



Effectiveness of Information Bundle on Knowledge regarding selected Pediatric Oncological Emergencies among Staff Nurses Working in Mahatma Gandhi Medical College and Research institute, Puducherry

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ABSTRACT:

Background: Pediatric oncology is a complicated multidisciplinary subspecialty. Health care professionals should be aware of the many and often serious syndrome associated with the management of pediatric oncologic conditions to prevent their occurrence and mitigate potentially severe consequence through proactive interventions. The study aimed to evaluate effectiveness of information bundle on knowledge regarding pediatric oncological emergencies among staff nurses. **Methods:** Quantitative research approach with pre-experimental, one group pre-test and post-test design & Non probability convenience sampling technique was used to collect data from 30 staff nurse who worked in MGMCRI at Puducherry. The structured questionnaire consists of Section-A Demographic data and Section-B questions related to knowledge regarding pediatric oncologic emergencies and its nursing care. **Results:** Pediatric oncologic emergencies required intensive care, the results shows that the level of knowledge of the staff nurses was higher than the pretest which was assessed after giving information bundle. Hence the information bundle was effective method to improve the level of knowledge among staff nurse. Study revealed that there was a highly significant difference between pre-test and post-test score ($p < 0.001$) among Staff Nurses. Hence, the information bundle was effective in improving the level of knowledge among Staff Nurses regarding selected Oncological emergencies. **Conclusion:** Oncologic emergencies are associated with significant mortality and morbidity. Health care professionals must have the knowledge and skill to give care during Oncological emergencies and they must be vigilant of these emergencies.

Keywords: Effectiveness, Information Bundle, knowledge, Pediatric Oncological Emergencies, Staff Nurses

WHAT IS ALREADY KNOWN ON THIS TOPIC

The national cancer institute estimates that 14.5 million persons in the United States have cancer, and that number could reach 19 million by 2024. Some oncologic emergencies are insidious and take months to develop, whereas others manifest over hours causing devastating outcomes such as paralysis and death.

WHAT THIS STUDY ADDS

This is a quantitative research approach with a pre-experimental, one-group pre-test and post-test design. A non-probability convenience sampling technique was used to collect data from 30 staff nurses, and the level of knowledge of the staff nurses was higher than the pretest which was assessed after giving the information bundle. Hence, the information bundle was an effective method to improve the level of knowledge among staff nurses. The study revealed that there was a highly significant difference between pre-test and post-test scores ($p < 0.001$) among staff nurses. Hence, the information bundle was effective in improving the level of knowledge among staff nurses regarding selected oncological emergencies.

INTRODUCTION

Pediatrics is the branch of medicine that involves the medical care of infants, children, and adolescents.^[1] According to WHO, cancer is the rapid creation of abnormal cells that grow beyond their usual boundaries, and which can then invade adjoining parts of the body and spread to other organs; the latter process is referred to as metastasizing. Other terms used are malignant tumors and neoplasm.^[2]

The Role of the Nurse in Pediatric Oncology.

The primary aim of the care team is that the families have trust in all members of the treatment

- The patient enters the hospital not only for chemotherapy but also for the treatment of complications and side effects such as infections, stomatitis, transfusions, and blood count checks.
- Non-mechanical intensive care has psychosocial consequences, such as pressure on the family, absence from school, limited social contacts, and short or long hospitalizations.
- Involvement of the entire family from the outset is crucial and represents a focal point

in care of the patient.^[3]

The pediatric oncology patient may present with a variety of life-threatening situations, including those resulting from structural or functional compromise of the cardio pulmonary or neurologic systems, hematologic abnormalities, and compromised immune system.

Children with known malignancies often are immune compromised secondary to their treatment and, as a result, pose unique diagnostic and therapeutic challenges.^[4]

Koizumi Tetal.(2014) conducted a study on Outcomes of pediatric oncologic requiring intensive care. The objective of the study is to report outcomes of pediatric oncologic emergencies requiring intensive care. Medical records of patients admitted to the pediatric intensive care unit (PICU) with oncologic emergencies from June 2007 to December 2010 were reviewed. Results reported outcomes of pediatric oncologic emergencies requiring intensive care shows Further study is required to confirm the efficacy of intensive care in pediatric oncologic emergencies.^[5]

Joy Christensen (2018) conducted a study on ‘‘The Role of the Pediatric Nurse Practitioner in the Management of Pediatric Oncology Patients in the Inpatient Setting. The study is to find the role of the pediatric nurse practitioner (PNP) in the comprehensive management of pediatric oncology patients in the inpatient setting was examined at a large tertiary teaching hospital. This article shows role responsibilities including new diagnosis teaching, procedures, routine chemotherapy, patients comprehensive medical management, coordination of nursing care across settings, and professional development. The finding reveals the considerable increase in practical knowledge of the staff nurse.^[6]

STATEMENT OF THE PROBLEM

A Study to Assess the Effectiveness of Information Bundle on Knowledge Regarding Selected Pediatric Oncological Emergencies among Staff Nurses Working In Mahatma Gandhi Medical College and Research Institute, Puducherry.

