

A Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Fluid Replacement in Burns Patients among Staff Nurses Working In YCR Hospital Latur

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Abstract

Introduction: Accidents have become the usual occurrence in today's world. Road traffic accidents, domestic accidents, industrial accidents and railway accidents contribute to large proportion of mortality, morbidity and disability. Burns of all kinds and degrees are also considered as a type of accidents. Burns cause aesthetic problems as well as acute physical problems and if not taken proper care, they can cause serious complication in the form of secondary bacterial infection, various degrees of contractures which restrict the daily activities, septicemia, etc. People affected are mostly of poor socioeconomic status. The cost of managing these injuries is high. In developing countries, the problem of burn injuries is more severe due to the reason that the care of burn patients requires specialized staff and medical technologies that are expensive and not always readily available. **Methods:** A Descriptive research approach was used for the present study. The study comprised of 30 staff nurses who fulfilled inclusive criteria and working in selected hospital. Knowledge questionnaire was used for data collection. The reliability of questionnaire was done by Guttman's Split Half Coefficient method. In order to obtain content validity, the tool given to 10 experts who included from the field of Medical-Surgical Nursing Department. Non Probability convenience sampling technique was used, Formal Permission was obtained from concerned authority from hospital for data collection. **Result:** The result showed that most of the samples under the study were between the age group of 21-30 years. 50% of samples were from general wards. Result interpreted that in pre test knowledge level regarding fluid replacement in burn was 40.28 % & in post test it was 85.6%. It is evident that calculated value of 't' at 0.05 level. This indicate that structured teaching programme was effective in improving the knowledge of staff nurses. **Conclusion:** The present study assess the knowledge level of staff nurses working in Y.C.R. Hospital, Latur regarding the "fluid replacement in burn patients" and found that he staff nurses having 29 (96.67%) had adequate knowledge, 1 (3.33%) of them had moderately adequate knowledge and only 0 (0%) of staff nurses had inadequate knowledge regarding "fluid replacement in burn patients."

Keywords: Fluid Replacement; Burns; Bacterial Infection.

Introduction

Accidents have become the usual occurrence in today's world. Road traffic accidents, domestic accidents, industrial accidents and railway accidents contribute to large proportion of mortality, morbidity and disability. Burns of all kinds and degrees are also considered as a type of accidents. Burns cause aesthetic problems as well as acute physical problems and if not taken proper care, they can cause serious complication in the form of secondary bacterial infection, various degrees of contractures which restrict the daily activities, septicemia, etc. People affected are mostly of poor socioeconomic status. The cost of managing these injuries is high. In developing countries, the problem of burn injuries is more severe due to the reason that the care of burn patients requires specialized staff and medical technologies that are expensive and not always readily available.

Despite many medical advances, burns continue to remain a challenging problem due to the lack of infrastructure and trained professionals as well as the increased cost of treatment, all of which have an impact on the outcome. There is very little information on the pattern of outcomes among burn patients in relation to clinical aspects in India. However, if the principles of first aid are properly applied a great degree of suffering due to burns can be avoided.

Throughout the world, burns remain a huge health issue, at least in terms of morbidity, especially in the developing countries. It is the nature of man "to want to do something" whenever there is an injury, and this leads to the application of various agents to burns. While some of these agents used in

treating such injuries may be beneficial, many of them are harmful and have no scientific basis for their use. The use of such harmful agents therefore calls for education of the people in order to prevent their damaging effects.

Burn injury is a significant cause of mortality and morbidity. A burn occurs when there is injury to the tissues of the body caused by heat, chemicals, electrical current or radiation. Burn injury occurs when energy from a heat source is transferred to the tissues of the body. The resulting effects are influenced by the temperature of the burning agent, duration of contact time and type of tissue that is injured. Burn injury mainly affects the integument or the skin.

One of the largest organs of the body, the skin or integument is made up of two layers of tissues, the outer epidermis and the inner dermis, and lies on a layer of subcutaneous fat. It makes up 15% to 20% of the body's weight.

The epidermis contains a fatty substance that makes the skin waterproof. The dermis contains blood vessels, nerves, muscles, sebaceous glands, sweat glands and hair follicles.

The sensory nerves within the dermis ensure that the body's surface area is sensitive to heat, cold, pain, and the slightest touch. As well as protecting the body from injury, bacterial and viral infections, and minor burns, the skin's key function is to maintain a constant body temperature. It does this by varying the blood flow into capillary vessels beneath the skin surface and by producing perspiration, which evaporates cooling the body.

The blood capillaries dilate and perspiration increases when the body is too warm. If the body needs to conserve heat, the blood vessels constrict, pulling the skin into "goose-pimples". The body also creates heat by shivering. So the overall functions of the skin include protection, maintenance of homeostasis, thermoregulation, sensory reception, vitamin synthesis and processing of antigenic substances.

When the skin is burned, the small blood vessels within the skin leak fluid which either gathers in tissue spaces to form blisters or it leaks through the skin surface. This loss of fluid can lead to a marked drop in the blood volume and loss of blood proteins, a condition which may result in shock.

