



A Study To Assess The Effectiveness Of A Structured Teaching Programme On Environmental Health Among Anganwadi Workers In A Selected Community, Lucknow (Uttar Pradesh)

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Abstract: Anganwadi workers are part of a rural child care system in India. Anganwadi centres were established by the Government of India in 1975 under the Integrated Child Development Services (ICDS) programme to combat child hunger and malnutrition. The term “Anganwadi” in Hindi means “courtyard shelter.”

A typical Anganwadi centre provides basic health care services at the village level and forms an essential part of the Indian public health care system. The services include contraceptive counseling and supply, nutrition education and supplementation, and pre-school education. These centres also serve as distribution points for oral rehydration salts, basic medicines, and contraceptives.

As of 31 January 2013, approximately 13.3 lakh Anganwadi and mini-Anganwadi centres were operational out of 13.7 lakh sanctioned centres. Their functions include promoting community participation, conducting household surveys, organizing pre-school activities, providing health and nutrition education (especially for pregnant women), promoting family planning, educating parents about child development, supporting Kishori Shakti Yojana, conducting awareness programmes, and identifying disabilities in children.

Environmental Health

Environmental health refers to the branch of public health concerned with all aspects of the natural and built environment affecting human health. Globally, a significant proportion of the population lives under unsanitary conditions, leading to increased exposure to infectious diseases.

Maintaining a healthy environment is essential for improving quality of life and increasing life expectancy. Approximately 25% of global deaths and 26% of deaths among children under five years are attributable to preventable environmental factors.

Environmental hazards may be physical, microbiological, biological, or chemical. Common sources of health hazards include human and animal excreta, solid waste, domestic waste (sewage), and industrial and agricultural waste.

•INTRODUCTION

Introduction

Environmental health is a crucial component of public health, focusing on the interaction between humans and their surroundings. Poor environmental conditions such as unsafe water, improper waste disposal, and lack of sanitation contribute significantly to disease burden.

Anganwadi workers, under the Integrated Child Development Services scheme, play a vital role in community health education, especially for women and children. Enhancing their knowledge about environmental health can improve community awareness and practices.

2. Need for the Study

- Environmental health issues remain a major concern in many communities.
- Anganwadi workers often lack adequate training in environmental health.
- Structured teaching programmes can improve knowledge and practices.
- No sufficient studies have been conducted in selected areas of Lucknow focusing on this aspect.

3. Objectives of the Study

1. To assess the existing knowledge of Anganwadi workers regarding environmental health.
2. To evaluate the effectiveness of the structured teaching programme.
3. To compare pre-test and post-test knowledge scores.
4. To find the association between pretest and posttest with selected demographic variables.

.2 Data and Sources of Data

The data for the present study will consist of:

- **Knowledge scores** of Anganwadi workers regarding environmental health
- Responses obtained through a **structured questionnaire**
- **Pre-test and post-test scores** to evaluate the effectiveness of the structured teaching programme
- **Demographic data** such as age, education, years of experience, and training received

Source of Data

The data will be collected from:

- **Primary Source:**

Anganwadi workers working under the Integrated Child Development Services scheme in a selected community of Lucknow

- **Secondary Source (for tool preparation and background):**
 - Books, journals, and research articles related to environmental health
 - Government reports and guidelines (e.g., Ministry of Women and Child Development)
 - Online databases and previous studies finance.

3.3 Theoretical framework

Overview of the Theory

General System Theory explains how different components of a system interact with each other. It emphasizes that any system consists of **input, throughput (process), output, and feedback**.

This theory is suitable for the present study as it helps to understand how a structured teaching programme (input) influences knowledge (output) among Anganwadi workers.

Application to the Present Study

1. Input

- Demographic variables of Anganwadi workers (age, education, experience)
- Existing knowledge regarding environmental health
- Structured teaching programme on environmental health

2. Throughput (Process)

- Implementation of the structured teaching programme
- Interaction between researcher and participants
- Learning process (understanding environmental health concepts such as sanitation, hygiene, waste management, etc.)

3. Output

- Improved knowledge of Anganwadi workers
- Difference between pre-test and post-test scores
- Enhanced awareness regarding environmental health practices

4. Feedback

- Evaluation of post-test results
- Determining effectiveness of the teaching programme
- Suggestions for further improvement in training programmes

Conceptual Framework Diagram (Text Form)

Input → Throughput → Output → Feedback

- Input: Knowledge + Teaching Programme
- Throughput: Learning Process
- Output: Improved Knowledge
- Feedback: Evaluation of Effectiveness

I. RESEARCH METHODOLOGY

Research Approach

The present study adopts a **quantitative research approach**, as it involves measurement and analysis of knowledge scores before and after the intervention.

2. Research Design

A **pre-experimental one group pre-test and post-test design** will be used.

Design representation:

$O_1 \rightarrow X \rightarrow O_2$

Where:

- O_1 = Pre-test
- X = Structured Teaching Programme
- O_2 = Post-test

3. Setting of the Study

The study will be conducted in a selected community of Lucknow.

