A STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE REGARDING PREVENTION OF WATER-BORNE DISEASES AMONG MOTHERS OF TODDLERS RESIDING IN SELECTED RURAL AREAS OF KANPUR DEHAT WITH A VIEW TO DEVELOP AN INFORMATION BOOKLET

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Abstract

Water-borne diseases remain a major public health concern, particularly among children under five years of age in rural communities. Mothers play a significant role in preventing these diseases through appropriate hygiene practices, safe drinking water management, sanitation, and early recognition of symptoms. The present study was conducted to assess the knowledge and attitude regarding prevention of water-borne diseases among mothers of toddlers residing in selected rural areas of Kanpur Dehat and to evaluate the effectiveness of a structured teaching programme.

A quantitative pre-experimental one-group pretest-posttest design was adopted. The study was conducted in the rural areas of Community Health Centre (CHC), Chaubepur, Kanpur. A total of 40 mothers of toddlers were selected using convenient sampling technique. Data were collected using a structured questionnaire covering demographic characteristics and knowledge regarding water-borne diseases and their prevention. A structured teaching programme was administered after the pretest and posttest assessment was conducted subsequently.

The findings revealed that before the intervention, 41% of mothers had inadequate knowledge and 59% had moderately adequate knowledge regarding prevention of water-borne diseases. After implementation of the structured teaching programme, 78% of mothers achieved adequate knowledge. The mean knowledge score increased from 52.7% in the pretest to 84.6% in the posttest, indicating a knowledge gain of 31.9%. Significant associations were observed between posttest knowledge scores and selected demographic variables including age, educational status, and family income.

The study concluded that the structured teaching programme was effective in improving the knowledge of mothers regarding prevention of water-borne diseases.

Index Terms: Water-borne diseases, Mothers, Toddlers, Knowledge, Prevention, Structured Teaching Programme, and Rural Community.

I. INTRODUCTION

Water-borne diseases are illnesses caused by pathogenic microorganisms transmitted through contaminated water. They include cholera, typhoid fever, hepatitis A, dysentery, and acute diarrheal diseases. These diseases continue to be a significant cause of morbidity and mortality among children, particularly in developing countries where access to safe drinking water and sanitation facilities remains limited.

Children under five years of age are highly vulnerable to water-borne diseases because of their developing immune systems. Inadequate sanitation, poor hygiene practices, unsafe drinking water, and lack of awareness among caregivers contribute to the spread of these diseases.

Mothers serve as primary caregivers and are responsible for household water management, food hygiene, and child care practices. Therefore, improving maternal knowledge regarding water-borne disease prevention is essential for reducing disease burden among toddlers.

II. NEED OF THE STUDY

Despite improvements in public health infrastructure, water-borne diseases continue to affect rural populations disproportionately. Poor sanitation, inadequate drainage systems, contamination of water sources, and limited health awareness contribute significantly to disease transmission.

Educational interventions aimed at mothers can improve preventive practices such as handwashing, water purification, safe food handling, and environmental sanitation. Strengthening maternal knowledge can help reduce morbidity and mortality among children under five years of age.

III. OBJECTIVES OF THE STUDY

1. To assess the pretest knowledge regarding water-borne diseases and their prevention among mothers of toddlers.
2. To assess the posttest knowledge regarding water-borne diseases and their prevention among mothers of toddlers.
3. To evaluate the effectiveness of a structured teaching programme regarding prevention of water-borne diseases.
4. To determine the association between knowledge scores and selected demographic variables.

IV. RESEARCH METHODOLOGY

Research Approach

A quantitative research approach was adopted for the study.

Research Design

A pre-experimental one-group pretest-posttest design was used to evaluate the effectiveness of the structured teaching programme.

Setting of the Study

The study was conducted in selected rural areas under Community Health Centre (CHC), Chaubepur, Kanpur Dehat, Uttar Pradesh.

Population and Sample

The target population comprised mothers of toddlers residing in rural areas. Forty mothers participated in the study and were selected using convenient sampling technique.

Data Collection Tool

The structured questionnaire consisted of:

- Section I: Demographic information
- Section II: Personal information
- Section III: Knowledge regarding water-borne diseases and preventive measures

Reliability

The tool was validated by experts and reliability testing was performed before the final study.

Intervention

A structured teaching programme on prevention of water-borne diseases was administered after the pretest. Posttest evaluation was conducted after completion of the intervention.

V. RESULTS AND DISCUSSION

Table 1: Demographic Characteristics of Respondents

Variable	Percentage
Illiterate	24%
Primary Education	26%
Matric	20%
Intermediate	15%
Graduation	10%
Graduation & Above	5%
Joint Family	72%
Nuclear Family	28%
Housewives	56%
Working Mothers	44%
Income < ₹10,000	45%
Income ₹11,000–20,000	35%
Income > ₹20,000	20%

The majority of respondents belonged to joint families and most mothers had primary or lower educational qualifications.

Pretest and Posttest Knowledge Levels

The study revealed that before the educational intervention, 41% of mothers had inadequate knowledge and 59% had moderately adequate knowledge regarding prevention of water-borne diseases. Following the structured teaching programme, 78% of mothers demonstrated adequate knowledge.

Effectiveness of Structured Teaching Programme

Assessment	Mean Knowledge Score
Pretest	52.7%
Posttest	84.6%
Knowledge Gain	31.9%

The findings indicated a significant improvement in knowledge after the structured teaching programme. Mothers gained an average of 31.9% additional knowledge compared with pretest scores.

These findings are consistent with previous studies that demonstrated the effectiveness of educational interventions in improving hygiene practices and disease prevention behaviours among caregivers.

Association with Demographic Variables

The study found statistically significant associations between posttest knowledge scores and:

- Age of mother ($\chi^2 = 8.53$, $p = 0.04$)
- Family income ($\chi^2 = 7.76$, $p = 0.05$)
- Educational status ($\chi^2 = 9.71$, $p = 0.02$)

These findings indicate that educational level, socioeconomic status, and age influence knowledge acquisition regarding prevention of water-borne diseases.

VI. CONCLUSION

The study concluded that mothers of toddlers had inadequate to moderate knowledge regarding prevention of water-borne diseases before intervention. The structured teaching programme significantly improved knowledge levels, as evidenced by higher posttest scores and a substantial gain in mean knowledge percentage. The findings demonstrate that community-based educational programmes are effective in promoting awareness regarding water-borne diseases and their prevention.

Health education initiatives focusing on safe drinking water, sanitation, environmental hygiene, and disease prevention should be strengthened at the community level to improve child health outcomes.

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