So the care of the burn-injured client is both complex and challenging. The psychological and physical trauma sustained following a burn injury can be devastating for both the victim and family members or significant others. Having a thorough understanding of the pathophysiological changes that occur after a burn, knowing about the first aid management of burns and becoming familiar with the standards of care will promote positive outcomes.

Burns constitute a major health problem in India. However, exact mortality figures for India are not available owing to the lack of proper burn registry. The projected figures suggest an annual mortality rate of 100,000 to 140,000. This staggering incidence is largely due to illiteracy, poor living conditions, and neglect of children.

High population density, illiteracy and poverty are the main demographic factors associated with a high risk of burn injury. It is vital to assess the extent of burn area affected by a burn, as the greater the surface area, the greater the fluid loss and risk of shock.

Problem Statement

A study to assess the effectiveness of structured teaching program on Knowledge regarding fluid replacement in Burns patients among Staff Nurses working in YCR Hospital Latur.

Objective

- To assess the knowledge of staff nurses regarding fluid replacement in burns patients.

- To evaluate the effectiveness of structured teaching program in fluid replacement.
- To find out the relationship between knowledge of the Staff Nurses regarding fluid replacement in burns patients with selected socio-demographic variables.

Material and Methods

A Descriptive research study approach was used for present study. The study comprises of 30 staff nurses who fulfilled inclusive criteria and working in selected hospital by non-probability convenience sampling. One group pre test post test quasi experimental design was used for this study. The content validity of the tool was established in the consultation with guide and 12 experts from the field of medical- surgical nursing. The reliability of questionnaire was done by Guttman's split Half Coefficient method. The purpose and important of research study explain before collection of data.

Hypothesis

H₁: There will be a significant relationship between the knowledge of the Staff Nurses regarding fluid replacement in burns patients with the selected Socio demographic variables.

H₂: There will be a significant relationship between pre - test and post test knowledge scores.

Result:

Analysis and interpretation is based on the objective of the study. The analysis was done with the help of inferential and descriptive statistics. Frequency and percentage wise distribution of demographic variable of staff nurses.

Table no.1 Frequency and percentage distribution of demographic characteristics of staff nurses of Y . C . R hospital, Latur.

Demographic variables	Number	Percentage
Age		
21-30 yrs	21	70 %
31-40 yrs	9	30%
41-50 yrs	0	0
Above 50	-	-
Gender		
Male	05	17%
Female	25	83%
Education		
GNM	12	40%
R.GNM	18	60%
Area of working		
ICU	08	2%
Casualty	07	23%
Burn ward	0	-
General ward	15	50%
Year of experience		
1-5	14	47%
6-10	13	43%
11-15	02	07 %
16-20	01	03%
Area of achievement		
Pass class	16	53%
2 nd class	08	27%
Distinction	01	3%
1 st class	05	17%

The above table shows that 70% samples belongs to 21-30 years of age and 83% of sample were female. 60% of nurses had completed their RGNM. 50% of nurses was working in general ward.

Comparison of pre-test and post-test level of knowledge fluid replacement in burn patients among staff nurses working in Y.C.R. Hospital, Latur.

Level of knowledge	Pre-test score		Post-test score	
	Number	Percentage	Number	Percentage
Adequate (>76%)	0	0	29	96.67
Moderate (51-75%)	2	6.67	1	3.33
Inadequate (<50%)	28	93.33	0	0

The above table depict that in pre test 2 % of the sample had moderate level of knowledge score. 28% had inadequate level of knowledge in post test 96.67% of the sample had adequate level of knowledge and 3.33% of sample had moderate level of knowledge. The difference between pre test & post test level of knowledge score was found to be statistically significant.

Area wise comparison of mean, SD and mean percentage of pre test and post test knowledge score about fluid replacement in burn patients among staff nurses working in Y.C.R. Hospital, Latur.

Discussion

The discussion of the study of appropriate review of literature, statistical analysis and the fining of study based on study of objectives the aim of the present study to evaluate the structure teaching program of knowledge regarding fluid replacement in burn patients among staff nurses working in Y.C.R. Hospital, Latur.

Non experimental designs were used for this study the samples of this study was 30 staff nurses working in Y.C.R. Hospital Latur selected nursing simple and random sampling techniques to assess the knowledge on fluid replacement in burn patients.

The consent of staff nurses obtained and structured self-administered questionnaire test was conducted on the entire subject.

The first step in the study was to assess demographic characteristics of the staff nurses. Table No. I shows that sample belonged to age, gender, education, area of working, year of experience & academic achievement. The objective of study is to evaluate the knowledge regarding fluid replacement in burn patients.

Table no. II shows that frequency and percentage distribution of staff nurses regarding fluid replacement in burn patient that 29 (96.67%) had adequate knowledge, 01 (3.33%) of the had moderately adequate knowledge and 0 (0 %) of staff nurses had inadequate knowledge.

Conclusion

The present study assess the knowledge level of staff nurses working in Y.C.R. Hospital, Latur regarding the, "fluid replacement in burn patients" and found that the staff nurse shaving 29 (96.67%) had adequate knowledge, 1 (3.33%) of the had moderately adequate knowledge and only 0 (0 %) of staff nurses had inadequate knowledge regarding "fluid replacement in burn patients."

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