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University of Shandi

Faculty of post graduated study& Scientific research

Nurses competence Regarding Pressure Ulcer Prevention For Critical Ill Patients – Military Hospital 2017

submitted for fulfillment for requirement

of M.SC degree in Critical care Nursing

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DEDICATION

To my dear parents who gave me special care during this work

To my sweet sisters and brothers

To my friends and colleagues

ACKNOWLEDGMENT

Initially all praise to Allah who gave me the power to achieve my dreams.

Special thanks the staff of Faculty of Nursing Sciences In shandi university.

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Abbreviations

PU=pressure ulcer

EPUAP= the European Pressure Ulcer Advisory Panel

CNE =continuous nursing education

CME= continuous medical education

UAPUs=unit-acquired pressure ulcers

RN= registered nurse nursing

HPPD= hours per patient day

NICE= National Institute for Health and clinical excellence

ABSTRACT

This study was done in the descriptive section, in the period from march to September 2017 to investigated from the competence of nurses about prevention of pressure ulcer , this study was done through questionnaire and checklist, 60 nurses were Participants in this study they chose through random simple sampling , then data was statistical analysis through SPSS 22 (statistical package for social sciences) .then the result were presented in tables and forms.

The result show the nurses had generally knowledge about fact of pressure ulcers (100%) ,above the half knew about risk factors that lead to pressure ulcers such as hypoxemia (63.3%), and neurologic diseases(63.3%) in side of practice nurse had inadequate uses of strategies to prevention of pressure ulcer, also No Document ,to noting details of any pain possibly related to pressure damage and did not have any formal assessment tool **%0** ., the most barrier faces nurses to practice the prevention of PU is Shortage of pressure relieving device (81.7) and Uncooperative patients (78.3%).

The recommendation of study continuous nursing training to identify patient risk factor to pressure ulcers and how appropriate intervention , increase the awareness of patient and family to important of prevention from pressure ulcers, hospital should be uses assessment tools, guidelines and strategies to prevent and decrease the incidence of pressure ulcers.

ملخص البحث

أجريت هذه الدراسة الوصفية المقطعية في الفترة من مارس إلي سبتمبر2017 للتحقيق من كفاءة الممرضين حول الوقاية من قرح السرير, وتمت هذه الدراسة عن طريق الاستبيان وقائمة التحقق .شاركت في هذه الدراسة 60 ممرضا تم اختيارهم عن طريق العينة العشوائية البسيطة, وثم تم تحليل البيانات إحصائيا عن طريق برنامج التحليل الإحصائي SSPS22ومن ثم عرضت النتائج في جداول وإشكال.

أظهرت النتائج إن الممرضين لديهم معرفه عامه عن حقائق حول قرح السرير100%, وأكثر من ثلثهم لديهم معرفه عن العوامل التي تؤدي إلي الاصابه بقرح السرير مثل نقص الأوكسجين بالدم 63.3% والإمراض العصبية63.3% إما الجانب العملي المهاري أثبتت الدراسة عن عدم كفاءة الممرضين في استخدام الإستراتيجيات الوقائية من قرح السرير, وأيضا لا يوجد توثيق للملاحظات التفصيلية للام المحتمل المصاحب تلف الضغط ألسريري وليس لديهم أدوات تقيم رسميه0%,معظم العوائق التي تواجه الممرضين في تطبيق الوقاية من قرح السرير نقص في أجهزه رفع الضغط السرير81.7% وعدم تعاون المرضي78.3%.

توصي الدراسة إلي التدريب المستمر للممرضين لي معرفة المرضي المعرضين لقرح السرير وكيفية التدخل المناسب ,و زيادة وعي المرضي والأهل لأهمية الوقاية من قرح السرير, كما علي المستشفى استخدام الأدوات و القواعد الإرشادية والاستراتيجيات للوقاية وتقليل حدوث قرح السرير.

1:1 Introduction

Pressure ulcers(PU) have plagued critically ill and debilitated patients since the dawn of recorded medicine Pressure ulcers are associated with adverse patient outcomes, and contribute to patient pain, depression, loss of function and independence, increased incidence of infection and sepsis, additional surgical interventions, significant economic costs and prolonged hospital stays Therefore, the most effective treatment for pressure ulcers is to prevent their development(1).

This review focuses on nurse Knowledge and competence PU prevention. Pressure ulcers are a frequently occurring health problem throughout the world. They are painful, costly, and an often preventable complication for which many individuals are at risk. Prevalence and incidence rates are generally higher in unique populations who are at elevated risk, such as those receiving palliative care, those with spinal cord injuries, neonates and infants, and individuals in critical care. Pressure ulcers represent a major burden of sickness and reduced quality of life for patient consumers and their care givers.

Pressure ulcers increase hospital costs signitcantly :-In the United States, pressure ulcer care is estimated to approach $11 billion (USD) annually, with a cost of between $500 (USD) and $70,000 (USD) per individual pressure ulcer

-European cost models highlight that the cost of illness associated with pressure ulcers consumes up to 1.4% of health care expenditure in the Netherlands or between $362 million and $2.8 billion annually

-In the United Kingdom(UK) pressure ulcers cost up to 4% of the annual health care budget (or £750 million annually) with expenses estimated at£30,000 per individual pressure ulcer.

When community health care costs are added to hospital costs, pressure ulcersconsume up to £2.1 billion of the National Health Service (NHS) budget.-In Australia, associated opportunity cost related to increased hospital length of stays arising from development of pressure ulcer is an estimated mean$285 million (AUD) (3).

A pressure ulcer (PU) can occur anywhere on the body where there is prolonged exposure to pressure. Prolonged pressure(from lying or sitting on a specific part of the body) will impede capillary blood supply to an area and thus limit the delivery of oxygen and nutrients to tissue, placing patients at risk for skin breakdown . Expected capillary pressure ranges are between 10 and 30 mmHg. Tissue hypo-perfusion occurs when the interface pressure exceeds capillary pressure, thus increasing the likelihood of(PU) development.

Critically ill patients in ICU are considered to be at greatest risk for(PU) development, as this patient group is likely to present with high acuity, may require mechanical ventilation and subsequent administration of sedation and pharmacological drugs potentially reducing peripheral circulation and be immobile(1).

Pressure ulcers remain the chief complications of prolonged hospitalization, specifically in situations of poor nutrition, increased moisture on the skin (e.g., incontinence), prolonged pressure, and compromised sensory stimuli Pressure ulcers increase the cost of hospitalization, increase patient morbidity and mortality, and play a significant role in the spread of infection in the clinical area The presence or absence of pressure ulcers has been generally regarded as a performance measure of quality nursing care and overall patient health On average, 60,000 people die each year worldwide due to pressure ulcer related causes The prevalence of pressure ulcers in European hospitals ranges from 1% to 11% in medical wards and 4.7% to 66% in surgical wards(2).

1:2 objective:

general objective:

to assess the a knowledge and competence of nursing regarding to prevention of pressure ulcer in critical ill patients.

specific objective:

1-To assess nurses' knowledge about prevention pressure ulcers.

2-To assess the nurses ability to identify risk factors and risk indicators in critical care patients.

3-To identify effective nursing measures to prevent development of pressure ulcers.

4-to assess the barriers that meet nurses in prevent pressure ulcer**.**

1:3 Rational:

The development of hospital-acquired pressure ulcers is a great concern in health care today.

Pressure ulcer treatment is costly, and the development of pressure ulcers can be prevented

Critical care patients are at high risk for development of pressure ulcers because of the increased use of devices, hemodynamic instability ,and the use of vasoactive medications In this paper will focus on the nurses knowledge and competenceto prevent (PU).

1:4Research question

-Nurses caring critical ill patient did they take appropriate and adequate knowledge to prevent PU?

-What are the nurses ability to identify risk factors ?

-What are the nursing measures uses to prevent development of pressure

Ulcers?

2:1 Literature Review

Nowadays, tertiary hospitals deliver care to increasingly critical patients and with higher complexity levels due to the greater survival of patients with chronic illnesses and traumas. In these conditions, these individuals are more susceptible to complications that put their safety at risk, including hospital infections, medication administration errors and injuries to skin integrity, among others. On the other hand, patients are increasingly aware of their rights to receive high-quality care and are more demanding regarding the products and services offered by health institutions.

Hospital nurse staffing is a major topic in health services research and has been investigated extensively in relation to patient care quality and safety over the past decades. Although there is a large body of evidence demonstrating that higher nurse staffing levels are significantly associated with better patient outcomes, including lower mortality rates, lower failure-to- rescue rates, and shorter length of stay (4).

The National Pressure Ulcer Advisory Panel (NPUAP) defines a "Pressure Ulcer" as: "localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear and/or friction(5).

