

Review Article

A Pre-Experimental Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Oral Care of Patients in Intensive Care Unit Among Staff Nurses Working in Selected Hospitals of District Patiala, Punjab

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Abstract

Statement of Problem: A Pre-experimental study to assess the effectiveness of structured teaching program on knowledge regarding oral care of patients in Intensive Care Unit among staff nurses working in selected hospitals of District Patiala, Punjab.

Background of the Study: Mouth cleanliness is very important for critical patients in hospital it is usually the accountability of nurses with adequate information for mouth hygiene, guiding principle and rate of performance oral care needed to prevent spread of infection.

Aim of the Study: The aim of study is to assess the effectiveness of structured teaching program on knowledge regarding the oral care of patients in intensive care unit among staff nurses working in selected hospitals of District Patiala, Punjab.

Methodology: The research approach adopted for the study was experimental, with pre-experimental one group pre-test post-test design. Forty staff nurses were selected from selected hospitals by Purposive sampling technique. The independent variable in the study was the structured teaching program regarding the oral care of patients in intensive care unit.

The tool developed and used for the data collection was Self-structured Knowledge Questionnaire that comprised of 30 items related to knowledge regarding the oral care of patients in intensive care unit

Results: Most of the staff nurses (65%) were in the age group of 25-35 years. 95% of the staff nurses are females and 5% are males. 62.5% of staff nurses were GNM qualified and 0% were having M.Sc. Nursing. 80% of staff nurses, had experience of 0-5 years, 0% had experience above 15 years. 60% of staff nurses had chosen colleagues as source of information knowledge regarding the oral care of patients in intensive care unit.

Conclusion: The staff nurses had significant gain in knowledge after the administration of structured teaching program regarding the oral care of patients in intensive care unit.

Keywords: Effectiveness, Knowledge, Structured Teaching Program, Oral Care of Patients, Staff Nurses Working in Intensive Care Units.

1. Introduction

1.2. *Caring Is the Essence of Nursing – (Jean Watson):*

Nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. It includes the promotion of health, the prevention of illness, and the care of ill, disabled and dying people. Sister Simone Roach came up with the five C's of caring: commitment, conscience, competence, compassion and confidence. The five C's are considered beneficial to improving coworker and patient relationships and increasing a nurse's chances for career advancement. Conscience and compassion directly relate to providing the best possible care to patients in a morally responsible and considerate way [1]. The mouth consists of two regions, the vestibule and the oral cavity proper. The mouth, normally moist, is lined with a mucous membrane, and contains the teeth. The lips mark the transition from mucous membrane to skin, which covers most of the body [2].

Oral care is the practice of keeping the mouth clean and healthy by brushing and flossing to prevent tooth decay and gum disease. The purpose of oral hygiene is to prevent the buildup of plaque, the sticky film of bacteria and food that forms on the teeth. Plaque adheres to the crevices and fissures of the teeth and generates acids that, when not removed on a regular basis, slowly eat away, or decay, the protective enamel surface of the teeth, causing holes (cavities) to form. Plaque also irritates gums and can lead to gum disease, periodontal disease, and tooth loss. Brushing and flossing removes plaque from teeth, and antiseptic mouthwashes kill some of the bacteria that help form plaque [3].

Mouth hygiene is an essential component in nursing that has consequences on the patient's safety and comfort in intensive care units. As effective mouth hygiene is very important to a patient's health, it has implications for identification, interventions and treatment. Critically ill patients had a lack of ability to perform own mouth hygiene. Because most patients had the presence of gastric tube, end tracheal tube, and a lot of equipment's essential for the assessing and supervision of a critically ill patient that complicates the practice of oral hygiene. Mouth hygiene is vital for critical ill patients in hospital. So, all nurses must recognize the hazard factors that effect on oral safety and associated with general disease, dental Caries (tooth decay) and Gingivitis and gum disease (Jones, Newton & Bower) [4].

Critically ill patients are at great risk of bad mouth hygiene, especially among elderly patients because they suffer from malnourishment, dehydration and decreased immunity. Other causes include prevention of the practice of oral care and contributing factors such as maintenance of good oral hygiene with smoking, alcohol history, incubation or patients on oxygen therapy. Mouth hygiene is an essential element of nursing care, and is useful for all patients, particularly those with a difficult disease. Maintaining good oral hygiene in the critically ill patient as it is very important in reducing the risk of nosocomial infection. So, mouth care for critical patients prevents spread of infections and improving patient comfort [5].

In Intensive Care Unit, providing oral care to patients who are not cooperative, have a high risk for aspiration, or are intubated can be a challenge and, at times, an impossible task. However, if the benefit of oral care outweighs the risk, clear, precise oral care procedures and adequate evidence to support these processes are needed. If providing systematic oral care can decrease the incidence of pneumonia and other outcome measures, the care should be considered an important and critical component of critical care nursing [6]. Oral care is recognized as an essential component of care for critically ill patients which provides comfort and enhances a sense of wellbeing. Oral and general health are interdependent which influence each other through biological, psychological, emotional, and developmental factors [7].