OBJECTIVES

1. To assess the level of knowledge regarding Pediatric Oncological emergencies among Staff Nurses.
2. To evaluate the effectiveness of Information Bundle on knowledge regarding Pediatric Oncological Emergencies among Staff Nurses.

3. To associate the level of knowledge with the selected demographic variables of Staff Nurses

HYPOTHESES

H₁-There is a significant difference in pre and post-test level of knowledge regarding pediatric Oncological emergencies among staff nurses.

H₂-There is a significant association between the levels of knowledge regarding pediatric Oncological emergencies and selected demographic variables of staff nurses.

The Conceptual Frame Work of the study was based on the “General system theory” (Ludwig von Bertalanffy-1968)^[7].

METHODS AND MATERIALS

Quantitative research approach with pre- experimental, one group pre-test and post-test design was adopted. The study was conducted in MGMCRI at Puducherry. The Staff Nurses 30 members who met the inclusion and exclusion criteria were selected using Non probability convenience sampling technique. Pretest was assessed using the structured questionnaire. It consists of Section-A Demographic data and Section-B knowledge questions regarding pediatric oncologic emergencies and its nursing care. The first week of data collection, pretest level of knowledge was assessed by using structured questionnaire. The Information Bundle was issued to all the participants to orient and gain knowledge regarding pediatric oncologic emergencies and its nursing care. The post test was conducted after one week of intervention in order to evaluate the effectiveness of Information Bundle on pediatric oncologic emergencies.

Scoring Interpretation

Based on their answers level for knowledge score of staff nurse was

Table 1: Scoring Interpretation of Knowledge Questionnaire.

S.No	Level of Knowledge	Scoring Interpretation
1	Adequate	25– 30 ($\geq 75\%$)
2	Moderately adequate	15–24 (50-75%)
3	Inadequate	<15 (<50%)

RESULTS

The data were analyzed based on the objectives of the study.

The major findings of the study (Figure 1) revealed that the level of knowledge regarding Pediatric Oncological emergencies among Staff Nurses during pre and post-test. During the pre- test out of 30 samples, 15 (50%) had inadequate knowledge, 14 (46.7%) had moderately adequate knowledge and 1(3.3%) had adequate knowledge and in the post-test 16 (53.3%) had adequate knowledge and 14 (46.7%) had moderately adequate knowledge.

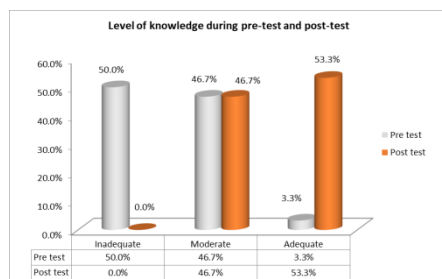


Figure 1 Distribution of level of knowledge regarding Pediatric Oncological emergencies during pre-test and post-test by comparison.

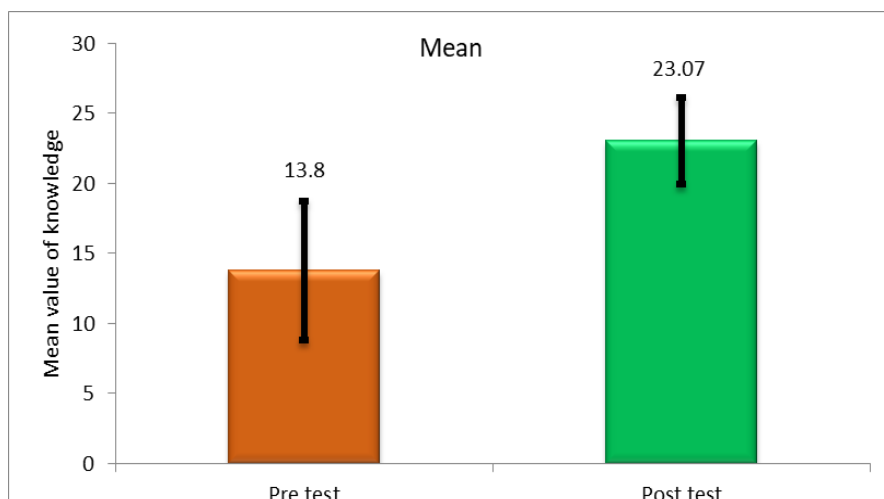


Figure 2. Mean value of knowledge in pre-test and post-test regarding Pediatric Oncological emergencies

Figure 2 showed that the mean pre-test knowledge score was 13.8 and the post-test knowledge score was 23.07, it was higher than the pre-test. The standard deviation of the pre-test knowledge score was 4.944 and the post-test knowledge score was 3.095.

