

A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge and Practice Regarding Oral Re-hydration Solution for Acute Diarrhea among Mothers of Under-Five Children in Bahour at Puducherry.

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ABSTRACT :

Background: Acute diarrhea is a leading cause of morbidity and mortality among under-five children. Oral Re-hydration Solution (ORS) is a simple, effective intervention to prevent dehydration, yet maternal knowledge and practice remain sub-optimal in many rural settings. This study aimed to evaluate the effectiveness of a Planned Teaching Programme (PTP) on knowledge and practice regarding ORS among mothers of under-five children. **Methods:** A pre-experimental one-group pretest post-test design was conducted among 50 mothers at the Primary Health Centre, Bahour, Puducherry. Data were collected using a structured questionnaire and observation checklist before and after the intervention. **Results:** In the pretest, 44% had inadequate and 46% had moderate knowledge regarding ORS. Post-test showed significant improvement with 52% achieving adequate knowledge and 48% moderate knowledge. Practice levels also improved markedly from 58% poor in pretest to 42% good and 58% moderate in post-test. The paired t-test indicated highly statistically significant gains in both knowledge ($t = 18.478$, $p < 0.001$) and practice ($t = 15.788$, $p < 0.001$). A moderate positive correlation was found between post-test knowledge and practice scores ($r = 0.600$, $p < 0.001$). Significant associations existed with educational status and religion for knowledge levels. **Conclusion:** The Planned Teaching Programme was highly effective in improving knowledge and practice regarding ORS. Integrating such educational interventions into routine maternal and child health services is recommended to reduce diarrhea-related morbidity in rural communities.

KEYWORDS: Mothers of under-five children, Oral Re-hydration Solution, Planned Teaching Programme, Knowledge, Practice, Acute Diarrhoea, Puducherry.

1. INTRODUCTION :

Diarrhea, according to the World Health Organization (WHO), is characterized by having three or more loose or watery stools each day, as well as any additional bowel movements that mothers consider abnormal or excessively frequent in children. There are three clinical classifications of diarrhea: acute bloody diarrhea, acute watery diarrhea, and chronic diarrhea, which persists for a minimum of 14 days (Amir K. Saleh et al. 2024).

Globally, diarrhoea continues to be a significant public health challenge. In low-income nations, diarrhoea ranks as the second leading cause of illness and death among children. Annually, around 2.5 billion cases of

diarrhoea are recorded in children under the age of five. More than 50% of these cases occur in Africa and South Asia. The rate of incidence peaks during the first two years of life and decreases as children age.

Acute diarrhea ranks among the most prevalent health challenges. Dehydration caused by diarrhea has been associated with 16% of deaths in children under the age of five and 3% of fatalities in newborns globally. Another health issue related to diarrhea is malnutrition. Children experiencing diarrhea along with severe malnutrition face an increased risk of mortality. Studies indicate that diarrhea can also lead to long-term physical impairments, including stunted growth and reduced cognitive development (Leena Muppal 2024).

Diarrhoea poses a significant health risk for young children in developing nations and is the second leading cause of hospital admissions for those under five in India. Each year, around 320,000 children are admitted to hospitals due to dehydration resulting from diarrhoea. The use of Oral Re-hydration Solution (O.R.S) in treating these children has notably reduced the incidence of illness and death due to acute infectious diarrhoea (Rina kumari (2020)).

A structured teaching program (STP) plays a crucial role in enhancing mothers' understanding and practices related to Oral Re-hydration Solution (ORS) for managing acute diarrhoea in children under five, particularly in Asian nations where the incidence of diarrhoea is elevated. Initial assessment findings frequently reveal a lack of proper knowledge and inaccurate preparation methods, underscoring the pressing necessity for organized educational initiatives to decrease both morbidity and mortality.

The present study titled "A study to assess the effectiveness of Planned Teaching Programme on knowledge and practice regarding oral rehydration solution for acute diarrhoea among mothers of under-five children in Bahour at Puducherry" aims to evaluate how effectively a structured teaching programme can enhance the knowledge of mother's of Under-Five Children regarding ORS.

2. STATEMENT OF THE PROBLEM :

A study to assess the effectiveness of Planned Teaching Programme on knowledge and practice regarding oral re-hydration solution for acute diarrhoea among mothers of under-five children in Bahour at Puducherry.