INTERNATIONAL NPUAP/EPUAP PRESSURE ULCER CLASSIFICATION SYSTEM Among the various classification schemes for pressure ulceration, the one developed by the European Pressure Ulcer Advisory Panel(EPUAP)uses a simple, four grade classification .No "ideal" classification system exists; the EPUAP's grade 1 ulceration, for example, may be difficult to detect in people with darkly pigmented skin. Eschar (dried, black, hard, necrotic tissue) covering a pressure ulcer prevents accurate grading. Undermining of adjacent tissue, and sinus

wounds, commonly occur and can affect grading as Classification of pressure ulcers by grade* well as healing

-*Grade 1*—Non-blanchable erythema of intact skin. Discoloration, warmth, in duration, or hardness of skin may also be used as indicators, particularly in people with darker skin.
-*Grade 2*—Partial-thickness skin loss, involving epidermis, dermis, or both. The ulcer is superficial and presents clinically as an abrasion or blister.
-*Grade 3*—Full-thickness skin loss involving damage to or necrosiscutaneous tissue that may extend down to, but not through, underlying sub fascia
-*Grade 4*—Extensive destruction, tissue necrosis or damage to muscle, bone, or supporting structures, with or without full-thickness skin loss (6).

Risk factors

Previous studies have identified the following factors as increasing the likelihood of developing a pressure ulcer: immobility, admission to the ICU, malnutrition, incontinence, hypoalbuminemia, spinal cord injury, stroke, hypertension, reduced level of consciousness(impaired mentation), fractures and/or major orthopedic procedure, advanced age, trauma, decreased perfusion, poor wound healing, inadequate nursing care, and chronic illness (including being bed-bound). cord injuries develop pressure ulcers at least once in their lives.

Because the development of pressure ulcers depends on the length of time that pressure is applied, immobility is the major risk factor. Healthy, active people can develop PU when anesthesia, sedation, disease, or injury renders them immobile and causes decreased pain perception. Although all patients who are bed- or chair-bound have some degree of mobility impairment, the severity ranges from complete immobility to the ability to reposition independently. Patients may not reposition themselves because they cannot move or cannot sense the discomfort associated with immobility. Patients who cannot move include those with spinal cord injury, various fractures, Parkinson’s disease, stroke, and deconditioning associated with severe

illness. Physical restraints, used in the bed or chair, contribute to impaired movement and also may directly cause pressure. Examples of sensory loss that impair sensing the need to reposition include peripheral neuropathy, spinal cord injury, stroke, and coma from any cause (including medically-induced sedation and/or paralysis). Although inability to move and inability to sense the need to move are separated in these examples, it is more common to find patients who have both immobility and sensory loss, such as a ventilated patient with a hip fracture who is receiving intravenous analgesia and sedation.

Malnutrition has been also been associated with the development of pressure ulcers.

Urinary and fecal incontinence are considered to be predictive of PU development, at least since the validation of the early predictive instruments The risk of(PU) in the intensive care unit has been shown to increase as a function of time.

In one study, the cumulative risk of developing PU was found to be 50% at 20 days in the ICU.37 In another study, almost all PU developed in patients with an ICU(1).

Assessment Tools:

risk assessment scales can be used to identify patients who are more likely than others to develop pressure ulcers. There are several pressure ulcer risk assessment tools available, including the Norton scale, Waterlow score and Braden scale. the first pressure ulcer risk assessment tool was developed in the 1960s. Subsequent tools have been based on a similar design comprising a selection of intrinsic and extrinsic factors that are believed to contribute to pressure ulcer development.

Each risk factor is awarded an arbitrary numerical value, and practitioners are expected to choose at least one option from each parameter, and then calculate a final score.

The final score is supposed to reflect the degree of risk a patient has of developing a pressure ulcer.

Pressure ulcer risk assessment tools

The Norton Scale

In 1962, Doreen Norton devised the first pressure ulcer risk assessment tool, which was specifically designed for an elderly care environment. Following discussion with her colleagues, she identified five key risk factors that were further separated into sub-divisions, with one or two word descriptions to describe variations of each risk factor as illustrated in Figures *1*. Using this tool, the descriptions with the lowest value represented the worst scenario.

The range of possible total scores varied between 5 and 20, with an arbitrary cut-off score of14, which equates to the individual being 'at risk'(7).

Although innovative for its time the Norton scale has little research to endorse its use outside of an elderly care setting. Furthermore, subsequent modified versions of this tool have incorporated nutrition as a risk factor, highlighting recent research alluding to the importance of nutrition and wound healing, and have also stratified the degrees of risk (8).

Physical Condition	Good	4
	Fair	3
	Poor	2
	Very Bad	1
Mental Condition	Alert	4
	Apathetic	3
	Confused	2
	Stuporous	1
Activity	Ambulant	4
	Walks with help	3
	Chairbound	2
	Bedfast	1
Mobility	Full	4
	Slightly Impaired	3
	Very Limited	2
	Immobile	1
Incontinence	None	4
	Occasional	3
	Usually Urinary	2
	Urinary and Fecal	1

Greater than 18	Low Risk
Between 18 and 14	Medium risk
Between 14 and 10	High Risk
Lesser than 10	Very High Risk

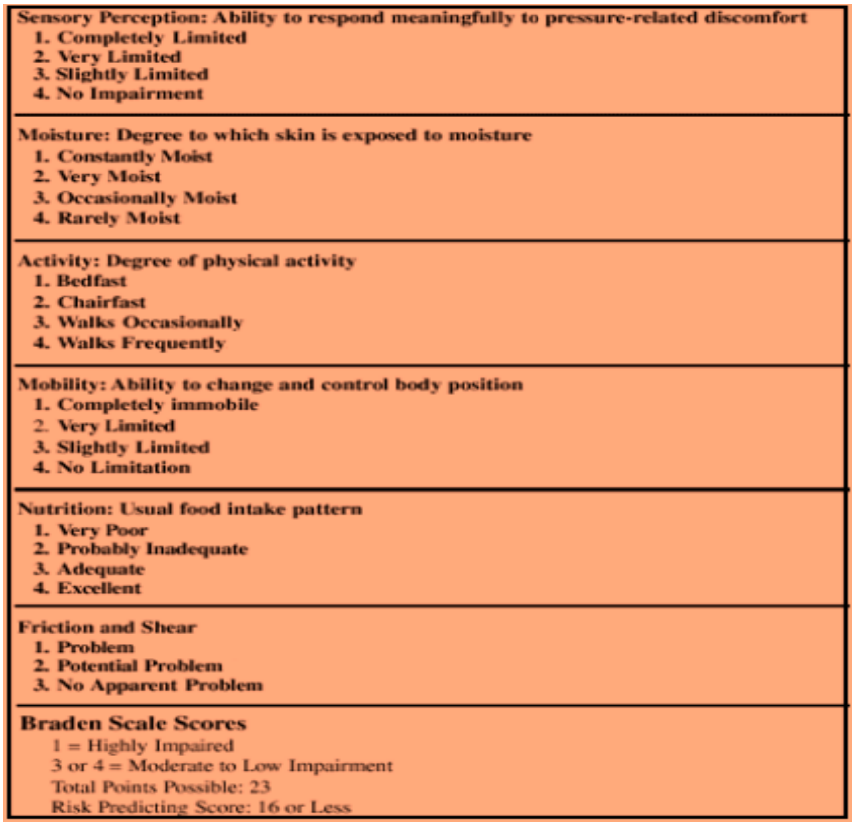
Figures no (1) show The Norton Scale

The Braden Scale

The Braden Scale was devised by American researchers in the mid-1980s. Following an extensive literature search, the foundation for this tool was based on a 'conceptual schema of a etiological factors' whereby 'pressure and 'tissue tolerance' were identified as significant factors in pressure ulcer development. Six further parameters were identified as risk factors that could contribute to pressure or affect the tissue tolerance of the skin.

The range of possible total scores when using this tool varies between 6 and 23 and, like the Norton scale, low scores signify higher risk.

The cut off points that signify that an individual is 'at risk' varies between16 and 18, depending on the clinical environment in which the tool is being used(9).



Sensory Perception: Ability to respond meaningfully to pressure-related discomfort
1. Completely Limited
2. Very Limited
3. Slightly Limited
4. No Impairment

Moisture: Degree to which skin is exposed to moisture
1. Constantly Moist
2. Very Moist
3. Occasionally Moist
4. Rarely Moist

Activity: Degree of physical activity
1. Bedfast
2. Chairfast
3. Walks Occasionally
4. Walks Frequently

Mobility: Ability to change and control body position
1. Completely immobile
2. Very Limited
3. Slightly Limited
4. No Limitation

Nutrition: Usual food intake pattern
1. Very Poor
2. Probably Inadequate
3. Adequate
4. Excellent

