

The effectiveness of educational program on nurses practice, regarding wound care in kosti teaching hospital. Kosti- city-Sudan

Submitted by:

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The Abstract

Background:

The wound care is of great important ,because any wound is at risk of bacterial contamination, which inhibits the healing process and prevents wound closure. Nursing play a key role in managing patient with wound and this paper aims to evaluate the effectiveness of educational program in wound care on nurses practice in kosti teaching hospital. The study used the quasi-experimental, **total coverage** for all nurses (N=٥٠), whom they were work in kosti teaching hospital, the practice of nurses were evaluated by observational checklists in two phases through eight months. The collected data was analyzed by statistical package for social sciences (SPSS). the findings of the study revealed that Concerning the practical issues of study group regarding wound assessment ,wet to dry dressing and dry dressing. the study showed that nurses had poor practice only during the pre-intervention test, but this improved in post -test to include all procedures of steps that are needed. In addition to that the study reflected, that regarding barrier to perform standard guide lines about wound care, most common barriers were lack of training (٥٨%), Lack of facilities (٥٤%) lack of equipment (٧٨%). **Conclusion:** From finding the current study indicated that the educational programs were effective in improving practice and performance of study group, and indicated the ability of study group to assessment of the wound and applying dressing and reducing the infection of the wound

Keywords: wound , nurse ,dry dressing, wet dressing

المستخلص

العناية الجيدة بالجروح مهمة لأن أي جرح يكون عرضة لخطر التلوث الجرثومي ، مما يعوق عملية الشفاء ويمنع إغلاق الجرح.. يلعب التمريض دوراً رئيسياً في العناية بالجروح، هدفت هذه الدراسة إلى تقييم تأثير برنامج التدخل التمريضي على ممارسة الممرضين فيما يتعلق بالعناية بالجروح، استهدفت هذه الدراسة شبه التجريبية التداخلية عدد خمسون من الممرضين، الذين يعملون بمستشفى كوستي التعليمي، وقد تم اختيارهم عن طريق أخذ العينة الشاملة ، باستخدام استبانة لجمع البيانات المنظمة والملاحظة علي مرحلتين خلال ثمانية أشهر وتم تحليل هذه البيانات ببرنامج الحزم الإحصائية للعلوم الاجتماعية إصدار ٢٤. أظهرت نتائج الدراسة أن أداء مجموعة الدراسة كان ضعيفاً في مؤشرات تقييم الجرح والغيار الرطب الجاف والغيار الجاف بينما تحسنت ممارساتهم وأدائهم بعد البرنامج التعليمي. كما أوضحت الدراسة أن أكثر المعوقات التي تمنع الممرضين من استخدام المعايير الأساسية للعناية بالجروح هي نقص التدريب (٥٨٪)، نقص المرافق (٥٤٪) نقص المعدات (٧٨٪). وقد خلصت الدراسة إلى أن البرامج التعليمية ذات كفاءة وفعالية عالية في زيادة المعرفة ، وتحسين الممارسة وأداء الممرضين، وقدرة الممرضين على تقييم الجرح وتطبيق غيار الجرح وهذا يقلل من المضاعفات وتحسين جودة الرعاية الصحية.

Introduction:

The major functions of the skin include protection of the internal organs, unique identification of an individual, thermoregulation, metabolism of nutrients and metabolic waste products, and sensation. Maintaining skin integrity is a primary responsibility of nursing personnel. Impaired skin integrity, such as wounds, may occur as a result of trauma or surgery. The potential for skin breakdown and eventual pressure ulcer formation also exists whenever factors such as prolonged pressure, constant irritation of the skin, and immobility are present. Nurses, through constant and timely observations and interventions, can prevent or minimize skin breakdown. Prevention, early intervention, and treatment programs are essential strategies to decrease the prevalence of pressure ulcers and pain related to inflammation and infection of wound^{(١)(٢)}.

