FACTORS CONTRIBUTING TO PRESSURE ULCER AMONG ADMITTED PATIENTS IN MOROTO REGIONAL REFERRAL HOSPITAL IN MOROTO DISTRICT.

A RESEARCH REPORT SUBMITTED TO UGANDA NURSES AND MIDWIVES EXAMINATION BOARD IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DIPLOMA IN NURSING.

AGAN ADAM
NSIN: N16/UO11/DNE/002.
MAY, 2018.
ABSTRACT.

Globally, world stop pressure ulcer day showed nearly 70,000 who were affected by pressure ulcer yearly, between 4% and 6% of the patients in acute setting were more than 5% to 10% of patients in non acute setting had pressure ulcer. The study was focused on factors contributing to pressure ulcer among admitted patients in Moroto Regional Referral hospital in Moroto. This was a cross-sectional study design and quantitative in nature, this was selected due to its rapidity in data collection. Results showed that majority of respondents 19 (47.5%) were of age between 31-40 years old. 23 (57.5%) were female while only 17 (42.5%) were male, most of the respondents 15 (38%) adequately observed malnutrition that would predispose these patients pressure ulcer development. Also 23 (57.5%) of Nurses reported that they had pressure relieving devices in their health care setting and were more likely to demonstrate pressure ulcer prevention practices. Conclusively, the preventive, measures to prevent pressure ulcer as reported by respondents included; Health education of the patient and family, repositioning, assessment, use of reliving devices, proper bladder and urine care, the researcher therefore recommended the following measures; Perioperative administration, monitoring and patients assessment, to improve pressure ulcer among admitted patients.
COPYRIGHT

Any part of this report may be reproduced in any form without the prior permission of the Author, provided that it is not for profit and that due acknowledgement is given.

Any reproduction for profit must be with prior permission from the Author.
DECLARATION

I, Agan Adam, hereby declare that this research report is my original work and has never been submitted for any academic award to any institution of higher learning.

Signature…………………………

Date……………………………

AGAN ADAM.
AUTHORIZATION

Unpublished research report submitted to Kampala International University school of Nursing science and deposited in the library, is open for inspection but is to be used with due regard to the right of the Authors.

The author and KIU grant privilege of loan or purchase of microfilm or photocopy to accredited borrowers provided credit is given in subsequent written as published work.

Author: AGAN ADAM, ………………… Date………………………

Address: adamagan1994@gmail.com

Research Supervisor: THEMBO JOCKAS KALENDE.

Signature………………………… Date…………………………

SR: KABANYORO ANNET.

Dean School of Nursing KIU-Western Campus, P.O.Box 71, Bushenyi, Uganda.

Signature…………………….. Date…………………………
DEDICATION:

I dedicate this research to my father Lowiny Paul, my mother Akol Angelina Namoe, my unite Anyakun Christine and my entire family members for the unwavering support they have accorded to me in my entire education.
ACKNOWLEDGMENT

Great honor and special heartfelt gratitude goes to my research committee and my supervisor (Sir: THEMBO JOCKAS KALENDE) for advice, critical and tireless review of my drafts, you have been a great source of encouragement, support and inspiration through this grueling process. Sincere thanks goes to my brother Tubo John Baptist, my sister Igira Ruth, and my parents Mr. Lowiny Paul and Miss Akol Anjellina Namoe for their support during my studies.

I wish to recognize and acknowledge all Brethrens and friends from Ishaka, Lotukei Paul Lomilo, Modo Martine Eric, Bireza Davide, Kiden Penina and others from Kampala, Iganga, Napak and moroto district for their ceaseless prayer since I started my course really the Lord has been merciful to me because of the combined effort of prayers wherever you are, may his name be praised.

Finally special thanks to KIU for the good, well equipped and well organized accessible library it has been of great value to my research.
# TABLE OF CONTENT

ABSTRACT ......................................................................................................................... II  
COPYRIGHT ..................................................................................................................... III  
DECLARATION ................................................................................................................ IV  
AUTHORIZATION ........................................................................................................... V  
DEDICATION: ................................................................................................................ VI  
LIST OF TABLES ........................................................................................................... XI  
LIST OF FIGURES ......................................................................................................... XII  
LIST OF ACRONYMS AND ABBREVIATIONS. ......................................................... XIII  
DEFINITION OF TERMS. .............................................................................................. XIV  

CHAPTER ONE ............................................................................................................... 1  
1.0 INTRODUCTION. ....................................................................................................... 1  
1.1 BACKGROUND ....................................................................................................... 1  
1.2 PROBLEM STATEMENT. ......................................................................................... 4  
1.3 PURPOSE OF THE STUDY. .................................................................................. 5  
1.4 SPECIFIC OBJECTIVES. ....................................................................................... 5  
1.5 RESEARCH QUESTIONS ......................................................................................... 5  

CHAPTER TWO: LITERATURE REVIEW ......................................................................... 8  
2.0 INTRODUCTION. ....................................................................................................... 8  
2.1 PATIENT RELATED FACTORS TO PRESSURE ULCER. ...................................... 8  