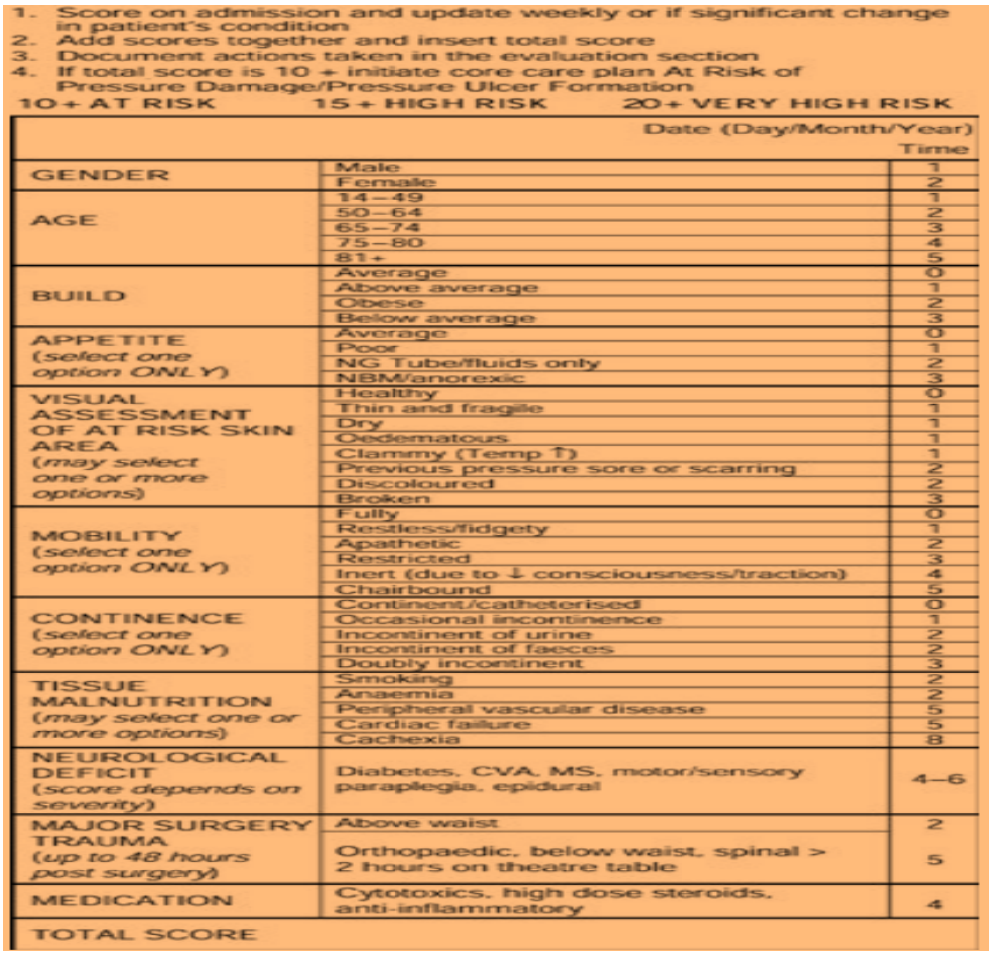
Friction and Shear
1. Problem
2. Potential Problem
3. No Apparent Problem

Braden Scale Scores
1 = Highly Impaired
3 or 4 = Moderate to Low Impairment
Total Points Possible: 23
Risk Predicting Score: 16 or Less

Figures no (2)show The Braden Scale

The Waterlow Scale

In 1987, Judy Waterlow devised the Waterlow scale following an extensive literature search and pilot studies within her local areas. She felt that the Norton scale did not address nutritional issues, account for underlying pathology, or highlight the risk of patients undergoing surgical procedures. In comparison to the Norton and Braden scale, the Waterlow scale identifies significantly more risk factors in the assessment tool, resulting in a possible total score ranging between 4 and 40. High scores signify high risk (10+ = at risk; 15+ = high risk; 20+ = very high risk(10,11).



1. Score on admission and update weekly or if significant change in patient's condition
2. Add scores together and insert total score
3. Document actions taken in the evaluation section
4. If total score is 10 + initiate core care plan At Risk of Pressure Damage/Pressure Ulcer Formation

10+ AT RISK 15 + HIGH RISK 20+ VERY HIGH RISK

		Date (Day/Month/Year) Time
GENDER	Male	1
	Female	2
AGE	14–49	1
	50–64	2
	65–74	3
	75–80	4
	81+	5
BUILD	Average	0
	Above average	1
	Obese	2
	Below average	3
APPETITE (select one option ONLY)	Average	0
	Poor	1
	NG Tube/fluids only	2
	NBM/anorexic	3
VISUAL ASSESSMENT OF AT RISK SKIN AREA (may select one or more options)	Healthy	0
	Thin and fragile	1
	Dry	1
	Oedematous	1
	Clammy (Temp ↑)	1
	Previous pressure sore or scarring	2
	Discoloured	2
	Broken	3
MOBILITY (select one option ONLY)	Fully	0
	Restless/fidgety	1
	Apathetic	2
	Restricted	3
	Inert (due to ↓ consciousness/traction)	4
	Chairbound	5
CONTINENCE (select one option ONLY)	Continent/catheterised	0
	Occasional incontinence	1
	Incontinent of urine	2
	Incontinent of faeces	2
	Doubly incontinent	3
TISSUE MALNUTRITION (may select one or more options)	Smoking	2
	Anaemia	2
	Peripheral vascular disease	5
	Cardiac failure	5
	Cachexia	8
NEUROLOGICAL DEFICIT (score depends on severity)	Diabetes, CVA, MS, motor/sensory paraplegia, epidural	4–6
MAJOR SURGERY TRAUMA (up to 48 hours post surgery)	Above waist	2
	Orthopaedic, below waist, spinal > 2 hours on theatre table	5
MEDICATION	Cytotoxics, high dose steroids, anti-inflammatory	4
TOTAL SCORE		

Figures no(3) show Waterlow scale's

Judy Waterlow also went to considerable effort to ensure that her tool was user friendly and, by incorporating information on methods of how to prevent pressure ulcer development, she encouraged staff to be proactive in the prevention and More recently, Judy Waterlow has revised her original version of the Waterlow scale following collaboration with colleagues in Australia. She has made a few amendments as listed in table no 1. In addition, she has produced a manual to clarify many of the 'grey areas' that arose from use of the original tool. However, once again, research is eagerly awaited to assess the revised Waterlow scale's effectiveness in clinical practice(12).

Table no 1 Amendments to the Waterlow scale

Risk factor	**Amendment in revised Waterlow**
Build/weightfor height	BMI score incorporated into this section
Continence	Diferentiates between urinary and faecal incontinence
Skin type visual risk areas	Defines 'discolouration' and 'broken spots' using the EPUAP classification tool
Mobility	Defines the terms 'bed-bound' and 'chair-bound'
Appetite	This has been replaced with a Malnutrition Screening Tool to identify nutritional status. (An Australian screening tool, rather than the MUST screening tool produced by BAPEN is used)
Tissue malnutrition	Clarifies single and multiple organ failure, and defines what constitutes anaemia
Neurological deficit	Limits the score for this parameter to 6
Major surgery/trauma	Incorporates a score for operations longer than 6 hours. Explains that this score can be discontinued 48 hours post-operatively if the individual is making a normal recovery
Medication	Limits the score for this parameter to 4

Which risk assessment tool is the best?

The simple answer is that there is no 'best' pressure ulcer risk assessment tool. Experts have been unable to unequivocally endorse one specific tool for all clinical areas, due to a lack of robust research. So how can we decide which tool is the most appropriate for our clinical area? It is important to consider the predictive validity of a tool when either piloting risk assessment tools within a clinical area, or when reviewing the literature.

The predictive validity assesses the efficacy of a tool at differentiating between individuals who are at risk and those who are not, and this is achieved by measuring the sensitivity and specificity of a tool. The sensitivity looks at the accuracy of the tool in predicting those who will develop the condition; the ideal tool would achieve a score of 100%. Similarly, specificity aims to ascertain a tool's ability at predicting those who will not develop a pressure ulcer, thus avoiding over prediction and a waste of resources. Once again, the ideal score for specificity would be 100 (13).

risk assessment is an integral component of pressure ulcer prevention and its use is recommended by international guidance (National Institute for Health and clinical excellence (NICE) in combination with nurses' clinical judgment. While risk assessment is necessary to ascertain the likelihood of individuals developing pressure ulcers, the decision to initiate preventive interventions and the timing and appropriateness of these depends on nurses' knowledge and their duty of care as professionals. Increasing nurses' knowledge of the causes of pressure ulcers can help to prevent their development .

Anthony et al suggested that increasing age, incontinence, poor nutrition and immobility are the main risk factors for the development of pressure ulcers (14).

Benbow stated that the numeric value identified following use of a risk assessment scale is only useful if used in conjunction with nurses' clinical judgment and

knowledge of the patient. For example, the numeric risk score of a patient may be high as a result of previous disease, however the patient may be mobile and able to self-care, and have overall good health, which may not be identified by the risk assessment scale .

a number of studies indicate that there is insufficient evidence to ascertain the usefulness, effectiveness and prediction value of risk assessment scales in pressure ulcer prevention. This is compounded by the weak validity and reliability of many risk assessment scales (15).

A review to determine whether using structured, systematic pressure ulcer risk assessment tools reduces the incidence of pressure ulcers.. risk assessment scales should be used in conjunction with nurses' knowledge and skills to reduce the incidence of pressure ulcers.

The European Pressure ulcer advisory Panel and National Pressure ulcer advisory Panel recognized the need for healthcare professionals to be educated about how to undertake a structured approach to conducting and recording pressure ulcer risk assessment and identified that the use of elements such as a risk assessment scale, comprehensive skin assessment and clinical judgment is important for the formation of a structured approach to risk assessment evidence suggests that if these elements are used in combination with education programmers', for example educating professionals on how to conduct skin assessment by teaching the technique for identifying blanching response of the skin, and care protocols, it can reduce the development of PU (16) .

