

Effectiveness Of A Structured Teaching Programme On Prevention Of Eczema Among Hostel Students: A Pre-Experimental Study

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Abstract

Eczema, also known as atopic dermatitis, is a chronic inflammatory skin condition commonly seen among adolescents and young adults and is associated with recurrent itching, dryness, and skin lesions that negatively affect quality of life. Hostel students are particularly vulnerable to eczema due to overcrowding, stress, poor hygiene practices, and limited awareness regarding preventive measures. The present study aimed to evaluate the effectiveness of a structured teaching programme on knowledge regarding the prevention of eczema among hostel students. A pre-experimental one-group pre-test post-test research design was adopted, and the study was conducted among 60 hostel students selected using a convenient sampling technique. Baseline knowledge was assessed using a structured questionnaire, followed by the implementation of a structured teaching programme focusing on preventive aspects of eczema. Post-test assessment was carried out using the same tool to determine the effectiveness of the intervention. The results revealed that the mean pre-test knowledge score was 13.23 ± 3.90 , which significantly increased to 20.02 ± 5.35 in the post-test. The calculated paired 't' value of 12.13 was statistically significant at $p < 0.001$, indicating a significant improvement in knowledge. The study concluded that the structured teaching programme was effective in enhancing knowledge regarding the prevention of eczema among hostel students.

Keywords: Eczema, Structured teaching programme, Knowledge, Hostel students, Nursing education.

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I. Introduction

Eczema, clinically referred to as atopic dermatitis, is a chronic, relapsing inflammatory skin disorder characterized by intense pruritus, xerosis, erythema, oozing, and scaling of the skin. It is a common dermatological condition affecting individuals across all age groups, with a significant prevalence among adolescents and young adults¹. The disease often follows a fluctuating course with periods of exacerbation and remission, negatively impacting physical comfort, psychological well-being, sleep quality, and overall quality of life. Persistent itching and visible skin lesions may also lead to social embarrassment, stress, and reduced academic performance among students².

The etiology of eczema is multifactorial, involving a complex interaction between genetic predisposition, immune dysregulation, environmental exposures, and lifestyle factors. Common triggers include allergens, irritants, climatic variations, stress, poor hygiene practices, and improper skin care. Hostel students are considered a vulnerable group due to shared living conditions, overcrowding, limited personal space, inadequate ventilation, and exposure to dust, mites, and harsh detergents³. In addition, academic stress, irregular dietary habits, lack of awareness regarding skin care, and delayed health-seeking behavior further contribute to the risk of eczema occurrence and recurrence among this population⁴.

Prevention plays a pivotal role in the management of eczema, as there is no definitive cure for the condition. Preventive measures such as maintaining proper personal hygiene, using appropriate emollients, avoiding known triggers, managing stress, and adopting healthy lifestyle practices can significantly reduce the frequency and severity of flare-ups. However, lack of adequate knowledge and misconceptions regarding skin care often result in poor preventive practices among students, leading to worsening of symptoms and complications such as secondary infections⁵.

Nurses play a vital role in health promotion, disease prevention, and patient education, particularly in community and institutional settings. Through health education initiatives, nurses can empower individuals with

knowledge and skills necessary to adopt preventive behaviors and improve self-care practices⁶. A structured teaching programme is a systematic, planned educational intervention designed to enhance knowledge, modify attitudes, and promote healthy practices. Such programmes are especially effective in addressing preventable health problems among young populations residing in hostels⁷.

Evaluating the effectiveness of structured teaching programmes is essential to generate evidence-based nursing practices and to ensure the optimal utilization of educational interventions in disease prevention. A pre-experimental research approach provides an opportunity to assess changes in knowledge levels before and after the intervention⁸. Therefore, the present study aims to evaluate the effectiveness of a structured teaching programme on the prevention of eczema among hostel students, with the intent of enhancing their knowledge and promoting preventive practices to reduce the burden of eczema and improve overall skin health.

II. Objectives

1. To assess the pre-test knowledge level of hostel students regarding prevention of eczema.
2. To assess the post-test knowledge level of hostel students regarding prevention of eczema.
3. To evaluate the effectiveness of a structured teaching programme on knowledge regarding prevention of eczema.

III. Methodology

Research Design:

A pre-experimental one-group pre-test–post-test research design was used.

Setting:

The study was conducted in a selected college hostel.

Population and Sample:

The population consisted of hostel students. A sample of 60 students was selected using a convenient sampling technique.

Tool for Data Collection:

A structured knowledge questionnaire on prevention of eczema was used. The tool consisted of items related to causes, signs and symptoms, risk factors, and preventive measures of eczema.