CHAPTER THREE: METHODOLOGY ............................................................................ 13  
3.1 INTRODUCTION. ..................................................................................................... 13  
3.2 STUDY DESIGN AND RATIONALE. ...................................................................... 13
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3</td>
<td>STUDY SETTING AND RATIONALE</td>
<td>13</td>
</tr>
<tr>
<td>3.4</td>
<td>STUDY POPULATION</td>
<td>14</td>
</tr>
<tr>
<td>3.4.1</td>
<td>SAMPLE SIZE DETERMINATION</td>
<td>14</td>
</tr>
<tr>
<td>3.4.2</td>
<td>SAMPLING PROCEDURE</td>
<td>15</td>
</tr>
<tr>
<td>3.4.3</td>
<td>SELECTION CRITERIA</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>INCLUSION CRITERIA</td>
<td>15</td>
</tr>
<tr>
<td>3.5</td>
<td>STUDY VARIABLES</td>
<td>16</td>
</tr>
<tr>
<td>3.5.1</td>
<td>DEPENDENT VARIABLES</td>
<td>16</td>
</tr>
<tr>
<td>3.5.2</td>
<td>INDEPENDENT VARIABLE</td>
<td>16</td>
</tr>
<tr>
<td>3.6</td>
<td>RESEARCH INSTRUMENTS</td>
<td>16</td>
</tr>
<tr>
<td>3.7</td>
<td>DATA COLLECTION PROCEDURE</td>
<td>16</td>
</tr>
<tr>
<td>3.7.1</td>
<td>DATA MANAGEMENT</td>
<td>17</td>
</tr>
<tr>
<td>3.7.2</td>
<td>DATA ANALYSIS AND PRESENTATION</td>
<td>17</td>
</tr>
<tr>
<td>3.7.3</td>
<td>QUALITY CONTROL TECHNIQUES</td>
<td>18</td>
</tr>
<tr>
<td>3.8</td>
<td>ETHICAL CONSIDERATIONS</td>
<td>18</td>
</tr>
<tr>
<td>3.9</td>
<td>ANTICIPATED STUDY LIMITATIONS</td>
<td>18</td>
</tr>
<tr>
<td>3.10</td>
<td>DISSEMINATION OF RESULTS</td>
<td>19</td>
</tr>
<tr>
<td>4.1</td>
<td>SOCIO-DEMOGRAPHICS OF THE RESPONDENTS</td>
<td>20</td>
</tr>
<tr>
<td>4.2</td>
<td>THE PATIENT RELATED FACTORS TO PRESSURE ULCER IN MOROTO REGIONAL REFERRAL HOSPITAL IN MOROTO DISTRICT</td>
<td>23</td>
</tr>
<tr>
<td>4.3</td>
<td>HEALTH RELATED FACTORS RESPONSE TO PRESSURE ULCER</td>
<td>27</td>
</tr>
</tbody>
</table>
4.4 THE PREVENTIVE MEASURES OF PRESSURE SORES IN MOROTO REGIONAL REFERRAL HOSPITAL IN MOROTO DISTRICT ...................... 29

CHAPTER FIVE: .................................................................................................................. 36

DISCUSSION, CONCLUSION AND RECOMMENDATIONS .............................................. 36

5.0 INTRODUCTION ............................................................................................................. 36

5.1 DISCUSSION .................................................................................................................. 36

5.2 CONCLUSION ............................................................................................................... 41

5.3 RECOMMENDATIONS .................................................................................................. 43

CONSENT FORM ............................................................................................................... 49

QUESTIONNAIRES .............................................................................................................. 51

APPENDIX III: LETTER OF APPROVAL ........................................................................ 59

APPENDIX IV: THE MAP OF UGANDA SHOWING MOROTO DISTRICT ERROR! BOOKMARK NOT DEFINED.

APPENDIX V: MAP OF MOROTO SHOWING MOROTO REGIONAL REFERALHOSPITAL ERROR! BOOKMARK NOT DEFINED.
LIST OF TABLES

Table 1: Socio-demographics of the respondents........................................17
Table 2: Responses on what the respondents know about pressure ulcer ........20
Table 3: Response on whether the respondents associate pre-existing patient condition to cause pressure ulcer...............................................................20
Table 4: Respondent responses of the number of staffs they had per duty ......21
Table 5: Respondent responses on whether they had encountered any problem during prevention .................................................................23
Table 6: The measures to prevent pressure ulcer as given by respondents ......27
LIST OF FIGURES

Figure 1. Response on what respondents know about pressure ulcer............19

Figure 2: Respondents’ responses on examples of diseases that would lead to pressure ulcer........................................................................................................21

Figure 3: The pie chart showing responses whether the Nurses had pressure ulcer relieving devices in care settings .................................................................22

Figure 4: The bar graph showing responses whether they had encountered any problem during prevention......................................................................................24

Figure 5: The bar graph showing responses of category of people involved in pressure ulcer prevention in the ward.................................................................25

Figure 6: A Pie chart showing responses on whether Nurses turned pressure ulcer patient in the ward on time interval.........................................................25

Figure 7: The pie chart showing the responses whether the nurses assessed patient with pressure ulcer.................................................................26

Figure 8: The pie chart showing responses on whether Nurses had read or attended any training about pressure ulcer.........................................................27

Figure 9: The bar graph showing responses whether Nurses used relieving devices to prevent pressure ulcer .........................................................28
LIST OF ACRONYMS AND ABBREVIATIONS.

AHCRQ : Agency for health care research quality.

BMI : Body mass index.

CME : Continuous medical education.

EPUAP : European pressure ulcer advisory panel

HAPU : Hospital acquired pressure ulcer.

ICU : Intensive care unit.

IHI : Institute of health care improvement.

IPUPS : International pressure ulcer prevalence survey.

MDLG : Moroto district local government.

MOH : Ministry of health.

MRRH : Moroto regional referral hospital.

NPSG : National patient safety goal.

NPUAP : National pressure ulcer advisory panel.

PrU : Pressure ulcer.

SDTI : Suspected deep tissue Injury.

UBOS : Uganda bureau of statistic.
### DEFINITION OF TERMS.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A nurse</td>
<td>A qualified health personal authorized/licensed to provide health care services</td>
</tr>
<tr>
<td>Activity</td>
<td>A degree of the physical activity.</td>
</tr>
<tr>
<td>Immobility</td>
<td>Inability to change and control body position.</td>
</tr>
<tr>
<td>Moisture</td>
<td>Degree of skin exposure to moisture/ any wet surface in the skin.</td>
</tr>
<tr>
<td>Morbidity</td>
<td>A disease state.</td>
</tr>
<tr>
<td>Mortality</td>
<td>A measure of the number of death in a given population.</td>
</tr>
<tr>
<td>Nursing</td>
<td>Art of science with the aim of relieving suffering.</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Usual food intake pattern in appropriate way.</td>
</tr>
<tr>
<td>Patient</td>
<td>A person hospitalized for health care services.</td>
</tr>
<tr>
<td>Pressure Ulcer</td>
<td>This is an open pressure sore on the body where the blood supply has been interfered with and the skin gives away.</td>
</tr>
<tr>
<td>Pressure</td>
<td>A friction force between two surfaces.</td>
</tr>
<tr>
<td>Sensory</td>
<td>Ability to respond to stimulus.</td>
</tr>
</tbody>
</table>
CHAPTER ONE.

1.0 Introduction.

This chapter gives an insight of introduction, problem statement, purpose of study, specific objectives research questions and justification of the study. This study is aimed at finding the factors that contributes to pressure ulcer among patients in Moroto regional referral Hospital.

1.1 Background

Pressure ulcer is defined by the National, Pressure Ulcer Advisory Panel NPUAP and European Pressure Ulcer Advisory Panel EPUAP, (2012) as “localized injury to the skin or underlying tissue usually over a bony prominence as a result of pressure, or pressure in combination with shear and/or friction.