A study to assess the inter-rater reliability of the Waterlow score for pressure ulcer risk assessment completed by different nurses. The sample included 110 nurses who used the scale in their daily work and were delegates at a five-day study course on pressure ulcer prevention. The nurses were asked to complete a risk assessment for a patient in a case study. The results indicated that nurses tended to overrate rather than underrate the patient's risk of developing a pressure ulcer, with only 13 of the 110 nurses accurately rating the patient's risk of developing a

pressure ulcer. Possible consequences of overrating risk include unnecessary instigation of interventions and use of equipment. This may not only result in a waste of resources and nurses' time, placing increased financial burden on health services, but may also compromise patient comfort and quality of life(17).

argued that complicated algorithms used in risk assessment scales might be an unnecessary distraction, delaying care and contributing to the development of pressure ulcers. The study identified poor inter-rater reliability for the Waterlow score risk assessment tool and found that some nurses were not using the tool correctly, which meant that some nurses might give the same patient a different score. This can be particularly problematic in the clinical setting, where different healthcare professionals may care for the same patient and resources are limited. For example, a patient who is less likely to develop a pressure ulcer may be given a high score depending on who assessed him or her. If an intervention is applied according to the score alone, this may result in unnecessary treatment and use of resources. Providing education and increasing awareness among healthcare professionals on the correct use and interpretation of risk assessment scales is essential to ensure that patients are treated appropriately (17).

Highlighted the importance of education and training to ensure that healthcare professionals use risk assessment scales in the same way and as they are intended to be used.

They also indicated that to complete a risk assessment score on each patient admitted to the hospital would be a 'pointless exercise' because scoring can be unreliable and nurses may interpret the results differently. Therefore, training and education about the risk factors involved in developing pressure ulcers and action to be taken may be more useful than reliance on risk assessment scales, which may be open to individual interpretation (14).

NICE states that initial and ongoing pressure ulcer assessment is the responsibility of all healthcare professionals. an audit conducted by Jones et al demonstrated that risk assessment was being carried out within 24 hours of admission for 54% of

patients, with 16% of risk assessment forms completed but not dated, and 18% of forms not completed. a total of 12% of forms were satisfactory, but were completed after 24 hours. suggested that nurses considered completion of risk assessment forms a paper exercise instead of recognizing risk assessment as an opportunity to provide holistic patient care(18).

The study relating to The prevention PU in brazil his study aimed to describe and to analyze knowledge on pressure ulcer prevention among nursing team members working in direct care to adult and elderly patients at a university hospital. A descriptive and exploratory research was carried out between January and March 2009 Participants were 386 professionals, of whom 64.8% were nursing auxiliaries/technicians and 35.2% baccalaureate nurses (BSN). The mean percentage of correct answers on the knowledge test was 79.4% (SD=8.3%) for nurses and 73.6% (SD=9.8%) for nursing auxiliaries/technicians. Both professional categories display knowledge deficits in some areas related to the theme. The identification of deficient areas can guide strategic planning with a view to the dissemination and adoption of prevention measures by the team (19).

Study in Nigeria was conducted to describe nurses' level of knowledge of PU preventive interventions and to test the reliability of the Pressure Ulcer Knowledge Test (PUKT) among Nigerian nurses. One hundred, eleven (111) nurses were purposively selected from specific wards of a state teaching hospital in South West Nigeria study found The value of knowledge in PU prevention cannot be overemphasized. Findings from this study indicate a gap in knowledge of current evidence-based interventions for PU prevention among nurses in Nigeria and confirm that most PU prevention practice decisions are based on tradition, myths, and past experience. A structured educational approach is needed to enable Nigerian nurses to provide evidence-based PU prevention interventions(20).

Study done by Magda M. Bayoumi, Enas Bassuni, This study was conducted at General Mohyeil Hospital and Rijal Alma Hospital, from October 2012 to

February 2012. to evaluate the nurses' knowledge regarding bedsores' preventive measures at Saudi Arabia.

The study sample consisted of 38 staff nurses from different departments or units. In the study sample the characteristics of staff nurses were both sex, ranged from 24 years (50%) to 43 years (15.8%), are working in different areas medical (42.11%), surgical (13.2%), ER (13.2), ICU (21%), and 10.5 in artificial kidney unit, the majority of the nurses (76.3%) pay attention to give the patient and family health education about how to prevent bed sores. In addition there are significant correlation (0.026) between years of experiences and don't elevate the high risk patient above 20 degree. The study concluded that prevalence of pressure sores are developing at factors, also nurses knowledge were good in comprehensive skin assessment within 24 hours of admission. As well as most of nurses were not conscious regarding the degree of bed elevation for high risk patient (21).

The study was undertaken in 2005 in Mosul city, Republic of Iraq about Nurses' Attitudes, Towards Bed Sores Prevention The nurses surveyed demonstrated a positive attitude towards Bed Sores prevention. However, prevention practices were demonstrated to be haphazard and erratic and were negatively affected by lack of time and staff.
These barriers prevented the nurses' positive attitude from being reflected into effective clinical practice. Education, although poorly accessed, or made available, was rarely cited as impeding practice in this area. This study suggests that positive attitudes are not enough to ensure that practice change takes place, reinforcing the complex nature of behavioral change. Implementation strategies should introduce ways in which key Nursing staff can be empowered to overcome barriers to change(22).

In Ugandan study was done to determine the nurses' knowledge and practices regarding risk factors, prevention, and management of pressure ulcers at a teaching hospital in Uganda. The study employed a descriptive cross-sectional design. Fifty-six Ugandan registered practicing nurses were sampled. A composite self-

administered questionnaire and an observation checklist were utilized. The nurses had limited knowledge about critical parameters of pressure ulcers. Prevention practices were observed to be unreliable and uncoordinated related to a significant shortage of staff and logistics for pressure ulcer prevention. Nurses had poor access to current literature on pressure ulcer prevention. Translation of nurses' knowledge into practice is possible if barriers like staff shortage, pressure relieving devices provision, and risk assessment tools are addressed at Mulago The prevention and management of pressure ulcers is of great importance. However, nurses at Mulago Hospital have given it low priority stemming from inadequate knowledge and heavy workload such as one nurse having many patients to attend to. The nurse training schools and universities need to examine their curricula to address issues related to pressure ulcers prevention and treatment. Hospitals also need to devote more resources to prevent and manage pressure ulcers. Professionals should also meet their responsibility to provide continuous nursing education (CNE) and continuous medical education (CME) to staffs about pressure ulcers. Included and reflected in this education should be the importance of interdisciplinary collaboration (23).

Study about Comparability of nurse staffing measures in examining the relationship between RN staffing and unit-acquired pressure ulcers: A unit-level descriptive, co relational study In this study, both administrative and nurse-reported measures were examined. Administrative measures included registered nurse (RN) skill mix and three versions of nursing hours per patient day (HPPD); nurse-reported measures included RN reported number of assigned patients and RN-perceived staffing adequacy. To examine correlations among six nurse staffing measures and to compare their explanatory power in relation to unit-acquired pressure ulcers (UAPUs).found Two versions of HPPD (total nursing HPPD and RN HPPD) and RN skill mix were significantly correlated with RN-reported number of assigned patients (r range = 0.87 to0.75). These staffing measures had weaker correlations with RN-perceived staffing adequacy (r range = 0.16 to 0.23).

Of the six staffing variables, only RN-perceived staffing adequacy and RN skill mix were significantly associated with UAPU odds, the former being the better predictor.

Although RN-perceived staffing adequacy was not highly correlated with administrative measures of HPPD and RN skill mix, it was the strongest predictor of UAPU occurrences. RN-perceived staffing adequacy can serve as a more appropriate measure of staffing for nursing-sensitive outcomes research than administrative measures, as it reflects relevant aspects of staffing and involves an implicit adjustment for patient acuity(24).

Nurses' clinical judgment plays a vital role in pressure ulcer risk assessment, but evidence is lacking which patient characteristics are important for nurses' perception of patients' risk exposure. the study in Germany about What patient characteristics guide nurses' clinical judgment on pressure ulcer risk? To explore which patient characteristics nurses employ when assessing pressure ulcer risk without use of a risk assessment scale. found : Nurses consider multiple patient characteristics for pressure ulcer risk assessment, but regard some conditions more important than others. Triangulation showed that these are measures reflecting patients' exposure to pressure or overall care dependency.

Qualitative data furthermore indicate that nurses are likely to trade off risk-enhancing conditions against conditions perceived to be protective. Here, patients' mental capabilities like willingness to engage in one owns care seem to be particularly important.

Due to missing information on these variables in the quantitative data, they could not be incorporated into triangulation. study demonstrates that nurses use a broad spectrum of patient characteristics when assessing patients' pressure ulcer risk. These characteristics cover well-known a etiological pathways, but go beyond established risk factors. Nurses seem to weigh up observed risk factors against patients' protective conditions. Here they seem to give particular attention to patients' ability to comply with advice for prevention. Patients' care dependency

and self-care abilities seem to be core concepts underlying nurses' diagnostic considerations in pressure ulcer risk assessment (25).

Key priorities for implementation

Prevention: adults

Risk assessment

-Be aware that all patients are potentially at risk of developing a pressure ulcer.

- Carry out and document an assessment of pressure ulcer risk for adults:

being admitted to secondary care or care homes in which NHS care is provided or NHS care in other settings(such as primary and community care and receiving emergency departments) if they have a risk factor, for example:

-significantly limited mobility (for example, people with a spinal cord injury).

