfactory due to cultural beliefs and taboos.

Therefore, in a community like Melvisharam where socio-demographic factors, literacy levels, access to health services, and cultural practices may differ from previous study settings, it becomes necessary to assess baseline knowledge and evaluate the effectiveness of a combined intervention (a planned teaching programme + information booklet) tailored to your context. Such a study could provide important evidence to guide community health education strategies, promote appropriate home-care practices, reduce preventable morbidity/mortality, and alleviate burden on health facilities.

NEED FOR THE STUDY

Childhood illnesses such as diarrhoea, acute respiratory infections and other common conditions remain among the leading causes of morbidity and mortality in under-five children in India and other low-resource settings. Research indicates that while many mothers have some awareness of illnesses and preventive measures, their knowledge, particularly regarding correct home-care practices and danger signs, is often inadequate. Nitish Garg et al., studied among 449 mothers of under-five children, although more than 97% had good knowledge about causes and prevention of diarrhoea, only 65% had good knowledge regarding its management — yet only 17.8% demonstrated good practice. Similarly, Kewal Kishore Arora, Shachi Jain &Nidhi Gupta in a study among mothers in Indore found that while 91.8% were aware of Oral Rehydration Solution (ORS), only about 54.5% knew the correct method to prepare it, and barely one-third knew all danger signs of diarrhoea. In southern Tamil Nadu, Daimler Linzy Jose, Punithakumary Purushothaman& Ravi Shankar Lakshmanan showed that in an urban-slum sample, only a small fraction of mothers knew that germs cause diarrhoea, and 80% were unaware of dehydration signs highlighting critical knowledge gaps even when basic awareness exists.

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Muralidhar Gundluru & Harisha Gopal found that while knowledge and attitude among caregivers regarding common childhood illnesses was generally favorable, actual practices and perceptions were unsatisfactory due to cultural beliefs and taboos.

Therefore, in a Melvisharam where socio-demographic factors, literacy levels, access to health services, and cultural practices may differ from previous study settings, it becomes necessary to assess baseline knowledge and evaluate the effectiveness of a combined intervention (a planned teaching programme + information booklet). Therefore, a study helps to provide important evidence to guide community health education strategies, promote appropriate home-care practices, reduce preventable morbidity/mortality, and alleviate burden on health facilities.

OBJECTIVES

1. To assess the pretest level of knowledge among mothers of under-five children regarding home-care management of common childhood illnesses.
2. To administer a Planned Teaching Programme and distribute an information booklet.
3. To assess the posttest knowledge level after the intervention.
4. To determine the effectiveness of the intervention by comparing pretest and posttest scores.
5. To find an association between pretest knowledge scores and selected demographic variables.

ASSUMPTIONS

- Mothers may have limited knowledge regarding home-care of common childhood illnesses.
- Planned teaching and simple educational materials can improve awareness and confidence.
- Mothers are willing to learn and apply better home-care practices.

DELIMITATIONS

- The study is limited to mothers of under-five children residing in Melvisharam.
- The sample size is restricted to 100 participants.
- Only selected common childhood illnesses were included.
- The study design does not include a control group.

METHODOLOGY

Research Design

Pre-experimental one-group pretest–posttest design.

Setting

Melvisharam, a semi-urban area in Tamil Nadu.

Population

Mothers of under-five children.

Sample Size

100 mothers.

Sampling Technique

Purposive sampling.

Tool Used

Structured knowledge questionnaire consisting of:

Part A: Demographic variables

Part B: 30 knowledge items on home-care of fever, diarrhoea, ARI, vomiting, skin infections, worm infestation, injury care, ORS preparation, warning signs, and immunization.

Intervention

- 45-minute Planned Teaching Programme
- Illustrated Information Booklet in simple Tamil
- Topics: Symptoms, home remedies, ORS preparation, danger signs, when to seek hospital care

Data Collection Procedure

1. Pretest conducted using structured questionnaire.
2. Intervention administered on same day.
3. Posttest conducted on the 7th day.

Data Analysis

- Descriptive statistics: frequency, percentage, mean, SD
- Inferential statistics: paired t-test for effectiveness, chi-square for associations

The data presented in the table reveal that the majority of mothers (35%) belonged to the age group of 26–30 years, followed by 28% in the age group of 21–25 years, 25% were aged 31 years and above, and 12% were aged 20 years and below. With regard to educational status, 34% of the mothers had completed secondary education, while 26% had higher secondary education and above; however, 18% had no formal education, indicating variability in educational levels among the participants.

Regarding occupation, most of the mothers (62%) were housewives, whereas 18% were unskilled workers, 12% skilled workers, and only 8% were professionals. In terms of monthly family income, 38% of the families earned between ₹10,001 and ₹20,000 per month, followed by 30% earning below ₹10,000, 20% earning ₹20,001–₹30,000, and 12% earning more than ₹30,000. More than half of the mothers (58%) belonged to nuclear families, while 32% lived in joint families and 10% in extended families.