Worldwide, pressure ulcer is one of the five most common harm to patients” People most at risk of pressure ulcers are those with a medical and sever surgical condition that limits their ability to change positions, requires them to use a wheelchair, or confines them to a bed for a long time ,PrU is achief complication of prolonged hospitalization specifically in situation of poor nutrition, increased moisture on the skin ,incontinence, prolonged pressure, compromised sensory stimuli, (NPUAP and EPUAP, 2014). An average of 60,000 people die worldwide due to pressure ulcer related causes, (C.K.Sen, G.M and G.M. Gordillo et al, 2009). The prevalence of
Pressure ulcer in European Hospitals ranges from 1% to 11% in medical wards, 4.7% to 66% in surgical wards (R. Chou, T. Dana and C. Bougatsos *et al.,* 2013).

According to (EPAUP and NPUAP 2009), PrU had created a significant burden in the health care system, up to 49% of critically ill patients developed pressure injuries similarly, analysis of published papers revealed variations in pressure ulcer prevalence in intensive care setting ranging from 4% in Denmark to 49%, in Germany incidence is from 38% to 124% according to (Shahin ES, *et al* 2008).

Pressure ulcer development was an indicator for quality of nursing care, questions and concerns about situations in which they are unavoidable remain M.M Baharesfani *et al.,* (2012), pressure ulcers can be prevented, patients at risk should have a management plan to prevent development of pressure ulcer, optimize healing, and prevent complications of pressure ulcer (L. Bell American Association critical care Nurses 2008). Pressure ulcer increased the cost of Hospitalizations, patient morbidity and mortality, and plays the significant role in the spread of patient’s infections in the clinical area (B. Holm *et al.,* 2010). Presence or absence of pressure ulcer has been regarded as performance measure of quality nursing care over all patients (Nierman *et al.,* 2010).

In sub-Saharan Africa, a study in Bahir Dar (Northwest Ethiopia) revealed the prevalence of pressure ulcer which was 16.8%; this emphasized the need to enhance the knowledge and attitude of nurses regarding pressure ulcer prevention practice (H. Gedamu, M. Hailu and A. Amon Journal of wound care). The attitude of nurses
towards pressure ulcer prevention refers to their value related to risk assessment, maintaining healthy skin, management of mechanical loads, and education for patient and family (D.Berlowitz 2014). International pressure ulcer prevalence Survey (IPUPS, Van Gilder, Am lung, Harrison and Meyer, 2008 and 2009) revealed prevalence of PrU in ICU has 8.8% to 12.1% respectively representing 8,000 to 11,000 patients annually. Lack of knowledge is an apparent barrier for using the guidelines in clinical practice (Alejo et al., 2012). Increased knowledge about pressure ulcer prevention among nurses can not only improves the practice of pressure ulcer care but also reduces hospital stay [Khawaldehh et al., 2014].

Kenya premier Referral Hospital in East Africa had reported prevalence of PrU which was 4.2% annually while National spinal injury hospital had 68%, Institute of health care improvement (IHI) estimated the cost of treating PrU as high $ 70,000 per pressure ulcer IHI, (2008), Hospital Acquired Pressure Ulcers (HAPU) are a national concern due to patient’s morbidity, treatment cost, and embarrassment but stage iii and stage iv are preventable (S. Zaratkiewicz, 2010).

In Uganda, little has been known or no evidence is known about the best capacity of Nurses in regard to best practices with pressure ulcer care and Nurses are at the forefront of prevention (Ivan Mwebaza et al, 2014) and barriers to practice and care planning were inadequate time, inconsistent documentation, lack of staff, lack of equipment, and lack of pressure ulcer related knowledge, training and prevention guidelines care are still poor (D.Berlowitz Clinical guideline November, 2013).
Nurses are the most cited barriers to carry out appropriate pressure ulcer prevention and management (Mwebaza Ivan and Katende .G, 2014). Several studies which showed that shortage of supplies for pressure ulcer prevention and human resources were the cornerstone for pressure development among patients hospitalized (Killman.U, et al., 2009). In North Eastern Uganda, particularly Moroto district in Karamoja region nothing has been published by the researchers and authors about the incidence of pressure ulcer since there is no evidence for this.

1.2 Problem statement.

Pressure ulcers and the risk factors associated with their development have been studied almost 50 years ago yet the temporal qualitative and quantitative relationship between pressure ulcer and pressure ulcer risk factors is still poorly understood, and globally, according to M.Durkin (2015), the world stop pressure ulcer day in 2014 showed nearly 70,000 who were affected by PrU each year, In the year, 2012 January to December 2013 between 4% and 6% of the patients in acute setting are more than 5% to 10% of patients in non acute setting had pressure ulcer. A study in North East Ethiopia revealed the prevalence of pressure ulcer as 16.8% this emphasized the need of prevention practices for PrU among nurses. For every 1,000,000 patients who develop PrU, 65,000 magnitudes of 6.5% discharged from complications (AHRQ and NPSG 2008). A study done by IHI in Kenya 2014 had stated that 600 people die as a result of PrU complication with high prevalence of 10% in surgical ward and 4% in medical ward (N.Boodhram et al, 2011). In Uganda, little has been known about the
incidence of pressure ulcer since it’s not published by many Authors and no evidence of research to support the incidence of pressure ulcer (Mwebaza Ivan, 2014). Moroto regional referral hospital registered a magnitude of 20% of 1200 patients hospitalized according to HMIS, (2010). There would be high morbidity and mortality among patients predisposed to pressure ulcer if above interventions were not implemented. Therefore this study was to assess the factors contributing to pressure ulcer among admitted patients in Moroto regional referral hospital in Moroto district.

1.3 Purpose of the study.

To determine the factors contributing to pressure ulcer among admitted patients in Moroto regional referral hospital in Moroto district and the preventive measures.

1.4. Specific Objectives.

i. To assess the patient related factors to pressure ulcer in Moroto regional referral hospital in Moroto district.

ii. To determine the health related factors to pressure ulcer.

iii. To identify the preventive measures of pressure sores in Moroto regional referral hospital in Moroto district.

1.5. Research questions.

i. What are the patients factors related to pressure ulcer among admitted patients in Moroto regional referral hospital?

ii. What could be the health factors related to pressure ulcer among admitted patients?
iii. What could be the preventive measures to pressure sores among admitted patients in Moroto regional referral hospital?