-significant loss of sensation.

-a previous or current pressure ulcer.

-nutritional deficiency.

-the inability to reposition themselves.

-significant cognitive impairment.

Consider using a validated scale to support clinical judgment (for example, the Braden scale, the Waterlow score or the Norton risk-assessment scale) when assessing pressure ulcer risk.

Reassess pressure ulcer risk if there is a change in clinical status (for example, after surgery, on worsening of an underlying condition or with a change in mobility).

Skin assessment

#Offer adults who have been assessed as being at high risk of developing a pressure ulcer a skin assessment by a trained healthcare professional . The assessment should take into account any pain or discomfort reported by the patient and the skin should be checked for:

-skin integrity in areas of pressure.

-color changes or discoloration.

-variations in heat, firmness and moisture (for example, because of incontinence, oedema, dry or inflamed skin).

Use finger palpation or diascopy to determine whether erythema or discolouration (identified by skin assessment) is blanchable.

Start appropriate preventative action in adults who have non-blanching erythema and consider repeating the skin assessment at least every 2 hours until resolved.

Repositioning

- Encourage **a**dults who have been assessed as being at risk of developing a pressure ulcer to change their position frequently and at least every 6 hours. If they are unable to reposition themselves, offer help to do so, using appropriate equipment if needed. Document the frequency of repositioning required.

- Encourage adults who have been assessed as being at high risk of developing a pressure ulcer to change their position frequently and at least every 4 hours. If they are unable to reposition themselves, offer help to do so, using appropriate equipment if needed. Document the frequency of repositioning required.

Skin massage

- Do not offer skin massage or rubbing to adults to prevent a pressure ulcer.

Nutritional supplements and hydration

- Do not offer nutritional supplements specifically to prevent a pressure ulcer in adults whose nutritional intake is adequate.

- Do not offer subcutaneous or intravenous fluids specifically to prevent a pressure ulcer in adults whose hydration status is adequate.

Pressure redistributing devices

- Use a high-specification foam mattress for adults who are:
#admitted to secondary care.
#assessed as being at high risk of developing a pressure ulcer in primary and community
care settings.
- Consider a high-specification foam theatre mattress or an equivalent pressure redistributing surface for all adults who are undergoing surgery.
- Discuss with adults at high risk of developing a heel pressure ulcer and, where appropriate, their family or careers, a strategy to offload heel pressure, as part of their individualized care plan.
- Consider the seating needs of people at risk of developing a pressure ulcer who are sitting for prolonged periods.
- Consider a high-specification foam or equivalent pressure redistributing cushion for adults who use a wheelchair or who sit for prolonged periods.

Barrier creams

- Consider using a barrier preparation to prevent skin damage in adults who areat high risk of developing a moisture lesion or incontinence-associated dermatitis, as identified by skin assessment (such as those with incontinence, oedema, dry or inflamed skin).

Prevention: neonates, infants, children and young people

Risk assessment

- Carry out and document an assessment of pressure ulcer risk for neonates, infants, children and young people:
-being admitted to secondary or tertiary care or receiving NHS care in other settings (such as primary and community care and emergency departments) if they have a risk factor, for example:
-significantly limited mobility.

-significant loss of sensation.

-a previous or current pressure ulcer.

-nutritional deficiency.

-the inability to reposition themselves.

-significant cognitive impairment.

Use a scale validated for this population (for example, the Braden Q scale for children), to support clinical judgment.

Skin assessment

Offer neonates, infants, children and young people who are assessed as being at high risk of developing a pressure ulcer a skin assessment by a trained healthcare professional.

Take into account:

-skin changes in the occipital area.

-skin temperature.

-the presence of blanching erythema or discoloured areas of skin.

Be aware of specific sites (for example, the occipital area) where neonates, infants, children and young people are at risk of developing a pressure ulcer.

Repositioning

- Ensure that neonates and infants who are at risk of developing a pressure ulcer are repositioned at least every 4 hours.

- Encourage children and young people who are at risk of developing a pressure ulcer to change their position at least every 4 hours. If they are unable to reposition themselves, offer help to do so, using appropriate equipment if needed.

- Consider more frequent repositioning than every 4 hours for neonates and infants who have been assessed as being at high risk of developing a pressure ulcer. Document the frequency of repositioning required.

- Encourage children and young people who have been assessed as being at high risk of developing a pressure ulcer to change their position more frequently than every 4 hours. If they are unable to reposition themselves, offer help to do so, using equipment if needed.

Document the frequency of repositioning required.

- Ensure that repositioning equipment is available to aid the repositioning of children and young people, if needed.
- Ensure that healthcare professionals are trained in the use of repositioning equipment.
- Ensure that patients, parents and careers understand the reasons for repositioning. If children and young people decline repositioning, document and discuss their reasons for declining.
- Consider involving a play expert to encourage children who have difficulty with, or who have declined repositioning.
- Relieve pressure on the scalp and head when repositioning neonates, infants, children and young people at risk of developing a pressure ulcer.

Skin massage

Do not offer skin massage or rubbing to neonates, infants, children and young people to prevent a pressure ulcer.

Nutritional supplements and hydration

Do not offer nutritional supplements specifically to prevent a pressure ulcer in neonates, infants, children and young people with adequate nutritional status for their developmental stage and clinical condition.

Do not offer subcutaneous or intravenous fluids specifically to prevent a pressure ulcer in neonates, infants, children and young people with adequate hydration status for their development stage and clinical condition.

Pressure redistributing devices

Use a high-specification foam cot mattress or overlay for all neonates and infants who have been assessed as being at high risk of developing a pressure ulcer as part of their individualized care plan.

Use a high-specification foam mattress or overlay for all children and young people who have been assessed as being at high risk of developing a pressure ulcer as part of their individualized care plan.

Discuss with children and young people at high risk of developing a heel

pressure ulcer and their parents and careers, where appropriate, a strategy to offload heel pressure as part of their individualized care plan.

Offer infants, children and young people who are long-term wheelchair users, regular wheelchair assessments and provide pressure relief or redistribution.

Offer neonates, infants, children and young people at risk of developing an occipital pressure ulcer an appropriate pressure redistributing surface (for example, a suitable pillow or pressure redistributing pad).

Barrier creams

Use barrier preparations to help prevent skin damage, such as moisture lesions, for neonates, infants, children and young people who are incontinent (26).

MATERIALS AND METHODS

3:1Study Design:

This is descriptive quantitative cross-sectional study design used Nurses Knowledge and competence Regarding Pressure Ulcer Prevention For Critical Ill Patients in mailitary hospital Omdurman

3:2 Study area

Omdurman is the second largest city in Sudan and Khartoum State lying on the western banks of the river Nile opposite the capital Khartoum . the study samples was collected from military hospital Omdurman. Convenience random sampling

3:3 Study population:

1-Inclusion criteria: Nurses that working in the military hospital Omdurman in ICU and general word during study period ,Males and females.

2-Exclusion criteria: All nurses in vacations or sick leave.

3:4 Data collection tools

Data were collected through questionnaire designed specifically to answer the objectives of this study and observation checklist.

3:5 Sampling:

All nurses were enrolled in the study.

3:6 Sample size:

60 nursing participation in study.

3:7Sampling technique:

simple Random sampling.

3:8Data processing and analysis:

Using computer software SPSS 22 (statistical package for social sciences) program widows is used for data management and statistical analysis ,descriptive statistics were performed on the study variables

3:9Ethical considerations:

The researcher took permission from the hospital of the study with an official letter from the Faculty of Nursing Sciences to the director of the hospital with the agreement of the target population, every individual observed once. Verbal consent from the interviewed persons was also taken after explaining the study and its objectives to them. Confidentiality was given consideration and the information is used for the research purpose only.

