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# Effectiveness Of A Structured Teaching Programme On Knowledge Regarding Burns And Home Care Management Among Caregivers Of Burn Patients In A Tertiary Care Hospital, Bengaluru: A Pre-Experimental Study

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***Abstract***
***Introduction:*** *Burn injuries remain a major global public health concern, especially in low- and middle-income countries, contributing significantly to morbidity and mortality. Caregivers play a crucial role in recovery, yet their knowledge regarding burn management is often inadequate.*
***Aim:*** *To evaluate the effectiveness of a structured teaching programme (STP) on knowledge regarding burns and home care management among caregivers of burn patients.*
***Materials and Methods:*** *A pre-experimental one-group pre-test post-test study was conducted among 40 caregivers of burn patients at a tertiary care hospital in Bengaluru, Karnataka, India. Participants were selected using convenience sampling. Data were collected using a structured questionnaire (35 items). A structured teaching programme was administered, and post-test assessment was done after 7 days. Data were analyzed using descriptive statistics and paired t-test.*
***Results:*** *The mean pre-test score was 20.85±2.52 (59.57%), which increased to 29.17±1.72 (83.34%) post-intervention. The improvement was statistically significant ($t=15.806$, $p<0.001$). Pre-test showed 82.5% caregivers had inadequate knowledge, whereas post-test showed 70% had adequate knowledge. No significant association was found between post-test knowledge and demographic variables ($p>0.05$).*
***Conclusion:*** *The structured teaching programme was highly effective in improving caregivers' knowledge regarding burns and home care management.*
***Keywords:*** *Burns, Caregivers, Structured Teaching Programme, Home Care Management, Knowledge*
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## I. Introduction

Burn injuries are a significant global public health issue, accounting for approximately 180,000 deaths annually, predominantly in low- and middle-income countries[1]. In India, burn injuries contribute substantially to hospital admissions and long-term disability[2]. Burns may occur due to thermal, electrical, chemical, or radiation exposure and can result in varying degrees of tissue damage[3]. Severe burns are often associated with complications such as shock, infection, electrolyte imbalance, and respiratory distress[4].

In addition to physical injury, burns have profound psychological and socioeconomic consequences, including disfigurement and long-term disability[5]. A majority of burn injuries occur in domestic settings, particularly in kitchens, often due to unsafe practices and lack of awareness[6,7]. Despite advances in medical management, prevention through education remains the most effective strategy[8]. However, misconceptions regarding first aid measures continue to persist[9]. Caregivers play a crucial role in the recovery and rehabilitation of burn patients, yet their knowledge is often found to be inadequate. Hence, the present study was undertaken to evaluate the effectiveness of a structured teaching programme on caregiver knowledge regarding burns and home care management.

## II. Aim And Objectives

**Aim:** To evaluate the effectiveness of a structured teaching programme on knowledge regarding burns and home care management among caregivers.
**Objectives:** The objectives of the study were to assess the baseline knowledge of caregivers, evaluate the effectiveness of the structured teaching programme using pre-test and post-test scores, and determine the association between knowledge scores and selected demographic variables.

**Hypothesis**

H1: There is a significant difference between pre-test and post-test knowledge scores.

H2: There is a significant association between post-test knowledge scores and selected demographic variables.

## III. Materials And Methods

A pre-experimental one-group pre-test post-test design was adopted for the study. The research was conducted at Victoria Hospital, Bengaluru. A total of 40 caregivers of burn patients were selected using a convenience sampling technique. Caregivers who were willing to participate and able to read either Kannada or English were included in the study, while those who were unwilling or unavailable during the data collection period were excluded.

Data were collected using a structured questionnaire consisting of two sections. Section I included socio-demographic variables, while Section II comprised a knowledge questionnaire related to burns and home care management. The scoring criteria were categorized as inadequate (<50%), moderate (51–75%), and adequate (>75%). The content validity of the tool was established by experts in the field, and the reliability coefficient was found to be r = 0.86, indicating good reliability.