3. OBJECTIVES :

- To assess the level of knowledge and practice regarding oral re-hydration solution for acute diarrhoea among mothers of under-five children.
- To evaluate the effectiveness of Planned Teaching Programme on knowledge and practice regarding ORS for acute diarrhoea among mothers of under-five children.
- To find out the association between post-test levels of knowledge and level of practice regarding ORS with selected demographic variables.

4. HYPOTHESIS :

H₁: There is a significant difference between pretest and post-test knowledge scores regarding ORS for acute diarrhoea among mothers of under-five children.

H₂: There is a significant association between post-test levels of knowledge and practice scores regarding ORS for acute diarrhoea among mother of under five children and their selected demographic variables.

5. METHODS AND MATERIALS :

5.1 Study Design and Setting: A quantitative pre-experimental one-group pretest and post-test design . The study was conducted at the Primary Health Centre (PHC), Bahour, Puducherry.

5.2 Participants: A sample of 50 mothers of under-five children was selected using non- probability convenience sampling technique.Inclusion criteria included mothers with children under five years, willing to participate, and able to understand and responded to questionnaire.

5.3 Instrument: Data were collected using a structured questionnaire consisting of demographic variables and 15 knowledge – based items , 15 practice – based items and an ORS preparation observation checklist. The tool was validated by experts.

5.4 Procedure: A Pretest was conducted ,followed immediately by a Planned Teaching Programme on ORS (using pamphlets, demonstration, and discussion).A Post-test was administered one week later the same questionnaire.

6. RESULTS :

Section A: Demographic Variables

Most participants were aged 26–30 years (50%), primary educational status (80%), belonged to nuclear/joint families(48%), housewives(75%), Hindu (56%) and resided in rural areas.

Section B: Pretest and Post-test Knowledge

Table 1: Pretest and Post-test level of knowledge (N=50)

Level of knowledge	Pretest		posttest	
	F	%	F	%
Inadequate (0-5)	22	44.0	0	0
Moderate (6-10)	23	46.0	24	48.0
Adequate (11-15)	5	10.3	26	52.0

Pretest mean score : 6.52 ± 3.22 to post-test mean score : 10.70 ± 2.10

Section C: Pretest and Post-test practice

Table 2: Pretest and Post-test level of practice (N =50)

Level of practice	Pretest		Posttest	
	F	%	F	%
Poor (0-5)	29	58.0	0	0
Moderate (6-10)	14	28.0	29	58.0
Good (11-15)	7	14.0	21	42.0

Pretest mean score : 5.88 ± 3.62 to posttest mean score : 10.46 ± 2.15

Section D: Effectiveness of PHT

Table 3: comparison of pretest and post-test knowledge and practice scores

Test	Mean	S.D	Mean Difference	Paired “t” test & p-value
knowledge				
Pretest	6.52	3.22	4.18	t = 18.478 p=0.0001, S*
Post test	10.70	2.10		
Practice				
Pretest	5.88	3.61	4.58	t = 15.788 p=0.0001, S*
Post test	10.46	2.15		

Signidicant at $p < 0.05$.

Section E: Association

Significant association found with educational status ($\chi^2 = 8.817$, $p = 0.032$) and mother’s education ($\chi^2 = 8.166$, $p = 0.043$) showed a statistically significant association with the level of knowledge and practice at the $p < 0.05$ level.

7. DISCUSSION :

The findings demonstrate that the Planned Teaching Programme significantly enhanced both knowledge and practice regarding ORS. This aligns with previous studies showing the effectiveness of structured educational interventions in improving maternal practices for childhood diarrhoea management. The results highlight the importance of targeted health education in rural settings.

8. LIMITATION OF THE STUDY :

The study was limited to one PHC in Bahour, Puducherry, which may limit generalizability of the findings. The study measured only knowledge and practice were assessed long-term retention and actual skill performance were not evaluated.

9. IMPLICATIONS FOR NURSING RESEARCH:

1. Conduct studies with larger samples in diverse settings.
2. Longitudinal studies to assess knowledge retention.
3. Comparative studies between different teaching methods.

10. CONCLUSION :

This study concluded that the Planned Teaching Programme was highly effective in improving knowledge and practice regarding Oral Rehydration Solution among mothers of under-five children. Structured teaching is a simple, cost-effective strategy that can significantly contribute to better management of acute diarrhoea and reduction of child morbidity.

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