4:1 result

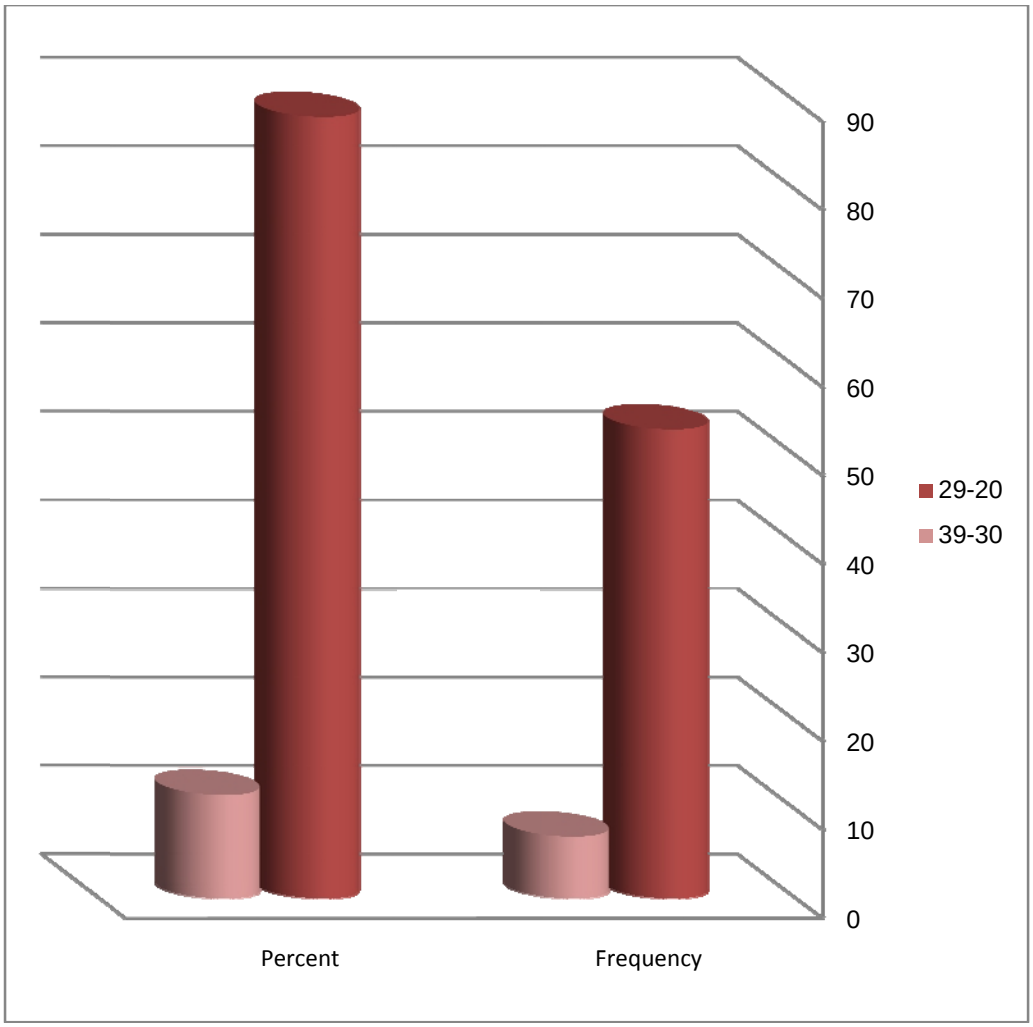


Figure No(4) show the age frequencies of the study populations.

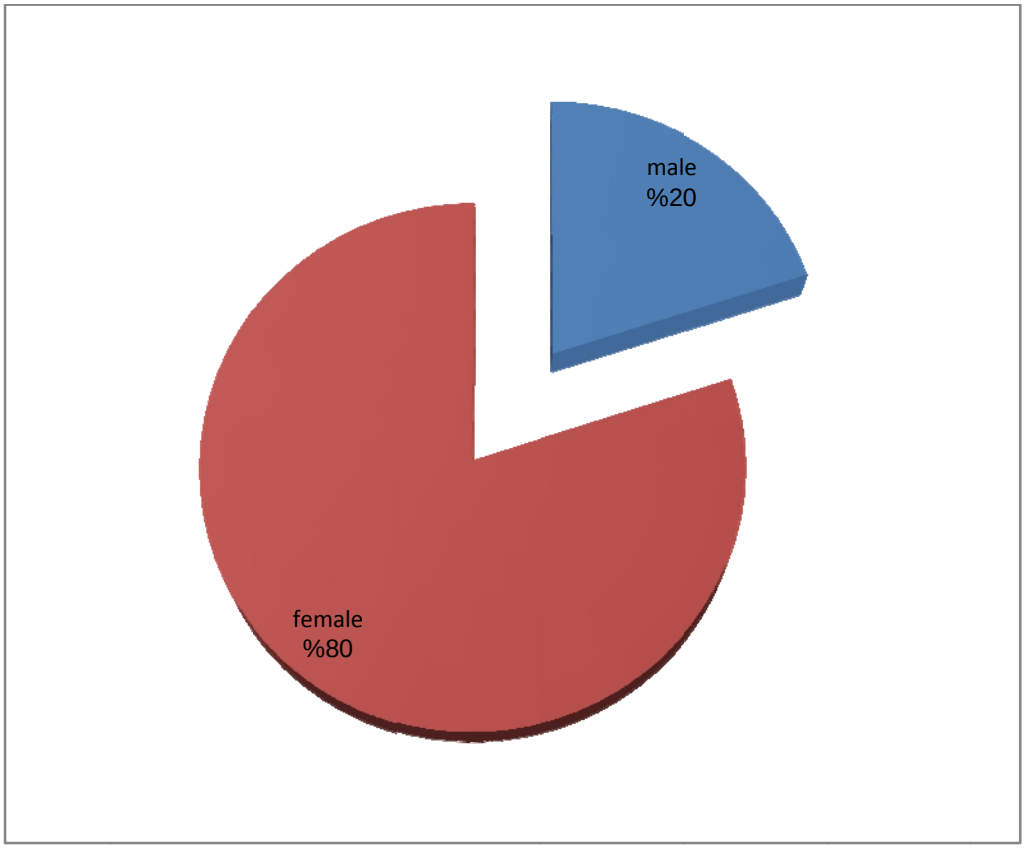


Figure No(5) show the genders of nurses work .

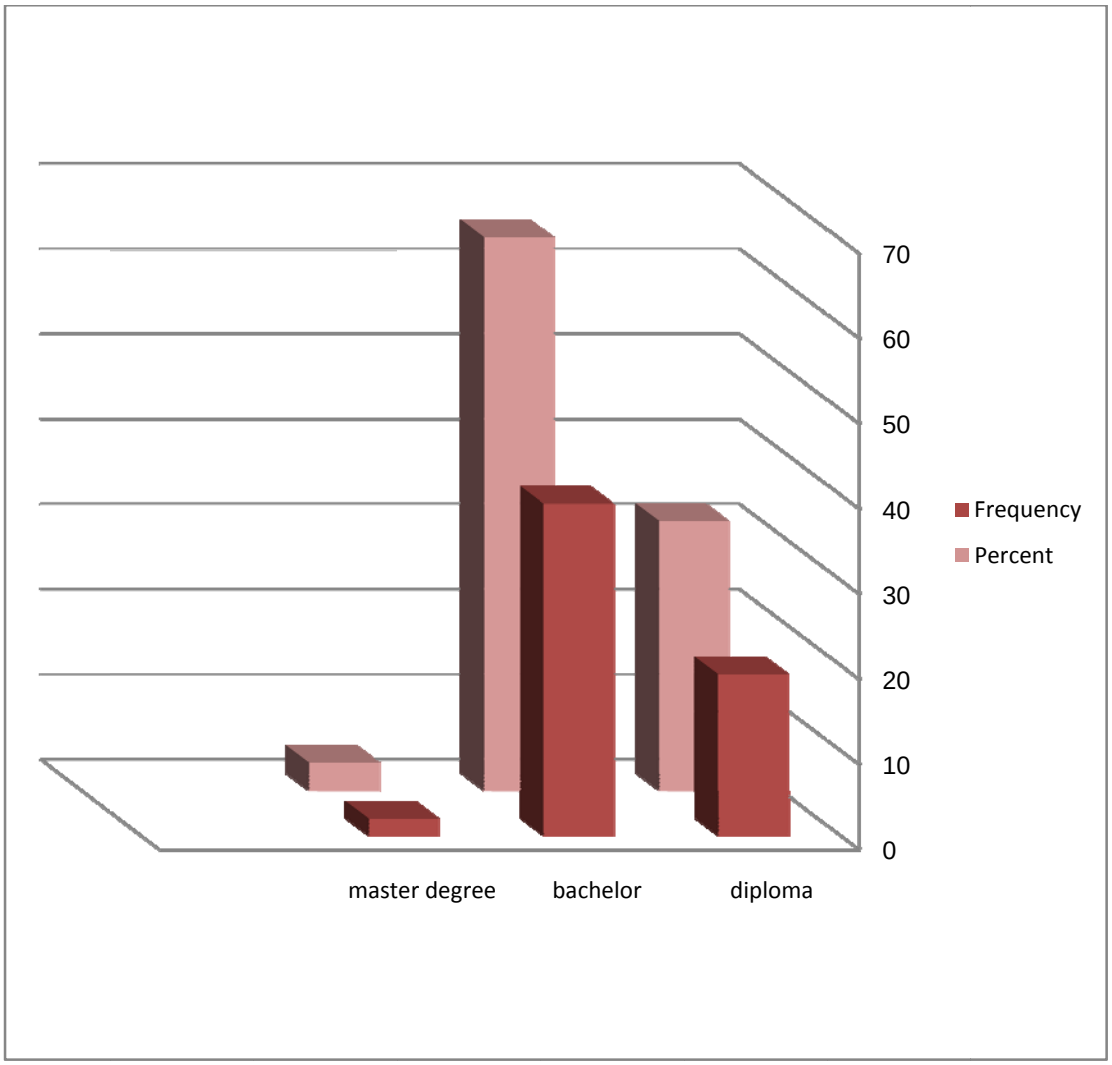


Figure No(6) show the qualification level of the nurses.

