



## EVALUATING THE EFFECTIVENESS OF SCHOOL-BASED HEALTH EDUCATION ON CHILDREN'S HYGIENE PRACTICES

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### Abstract

Hygiene practices play a critical role in preventing communicable diseases among children and promoting overall health. School-based health education programs are widely implemented to instill proper hygiene behaviors, yet their effectiveness varies depending on content, delivery methods, and follow-up reinforcement. This study evaluates the impact of structured school-based health education on children's hygiene practices, including handwashing, oral care, and personal cleanliness. Using a mixed-method approach, the research incorporated pre- and post-intervention surveys, observational assessments, and focus group discussions among students aged 8–12 years. The findings indicate a significant improvement in hygiene knowledge, behavior, and adherence following structured health education sessions. The study highlights the critical role of teachers and school nurses in reinforcing hygiene practices and suggests that sustained educational interventions can substantially reduce the incidence of hygiene-related illnesses among school-aged children.

**Keywords:** School Health Education; Hygiene Practices; Children; Health Promotion; Preventive Care; Handwashing; Oral Hygiene; Personal Cleanliness; Behavior Change; Nursing Interventions.

### INTRODUCTION

Proper hygiene practices among children are fundamental for preventing communicable diseases such as diarrheal illnesses, respiratory infections, and skin infections [1-5]. According to the World Health Organization (WHO), poor hygiene is responsible for a significant proportion of preventable illnesses in school-aged children globally [6]. Schools provide an ideal platform for health promotion, as they reach large numbers of children during formative years when habits are established [7-9].

School-based health education programs aim to equip children with knowledge, skills, and attitudes necessary for maintaining personal and environmental hygiene [10-13]. These programs often include interactive teaching methods, demonstrations, and participatory activities to engage children actively [14-18]. Nurses, health educators, and teachers collaborate to deliver these interventions effectively. Evidence suggests that

school health programs improve knowledge, but translating knowledge into sustained behavior remains a challenge [19].

The current study evaluates the effectiveness of structured health education sessions on improving hygiene practices among schoolchildren [20-24]. It aims to determine the extent to which knowledge transfer, reinforcement, and monitoring influence hygiene behaviors and reduce the prevalence of hygiene-related illnesses [25-28].

### METHODOLOGY

A mixed-method approach was employed to evaluate the impact of school-based health education:

#### 1. Study Population:

200 students aged 8–12 years from four public schools were randomly selected [29].



**2. Intervention:**

Structured health education sessions covering handwashing, oral hygiene, bathing, and personal cleanliness were conducted by trained school nurses and teachers over four weeks [30, 31].

**3. Data Collection:**

- Pre- and Post-Intervention Surveys: To assess knowledge and self-reported hygiene practices.
- Observational Checklists: Teachers and nurses observed handwashing, use of soap, and oral care practices during school hours.
- Focus Group Discussions: Conducted with students and teachers to explore attitudes, challenges, and perceptions.

**4. Data Analysis:**

Quantitative data were analyzed using descriptive statistics and paired t-tests to assess improvements in knowledge and behavior. Qualitative data from focus groups were thematically analyzed [32, 33].

**Case Study**

**School A – 4th Grade Class (n=50)**

**Data Analysis**

**Table 1: Pre- and Post-Intervention Knowledge Scores (n=200)**

Hygiene Topic	Pre-Test Score (%)	Post-Test Score (%)	Improvement (%)
Handwashing	52	88	36
Oral Hygiene	48	82	34
Personal Cleanliness	55	90	35
Environmental Hygiene	50	85	35

**Table 2: Observed Hygiene Behaviors (n=200)**

Behavior	Pre-Intervention (%)	Post-Intervention (%)	Change (%)
Handwashing after toilet	45	87	+42
Use of soap while hand washing	38	82	+44
Brushing teeth twice daily	35	77	+42
Maintaining personal cleanliness	50	88	+38

**Interpretation:** Observational assessments confirm significant improvements in hygiene behavior following educational interventions.

**Questionnaire Highlights for Students:**

1. How often do you wash your hands with soap after using the toilet?
2. How often do you brush your teeth daily?
3. Do you understand why hygiene is important for your health?
4. Are you practicing handwashing and oral care at home?
5. Which hygiene practices do you find most challenging?

**For Teachers/Nurses:**

1. Did students demonstrate improved

Before intervention, observational assessments indicated that:

- Only 40% of students washed hands with soap after using the toilet.
- Less than 35% brushed teeth twice daily.
- Handwashing technique was incorrect in 60% of students [35].

**Post-intervention findings after four weeks:**

- 85% of students washed hands with soap at appropriate times.
- 78% adhered to recommended oral hygiene practices.
- Proper handwashing technique improved significantly.
- Teachers reported increased student engagement during health sessions, and students expressed enjoyment in participatory activities like handwashing demonstrations and hygiene role-plays [36].

**Interpretation:**

Knowledge of hygiene practices improved substantially after school-based interventions, indicating the effectiveness of structured education.

2. hygiene behaviors after education sessions?
2. Were participatory teaching methods effective in engaging children?
3. Did you observe changes in school absenteeism related to hygiene-related illnesses?
4. How often were hygiene practices reinforced during school hours?
5. What challenges exist in maintaining long-term hygiene behavior in students?

**CONCLUSION**

School-based health education significantly enhances children’s hygiene knowledge and practices. Structured interventions, participatory teaching methods, and reinforcement from teachers and nurses were instrumental in



improving handwashing, oral hygiene, and personal cleanliness. Observational and survey data indicate that children not only gained knowledge but also adopted practical hygiene behaviors.

Sustaining these behaviors requires ongoing reinforcement, family engagement, and integration of hygiene education into the school curriculum.

Health education programs should be adapted to the local context, ensuring accessibility, cultural relevance, and continuous monitoring. School nurses and teachers play a crucial role in fostering long-term health habits that can reduce the incidence of communicable diseases and promote overall well-being.

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