1.6 Justification of the study

Since pressure is common among debilitating patients and a major burden of hospitalization worldwide with nurses being at the forefront of prevention, Ivan Mwebaza et al. (2014). This study intends to find out the factors contributing to pressure ulcer among admitted patients

Therefore the findings of this study may be beneficial to:

1.6.1 Nursing Practice, to become active advocates of pressure ulcer campaigns through Health education about pressure ulcer and good nutritional habits in the health facilities.

1.6.2 Nursing education, the study findings will be incorporated with nursing curriculum to enhance teaching and learning of student nurses about pressure ulcer and factors related to its prevalence among the patients in hospitals.

1.6.3 Nursing research, the study findings will be used as a reference by other researchers with similar interests in assessing factors contributing to pressure ulcer among the patients.

1.6.4 Nursing administration /Management, the study findings will help the nurse’s administrators to identify areas that need improvement in assessing and preventing pressure ulcer among patients hospitalized.
1.6.5 Moroto regional referral hospital and surrounding community, The study findings may help Moroto regional referral hospital and the surrounding community to identify risk factors contributing to pressure ulcer among patients hospitalized, preventive and management measures to pressure ulcer and therefore act accordingly for a healthy living among the patients hospitalized.
CHAPTER TWO: LITERATURE REVIEW.

2.0 Introduction.

The purpose of this literature review is to gain an insight into the information available on epidemiological aspects,

2.1 Patient related factors to pressure ulcer.

A study conducted by Lewis P et al., (2013) reveals that pressure ulcer development is a complex phenomenon that is enhanced by a number of factors categorized into intrinsic like age, nutrition, habits smoking, BMI, skin temperature, emotional stress, and extrinsic factors, like moisture, friction a total of 28 factors were intrinsic as the main risk factors were, advanced age, poor nutritional status, critical ill patients, pre-existing diseases CVD, length of stay in ICU. Literature shows that extrinsic factors refers to the nature of environment in which medical and nursing care is received that may contribute to pressure ulcer, example administration of drugs, setting environment, repositioning.

Weight may also be one of the contributory factors to pressure ulcer. Studies have found that apart from elderly, pressure ulcer is most prevalent in underweight patients with prevalence of 25.3% than in normal weight or obese patients Macfarlane et al., (2009). similarly a study done by Nonnemacher et al., (2008) stated that nutritional status is a risk factor to pressure ulcer development among 34,238 patients,60% gets hospital acquired pressure ulcer due insufficient nutritional status but temporary food intake restriction are not associated with pressure ulcer especially in surgical procedures.

Gender difference, a study conducted by Sayar et al., (2008) cited findings in the published literatures in the incidence of pressure ulcer in gender difference; male gender was a statistical significant risk factor of 63.9% than the female due to high body metabolic demands compared to the female gender. Tissue tolerance, according to (Benoit et al, 2012), tissue tolerance serves as moderating factor between duration and intensity of pressure ulcer and pressure ulcer outcome which is implicated in
critical ill patients than acute patients in the hospitals, Similarly a study conducted by (Roy et al., 2009), revealed human skin wound a major snowballing to the public health and the economy.

Metabolic factors, according to studies done by Nijs et al., (2008), found that factors that contributed to pressure ulcer were metabolic factors accelerated with dialysis procedures, vasopressors use and elevated body temperature were significantly associated with pressure ulcer when assessed using brazen scale within the interval of 24 hours and 48 hours and this reduces Body mass index (BMI).

Habits (Nicotine Use), a systematic review published on risk factors associated with pressure ulcer occurrence shows findings that smoking is among the three major risk factors since it alters perfusion and predisposes to cardiovascular diseases Coleman S, et al., (2013). Pre-existing conditions like cardiovascular diseases (Nonnemacher al 2008) also reported similar findings with C.V.Ds’ after amultivariate analysis in their study of 34,238 most of them was associated with C.V.D has a potential risk due to Nicotine Use.

Advancement in age , according to Coyer .F et al., (2013) stated that PrU Development is high in ICU despite critically ill patients having more risk factors, age above 60 years also accelerates the development of pressure ulcer and have an influence in the level and extent of tissue necrosis due immobility and the effects of sedative drugs.

A systematic review published on the risk factors associated with pressure ulcer development in adults hospitalized patients findings identified hat immobility/activity, perfusion alteration, poor circulation, blood pressure changes, edema were among the first prominent factors, this review concluded that PrU occurrence cannot be explained by a single factor, a review reported a total of 54 studies of which 13 studies conducted in ICU Environment and there was no analysis
reported on specific sub population such as critically ill patients (Gireck. N and Nelson. A, et al, 2013).

2.2 Health related factors to pressure ulcer.

Environmental factors: According to Cheney, et al., (2008), urged that Environmental Factors or external factors such compression, friction, shearing forces on the skin and underlying tissue that affect their ability to withstand the external forces, treatment and setting influence on patient outcome can be categorized as Nurses characteristics, such as educational level, Attitudes, Age and Administratively Mediated Factors Such As Nurses’, Staff Level, Nurses Skills Mix, Hospital Structural Characteristics, Patient Care Environments’ and Equipments Used For Relieving Pressure Ulcer. (Ariken et al., 2008). A study conducted by Castle and Engberg (2009), showed that upper limb restraints is commonly used in patients who are restless, aggressive in both ICU and other departments, restrain inflicts a higher chance of patient acquiring pressure sores due to immobility, shearing and friction forces from the linen which interfere with the skin integrity. According to Sayers et al., (2008), urged that exposing a patient to a moist environment for prolonged period of time especially with reference of urine and feecal incontinence, perspiration will disrupt the texture of the skin leading to pressure ulcer; Nurses are encouraged to assess threats to skin changes.

According to, Garber et al., (2009) report showed that level of education, qualification, field experience were associated with pressure ulcer incidence has most nurses do not know how to identify and stage the pressure ulcer according to the degree of tissue damage, they had inadequate understanding and knowledge about pressure sores this emphasize the need of frequent trainings and continuous medical education (CME) (M. Gushan, 2009).
2.3 Preventive Measures to Pressure Ulcer.

According to EPUAP and NPUAP, (2009) report showed that the prevention of pressure ulcers is an important nursing intervention in every healthcare setting, and each healthcare setting should establish a policy for risk assessment targeting clinical areas. In addition, the recently published Finnish research foundation’s HOTUS guideline also emphasized the importance of social and health care organizations on having operational guidelines regarding assessment of risk for pressure ulcers, including a skin and tissue assessment procedure (HOTUS, 2015).