Table 2 Mean, Standard Deviation, Mean Standard Error, Mean difference, Paired t-test, p-value of pre and post test comparison knowledge score

Knowledge	Mean	SD	Standard Error Mean	Mean difference	Paired t-test	p-value

Pre-test	13.8	4.944	0.903	9.267	8.37	p<0.001*
Post-test	23.07	3.095	0.565			

***p<0.001 Highly significant

Table 2 showed the Mean, Standard Deviation, Mean Standard Error, Mean difference, Paired t-test, p-value of pre and post test comparison knowledge score. The obtained paired 't' value was 8.37 and p value was 0.001. It was highly significant at p<0.001 level. It was inferred that the educational program on knowledge regarding safe handling of cancer drugs was highly effective. Hypothesis (H₂) was accepted. Hence, there is a significant difference in pre and post-test level of knowledge regarding Pediatric Oncological Emergencies among Staff Nurses working in Pediatric unit.

DISCUSSION

The Findings of the Study discussed as Per Objectives

1. The first objective of the study was to assess the level of knowledge regarding pediatric Oncological emergencies among Staff Nurses.

The results of the study showed that majority of the staff nurse about 50% were seems to have inadequate knowledge regarding Pediatric Oncological emergencies. During the pre-test out of 30 samples, 15 (50%) had inadequate knowledge, 14 (46.7%) had moderately adequate knowledge and 1 (3.3%) had adequate Knowledge and in the post-test 16 (53.3%) had adequate knowledge and 14 (46.7%) had moderately adequate knowledge.

The findings of the study was supported by **Banerjee S, David A (2016)** conducted a study on Effectiveness of information booklet on palliative care to improve nurses knowledge. In this study, they aim to assess the level of knowledge about palliative care among nurses using structured questionnaire and also to assess the effectiveness of information booklet designed. The result showed post test scores were significantly higher than the pre-test knowledge scores, which indicate The information booklet was effective in enriching the knowledge of nurses on palliative care.^[8]

2. The second objective was to evaluate the effectiveness of Information Bundle on knowledge regarding Pediatric Oncological Emergencies among Staff Nurses working in Mahatma Gandhi Medical College & Research Institute.

The result showed that the level of knowledge of the staff nurses was higher than the pre-test, which was assessed after giving Information Bundle. During the pre-test out of 30 samples, 15(50%) had inadequate knowledge, 14(46.7%) had moderately adequate knowledge and 1(3.3%) had adequate knowledge and in the post-test 16(53.3%) had adequate knowledge and 14(46.7%) had moderately adequate knowledge. There was a highly significant difference between pre-test and post-test score ($p < 0.001$) hence, the Information Bundle was effective method to improve the level of knowledge among staff nurses

The findings of this study was supported by **Sheetal Udaykar, (2014)** Conducted a quantitative research study on effect of self-instructed module regarding Oncological emergencies on knowledge among nurses. The study aimed to assess the knowledge and evaluate the effect of instructional module among staff nurse were recorded. The results shown that overall knowledge was improved by the use of self- instructional module given to the staff nurses. ^[9]

The study proved that the level of knowledge of staff nurses regarding Pediatric Oncological Emergencies was highly significant ($p < 0.001$) difference in pre and post test.

Hence the stated hypothesis (H_1) was accepted.

3. The third objective was to find out the association between the knowledge regarding Pediatric Oncological Emergencies with selected demographic variables of staff nurses.

The results reveals that there is no association between the level of knowledge with their selected demographic variables the association between the knowledge regarding pediatric Oncological emergencies and selected demographic variables of staff nurses. Hence, Hypothesis (H_2) was rejected.

Limitation:

- The sample size was only 30.
- The data collection of the study was limited to one week period only.

Recommendations:

- The screening tool has to be tested for it's of reliability and validity with a much larger sample size, in order to substantiate the results of this kind of study.
- Similar study can be carried out with large samples
- A comparative study can be conducted to assess the effectiveness of information bundle on knowledge regarding pediatric Oncological emergencies among staff

nurses.

- The study can be done by comparison with the knowledge in pre-test and post-test.

CONCLUSION

The major conclusion of the present study shows that the majority of staff nurses working in pediatric unit had inadequate knowledge during pre-test and adequate knowledge during post-test regarding the Pediatric Oncological Emergencies. It reveals that the Information bundle was effective to improve the knowledge level of staff nurses. It serves both in wellness and illness.

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