Skin wounds are leading a public health concern worldwide. It is estimated that each year there are more than ٢٣٤ million surgical incisions performed worldwide while up to ٥٠ million occur only in United States. Traumatic wounds occur over the rate of ٥٠ million every year worldwide additionally, according to the world health organization non-fatal burn injuries are a leading cause of morbidity. In ٢٠٠٤, nearly ١١ million people worldwide were burned severely enough to require medical attention. Acute wounds (surgical, traumatic, mid- and medical treated-burns) are those when proceeds through an orderly and timely reparative process to establish sustained anatomic and functional integrity commonly within ٨-١٢ weeks. Although acute wounds account for the vast majority of skin injuries, chronic wounds though with a lower number, are of major concern among clinicians because chronic wounds may take a long time for healing or may never do so. Thus the treatment of a chronic wound is timely and costly consuming with mid-to-low successful. Chronic wounds (venous, diabetic, arterial, and pressure ulcers and complicated acute wounds like hospitalized burn wounds, etc.)^(٣). Assessment of the pre wound skin as part of a full wound assessment is seen as integral by both healthcare professionals and patients^{(٤)(٥)(٦)(٧)}.

Optimal wound management requires attention to three critical elements Determining a etiologic factors, followed by interventions to correct or ameliorate those factors ,assessing systemic factors affecting wound repair, with measures to optimize the repair process and assessing the wound including wound edge and per wound skin status, as a basis for topical therapies to promote healing^٨.(٨)^{(٩)(١٠)}.

Objectives:

To evaluate the effectiveness of educational program on nurses practice regarding wound care in kosti teaching hospital.

Materials and Methods :

This study was quasi experimental study in the period from July ٢٠١٧ to September ٢٠١٩. And conducted in White Nile State. Kosti teaching hospital, in surgical , medical department , outpatient , medical ward (male& female), surgical wards (male & female) ,intensive care unit and theater. The study population: inclusion criteria from all registered nurse who work in hospital during three shifts and willing to participate and had bacheloria , diploma ,master ,Phd degree and experience in wound care and total coverage and Sample size: estimated ٥٠. Data was collected using structured questionnaire and were developed by the researcher) include demographic data of nurse ,years of experience and qualification

and an observational check list: is used for assessing nurses practice about wound care(wound assessment (٢٦)steps marked, wet to dry dressing ١٨ steps marked and dry dressing ١٨ steps marked)to evaluate the performance of nurses at the different steps then the researcher used the following grades on assessing the performance of the nurse (Good, satisfy and poor). ♣ Good for the best performance of the steps is considered as (١) one. ♣ Satisfy for the average performance of the steps is considered as (١/٢) half. ♣ Poor for those who fails to performance of the steps is considered as (٠) zero.

Score system: The total grade score in every step was considered as good if the nurse scored between $> (٧٠-١٠٠\%)$ n where (n) is the percentage, and considered satisfy if score $> (٥٠-٦٩\%)$ n and considered poor if scored $< (٥٠\%)$. The total score of practice was (١٠٠%)for wound assessment, and for each types of dressing). Six consecutive wound assessment and wound dressing sessions were carried out, in the form of lectures, group discussions, and demonstration and re-demonstration by using models Program implementation was in the form of small group sessions, the program content has been sequenced through ٤ sessions for theory and ٥ sessions for practice by using observation check list. Group consisted of ١٠ nurse chosen from different unite. Different educational methods and media were used. Post-tests were conducted at the end of the program. ٣.١٠.١ Educational programs: Educational program was designed based on actual needs of nurse to improve their knowledge and practice regarding wound care and wound dressing it was in simple Arabic language, lectures, group discussion, and demonstrations used to implement the interventional program. The researcher used pictures, videos, and equipment for implemented the wound assessment , wet to dry dressing and dry dressing.

Education program took two months and consist of Six consecutive wound assessment and wound dressing sessions were carried out, in the form of

lectures, group discussions, and demonstration and re demonstration by using models. Data was collected in two phases.

