



Impact of Instructional Package on Knowledge & Practice among Nurses during Patients Care with Intercoastal Drainage

Dr. Ashok kumar Yadav*

Abstract

Introduction- A flexible plastic tube known as an intercostal drain is introduced through the chest wall & into the pleural area. It is used to drain the intrathoracic space of air, liquid, & pus. Any time the negative pressure in the pleural cavity is disturbed, causing respiratory distress, a patient may need an intercoastal drainage device. The current research is conducted to test the impact of instructional package on knowledge & practice among nurses with respect to intercostal drainage.

Material & methods- The study was conducted using a descriptive research methodology among 70 staff nurses who met the inclusion criteria made up the sample, which was created using a non-probability convenient sampling technique. Statistical analysis was done using SPSS 21.0 software.

Results - The maximum subjects were in the age group of 21 to 31 years. Females were more as compared to male staff. 60 % had experience of one to five years. After measuring knowledge & practises, we found that instructional packages were significant (P= 0.001).

Conclusion - A training programme proved helpful in enhancing staff nurses' knowledge & skills related to the management of patients with intercoastal drainage in the hospitals that it was tested in.

Keywords: instructional package, intercoastal drainage, knowledge, nurses, practice

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INTRODUCTION

Nurses are widely recognised as having a strong connection to patient safety since they constantly watch over patients to spot, stop, & treat medical errors as well as reduce other avoidable mistakes in healthcare. In order to maintain the best possible healthcare delivery, nurses—key healthcare professionals involved in safety—must be aware about a variety of machines & processes. This comprises a collection of deliberate actions taken in unison to lessen potential harm from healthcare management [1]. This implies that mistakes can happen even when everyone has the best of intentions. Patient safety is a precondition that enables organisations, professionals, & patients efforts to prevent errors by educating from the effects of errors [2]. The promise to keep patients safe has been described as the

culmination of individual responsibility & how organisations view everyone's safety as well as organisational norms, belief systems, feelings, & understanding [3].

Several drainage fenestrations are present in the portion of the tube that is inside the patient in conventional intercostal drainage, & there are also markers that indicate the distance along the tube's length. The initial drainage hole is outlined by a radiopaque stripe. [4]

Due to the negligence of the medical staff, managing a patient with an intercostal drainage might lead to a number of difficulties. [5] An intercostal drainage patient demands the nurse to use problem-solving & critical thinking skills. It is the nurse's duty to keep the pleural drainage system intact & patent after the intercostal drainage has been implanted.

***Corresponding Author:** Dr. Ashok kumar Yadav

Address: *Professor, Dept. of Nursing, Faculty of Nursing, Tanta University, Sri Ganganagar (Raj.)

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The instructions available & printed on the machines & medicines are very helpful in improving the knowledge & the ability to improve the procedural mechanism among the nurses & professionals. The current research is conducted to test the impact of instructional package on knowledge & practice among nurses with respect to intercostal drainage.

MATERIAL & METHODS

The descriptive cross sectional study is done for a period of one year among 70 nurses working in a hospital. The sampling method used was non probability convenient sampling. The inclusion criteria used is all those nurses working as full time staff & willing to participate with written consent were involved & those who were not interested were excluded.

The subjects were asked to fill the pre tested & validated form before & after the test & questionnaire was divided in to demographic & regarding knowledge & practices of staff nurse. Data was collected & analyzed using SPSS version 21.0. Chi-square, t-test & ANOVA were used to present the results keeping value of significance at p less than 0.05.

RESULTS

Table 1 represents distribution of subjects in relation to age, gender, qualification, & experience of nurses. Maximum subjects (51%) were from age group between 21 to 31 years with. Predominance of female staff (72%) was found over male staff. Most of the (56%) nurses completed their B.Sc. nursing, among them 60% having experience of 1 to 5 years.

Table 1: represents distribution of subjects with respect to demographics

variables	N (%)	
Age (years)	21 to 31	36 (51)
	32 to 42	15 (22)
	43 to 53	13 (18)
	Above 54	6 (9)
Gender	Male	20 (28)
	Female	50 (72)
Qualification	Graduation	39 (56)
	Post-graduation	31 (44)
Experience	Less than 1 year	17(22.8)
	One to five year	42 (60)
	More than 5 years	11 (17.2)

The overall comparison of pre-test & post-test knowledge & practises following the implementation of the instructional package is shown in Table 3. 15.83 is the calculated t-value for knowledge. With a value of p less than 0.05, this finding demonstrates a significant difference between staff nurses' pre-test & post-test knowledge regarding the care of patients with intercoastal drainage. The study hypothesis is approved if the calculated t-value (12.81) for practises is greater than the tabulated t-value at 49° of freedom. This finding indicates that staff nurses' pre-test & post-test practises regarding the management of patients with intercoastal drainage differed significantly.

Table 2: represents effectiveness of instructional package by comparing pre-test & post-test overall knowledge & practices

Variable		Mean ±SD	t value	P value
Knowledge	Pre test	11.05±1.5	15.83	0.001
	Post test	18.2±1.82		
Practices	Pre test	6.67±1.14	12.81	0.001
	Post test	9.91±1.0		

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DISCUSSION

The study demonstrated that an instructional package is beneficial in enhancing staff nurses' knowledge & clinical skills related to the care of patients with intercoastal drainage. In this study, the staff nurses' pre-test mean knowledge score was 11.05 & their post-test score was 18.2. It is evidence by the calculated t-value as 15.83 at 0.001 level of significance. Hence, the research hypothesis that a staff nurse education programme on how to care for patients with intercoastal drainage was successful is accepted.

The staff nurses' practises' pre-test mean climbed to 9.91 after the post-test, from 6.67. The estimated t-value of 12.81 at a significance level of 0.001 serves as proof. Hence, the research hypothesis that a staff nurse education programme on how to care for patients with intercoastal drainage was successful is accepted.

Similar research was carried out by Kesieme EB et al on "nurse" s knowledge\sof care of



chest drain' in Nigeria 2016. Nurses who often handled chest drains had a higher level of knowledge. The suctioning of chest drains, the patient's mobility, the milking of tubes, the daily change of the dressing over the chest drain insertion site & the drainage system all suffered from poor performance. This study therefore suggested that healthcare professionals train staff nurses to properly care for individuals with ICD. [7]

Similar research was done at the Ibn Alnafees Teaching Hospital by Omaina L. Hamel & Sabah A. The teaching programme was implemented on 60 nurses who were employed in surgical units, ICU, thoracic operating rooms, & open-heart operating rooms. The study found that, following the implementation of the educational programme, nurses' knowledge & practises regarding nursing interventions of the chest tube drainage system had improved. [8]

Cover the insertion site with sterile petrolatum gauze & alert the surgeon if the chest tubes are unintentionally withdrawn. Applying occlusive dressing will enhance the client's risk of getting a tension pneumothorax, thus avoid doing it there. Remove the petroleum gauze if respiratory distress starts to occur so that air can escape.[9]

CONCLUSION

Nurses' intercoastal drainage patient care knowledge & practices are getting better. The instructional packages were crucial in helping staff nurses increase their knowledge & skills. Staff nurses' knowledge & practices are improved by the instructional materials. The researcher is also made aware of the significance of knowledge & practices regarding the treatment of patients with intercoastal drainage.

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