The intervention consisted of a structured teaching programme of 45 minutes duration, delivered through lecture, discussion, and visual aids. Data analysis was performed using both descriptive and inferential statistics. Descriptive statistics such as mean, standard deviation, and percentage were used to summarize the data. Inferential statistics, including the paired t-test, were applied to assess the effectiveness of the intervention, and the chi-square test was used to determine the association between knowledge scores and demographic variables.

## IV. Results

The findings of the study revealed a significant improvement in caregiver knowledge following the structured teaching programme. The mean pre-test and post-test knowledge scores for general knowledge were 5.23±1.16 and 7.30±1.18, respectively, with a mean difference of 2.07 and a t-value of 7.787. Similarly, for home care knowledge, the mean pre-test score was 15.63±2.52, which increased to 21.88±1.41 in the post-test, with a mean difference of 6.25 and a t-value of 12.169. The overall knowledge score improved from a pre-test mean of 20.85±2.52 to a post-test mean of 29.17±1.72, with a mean difference of 8.32 and a t-value of 15.806. The results were found to be highly statistically significant ($p<0.001$) [Table-1].

In terms of knowledge level distribution, the majority of caregivers (82.5%) had inadequate knowledge in the pre-test, while none demonstrated adequate knowledge. However, following the intervention, 70% of caregivers achieved adequate knowledge, and 30% had moderate knowledge, with no participants remaining in the inadequate category. These findings indicate a substantial improvement in knowledge levels after the structured teaching programme [Table-2]. Furthermore, no significant association was found between post-test knowledge scores and selected demographic variables.

**Table-1: Pre-test and Post-test Knowledge Scores**

| Variable | Pre-test Mean±SD | Post-test Mean±SD | Mean Difference | t-value |
|---|---|---|---|---|
| General Knowledge | 5.23±1.16 | 7.30±1.18 | 2.07 | 7.787 |
| Home Care | 15.63±2.52 | 21.88±1.41 | 6.25 | 12.169 |
| Overall | 20.85±2.52 | 29.17±1.72 | 8.32 | 15.806 |

*$p<0.001$ (Highly significant)*

**Table-2: Distribution of Knowledge Levels in Pre-test and Post-test**

| Knowledge Level | Pre-test (%) | Post-test (%) |
|---|---|---|
| Adequate | 0% | 70% |
| Moderate | 17.5% | 30% |
| Inadequate | 82.5% | 0% |

## V. Discussion

The findings of the present study demonstrated a significant improvement in caregiver knowledge following the structured teaching programme. Pre-test findings indicated inadequate baseline awareness among caregivers, which is consistent with earlier studies[10]. Following the intervention, a marked increase in knowledge scores was observed, with an overall improvement of 83.34%, thereby supporting the effectiveness of structured educational interventions. These findings are in agreement with previous research that highlights the positive impact of planned teaching programmes in enhancing caregiver knowledge[11]. Furthermore, the absence of a statistically significant association between post-test knowledge scores and selected demographic variables

suggests that such structured educational interventions are universally beneficial across different population groups[12].

Despite these encouraging findings, certain limitations must be acknowledged. The relatively small sample size may limit the generalizability of the results. Additionally, the study was conducted in a single institutional setting, which may restrict the external validity of the findings. The use of convenience sampling could have introduced selection bias, potentially affecting the representativeness of the sample. Moreover, the use of a non-standardized tool may have implications for the reliability and validity of the measured outcomes.

In light of these limitations, future research should focus on multi-center studies with larger and more diverse samples to enhance generalizability. Longitudinal studies with extended follow-up are recommended to assess the long-term retention of knowledge and sustained impact of the intervention. Incorporating such structured teaching programmes into routine hospital education practices may improve caregiver preparedness and patient outcomes. Additionally, the use of varied, evidence-based, and innovative teaching strategies may further strengthen the effectiveness of educational interventions.

In conclusion, the structured teaching programme proved to be an effective method for significantly improving caregiver knowledge. The findings underscore the importance of systematic educational interventions in healthcare settings and support their integration into routine clinical practice to enhance the quality of care.

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