Pretest: in which the structured data collection instrument was distributed for nurses from (January -February ٢٠١٩) and each one of nurse was allowed sufficient time to the questionnaire were designed to elicit details of age, gender, qualification ,clinical experience and also .perform the procedure and was assessed through observational chick list during application on a model , after collection of pretest data the nurses were received the teaching program, the training was continued, was filled after explanation verbally the purpose of the study ,verbal consent was acquired from each participant and Post test: was done after four months, using the same assessment tools for the same previously identified group at (august ٢٠١٩)

Results:

Table (١): Demographic characteristics of study group n=٥٠

Items	Frequency	Percent
Age		
٢٠-٢٥ years	١٣	٢٦%
٢٦-٣٠ years	١١	٢٢%
More than ٣٠ years	٢٦	٥٢%
Clinical experience		
Less than one year	٣	٦ %
١-٥ years	١٢	٢٤ %
More than ٥ years	٣٥	٧٠ %
Gender		
Male	١٢	٢٤%
Never	١٠٠	١٠٠%
Female	٣٨	٧٦%
Qualification		
Diploma	٤٤	٨٨ %
Bachelor	٦	١٢ %

**Table Performance of study group during wound assessment and
Applying dressing pre and post test n=٥٠**

Items	Level of performance											
	Pre						Post					
	Good		Satisfy		Poor		Good		Satisfy		Poor	
	F	p	f	p	f	P	f	P	f	P	f	p
Wound assessment	-	-	-	-	٥٠	١٠٠٪	٢١	٤٢٪	٢٦	٥٢٪	٣	٦٪
	P١= .٠٣٥						P٢= .٠٧٨					
Applying wet to dry dressing	-	-	-	-	٥٠	١٠٠٪	٤٣	٨٦٪	٦	١٢٪	١	٢٪
	P١= .٠٥٤						P٢= .٠٥٧					
Applying dry dressing	-	-	-	-	٥٠	١٠٠٪	٣٩	٧٨٪	١١	٢٢٪	-	-
	P١= .٠٨٤						P٢= .٠٧٤					

*F=frequency

* p =percent

grade score: good if > (٧٠- ١٠٠٪)

satisfy if score > (٥٠-٦٩٪)

poor if scored< (٥٠٪).

**Table (): correlation between years of experience and
level of performance pre and post test**

Procedure	Pre test (sig)	Post test (sig)
Wound assessment	٠.١٨٦	٠.٥٢٦
Apply Wet to dry dressing	٠.٣٩١	٠.٣٠٨
Apply dry dressing	٠.٣٩١	٠.٠٣٢