Oral health problems are usually overshadowed by other serious needs in critically ill patients. In addition, nursing staff appear to perceive oral health as the most difficult part of their work; hence, it has been a low-priority intervention. If the nurses are to appreciate the importance of oral health, they must have a clear understanding of the complex characteristics of bacterial colonization in the oropharynx leading to systemic diseases such as cardiovascular disease, chronic obstructive pulmonary disease, and ventilator-associated pneumonia (VAP) in critically ill patients [8]. Oral health is an integral component of general health. It has also become clear that causative and risk factors in oral disease are often the same as that implication in the major general disease. The over health wellbeing, education and development of children, families and communities can be affected by oral health. The lack of availability and affordability of oral health service not only result in aggravation of the disease but also enhance cost of the treatment and care [9].

Conducted a study on effect of oral care program on prevention of ventilator associated pneumonia among 80 patients admitted in Intensive Care Unit of hospitals affiliated to Isfahan university of Medical Sciences, Iran. The results of this study showed the frequency of VAP on the third and fifth day was 15.80% (6) and 23.70% (9) in the control group and 10.50% (4) and 7.90% (3) in the intervention group respectively. Chi-square test didn't show a significant difference ($P=0.059$). The Mann-Whitney U test revealed that there was no significant difference between two groups on day 1,3,5 in terms of mean CPIS ($P>0.05$) [10].

1.3. Need of the Study

1.3.1. *The Objective of Having Standards is to Raise Them*

- (*Earnest Codman*): According to American Dental Association (ADA) Oral health touches every aspect of our lives but is often taken for granted. Mouth is a window into the health of our body. It can show signs of nutritional deficiencies or general infection. Systemic diseases, those that affect the entire body, may first become apparent because of mouth lesions or other oral problem [11]. The effective oral care improves patients comfort and prevents oral infection. Although oral care is common requirement of nursing good oral hygiene implies sound teeth and healthy gums with healthy surrounding tissues. The physical act of chewing food promotes saliva and gastric secretions and helps indi-

gestion. Teeth are essential not only for mastication of food, but also good appearance and clear speech. There is the evidence that improvement of oral hygiene does improve the general health. The nursing staffs have a special contribution to make in the care of oral hygiene of their patients in hospital, nursing home and other residential institution. The term halitosis is used for bad health. Halitosis is due to poor oral hygiene, periodontal disease, sinus infection, tonsillitis, and infection of nose and throat [12].

Oral hygiene is important as it affects both wellness and clinical results of intensive care patients. Oropharyngeal invasion by microorganisms is critical in development of nosocomial pneumonia (ventilator associated pneumonia/VAP) in intensive care units. Because, oropharyngeal invasion of aspirated microorganisms means disease development. VAP is a common type of nosocomial infections prolonging the hospital stay duration, increasing costs and mortality in intensive care patients on ventilator [13].

Problem Statement

"A pre- experimental study to assess the effectiveness of structured teaching program on knowledge regarding oral care of patients in intensive care unit among staff nurses working in selected hospitals of District Patiala, Punjab".

1.4. Aim of the Study

To assess the effectiveness of structured teaching program on knowledge regarding oral care of patients in Intensive Care Unit among staff nurses working in selected hospitals of District Patiala, Punjab.

1.5 Objectives

- To assess the pre-test knowledge score regarding oral care of patients in intensive care unit among staff nurses working in selected hospitals of District Patiala, Punjab.
- To plan and implement structured teaching program regarding oral care of patients in Intensive care unit among staff nurses working in selected hospitals of District Patiala, Punjab.
- To assess the posttest knowledge score regarding oral care of patients in intensive care unit among staff nurses working in selected hospitals of District Patiala, Punjab.
- To evaluate the effectiveness of structured teaching program regarding oral care of patients in intensive care unit among staff nurses working in selected hospitals of District Patiala, Punjab.
- To find out the association between pre-test knowledge score regarding oral care of patients in intensive care unit among staff nurses working in selected hospitals of District Patiala, Punjab with their selected socio-demographic variables.

1.6. Hypothesis

- To achieve the stated objectives the following hypothesis are formulated:
- H_0 : There will be no significant difference between mean pre-test knowledge score and mean post-test knowledge score after administration of structured teaching program.

- H_1 : The mean post-test knowledge score of staff nurses who will attend structured teaching program regarding oral care of patients in Intensive Care Unit (ICU) will be significantly higher than their mean pre-test knowledge score.
- H_2 : There will be significant association between the staff nurse's knowledge regarding oral care of patients in Intensive Care Unit with their socio demographic variables.