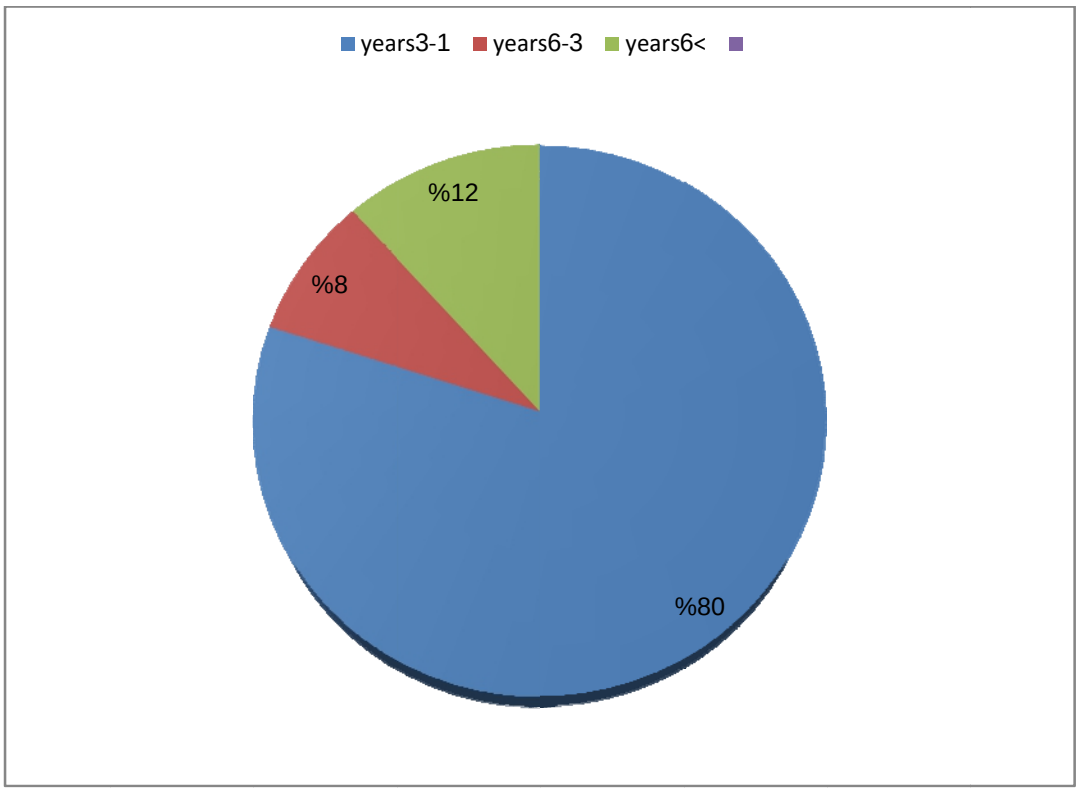


Figure No(7) show the years of practice.

Table no (2) Fact about pressure ulcers

Items	YES		NO		TOTAL	
	N	%	N	%	N	%
1- Areas of skin compromised as a result of unrelieved pressure	60	100%	00	00%	60	**100%**
2- Immobility is the most important factor for pressure ulcer Formation in an 80- years old man with fracture hip and bedridden	55	91.7%	5	8.3%	60	**100%**
3- Pale , red , or blue – gray discoloration on the skin is the sign for pressure ulcer Development	56	93.3%	4	6.7%	60	**100%**
4-develop in stages	54	90%	6	10%	60	**100%**
5- Partial skin loss with blister and abrasion is correct answer for the sign of stage II pressure ulcer	44	73.3%	16	26.7%	60	**100%**
6- Commonly occur around bony prominences	56	93.3%	4	6.7%	60	**100%**
7-Management requires interdisciplinary collaboration	34	56.7%	26	43.3%	60	**100%**
8-Can lead to permanent disabilities like bone destruction	56	93.3%	4	6.7%	60	**100%**
9- Sepsis is one of the complications	58	96.7%	2	3.3%	60	**100%**
10-Contributes to overall hospital costs incurred by patient	47	78.3%	13	21.7%	60	**100%**

Nurses' Knowledge about Pressure Ulcers The majority all nurses (100%) identified Areas of skin compromised as a result of unrelieved pressure , above Half (56.7%) identified Management requires interdisciplinary collaboration .

Table no(3) Risk factors for developing pressure ulcers

Items	YES		NO		TOTAL	
	N	%	N	%	N	%
1-Immobility	57	95%	3	5%	60	100%
2-Pressure/compression	53	88.3%	7	11.7%	60	100%
3-Friction/shear	49	81.7%	11	18.3%	60	100%
4-Hypoxemia	38	63.3%	22	36.7%	60	100%
5-exposure of skin to urinary and fecal incontinence	41	68.3%	19	31.7%	60	100%
6- Drugs such as steroids that may affect wound healing	54	90%	6	10%	60	100%
7-Age greater than 70 years, Skin may be more fragile than that of a younger	54	90%	6	10%	60	100%
8-Malnutrition	51	85%	9	15%	60	100%
9-Anemia	42	70%	18	30%	60	100%
10-Ischemia	50	83.3%	10	16.7%	60	100%
11-Neurologic disease	38	63.3%	22	36.7%	60	100%

Nurses were asked to identify possible risk factors for developing pressure ulcers The majority of nurses (95%) identify immobility is most Risk factors for developing pressure ulcers .above of half (63.3%) identify Hypoxemia and Neurologic disease is risk factors.

Tables no(4) Strategies used in prevention(PU)

Items	Always		Sometime		Never		Total	
	N	%	N	%	N	%	N	%
1-Consider bedfast and chairfast individuals to be at risk for development of pressure injury.	30	50%	29	48%	1	1.7	60	100%
2-Use a structured risk assessment, such as the Braden Scale, to identify individuals at risk for pressure injury as soon as possible (but within 8 hours after admission).	0	0%	0	0%	60	100%	60	100%
3-Inspect all of the skin upon admission as soon as possible (but within 8 hours).	18	30%	34	56.7%	8	13.3%	60	100%
4-Inspect the skin at least daily for signs of pressure injury, especially nonblanchable erythema.	31	51.7%	22	36.7%	7	11.7%	60	100%
5-Assess pressure points, such as the sacrum, coccyx, buttocks, heels, ischium, trochanters, elbows and beneath medical devices.	22	36.7%	36	60%	2	3.3%	60	100%
6- Cleanse the skin promptly after episodes of incontinence.	26	43.3%	30	50%	4	6.7%	60	100%
7-Use skin moisturizers daily on dry skin.	34	56.7%	23	38.3%	3	5%	60	100%

8-Avoid positioning an individual on an area of erythema or pressure injury.	35	58.3%	22	36.7%	3	5%	60	**100%**
9-Use heel offloading devices or polyurethane foam dressings on individuals at high-risk for heel ulcers.	15	25%	38	63.3%	7	11.7%	60	**100%**
10-Providing cushions on areas at risk of pressure ulcers.	23	38.3%	36	60%	1	1.7%	60	**100%**
11-Catheterization in case of incontinence.	31	51.7%	27	45%	2	3,3%	60	**100%**
12-Refer all individuals at risk for pressure injury from malnutrition to a registered dietitian or nutritionist.	21	35%	36	60%	3	5%	60	**100%**
13-Ensuring patient is well hydrated	21	33,3	38	63.3%	1	1.7%	60	**100%**
14- Turn and reposition all individuals at risk for pressure injury, unless contraindicated due to medical condition or medical treatments.	27	45%	30	50%	3	5%	60	**100%**
15-Use a pressure redistributing chair cushion for individuals sitting in chairs or wheelchairs.	23	38.3%	31	51.7%	6	10%	60	**100%**
16- Teach the individual and family about risk for pressure injury.	39	65%	20	33.3%	1	1.7%	60	**100%**

In The Strategies used in prevention PU, most of the nurses always(65%) Teach the individual and family about risk for pressure injury , less half (33.3%) sometime and(1.7%)never.

Above the half always (58.3%)Avoid positioning an individual on an area of erythema or pressure injury ,less the half(36.7%) sometime and(5%)never.

above the half(56.7%) always Use skin moisturizers daily on dry skin ,less the half (38.3%) some time and (5%) never.

Above the half (51.7%)always Catheterization in case of incontinence less the half (45%) sometime and (3.3%) never.

The majority (100%) never use structured risk assessment, such as the Braden Scale, to identify individuals at risk for pressure injury as soon as possible (but within 8 hours after admission).

The less than half (25%)always Use heel offloading devices or polyurethane foam dressings on individuals at high-risk for, above the half (63.3%) sometime and (11.7%) never.

Table no(5) Barriers to carrying out pressure ulcer prevention

Items	YES		NO		TOTAL	
	N	%	N	%	N	%
1-Poor access to literature	38	63.3%	22	36.7%	60	100%
2- Heavy workload/staff shortage	41	68.3%	19	31.7%	60	100%
3- Lack of universal guidelines for prevention	31	51.7%	29	48.3%	60	100%
4- Lack of in-service training about pressure ulcers	41	68.3%	19	31.7%	60	100%
5 -Uncooperative patients	47	78.3%	13	21.7%	60	100%
6- Presence of other priorities other than pressure ulcers	31	51.7%	29	48.3%	60	100%
7- Shortage of pressure relieving devices	49	81.7%	11	18.3%	60	100%
8- Inadequate knowledge about pressure ulcers	45	75%	18	25%	60	100%
9- Lack of multidisciplinary initiative	42	70%	18	30%	60	100%

Barriers to carrying out pressure ulcer prevention The majority of nurses (81.7%) identify Shortage of pressure relieving devices is one of the barrier to prevent PU . above half (51.7%) identify Lack of universal guidelines for prevention .