Significant = ٠.٠٥

**** P.V Highly Significant < .05**

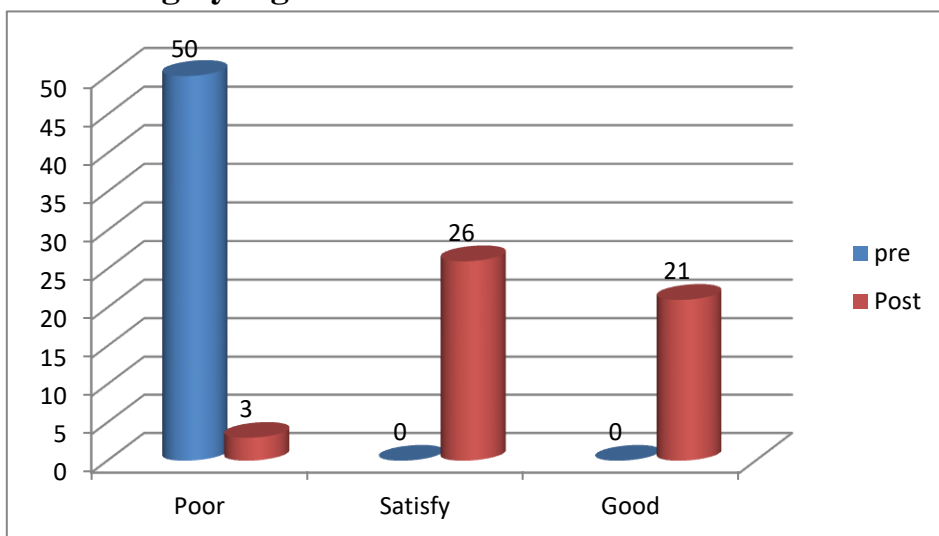


Figure No (٢): comparison between performance of study group regarding wound assessment in pre test and post test

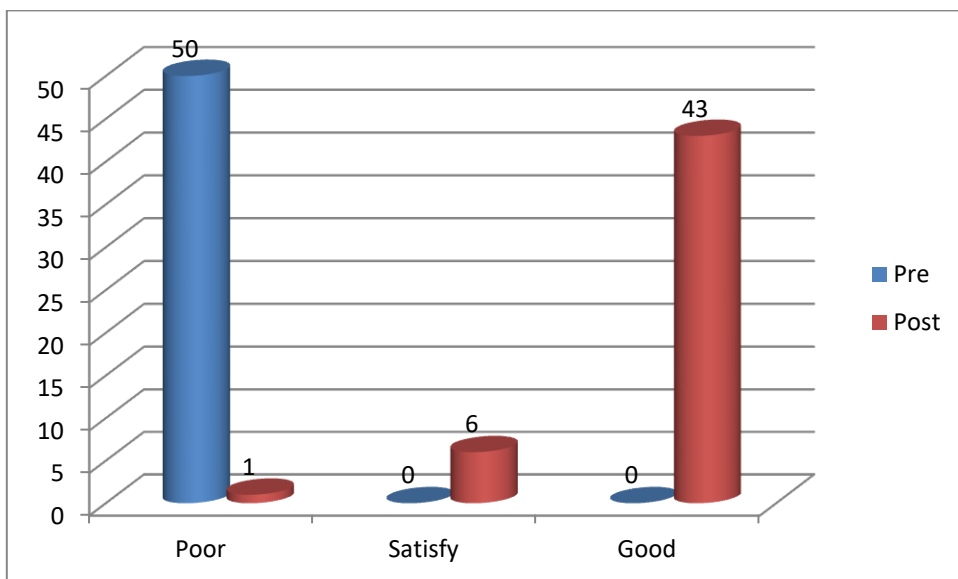


Figure No (٣): comparison between performance of study group regarding dry dressing in pre test and post test.