1.7. Delimitation

The study will be delimited to staff nurses:

- Working in Intensive Care Units in selected hospitals of District Patiala, Punjab.
- Willing to participate in research study.
- Available at the time of study

2. Methodology

The methodology refers to controlled investigation of the way of obtaining: organizing, analysing data. The methodology studies address the development, validation, and evaluation of research tool or techniques.

Polit and Hungler,1999: The purpose of the study was to assess the effectiveness of structured teaching programme on knowledge the oral care of patients in intensive care unit among staff nurses working in selected hospitals of District Patiala, Punjab.

2.1. Research Approach

Approach was Quantitative.

2.2. Research Design

The design of the study was One-group pre-test post-test design.

2.3. Research Variables

- Dependent Variables: knowledge of staff nurses regarding the oral care of patients in intensive care unit
- Independent Variables: Structured Teaching Program.

2.3. Research Setting

The study was conducted in Dr Aniljit Hospital Patiala Punjab, Rajindra Hospital Patiala, Dr Rahul Bansal Hospital Patiala Punjab Hospitals of District Patiala, Punjab.

3.4. Target Population

The staff nurses of intensive care units of selected hospitals of District Patiala, Punjab.

3.5 Sample Size

The sample size of the study comprised of 40 staff nurses working in intensive care units of selected hospitals of District Patiala, Punjab.

3.6. Sampling Technique

Purposive sampling technique.

3.7. Sampling Criteria

Inclusion criteria

The study included the Staff nurses:

- Working in intensive care units of selected hospitals of District Patiala, Punjab.
- Willing to participate in the research study.
- Available at the time of study.

3.8. Exclusion criteria

The study excluded the Staff nurses:

- Not willing to participate in the study.
- Not available at the time of study.
- Who have attended any In-service education program related to this topic.

3.9 Selection and Development of Tool

The present study aimed at assessing the effectiveness of Structured Teaching Program regarding the oral care of pa-

tients in intensive care unit. The Self-structured knowledge questionnaire was developed in order to obtain data. Tool was prepared after reviewing the related literature and after the consultation with the experts Research tool consists of 2 sections:

Section A: Socio-demographic variables

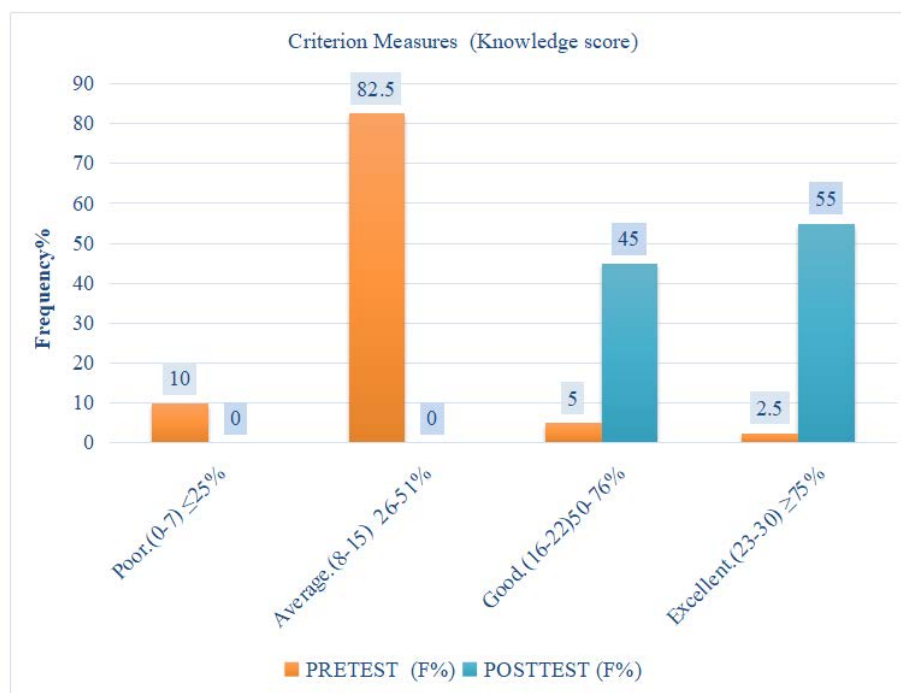
Section B: Multiple Choice Self-Structured Questions regarding the oral care of patients in intensive care unit

Scoring Procedure:

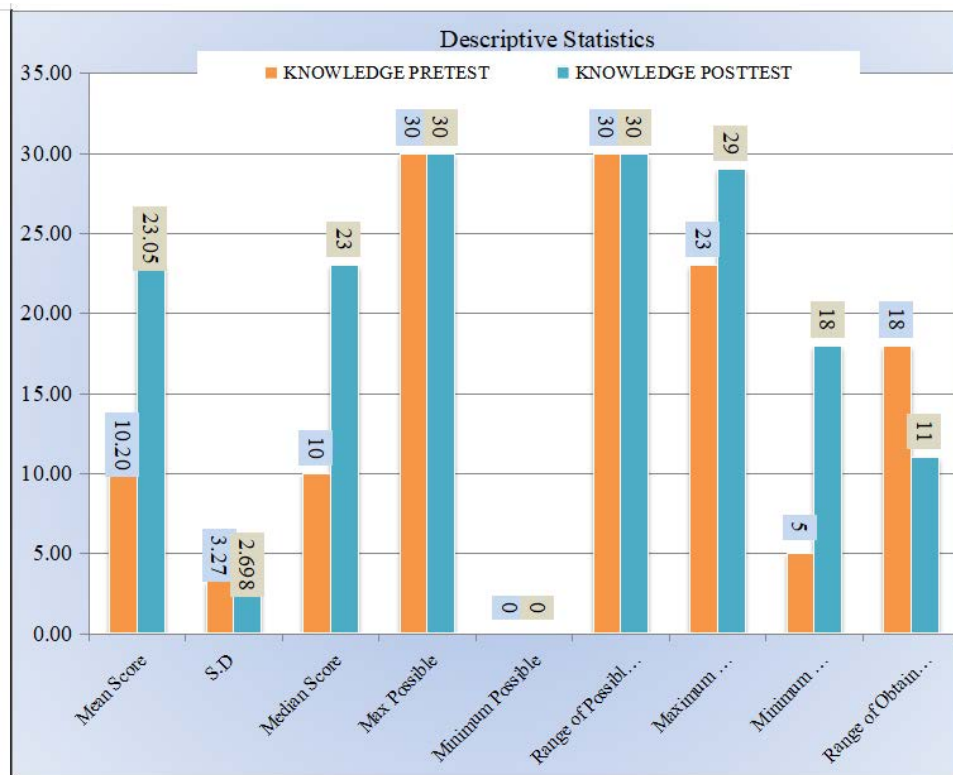
The maximum score for the correct answer to each item was "One" and for the wrong response "zero". The maximum possible score was 30 and minimum possible score was zero. The level of knowledge was categorized based on the percentage of scores obtained.

Table 1: Blue print on content wise distribution of items on Self-structured knowledge Questionnaire for the assessment of knowledge regarding oral care of patients in intensive care unit

Area	Knowledge		Comprehension		Application		Total Items	Percentage
	Item	Total	Item	Total	Item	Total		
Introduction	1, 2, 3, 4, 5, 6,7, 8	8	-	-	-	-	8	26.66
Definition	1	1	-	-	-	-	1	3.33
Purposes			16	1	-	-	1	3.33
Indications	18	1	-	-	-	-	1	3.33
Common problems of oral cavity	12, 13, 14, 15,17,	5	10,, 11	2	-	-	7	23.33
Nursing responsibility in providing oral care to the client in Intensive Care Unit	19, 20, 21, 23, 30	5	22, 24, 25,	3	26,27, 28, 29,	4	12	40
Total		20		5		5	30	100



Bar graph 1: showing Level of Scores



Bar graph 2: showing Mean, SD, Median, Maximum score, Range of possible score, Maximum obtained, Minimum obtained Range of obtained score of Pre-test and Post-test knowledge score.

Table 2: Showing Association of Scores and Socio-demographic Variables

Association Of Pretest Test Knowledge Scores with selected Socio-Demographic Variables.										
Variables	Options	Excellent	Good	Average	Poor	Chi Test	P Value	df	Table Value	Result
Age in years	Below 25	0	1	10	2	1.562	0.955	6	12.592	N S
	25-35	1	1	22	2					
	35-45	0	0	1	0					
	45-55	0	0	0	0					
	Above 55	0	0	0	0					
Gender	Male	0	0	2	0	0.447	0.930	3	7.815	N S
	Female	1	2	31	4					
Qualifications	G.N.M	0	1	22	1	14.140	0.028	6	12.592	S
	Post basic B.Sc. Nursing	0	0	1	2					
	B.Sc. Nursing	1	1	10	1					
	M.Sc. Nursing	0	0	0	0					
Experience (In years)	0 to 5	1	1	26	4	6.824	0.337	6	12.592	N S
	6 to 10	0	0	5	0					
	11 to 15	0	1	2	0					
	Above 15	0	0	0	0					

Source of information regarding oral care of patients in Intensive care unit	Seminar	0	0	0	0	10.988	0.089	6	12.592	N S
	Confer-ence	0	0	0	0					
	Work-shop	0	0	0	0					
	Mass media	0	1	1	1					
	Col-leagues	1	0	20	3					
	Others	0	1	12	0					

This section deals with the findings related to the association between pre-test knowledge score and selected socio-demographic variables. The chi-square test was used to determine the association between the score levels and selected socio-demographic variables

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