

A Study to Assess the Effectiveness of Structured Teaching Programme Knowledge and Practice regarding Emergency Management of Burns among Staff Nurses at Selected Hospitals, Bangalore

A. S. Ayilya¹, Kusum², Usha Esther³, Dr. Rajesh R⁴

^{1, 2, 3}Harsha College of Nursing

⁴Principal, Harsha College of Nursing

Abstract: **Background:** Skin is the largest organ of the body; It forms a barrier between the internal organs and the external environment and participates in many vital body functions. The skin is composed of three layers epidermis, dermis, and subcutaneous tissue. The epidermis is an outer most layer. It consists of stratified epithelial cell and composed predominantly of keratinocytes. The melanocytes are the special cells of epidermis. The Indian records says that 70 lakh burn injury cases are reporting annually of which 1.4 lakh people die of burn every year. Around 70% of all burn injuries occur in most productive age group (15 - 35) around four out of five burn cases are women, as many as 80% of cases admitted as a result of accidents at home. Emergency management of burn is the vital phase. The period of 24 hours are required to resolve the immediate, life threatening problems resulting from the burn injury. Emergency management includes First aid management, Airway management, Fluid - therapy, Prevention of infection, Pain management, Wound care, Nutritional therapy. **Assess:** - ABCDE - Airway - Breathing: be aware of inhalation and rapid airway complication, Circulation: fluid replacement - Diet: nutritional support - Exposure: percentage of burns Essential management points: ABCDE - Determine the percentage area of burn (Rule of 9's) - Good IV access and early fluid replacement. **Objectives of the Study:** a) To assess the level of pre test knowledge and practice regarding emergency management of burns among staff nurses b) To assess the effectiveness of structured teaching programme on knowledge and practice regarding emergency management of burns. c) To associate the post test knowledge and practice scores with their selected socio demographic variables of staff nurses regarding emergency management of burns. **Materials and Methods:** The conceptual framework for this study was derived from the General System Theory proposed by Ludwig Von Bertalanffy (1968). The study involved one group pre test and post test without a control group using pre experimental design, with purposive sampling technique. The pre - test was followed by administration of structured teaching programme and post test conducted on eighth day using same self - administered structured knowledge questionnaire to find out the effectiveness. The results were described by using descriptive and inferential statistics. **Results:** Hence the research hypothesis stated that there will be significant difference between pre and post - test knowledge scores of staff nurses in selected hospital regarding Emergency management of burns were accepted. It is evident that there was no statistically significant association found between the post - test knowledge score of staff nurses with selected demographic variables like age, gender, educational qualification, /professional qualification, areas of working, years of experiences and exposure to in service education on emergency burns management at 0.05 level of significance. **Conclusion:** Hence the research hypothesis stated that there will be significant difference between pre and post - test knowledge scores of staff nurses in selected hospital regarding Emergency management of burns were accepted.

Keyword: burns, management, staff nurses, Effectiveness

1. Introduction

"Injuries may be forgiven, but not forgotten."

Skin is the largest organ of the body, It forms a barrier between the internal organs and the external environment and participates in many vital body functions. The skin is composed of three layers epidermis, dermis, and subcutaneous tissue. The epidermis is an outer most layer. It consists of stratified epithelial cell and composed predominantly of keratinocytes. The melanocytes are the special cells of epidermis. Dermis makes up the largest portion of the skin, providing structure and strengths subcutaneous tissue (or) hypodermis, it is the inner most layer of the skin. Which provides a cushion between the skin layers, muscles, and bones. Hair is the outer growth of skin. the hair is present over entire body except for the palms and soles. Nails present on the dorsal surface of the fingers and toes, a hard transparent plate of keratin called nails, the skin having two types of glands like sebaceous glands and sweat glands.