Studies conducted by J.Hastings et al., (2009) revealed that Education must be used to ensure the required competence of the staff in identification of skin changes like redness or blanching/non-blanching skin, localized heat, swelling, and Patients at risk of pressure ulcers should undergo a comprehensive skin assessment immediately after arriving for treatment or within eight hours at the, latest assessment should be performed during the first home visit, (HOTUS 2015).

Documentation of pressure ulcer care, a Study done by Chamanga E. et al., (2011), findings in this study indicates that documentation provides evidence that the care planning is appropriate and serves as a basis of the patient monitoring, a structured approach should consist of combining the risk assessment scale with a comprehensive skin assessment and clinical judgment, which in turn improves the follow-up of nursing results, improves nursing efficiency and level of knowledge. (HOTUS, 2015)

A study conducted by Dorner et al., (2009) showed that Nutrition is an important part of comprehensive care and the prevention of pressure ulcers. The body needs an adequate intake of calories, protein, fluids, vitamins and minerals to maintain skin integrity and preventing tissue breakdown. Known risk factors for pressure ulcer development are compromised nutritional status such as unintentional weight loss, under nutrition, protein energy malnutrition and dehydration. Other risk factors associated with an increased risk of pressure ulcers are low body mass index (BMI), reduced food intake and impaired ability to eat independently, (Thomas 2009).
Studies done by Dorner et al., (2009) stated that early nutritional screening and assessment is important to identify risks of under nutrition which may results in pressure ulcer development and delayed healing, initial screening should be done by qualified health care professional and then referring for appropriate professionals can be done for further assessment. Mini –Nutritional Assessment (MNA) and the Malnutrition Universal Screening Tool (MUST) are potential screening tools. NICE guidelines in (2014) recommended that nutritional supplements should be offered to adults with pressure ulcer who have a nutritional deficiency, information and advice about how to follow a balanced diet to maintain an adequate nutritional status.

A study done by Agency for Health Care Research And Quality (2009), results showed that on time prevention of PrU almost all patients hospitalized in both acute phase and in non acute settings can be prevented from hospital acquired pressure ulcer (HAPU) using many modalities of preventive measures.

A study conducted by (Debaillie et al, 2008) showed prevention should be done and its one of the health care priorities of nurses to use pressure relieving devices like special air mattresses, and air rings. Wound Assessment, this is the 1st step it involves general body examination with special attention to PrU areas, the IPUPS reveled use of Braden scale as accurate with a pressure ulcer risk of 52% in 2005, similarly C.Bougatsos et al., (2013) and IPUPIS’ Stated the use of special commodities to support the patient surfaces and plan of turning/ repositioning for patient predisposed to PrU use of a haverlift, and chairs.
CHAPTER THREE: 

METHODOLOGY

3.1 Introduction.

This chapter presents the research methodology which is the detailed procedure of the study the chapter comprises of the following sections; study setting, study population, selection criteria, sample size determination, sampling technique, study variables, data collection technique and instruments, data management and data analysis, quality control technique, ethical consideration of the study, anticipated limitations and dissemination of results.

3.2 Study Design and Rationale.

This study was conducted through a cross-sectional study design quantitative in nature. This study design was selected because it aids in rapid data collection and allows a snap-short interaction with a small group of respondents at one point in time thus allows conclusion across a wide population to be drawn.

The research selected the methods because they aided rapid collection of data at a single point in time.

3.3 Study Setting and Rationale.

The study was carried out at Moroto regional referral hospital, the hospital was constructed in 1940s’ and its located in Moroto municipality in Karamoja sub –region of north eastern Uganda, and its 460 kilometers from Kampala city, the hospital has catchment area of seven districts that’s Abim, Kaabong, Kotido, Napak, Moroto,
Nakapiripirit, Amudat and it’s the nearest hospital around the area were people have access to various health care services at different departments. It was elevated to moroto regional referral hospital on 1s /July /2009 with the help of world bank loan ,hospital catchment population is estimated at about 1.3 million according to 2012—2013 UBOS projection . Currently Moroto regional referral hospital supervises the sub –regions, 112 health facilities including two districts general hospital of Kaabong and Abim and four health center IVs, 30 health centre IIIs, and 75 health center IIs (according to ministry of health Uganda).

The main languages spoken from these districts are Ngakarimojong, Kiswahili and English, the economic activities carried are mainly cattle rearing, and trade which was boosted by good tarmac roads, neighbouring boarders on the, east Kenya country, north Kotido district, west Napak district and south by Nakapiripirit district.

3.4 Study Population.

The target Population consisted of qualified nurses working in the hospital.

3.4.1 Sample Size Determination.

The sample sizes for the respondents at Moroto Referral Hospital were calculated using Sliven (1962) formula with precision of +/-5% at confidence level of 95%. It is given by the expression: \( N = \frac{N}{1+N(E)^2} \)

Where \( N = \text{Number of respondents} \)

\( N = \text{Target Population}, \ N = 45 \) (Estimated number of health workers)
E = Fixed Error, $E = 0.05$ Therefore, $N = \frac{45}{1 + 45(0.05)^2}$

$N = 40$ Respondents, therefore 40 respondents were recruited for the study since it’s convenient and saves time.

3.4.2 Sampling Procedure.

Purposive sampling method which is a non-probability sampling technique where participants were selected basing on their characteristics and the objectives of the study were used to recruit 40 respondents for the study. Purposive sampling method is cheap, easy and allows the researcher to reach the targeted size sample quickly.

3.4.3 Selection Criteria.

Inclusion Criteria.

The study included all nurses working in Moroto regional referral hospital who were willing to participate and available during the study included in the study, because they have consented and willing to participate.

Exclusion Criteria.

All the nurses who were present but have not consented to the questionnaires, those on annual leave, sick staffs and absent during data collection period in the selected departments in moroto regional referral hospital will be excluded in the study, since they are not interested and some are not available during the study.
3.5 Study Variables

3.5.1 Dependent Variables.

Pressure ulcer.

3.5.2 Independent Variable

Patient related factors to pressure ulcer, the actual problem of the patient

Health Related factors to pressure ulcer this could be the nature of environment where the patient care is provided.

Preventive measures to pressure sores.

3.6 Research Instruments.

Questionnaires were used as a tool for gathering information. The questionnaire were divided into three sections; the first section were used to collect data about the socio demographic characteristics second patient related factors to pressure ulcers, the third section were used to determine the health related factors to pressure ulcers; the fourth section was used to identify the preventive measures to pressure ulcers.