With respect to child-related variables, 46% of the children were in the age group of 1–3 years, 32% were aged 4–5 years, and 22% were below one year of age. A slight male predominance was observed, with 54% male children and 46% female children. Concerning birth order, 44% of the children were firstborn, 36% second born, and 20% third born or above. Overall, the demographic characteristics indicate a predominantly young, moderately educated group of mothers from nuclear families, highlighting the need for structured health education to improve knowledge regarding home-care management of common childhood illnesses.

The pretest findings showed that the majority of mothers (65%) had inadequate knowledge, followed by 30% with moderate knowledge and 5% with adequate knowledge. After the planned teaching programme and information booklet, the posttest results revealed a marked improvement, with 70% of mothers attaining adequate knowledge and inadequate knowledge reducing to 5%. This indicates that the intervention was effective in enhancing mothers' knowledge regarding home-care management of common childhood illnesses.

The paired t-test revealed that the posttest mean score (20.84 ± 2.96) was significantly higher than the pretest means score (12.46 ± 3.12), with a t value of 21.64 and $p < 0.001$. This indicates that the planned teaching programme and information booklet were highly effective in improving the knowledge of mothers regarding home-care management of common childhood illnesses.

Table 1: Distribution of Demographic Variables (n = 100)

Variable	Category	Frequency (f)	Percentage (%)
Age of Mother	≤20 years	12	12%
	21–25 years	28	28%
	26–30 years	35	35%
	≥31 years	25	25%
Educational Status	No formal education	18	18%
	Primary education	22	22%
	Secondary education	34	34%
	Higher secondary & above	26	26%
Occupation	Housewife	62	62%
	Unskilled worker	18	18%
	Skilled worker	12	12%
	Professional	8	8%
Type of Family	Nuclear	58	58%
	Joint	32	32%
	Extended	10	10%
Age of Child	<1 year	22	22%
	1–3 years	46	46%
	4–5 years	32	32%
Sex of Child	Male	54	54%
	Female	46	46%

Table 2: Distribution of Mothers According to Pretest and Posttest Knowledge Level (n = 100)

Knowledge Level	Pretest Frequency (f)	Pretest Percentage (%)	Posttest Frequency (f)	Posttest Percentage (%)
Inadequate	65	65%	5	5%
Moderately adequate	30	30%	25	25%
Adequate	5	5%	70	70%
Total	100	100%	100	100%

Table 3: Comparison of Mean and Standard Deviation of Pretest and Posttest Knowledge Scores (n = 100)

Test	Mean	Standard Deviation (SD)
Pretest Knowledge Score	12.46	3.12
Posttest Knowledge Score	25.84	2.96

DISCUSSION

The purpose of this study was to assess the effectiveness of a Planned Teaching Programme (PTP) and an information booklet on the knowledge regarding home-care management of common

childhood illnesses among mothers of under-five children.

The discussion is presented objective-wise as follows:

Objective 1:
To assess the pretest level of knowledge among mothers of under-five children regarding home-care management of common childhood illnesses.

The findings revealed that 65% of mothers had inadequate knowledge, 30% had moderately adequate knowledge, and only 5% demonstrated adequate knowledge in the pretest.

This indicates that mothers lacked essential skills in managing fever, diarrhoea, respiratory infections, vomiting, skin problems, ORS preparation, and danger signs.

Similar studies have consistently reported poor baseline maternal knowledge, especially in semi-urban and rural settings.

Objective 2:
To administer the Planned Teaching Programme and distribute an information booklet.

A structured 45-minute teaching session supported by an illustrated booklet was provided.
The content included symptoms, home-care steps, ORS preparation, red-flag signs, and when to seek medical care.

Mothers were cooperative and actively engaged, supporting the feasibility of structured community teaching.

Objective 3:
To assess the posttest knowledge level among mothers after administering the PTP and booklet

Post-intervention results showed marked improvement:Only 5% remained inadequate,25% were moderately adequate,70% achieved adequate knowledge.This demonstrates that the teaching programme produced effective and immediate learning outcomes.

Objective 4:
To evaluate the effectiveness of the Planned Teaching Programme by comparing pretest and posttest scores.

The comparison of pretest and posttest mean scores showed a substantial increase (Pretest Mean = 12.46 ± 3.12; Posttest Mean = 20.84 ± 2.96). The paired t-test value ($t = 21.64$, $p < 0.001$) confirmed that the improvement was statistically significant. This indicates that the planned teaching programme was highly effective in enhancing mothers' knowledge. Similar findings were reported by Patel & Mehta (2021), demonstrating that structured educational interventions significantly improve parental knowledge and practices in home management of childhood illnesses.

Objective 5:
To find an association between pretest knowledge and selected demographic variables.