The Indian records says that 70 lakh burn injury cases are reporting annually of which 1.4 lakh people die of burn every year. Around 70% of all burn injuries occur in most productive age group (15 - 35) around four out of five burn cases are women, as many as 80% of cases admitted as a result of accidents at home.

Need for the Study

A burn can affect any person at any time in any place. Burns affect people of all age groups and in any socio - economic groups. Those greatest risk are children below 4 years and adults more than 65 years. Burn is health issue which leads to morbidity and mortality, especially in the developing countries. Injuries that results from direct contact or exposure to thermal, chemical, or radiation sources are termed as burns. Burn injuries occur when energy from a heat source is transferred to the tissues of the body. The depth of injury is related to the temperature and duration of exposure or contact. Most burn injuries occur in the home, while cooking, bathing, or the living room. Careless cooking is the primary cause of the almost one third of all residential fires that begin in the

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kitchen. In the bath room by means of scalds and by improper use of electrical appliances around water resources. Burn injuries can also occur from work accidents.

Statement of the Problem

“A Study to Assess the Effectiveness Of Structured Teaching Programme on knowledge and practice regarding emergency management of burns among staff nurses at selected hospital, Bangalore”.

Objectives of the Study

- 1) To assess the level of pre test knowledge and practice regarding emergency management of burns among staff nurses.
- 2) To assess the effectiveness of structured teaching programme on knowledge and practice regarding emergency management of burns.
- 3) To associate the post test knowledge and practice scores with their selected socio demographic variables of staff nurses regarding emergency management of burns.

Hypotheses

H1 – There will be a significant difference between pre and post - test knowledge and practice scores regarding emergency management of burns among staff nurses.

H2 – There will be an association between post - test levels of knowledge and practice regarding emergency management of burns

Assumptions

- Staff nurses from hospital they may have some knowledge on management of burns
- Structured teaching program will improve the knowledge on management of burns

2. Materials and Methods

The study is based on an evaluative approach. Quasi experimental design was used for collection of data. The independent variable refers to the structured teaching programme regarding management of burns and dependent variable is the knowledge level of the staff nurses regarding management of burns.

- Purposive sampling technique was adopted to select samples. The structured knowledge questionnaire on management of burns was developed to collect data. The tool consisted of two parts Part I and Part II.
- **Part I:** Consists of selected demographic variables like age, gender, educational status/professional qualification areas of working, years of experience, exposure to inservice education.
- **Part II:** Consists of 32 structured knowledge questionnaires related to burns.

3. Result

Section A: Demographic Characteristics of Staffs

The study finding demonstrated that majority of staffs are in the age group (38%) of them between 24 to 30 years of age, 32% of them between 31 to 35 years of age, 18% of them between 36 to 40 years of age and 12% of them between 41 to 46 years of age. It was observed that 72% of them were female and 28% of them were male. With regard to

educational status/professional qualification, 60% of them GNM, 25% of them were BSC and 15% of them were MSC. In concern to areas of working, majority of staffs 73% belongs to burns ward and 27% of them belongs ICU. It was reported that, most of the staffs 35% year of experience was 5 years, 27% of them had 3 years, 20% of them had 1 years and 18% of them had freshers. The socio demographic history of exposure to in service education shows that, majority of staffs 58% got information from seminar, 23% conference, 12% of workshop and 7% of them fields.

Table 1: Classification of sample by socio – demographic characteristics, N = 60

Characteristics	Category	Respondents	
		N	%
Age in Year	24 to 30 years	07	11.67
	31 to 35 years	23	38.33
	36 to 40 years	19	31.67
	41 to 46 years	11	18.33
Gender	Male	17	28.33
	Female	43	71.67
Educational Status/ Professional Qualification	ANM	36	60
	GNM	15	25
	BSC	09	15
	MSC	0	0
Area of Working	Hospital	44	73.33
	PHC	16	26.67
Years of Experience	5 Years	12	20
	3 Years	21	35
	1 Years	16	26.67
	Fresher	11	18.33
Source of Information	Conference	14	23.33
	Workshop	7	11.67
	Field	4	6.67
	Seminar	35	58.33

Section B: Knowledge of Adolescents Regarding Emergency Burns Management

The present study reveals that, overall pre - test mean knowledge score obtained by the samples was 16.45 with a standard deviation (SD) 2.17 and over post - test mean knowledge score obtained by the samples was 25.9 with a standard deviation (SD) 2.48.