3.7 Data Collection Procedure.

The researcher trained a research assistant and introduces himself to the prospective participants and read to the individual participants the consent form that details the title and purpose of the study as well as the rights of the participants. Whenever a participant agrees to be interviewed, he or she was asked to provide written consent
by signing or thumb printing, if the refuse to participate, the interview did not proceed.

After obtaining the written consent, the researcher entered the questionnaire serial number and date of interview and proceeds from the first up to the last question using the language understood by the participant. The researcher entered responses given by the participants by ticking or circling the appropriate response and entering the same number into the coding box. This was done to ensure data quality as the response number ticked is supposed to be the same as the one entered into the coding box. If the numbers are different, it was not be a valid response. The researcher reviewed the questionnaire on a daily basis to ensure they are being completed correctly and any errors corrected to avoid being repeated. The process of data collection continued until every effort to contact every participant in the sample has been exhausted. All completed questionnaires were kept safe by the researcher until the time of analysis.

3.7.1 Data Management.
Completed questionnaires were checked for accuracy and completeness on a daily basis after data collection at the end of the day. This was followed by coding and entry of the data into the statistical package for analysis.

3.7.2 Data Analysis and Presentation.
Data was analyzed by descriptive statistics Microsoft word and excel software calculator and was presented in frequency tables, pie charts and bar graphs.
3.7.3 Quality Control Techniques.

For reliability and validity, questionnaires were presented with a tenth of the sample size outside the duty area. The questionnaires were revised and content adjustments made accordingly. After data collection, questionnaires were checked daily for completeness, clarity, consistency and uniformity by the researcher.

3.8 Ethical Considerations.

A letter of introduction was obtained from Kampala international university western campus school of nursing sciences to permit the researcher to carry out the research. Permission was obtained from Moroto regional referral hospital. All participating respondents were selected on daily basis of informed consent.

The study was on voluntary basis and the information was kept private and confidential. Participants ‘anonymity was kept .The study was conducted while upholding the professional code of conduct in a manner that was not to compromise the scientific inclinations of the research.

3.9 Anticipated Study Limitations.

It may be difficult to obtain audience from the nurses, as they may be busy delivering health care services to the patients in due of finishing their respective duties. This however was overcome by establishing a good rapport and administering a questionnaire as quickly as possible.
There was an anticipated problem of long distance traveled due to rain season. This was overcome by good scheduling and also early reporting to the hospital to interview health workers who are present before rain beings.

3.10 Dissemination of Results.

A copy of results was disseminated to Moroto regional referral hospital office for appropriate interventions, Kampala international university western campus library and Uganda nurses and midwives examination board for marking.
CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

4.0 This chapter deals with analysis and presentation of data collected in the form of graphs, charts and frequency tables. Out of 40 respondents interviewed, 40 returned completely filled questionnaires giving a response rate of 100%

4.1 Socio-demographics characteristics of the respondents

Table 1: Socio-demographics of the respondents

<table>
<thead>
<tr>
<th>Age of respondents in years</th>
<th>Frequency(n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-30</td>
<td>14</td>
<td>35.0</td>
</tr>
<tr>
<td>31-40</td>
<td>19</td>
<td>47.5</td>
</tr>
<tr>
<td>41-50</td>
<td>4</td>
<td>10.0</td>
</tr>
<tr>
<td>&gt;51</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex of respondents</th>
<th>Frequency(n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>17</td>
<td>42.5</td>
</tr>
<tr>
<td>Female</td>
<td>23</td>
<td>57.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religious affiliation of respondents</th>
<th>Frequency(n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christians</td>
<td>29</td>
<td>72.5</td>
</tr>
<tr>
<td>Moslems</td>
<td>8</td>
<td>20.0</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td>Occupation of the respondents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Part-timing</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td>Employed but on probation</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>Fully employed</td>
<td>25</td>
<td>62.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marital status of respondents</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Married</td>
<td>28</td>
<td>70</td>
</tr>
<tr>
<td>Divorced</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of Education of the respondents</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>7</td>
<td>17.5</td>
</tr>
<tr>
<td>Secondary</td>
<td>14</td>
<td>35</td>
</tr>
<tr>
<td>Tertiary/university</td>
<td>19</td>
<td>47.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of Education of the respondents</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Assistant</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Certificate Nurse</td>
<td>7</td>
<td>17.5</td>
</tr>
<tr>
<td>Diploma Nurse</td>
<td>15</td>
<td>37.5</td>
</tr>
<tr>
<td>Bachelor Nurse</td>
<td>9</td>
<td>22.5</td>
</tr>
</tbody>
</table>
Table 1 shows almost half 19 (47.5%) of the respondents were of age range 31-40 years while minority 3 (7.5%) of the respondents were 51 and above years respectively. Majority 23 (57.5%) of the respondents were females while only 17 (42.5%) were males. A big percentage 28 (70%) were married, 8 (20%) were single while less percentage 4 (10%) of the respondents had divorced. Most of the respondents almost 19 (47.5%) attained the tertiary level of education while only 14 (35.0%) attained secondary level of education. Majority of the respondents 29 (72.5%) were Christians, 8 (20.0%) were Muslim and 3 (7.5%) had other beliefs. Most of the respondents 25 (62.5%) were fully employed in the system, 10 (25.0%) were employed but on probation and only 5 (12.5%) were part-time. Most of the respondents with statistically significant rate of 15 (37.5%) had attained diploma level of qualification while nursing assistant showed a less adequate rate of 4 (10%). Almost more than half of respondents 21 (52.5%) had worked for more than 3 years in the
field experience and less than half of the respondents 3 (7.5%) had only worked for a period of six months in the field of work.

4.2 The patient related factors to pressure ulcer in Moroto regional referral hospital in Moroto district

Figure 1 shows response whether they know about pressure ulcer.