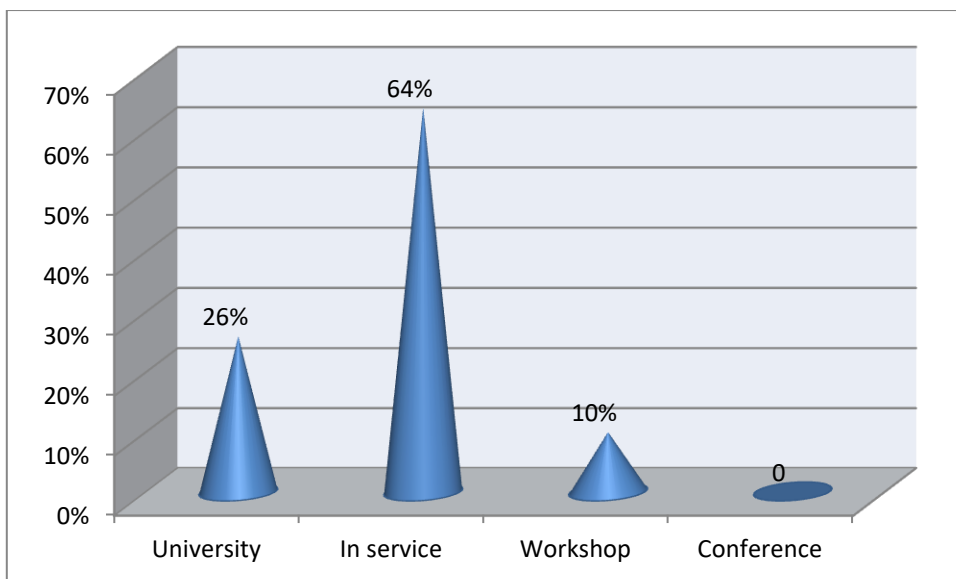


Figure No (٥): Distribution of study group as Sources of knowledge about wound care

Discussion:

Nurses play a key role in wound management and their theoretical understanding of basic wound management may be expected to influence the quality of wound therapy. Nurses had constant and timely observations and interventions, can prevent or minimize skin breakdown. ^(٥٩).

The result of the study presented that majority (٧٦%) of study group were female, more than half (٥٢%) of them their age more than ٣٠ years and more than tow third (٦٨%) of them had diploma

Despite of demonstration and re demonstration for study group about wound assessment , wet to dry dressing and dry dressing the study showed that all study group (١٠٠%) had poor performance in pre test and had been improved in the post test with highly significant result ($p= ٠.٠٠٠$) this result agree with literature review which state that(nurse not perform wound assessment for three reason in one study ٣٠% of the wounds had no diagnosis, i.e. the a etiologic factors had not been determined. Furthermore, there is currently no easy-to-use validated assessment tool that integrates fully the assessment) ^(٦٦)

Regarding barriers to perform standard guide lines about wound care

the study clarified that less than half (٤٢%)were reported work load, few percent (٢٠%) of them were reported lack of time , more than half (٥٨%) of them were reported lack of training , more than half (٥٤%) of them were reported Lack of facilities ,majority(٧٨%)of them were reported lack of equipment, less than half (٤٦%)of them were reported Lack guidelines)this result agree with literature review which state that(many did not guide practice in terms of setting goals for healing, planning care and determining

critical interventions) ^(٢٥) , half (٥٠٪) of them were reported Lack of knowledge .

The study illustrated that was no statistical significant between study group qualification and level of performance about wound assessment ,wet to dry dressing and dry dressing (p value = ٠.٨٩٩, ٠.١٨٩, ٠.٣٥٨) in pre test respectively and no **significant** in relation between study group qualification and wound assessment and wet to dry dressing and dry dressing (pv = ٠.٨١٢, ٠.٧٦٦ , ٠.٨٥٠) in post test respectively. this result agree with literature review which state that(wound assessment is comprehensive, systematic and evidence-based. It should provide baseline information against which healthcare practitioners can detail and record the current status of the wound)(٢٢

The study illustrated that In relation between the study group years of experience and level of practice (wound assessment , wet to dry dressing and dry dressing)there was no statistical significant in pre test (pv = ٠.١٨٦ , ٠.٣٩١, ٠.٣٩١)respectively, and there was statistical significant about dry dressing in post test(pv = ٠.٠٣٢) , and there was **no statistical significant difference** about wound assessment and wet to dry dressing in (pv = ٠.٥٢٦, ٠.٣٠٨)respectively.

Conclusion :

Most of study group knowledge and practice about wound assessment and wound dressing pre test (١٦٪) improved in post test (٧٦) .

The current study indicated that the educational programs were effective in improving practice and performance of study group, and indicated the ability of study group to assessment of the patient and reducing the complication.

The most common barrier to practice standard guide lines wound care , lack of training, resources, equipment, guidelines, lack of knowledge and unable to assess.

Recommendations :

Increase nurse awareness about wound care through in-services workshops, and continuous training. annuals conferences for nurse's staff about wound assessment and dressing to discuss their problems, exchange knowledge, and find ways to improve services provide to patients. Form guidelines for the caregivers of patients with wound and to replicate the study on a larger study sample in different settings to generalize the results.

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