Section C: Comparison of Pre - Test and Post - Test Mean Knowledge Scores of Staffs in Order to Evaluate the Effectiveness of STP on Emergency Burns Management

The present study reveals that, the aspect wise mean pre - test and post - test knowledge scores of mental illness among 60 staffs, with regard to introduction, definition, causes, signs, management of burns the mean scores in pre - test 8.32 with a SD 1.42 and post - test 12.45 with a SD 1.87 and obtained 't' value was 13.73. In that emergency burns management, the mean scores were in pre - test 6.1 with a SD 1.56 and post - test 9.38 with a SD 1.13 and obtained 't' value was 13.35. In concern with prevention and complication, the mean scores were in pre - test 2.03 with a SD 0.84 and in post - test 4.06 with a SD 0.79 and obtained 't' value was 14.90.

The overall 't' value was 23.74 which was above the table value 2.6 at p<0.05 level of significance. Hence, the research hypothesis H1 is accepted. Thus the study conducted that STP was effective in improving the knowledge of staffs regarding burns management.

Section D: Association between Pre - Test Level of Knowledge of Staffs and their Selected Demographic Variables

association between pre - test levels of knowledge of adolescents with their selected demographic variables was analyzed by Chi square test. In this study, the obtained Chi square value for source of information of staffs is higher value (18.53) when compared to the table value at $p < 0.05$ level of significance. Hence, the research hypothesis H2 is accepted. Above findings of the special study were supported by a study which was conducted to assess the effectiveness of STP on

knowledge regarding emergency burns management among staff nurse at selected hospital, Bangalore. Pre - experimental research design was used for the study. The sample consisted of 60 staffs and data was analyzed by using descriptive and inferential statistics. The study revealed that, in pre - test majority of the subjects 52% had inadequate knowledge scores and 48% of the subjects had moderate knowledge and no one had adequate knowledge and in post - test 55% of them had adequate knowledge and 45% of them had moderate knowledge

Association Between Pre - Test Level of Knowledge of staff Nurses and their Selected Demographic Variable

Characteristics	Category	N	Level of Knowledge		X2
			Inadequate	Moderate	
Age in Year	24 to 30 years	07	05	02	4.36 NS
	31 to 35 years	23	10	13	
	36 to 40 years	19	08	11	
	41 to 46 years	11	08	03	
Gender	Male	17	09	08	0.01 NS
	Female	43	22	21	
Educational Status/ Professional Qualification	GNM	36	16	20	5.90 NS
	BSC	15	07	08	
	MSC	09	08	01	
Areas of Working	Burns Ward	44	22	22	0.18 NS
	ICU	16	09	07	
Years of Experience	5 Years	12	08	04	2.13 NS
	3 Years	21	11	10	
	1 Years	16	08	08	
	Freshers	11	04	07	
Exposure to Inservice Education	Field	14	11	03	18.53 S*
	Conference	07	06	01	
	Workshop	04	04	00	
	Seminar	35	10	25	