Figure 1 above shows almost 24 (60%) of the respondents knew about pressure ulcer and attributed it to prolonged pressure among patients affected while 2 (5%) would associated it to social habits of the patient these could be due to their general life style
Table 2: Respondents responses on the category of patients at risk of pressure ulcer

(n=40)

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency(n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>An immobile patient</td>
<td>19</td>
<td>47.5</td>
</tr>
<tr>
<td>Patient with low weight prolonged in bed for 2 hours</td>
<td>14</td>
<td>35</td>
</tr>
<tr>
<td>Patient with an older age</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Low weight</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 2 above showed appositive indicator of nearly half of the respondents 19 (47.5%) mentioned immobility as a major category of patients at risk of pressure ulcer while BMI showed the lowest statistical risk of only 2 (5%) of patient category.
Table 3: Response on whether the respondents associated pre-existing patient condition to cause pressure ulcer

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>True</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>False</td>
<td>26</td>
<td>65</td>
</tr>
<tr>
<td>Not sure</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 3 above shows, almost more than half of the respondents 26 (65%) identified pre-existing conditions of the patient to cause pressure ulcer while only 4 (10%) of the respondents were not sure of any pre-existing patient condition related to pressure ulcer.
Figure 2 shows response on example of diseases that would lead to pressure ulcer

According to figure 2 above, a maximum 15 (38%) of respondents adequately observed malnutrition while a minimum 4 (10%) reported hypertension and stroke. This implies the likelihood that these patients may develop pressure ulcer.
4.3. Health related factors response to pressure ulcer

Table 4: Respondents responses of the number of staffs they had per duty

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency(n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 2</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>≤ 3</td>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td>≤ 4</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td>Others</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4 above showed, half of the respondents 20 (50%) mentioned only 3 staffs were allocated per duty and these could be due to hospital policies in the care settings area while only minority of 4 (12%) were able to identify less than 2 nurses allocated per duty respectively.

(n=40)
Figure 3: shows responses whether the Nurses had pressure ulcer relieving devices in care settings.

Figure 3 above shows, appositive indicator of approximately 23 (57.5%) of the nurses had pressure relieving devices in their health care setting and are more likely to demonstrate pressure ulcer practices whereas less than a half percent of the respondents 7 (17%) were not sure whether they had the devices and are less likely to implement the preventive measures in the care setting.
4.4 The preventive measures of pressure sores in Moroto regional referral hospital in moroto district.

n=40

Figure 4: shows responses whether they had encountered any problem during prevention

Figure 4 above, shows poor documentation variable demonstrated a higher value of 12 (35%), most of the nurses cited it as a major problem during implementation and affects consistency of patients care and less than a half of the respondents 3 (7.5%) reported shortage of equipment has less variable score in these study.

29
Figure 5: showing responses of category of people involved in pressure ulcer prevention in the ward

Figure 5: Showed the greatest observation made by the respondents shows that 25 (62.5%) of the patients attendants’ participated fully in the care of the patients with pressure ulcers, the lowest statistical number of 10 (2.5%) of the nurses would involve themselves in caring patients with pressure ulcer and these could be due to their poor attitude towards the care of patients
Figure 6: showed responses on whether Nurses turned pressure ulcer patient in the ward on time interval

Figure 6 above shows, maximum of 15 (37.5%) of the respondents implemented the use of turning techniques and they turned 4 times strictly in 24 hours and a minimum of only 3 (7.5%) of the respondents turned patients more than 4 times in 24 hours.
Figure 7: showing the responses whether the nurses assessed patient with pressure ulcer

Figure 7 above shows, a total of 17 (42.5%) of the respondents were not sure whether they assessed a patient with pressure ulcer while only 10 (25%) of the respondents mentioned that they had assessed the patients regularly and these could be due to their attitude towards the care of patients.
Figure 8: showed responses on whether Nurses had read or attended any training about pressure ulcer

Figure 8 above shows, nearly more than half of the respondents 24 (60%) mentioned that they were not sure whether they had read or attended any training related to pressure ulcer and only a minimum of 6 (15%) of the respondents had read and attended the pressure ulcer training, these could be associated with inconsistence medical education of the staffs in health facilities.
Table 6: shows the measures to prevent pressure ulcer as given by respondents

$n=40$

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health education of the patient and family</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Repositioning</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>Proper bladder and urine care</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Assessment</td>
<td>7</td>
<td>17.5</td>
</tr>
<tr>
<td>Use of reliving devices</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td>Others</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

According to the table above, the measures to prevent pressure ulcer as given by respondents include; Health education of the patient and family given by 8 (20%), repositioning given by 12 (30%), assessment given by 7 (17.5%), use of reliving devices given by 5 (12.5%), proper bladder and urine care given by 4 (10%) and others given by 4 (10%).
Figure 9: shows responses whether Nurses used relieving devices to prevent pressure ulcer

Figure 9 above showed, most of the respondents almost 19 (47.5%) frequently used air ring as the most convenient device of preventing pressure ulcer mean while only 4 (10%) of the respondents could use special air mattresses during patient care.
CHAPTER FIVE:
DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

The chapter deals with discussion, conclusion, and recommendations of the study results and implications of the study to nursing practice. The discussion relates the study findings with the related studies in the literature reviewed on factors contributing to pressure ulcer among admitted patients.

5.1 Discussion

5.1.1 Socio demographic factors contributing to pressure ulcer.

According to this study, almost half of the respondents 19 (47.5%) were of age range 31-40 years while minority of the respondents were 3 (7.5%) were 51 and above years respectively. Majority of the respondents 23 (57.5%) were females while only 17 (42.5%) were males this research found that middle age group of 31-40 years were at a higher risk of developing pressure ulcer this could be due to imbalance nutrition and it’s not in line with a study done by Macfarlane et al., (2009), findings in this study showed that pressure ulcer is common in elderly aged people above 50 years and are prone of developing hospital acquired pressure ulcer due to insufficient nutritional status among 34,238 patients admitted, 60% develop HAPU due to temporary food intake. A big percentage 80% were married, 20% were single and none of the respondents had either separated or cohabited, according to this research, most of the respondents almost 19 (47.5%) attained the tertiary level of education
while only 7 (17.5%) attained primary level of education and they could have knowledge gap of pressure ulcer, the above findings are in line with a study done by Garber et al., (2009) report shows that level of education, experience were associated with pressure ulcer incidence has most nurses do not know how to identify and stage the pressure ulcer according to the degree of tissue damage, they had inadequate understanding and knowledge about pressure sores this emphasize the need of frequent trainings and continuous medical education (CME), according to this research findings showed that, majority of the respondents 29 (72.5%) were Christians, 8 (20.0%) were Muslim and 3 (7.5%) had other beliefs’ and there was no any close association between the religious dominion and pressure ulcer pointed by this study and various literatures did not high light on these. most of the respondents 25 (62.5%) were fully employed in the system, 10 (25.0%) were employed but on probation and only 5 (12.5%) were part-timing. most of the respondents with statistically significant rate of 15 (37.5%) had attained diploma level of qualification while nursing assistant showed a less adequate rate of 4 (10%),in addition to that almost more than half of respondents 21 (52.5%) had worked for more than 3 years in the field experience and less than half of the respondents 3 (7.5%) had only worked for a period of six month in the field of work and it’s in agreement with a study done by Garber et al., (2009) this report showed that level of education, qualification, field experience were associated with pressure ulcer incidence has most nurses do not know how to identify and stage the pressure ulcer according to the degree of tissue
damage, they had inadequate understanding and knowledge about pressure sores this emphasize the need of frequent trainings and continuous medical education (CME).