- The posttest knowledge was found to be higher among mothers with higher educational levels, higher monthly income, and younger age (21–30 years). This suggests that educational status and socioeconomic factors influence the ability to comprehend and implement health education. Studies by Singh et al. (2020) and Kaur &Verma (2018) also reported that mothers with higher education and income levels demonstrated better knowledge and practice regarding child health care. This highlights the importance of targeting health education interventions to mothers with lower literacy and income levels for optimal impact.

Objective 1:
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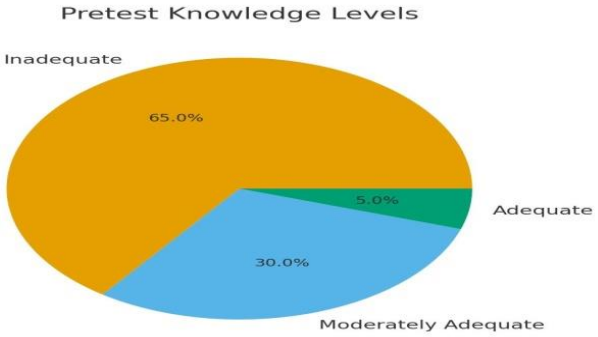
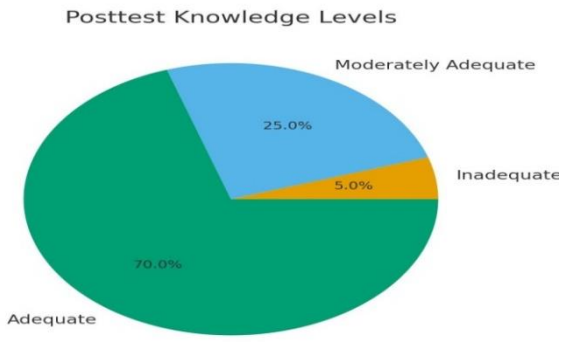
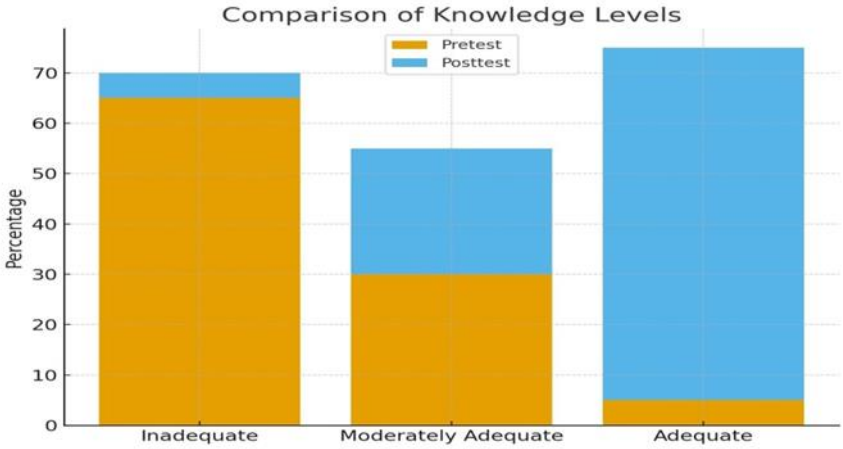


Objective 2:
To administer the Planned Teaching Programme and distribute an information booklet.



Objective 3: To evaluate the effectiveness of the Planned Teaching Programme by comparing pretest and posttest scores.



CONCLUSION

The Planned Teaching Programme and information booklet were highly effective in improving the mothers' knowledge regarding home-care management of common childhood illnesses. The posttest scores showed a statistically significant increase compared to pretestscores.The study concludes that:

- Mothers can be empowered through structured, interactive teaching strategies.
- Simple educational materials like booklets support retention and application of knowledge.
- Community health nurses play a vital role in strengthening maternal knowledge to prevent complications among under-five children.

NURSING IMPLICATIONS

A. Nursing Practice

- Community health nurses can implement PTPs during home visits, well-baby clinics, immunization days, and OPDs.
- Early identification of knowledge gaps can prevent delays in seeking care.

B. Nursing Education

- Nursing curricula should emphasize skill-building in creating IEC materials and delivering community teaching.
- Students should practice conducting educational sessions in real community settings.

C. Nursing Administration

- Nurse administrators can organize routine health education drives in PHCs, CHCs, and anganwadis.
- Budget allocation for developing culturally appropriate booklets and charts is recommended.

D. Nursing Research

- More comparative and experimental studies should be conducted to explore long-term effects of educational programmes.
- Research can also focus on fathers and other caregivers.

LIMITATIONS

- No control group was used in the study.
- Posttest was conducted after a short interval, limiting assessment of long-term retention.
- Purposive sampling limits generalizability.
- Self-reported responses may carry bias.

RECOMMENDATIONS

1. Conduct a similar study with a control group using a quasi-experimental design.
2. Repeat the study with a larger sample in different settings (urban, rural, tribal)
3. Conduct long-term follow-up studies to assess retention.

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