Hypotheses:

- **H₀:** There is no significant difference between the mean pre-test and post-test knowledge scores regarding prevention of eczema among hostel students.
- **H₁:** There is a significant difference between the mean pre-test and post-test knowledge scores regarding prevention of eczema among hostel students.

Intervention:

A structured teaching programme on prevention of eczema was administered after the pre-test. The programme included topics such as skin hygiene, avoidance of allergens, lifestyle modifications, and early recognition of symptoms.

Data Collection Procedure:

- Pre-test knowledge was assessed using the structured questionnaire.
- The structured teaching programme was administered.
- Post-test knowledge was assessed using the same questionnaire after the intervention.

Data Analysis:

Descriptive statistics (mean, standard deviation, minimum, maximum) were used to describe knowledge scores. Inferential statistics (paired t-test) were used to determine the effectiveness of the teaching programme.

IV. Results

The effectiveness of the structured teaching programme on prevention of eczema among hostel students was assessed through descriptive and inferential statistical analysis.

Descriptive statistics revealed that the mean pre-test knowledge score was 13.23 with a standard deviation of 3.90, indicating an overall inadequate to moderate level of knowledge among hostel students prior to the intervention. The pre-test scores ranged from a minimum of 5 to a maximum of 22, reflecting wide

variation in baseline knowledge regarding eczema prevention which can be observed in Table.1; Figur.1 and 2. This finding highlights the need for educational interventions targeting skin health among students residing in hostel settings.

Following the implementation of the structured teaching programme, the mean post-test knowledge score significantly increased to 20.02 with a standard deviation of 5.35. The post-test scores ranged from 8 to 30, demonstrating a marked improvement in knowledge levels after exposure to the teaching programme. The mean gain score was 6.78 with a standard deviation of 4.33 which can be observed in Table.1; Figur.1 and 2, indicating a substantial increase in knowledge as a result of the intervention.

Inferential statistical analysis was carried out using a paired 't' test to determine the effectiveness of the structured teaching programme. The calculated 't' value was 12.13 at 59 degrees of freedom. The obtained 'p' value was less than 0.001, which is highly significant at the 0.05 level. This statistical significance confirms that the observed improvement in post-test knowledge scores was not due to chance. Therefore, the null hypothesis was rejected, and the research hypothesis was accepted, indicating that the structured teaching programme was effective in improving knowledge regarding prevention of eczema among hostel students.

V. Discussion

The findings of the present study revealed a significant improvement in knowledge scores following the implementation of the structured teaching programme, indicating its effectiveness in enhancing awareness and understanding of eczema prevention among hostel students. The improvement observed in post-test scores emphasizes the value of planned and systematic educational interventions in addressing preventable dermatological conditions in young populations.

The low to moderate pre-test knowledge scores observed in this study may be attributed to lack of awareness, misconceptions about skin care, and limited exposure to health education related to eczema prevention. Hostel students are often exposed to multiple risk factors such as overcrowding, stress, poor hygiene practices, and environmental allergens, yet they may not receive adequate information on preventive measures. The structured teaching programme provided focused, relevant, and easily understandable information, which contributed to the significant increase in post-test knowledge scores⁹.

These findings are consistent with previous studies that reported significant improvement in knowledge levels following structured educational programmes on dermatological and other lifestyle-related health conditions. Improved knowledge is a crucial first step toward adopting healthy behaviors, as it enhances individuals' ability to recognize early symptoms, avoid triggering factors, and practice appropriate preventive measures. Increased awareness may also lead to timely health-seeking behavior, thereby reducing complications such as secondary infections and chronic skin damage¹⁰.

From a nursing perspective, the results underscore the important role of nurses as health educators in community and institutional settings. Nurses can utilize structured teaching programmes as an effective strategy to promote skin health, prevent disease occurrence, and improve quality of life among students¹¹. The findings of this study support the integration of health education sessions on eczema prevention into routine student health programmes, particularly in hostel environments where the risk of skin conditions is higher.

Overall, the study provides evidence that structured teaching programmes are an effective educational tool in improving knowledge regarding eczema prevention and can be incorporated into nursing practice to promote preventive dermatological care.

VI. Conclusion

The study concluded that the structured teaching programme was effective in improving knowledge regarding prevention of eczema among hostel students. Educational interventions should be regularly implemented by nursing professionals to prevent common skin disorders and promote overall health among young adults.

Nursing Implications

- **Nursing Practice:** Nurses can conduct regular health education sessions on skin care and prevention of eczema.
- **Nursing Education:** Nursing curricula should emphasize preventive dermatology and health education strategies.
- **Nursing Research:** Further studies with larger samples and experimental designs are recommended.
- **Nursing Administration:** Administrators should support educational programmes targeting student health.