Table no(6). CHECK LIST

Items	YES		NO		TOTAL	
	N	%	N	%	N	%
1- Consider bedfast and chairfast individuals to be at risk for development of pressure injury	45	75%	15	25%	60	**100%**
2- Do you use either the Norton or Braden pressure	0	0%	60	100%	60	**100%**
3-skin integrity in areas of pressure	35	58.3%	25	41.7%	60	**100%**
4- color changes or discoloration	41	68.3%	19	31,7%	60	**100%**
5-variations in heat, firmness and moisture	45	75%	15	25%	60	**100%**
6-Observe the skin for pressure damage caused by medical devices	50	83.3%	10	16.7%	60	**100%**
7-Document all skin assessments, noting details of any pain possibly related to pressure damage	0	0%	60	100%	60	**100%**
8-Cleanse the skin promptly after episodes of incontinence	52	86.7%	8	13.3%	60	**100%**
9-Use skin moisturizers daily on dry skin	28	46.7%	32	53.3%	60	**100%**
10-Assess nutrition includes dietary consul	48	80%	12	20%	60	**100%**
11-Turn and proper position to the patient at least every 2 hours	50	83.3%	10	12.7%	60	**100%**
12-Pressure redistributing devices for high risk patient	51	85%	9	15%	60	**100%**
13-Give the patient and family health education about preventive measures of bed ulcer	47	78.3%	31	21.7%	60	**100%**

In the check list the majority of nurses (86.7%) they were Cleanse the skin promptly after episodes of incontinence .and (0%) the nurses did not use either the Norton or Braden pressure for assessment the patient risk for PU ,and also no-Document for all skin assessments, noting details of any pain possibly related to pressure damage.

5:1 Discussion

This study was done to assess nurses Nurses Knowledge and competence Regarding Pressure Ulcer Prevention For Critical Ill Patients in military hospital, to assess nurses' knowledge, ability to identify risk factors and risk indicators in critical care patients , uses effective nursing measures to prevent development of pressure ulcers and the barriers that meet nurses in prevent pressure ulcer.

practicing nurses who participated in the study generally had knowledge about how pressure ulcers ,but They had inadequate understanding of the importance of interdisciplinary management Similar findings were also reported in a Ugandan Teaching Hospital(16) in Nigerian study indicate a gap in knowledge of current evidence-based interventions for PU prevention among nurses in Nigeria and confirm that most PU prevention practice decisions are based on tradition, myths, and past experience (13).

Participants had some level of knowledge about risk factors although fewer knew about systemic risk factors such as hypoxemia, and neurologic diseases , anthony et al suggested that increasing age, incontinence, poor nutrition and immobility are the main risk factors for the development of pressure ulcers (7).

In side of practice can identify inadequate uses of strategies to prevention of pressure ulcer and The nurses did not have any formal assessment tool .

The barrier faces nurses to practice the prevention of PU ,Shortage of pressure relieving device and Uncooperative patients .

In the observation the participant nurses They did not use either the Norton or Braden pressure for assessment the patient risk for PU ,and also no-Document for all skin assessments, noting details of any pain possibly related to pressure

damage, the majority of nurses they Cleanse the skin promptly after episodes of incontinence, Turn and proper position to the patient at least every 2 hours- and Observe the skin for pressure damage caused by medical devices.

5:2 Conclusions

The prevention of pressure ulcers is very importance , the majority of nurses had generally knowledge about fact of pressure ulcers 100% and had some level of knowledge about risk factors s, although above half knew about systemic risk factors such as hypoxemia (63.3%), and neurologic diseases(63.3%) ,in side of practice nurse had inadequate uses of strategies to prevention of pressure ulcer, and The nurses did not have any formal assessment tool , depend on past experience .also No Document ,to noting details of any pain possibly related to pressure damage, the most barrier faces nurses to practice the prevention of PU is Shortage of pressure relieving device (81.7) and Uncooperative patients (78.3%).

5:3 Recommendation

Professionals should be meet their responsibility to provide continuous nursing training to prevention of pressure ulcers and nurses ability to identify patient risk factor to pressure ulcers and how appropriate intervention ,

increases the awareness of patient and family to important of prevention from pressure ulcers **.**

the hospital need to uses assessment tools and guidelines and applied is important to early dedicate the patient high risk for pressure ulcers and uses the strategies to prevent and decrease the incidence of pressure ulcer.

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بسم الله الرحمن الرحيم

University Of shandi

Faculty of post graduated study

Faculty of Nursing Sciences

Department of Critical Care Nursing

Research Questionnaire for MSC degree study of

Nurses Knowledge and competence Regarding Pressure Ulcer Prevention For Critical Ill Patients 2017

Questionnaire No(1)

1- Age:

a)20 – 29 ☐ b)30 -39☐ c)40 – 50 d)>50 ☐

2-Gender:-

a) Male ☐ b) Female ☐

3-Qualification level:-

a)Diploma ☐ b)Bachelor ☐ c)Master degree ☐

d)Others ☐

4-:- Years of practice

a-1 – 3 years☐ b)4-6 years ☐ c) >6 years ☐

Facts about pressure ulcers

1-Areas of skin compromised as a result of unrelieved pressure ( )

2-Immobility is the most important factor for pressure ulcer Formation in an 80- year old man with fracture hip and bedridden ( )

3-Pale , red , or blue – gray discoloration on the skin is the sign for pressure ulcer development ( )

4-Develop in stages ( )

5-Partial skin loss with blister and abrasion is correct answer for the sign of stage II pressure ulcer ( )

6-Commonly occur around bony prominences ( )

7-Management requires interdisciplinary collaboration ( )

8-Can lead to permanent disabilities like bone destruction ( )

9-Sepsis is one of the complications ( )

10-Contributes to overall hospital costs incurred by patient ( )

Risk factors for developing pressure ulcers

1-Immobility ( )

2-Pressure/compression ( )

3-Friction/shear ( )

4-Hypoxemia ( )

5- exposure of skin to urinary and fecal incontinence. ( )

6- Drugs such as steroids that may affect wound healing. ( )

7-Age greater than 70. Skin may be more fragile than that of a younger ( )

8-Malnutrition ( )

9-Anemia ( )

10-Ischemia ( )

11-Neurologic disease ( )

Strategies used in prevention PU

1-Consider bedfast and chairfast individuals to be at risk for development of pressure injury

Always ( ) sometime ( ) never( )

2-Use a structured risk assessment, such as the Braden Scale, to identify individuals at risk for pressure injury as soon as possible (but within 8 hours after admission

Always ( ) sometime ( ) never( )

3-Inspect all of the skin upon admission as soon as possible (but within 8 hours

Always ( ) sometime ( ) never( )

4-Inspect the skin at least daily for signs of pressure injury, especially nonblanchable erythema

Always ( ) sometime ( ) never( )

5-Assess pressure points, such as the sacrum, coccyx, buttocks, heels, ischium, trochanters, elbows and beneath medical devices.

Always ( ) sometime ( ) never( )

6-Cleanse the skin promptly after episodes of incontinence.

Always ( ) sometime ( ) never( )

7-Use skin moisturizers daily on dry skin.

Always ( ) sometime ( ) never( )

8-Avoid positioning an individual on an area of erythema or pressure injury.

Always ( ) sometime ( ) never( )

9-Use heel offloading devices or polyurethane foam dressings on individuals at high-risk for heel ulcers.

Always ( ) sometime ( ) never( )

10-Providing cushions on areas at risk of pressure ulcers.

Always ( ) sometime ( ) never( )

13-Ensuring patient is well hydrated .

Always ( ) sometime ( ) never( )

14-Turn and reposition all individuals at risk for pressure injury, unless contraindicated due to medical condition or medical treatments

Always ( ) sometime ( ) never( )

15-Use a pressure redistributing chair cushion for individuals sitting in chairs or wheelchairs.

Always ( ) sometime ( ) never( )

16-Teach the individual and family about risk for pressure injury.

Always ( ) sometime ( ) never( )

Barriers to carrying out pressure ulcer prevention

1) Poor access to literature ( )
2) Heavy workload/staff shortage ( )
3) Lack of universal guidelines for prevention ( )
4) Lack of in-service training about pressure ulcers ( )
5) Uncooperative patients ( )
6) Presence of other priorities other than pressure ulcers ( )
7) Shortage of pressure relieving devices ( )
8) Inadequate knowledge about pressure ulcers ( )
9) Lack of multidisciplinary initiative ( )

Check list

NO	Action	yes	no
1	-Consider bedfast and chairfast individuals to be at risk for development of pressure injury - Do you use either the Norton or Braden pressure ulcer risk assessment tool?		
2	skin assess 1- skin integrity in areas of pressure . 2-colour changes or discoloration . 4-variations in heat, firmness and moisture. 5-Observe the skin for pressure damage caused by medical devices. 6-Document all skin assessments, noting details of any pain possibly related to pressure damage. SKIN CARE 1-Cleanse the skin promptly after episodes of incontinence. 2-Use skin moisturizers daily on dry skin. 3-Avoid positioning an individual on an area of erythema or pressure injury.		
3	Assess nutrition includes dietary consult .		
4	Turn and proper position to the patient at least every 2 hours .		
5	Pressure redistributing devices for high risk patient.		
6	Give the patient and family health education about preventive measures of bed ulcer.		