**significant at $p < 0.05$ level, S: significant, NS: non - significant

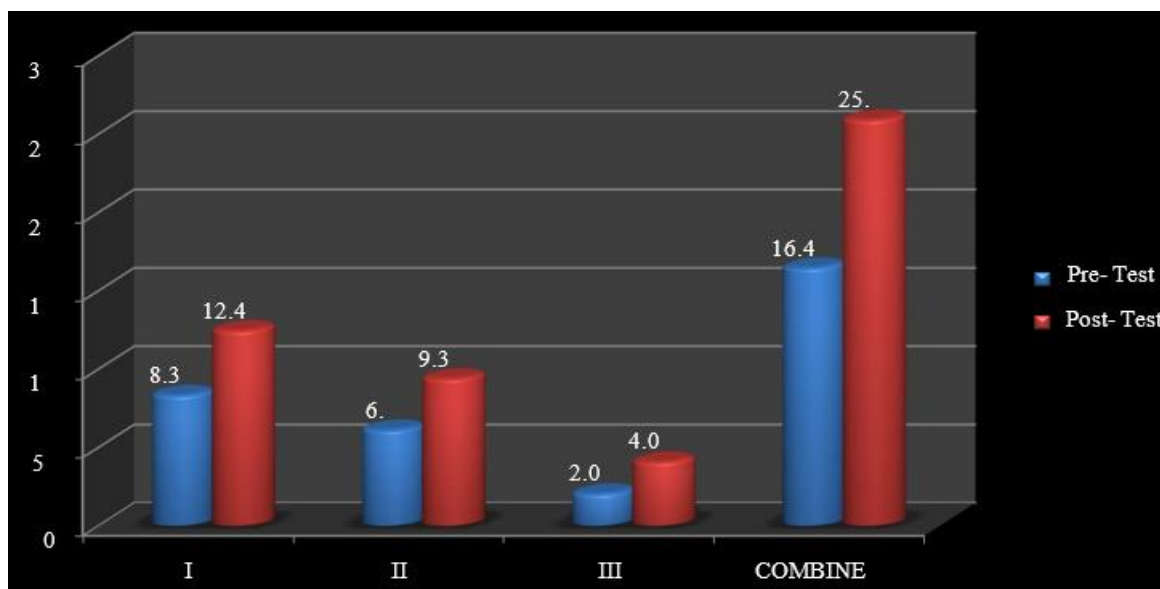


Figure: Aspect Knowledge Scores of Emergency Burns Management

The above detail shows that, the obtained paired ‘t’ value is 23.74 which was above the table value 2.6 at $p < 0.05$ level of significance. Therefore, H1 is accepted. (H1 - The mean post - test score will be significantly higher than the mean pre - test score regarding the emergency burns management.

4. Discussion

Emergency management of burn is the vital phase. The period of 24 hours are required to resolve the immediate, life threatening problems resulting from the burn injury. Emergency management includes First aid management,

Airway management, Fluid - therapy, Prevention of infection, Pain management, Wound care, Nutritional therapy. Assess: - ABCDE - Airway - Breathing: be aware of inhalation and rapid airway complication, Circulation: fluid replacement – Diet: nutritional support - Exposure: percentage of burns Essential management points: ABCDE - Determine the percentage area of burn (Rule of 9's) - Good IV access and early fluid replacement. It is very important for the nurse to know the immediate intervention that has to be taken soon after receiving the clients with burns. Safety and security can be ensured by providing clean, safe and comfortable physical environment

5. Nursing Implication

The study has implication in the area of practice, nursing education nursing administration and nursing research.

Nursing Education

- 1) The study reveals the importance of mass health education programme and community awareness programme.
- 2) There is a need for collaboration of nursing and medical professionals, and government organizations should ensure that regular training programme on emergency burns management is conducted.

Nursing Practice

- 1) Nursing professionals working in the hospital as well as community can understand the importance of health education regarding burns management.
- 2) Community nurses play a key role in changing the health education of people towards prevention and thereby improving success rate in early case identification and its treatment.
- 3) The study reveals the need for correction of the deficiency as an ongoing process.

6. Limitations of the Study

- 1) The study is limited to staff nurses.
- 2) Extraneous variables like exposure to media, peer contact were beyond the investigators control.
- 3) The study did not use any control group. Therefore, there are possibilities of threats to internal validity like events occurring between pre test and post test

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