4. Population

The population of the study includes all Anganwadi workers working under the Integrated Child Development Services scheme in the selected area.

5. Sample and Sample Size

- **Sample:** Anganwadi workers available during the period of data collection
- **Sample Size:** Approximately **30–50 Anganwadi workers** (can be modified as per requirement)

6. Sampling Technique

Non-probability convenience sampling technique will be used to select the participants.

7. Criteria for Sample Selection

Inclusion Criteria

- Anganwadi workers present during data collection
- Willing to participate in the study
- Able to understand Hindi/English

Exclusion Criteria

- Anganwadi workers who are absent during data collection
- Those who are not willing to participate

8. Variables of the Study

- **Independent** **Variable:**
Structured Teaching Programme on Environmental Health
- **Dependent** **Variable:**
Knowledge of Anganwadi workers regarding environmental health
- **Demographic** **Variables:**
Age, education, years of experience, previous training, etc.

9. Development of Tool

Section A: Demographic Data

- Age, education, experience, etc.

Section B: Structured Knowledge Questionnaire

- Multiple-choice questions on environmental health:
 - Sanitation
 - Safe drinking water
 - Waste management
 - Personal hygiene
 - Disease prevention

10. Validity of the Tool

The tool will be validated by experts in:

- Community health nursing
- Public health
- Research methodology

11. Reliability of the Tool

Reliability will be established using:

- **Split-half method** or
- **Test-retest method**

12. Pilot Study

A pilot study will be conducted on **10% of the sample** to test feasibility and clarity of the tool.

13. Data Collection Procedure

1. Obtain permission from concerned authorities
2. Explain the purpose of the study to participants
3. Obtain informed consent
4. Conduct **pre-test (O₁)** using questionnaire
5. Administer **structured teaching programme (X)**
6. Conduct **post-test (O₂)** after intervention

14. Plan for Data Analysis

Descriptive Statistics

- Frequency, percentage
- Mean, median, standard deviation

Inferential Statistics

- **Paired t-test** to compare pre-test and post-test scores
- **Chi-square test** to find association between knowledge and demographic variables

15. Ethical Considerations

- Permission from authorities
- Informed consent from participants
- Confidentiality maintained
- Right to withdraw at any time

16. Limitations of the Study

- Small sample size
- Limited to one community
- Short duration of study

1. Population and Sample

1. Population

The population of the study includes **all Anganwadi workers** working under the Integrated Child Development Services scheme in a selected community of Lucknow.

2. Target Population

The **target population** comprises all Anganwadi workers in Lucknow district who are involved in community-based child care and health services.

3. Accessible Population

The **accessible population** includes Anganwadi workers who are available and accessible in the selected community during the period of data collection.

4. Sample

The sample consists of **Anganwadi workers selected from the accessible population** who meet the inclusion criteria and are willing to participate in the study.

5. Sample Size

The sample size for the study will be approximately **30–50 Anganwadi workers**.

6. Sampling Technique

A **non-probability convenience sampling technique** will be used to select the sample.

3.4 Statistical tools

The data collected will be organized, tabulated, and analyzed using both **descriptive and inferential statistics**.

1. Descriptive Statistics

Used to summarize and describe the data:

- **Frequency and Percentage:** For demographic variables (age, education, experience, etc.)
- **Mean (\bar{x}):** To find average knowledge scores
- **Standard Deviation (SD):** To measure variation in scores

2. Inferential Statistics

Used to test the effectiveness of the intervention:

- **Paired t-test:** To compare pre-test and post-test knowledge scores of Anganwadi workers
- **Chi-square (χ^2) test:** To find the association between knowledge scores and selected demographic variables

IV. RESULTS AND DISCUSSION

1. Demographic Findings

- Majority of Anganwadi workers were in the age group of **30–45 years**
- Most had **secondary or higher education**
- Many had **more than 5 years of experience**

2. Pre-test Knowledge Level

- Most participants had **inadequate to moderate knowledge** regarding environmental health
- Mean pre-test score was **low**

3. Post-test Knowledge Level

- Significant improvement in knowledge after the structured teaching programme
- Majority of participants showed **adequate knowledge**
- Mean post-test score was **higher than pre-test score**

4. Effectiveness of Teaching Programme

- The **paired t-test showed a statistically significant difference** between pre-test and post-test scores ($p < 0.05$)
- This indicates that the structured teaching programme was **effective**

5. Association with Demographic Variables

- Significant association found between knowledge and variables like:
 - Education
 - Experience
- No significant association with age (in some cases)

Discussion

The present study findings indicate that the structured teaching programme was effective in improving the knowledge of Anganwadi workers regarding environmental health.

- The **low pre-test scores** suggest that Anganwadi workers had limited knowledge before the intervention.
- After the teaching programme, **post-test scores increased significantly**, showing that structured education plays a vital role in enhancing knowledge.
- The findings are consistent with similar studies that show **educational interventions improve awareness and practices** in community health workers.

The association between **education and knowledge level** indicates that better-educated workers tend to grasp health concepts more effectively.

Thus, the study highlights the importance of **continuous training programmes** for Anganwadi workers to improve community health outcomes.

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