Limitations

- The study was limited to one college hostel.
- Convenient sampling limits generalizability.

- The study assessed knowledge only, not practice.

Recommendations

- Replication of the study with a larger sample.
- Comparative studies using control groups.
- Long-term follow-up to assess retention of knowledge and practices.

Declaration

Declaration of Originality

We hereby declare that this manuscript entitled “Effectiveness of a Structured Teaching Programme on Prevention of Eczema among Hostel Students: A Pre-Experimental Study” is an original work carried out by us and has not been published or submitted for publication elsewhere in any form.

Ethical Approval and Consent

Ethical approval was obtained from the Institutional Ethics Committee of Aditya College of Nursing, Bangalore. Written informed consent was obtained from all participants prior to data collection. Confidentiality and anonymity of the participants were strictly maintained throughout the study.

Conflict of Interest

The authors declare that there is no conflict of interest.

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Table 1: Descriptive Statistics of Pre-test and Post-test Scores (N = 60)

Variable	Mean	SD	Minimum	Maximum
Pre-test score	13.23	3.90	5	22
Post-test score	20.02	5.35	8	30
Gain Score (Post-Pre)	6.78	4.33	-1	16

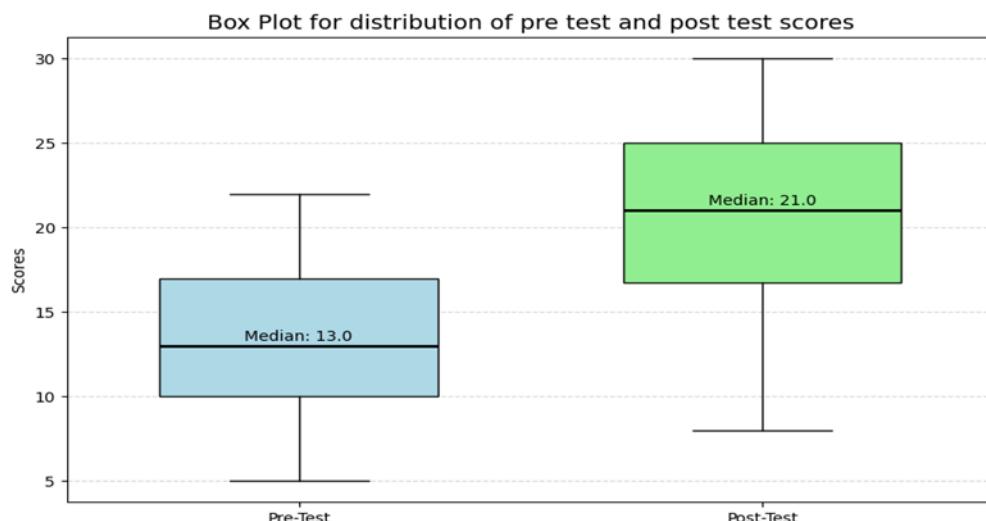


Figure.1: BOX PLOT: A side-by-side box plot can compare the distribution of pre-test and post-test scores. This shows the central tendency, spread, and any outliers in both datasets.

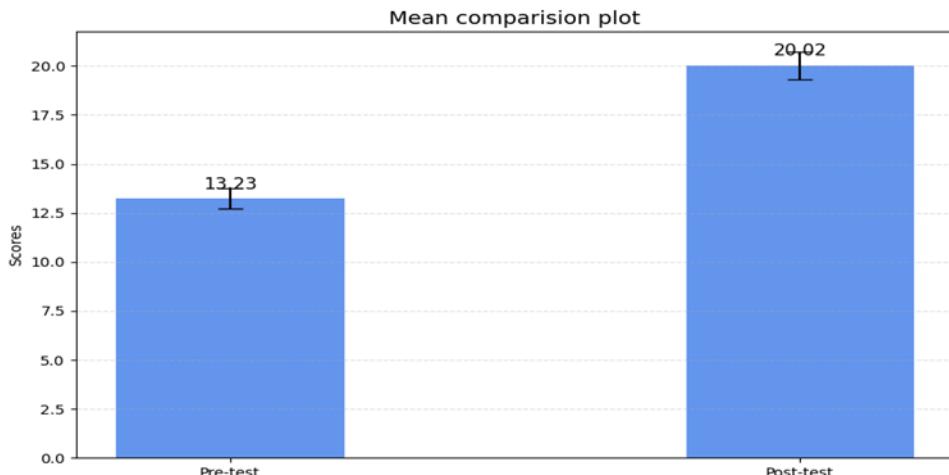


Figure.2: MEAN COMPARISON PLOT: A bar chart showing the mean pre-test and post-test scores with error bars (confidence intervals).

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