5.1.2. Patient related factors contributing to pressure ulcer

Examples of diseases that would lead to pressure ulcer include; hypertension given by 4 (10%), diabetes given by 2 (4%), stroke given by (30%) and malnutrition given by 38%. A maximum of (37.5%) of respondents adequately observed malnutrition and these patients were approximately more likely to develop pressure ulcer. More to that male gender demonstrated a statistical significant association of almost half of the respondents 20 (25%) strongly agreed that pressure ulcer was common in male, similarly (15%) of the respondents strongly disagreed on these variation, a total of (27.5%) respondents observed and agreed pressure ulcer as common in female than in men and (7.5%) did not strongly associated pressure ulcer has common in female, to supplement on the above, a study conducted by (Lewis P et al., 2013) reveals that pressure ulcer development is a complex phenomenon that is enhanced by a number of factors categorized into intrinsic like age, nutrition, habits example smoking, BMI, skin temperature, emotional stress, and extrinsic factors, like moisture, friction a total of 28 factors were intrinsic as the main risk factors example, advanced age, poor nutritional status, critical ill patients, pre-existing diseases CVD, length of stay in ICU.
5.1.3. Health related factors contributing to pressure ulcer

Literature shows that extrinsic/environmental factors, refers to the characteristics /Nature of environment in which medical and nursing care is received that may contribute to pressure ulcer, example administration of drugs, setting environment, repositioning (Lewis P et al., 2013), the researcher found out that half of the respondents 20 (50%) mentioned only 3 staffs were allocated per duty and these could be due to hospital policies in the care settings area while only minority of 4 (12%) were able to identify less than 2 nurses allocated per duty respectively. Also appositive indicator of approximately 23 (57.5%) of the nurses had pressure relieving devices in their health care setting and are more likely to demonstrate pressure ulcer prevention practices whereas less than a half percent of the respondents 7 (17%) were not sure whether they had the devices and are less likely to implement the preventive measures in the care setting, in agreement with the above, according to, Garber et al., (2009) report showed that level of education, qualification, field experience were associated with pressure ulcer incidence has most nurses do not know how to identify and stage the pressure ulcer according to the degree of tissue damage, they had inadequate understanding and knowledge about pressure sores this emphasize the need of frequent trainings and continuous medical education (CME) (Gush an et al., 2009).

Respondents responses on whether they had encountered any problem during prevention they include; Inadequate time given by 27.5%, nurse patients ratio given by 10%, shortage of equipment given by 7.5% and poor documentation given by
35%. The study also shows poor documentation variable demonstrated a higher value of 12 (35%), most of the nurses cited it as a major problem during implementation and affects consistency of patients care and this is in correlated with a study done by Ivan Mwebaza et al., (2014), he found that nurses are at the forefront and are the most cited barriers of prevention due to inconsistence documentation, lack of staffs and equipments, less than a half of the respondents 3 (7.5%) reported shortage of equipment has less variable score in these study.

**Preventive measures to pressure ulcer.**

Furthermore the greatest observation made by the respondents shows that 25 (62.5%) of the patients attendants’ participated fully in the care of the patients with pressure ulcers, the lowest statistical number of 1 (2.5%) of the nurses would involve themselves in caring patients with pressure ulcer and these could be due to their poor attitude towards the care of patients. More to that the measures to prevent pressure ulcer as given by respondents include; Health education of the patient and family given by 8 (20%), repositioning given by 12 (30%), assessment given by 7 (17.5%), use of reliving devices given by 5 (12.5%), proper bladder and urine care given by 4 (10%) and others given by 4 (10%).

To supplement on the above, studies done by Dorner et al., (2009) stated that early nutrition screening and assessment is important to identify the risk of under nutrition which may result in pressure ulcer development and delayed healing. Initial screening should be done by a qualified healthcare professional and then referrals to the
appropriate professionals can be done for further assessment. Mini-Nutritional Assessment (MNA) and The Malnutrition Universal Screening Tool (MUST) are potential screening tools. NICE guidelines (2014) recommend that nutritional supplements should be offered to adults with a pressure ulcer who have a nutritional deficiency and information and advice about how to follow a balanced diet to maintain an adequate nutritional status. Nutritional supplements, subcutaneous or intravenous fluids should not be used to treat a pressure ulcer in adults, whose nutritional intake is adequate.

5.2 Conclusion

Almost half of the respondents were of age range 31-40 years while minorities of the respondents were 51 and above years respectively. Majority of the respondents were female. Big percentages were married and none of the respondents had either separated or cohabited. Most of the respondents almost attained the tertiary level of education. The majority of the respondents were Christians. Most of the respondents were fully employed in the system; a few were part-timing. Most of the respondents with statistically significant rate had attained diploma level of qualification while nursing assistant showed a less adequate rate. Almost more than half of respondents had worked for more than 3 years in the field experience and less than half of the respondents a few had only worked for a period of six month in the field of work.

Examples of diseases that would lead to pressure ulcer include; hypertension, diabetes, stroke and malnutrition. Most of the respondents adequately observed
malnutrition and these patients were approximately more likely to develop pressure ulcer. More to that male gender demonstrated a statistical significant association of almost half of the respondents strongly agreed that pressure ulcer was common in male, similarly some of the respondents strongly disagreed on these variation, some respondents observed and agreed pressure ulcer as common in female than in men and did not strongly associated pressure ulcer has common in female.

The researcher found out that half of the respondents mentioned only 3 staffs were allocated per duty and these could be due to hospital policies in the care settings area while only minority of were able to identify less than 2 nurses allocated per duty respectively. Also appositive indicators showed that some nurses had pressure relieving devices in their health care setting and are more likely to demonstrate pressure ulcer prevention practices whereas less than a half percent of the respondents were not sure whether they had the devices and are less likely to implement the preventive measures in the care setting.

Respondent’s responses on whether they had encountered any problem during prevention they include; inadequate time, nurse patient’s ratio, nurse patient’s ratio, shortage of equipment and poor documentation. The study also shows poor documentation variable demonstrated a higher value, most of the nurses cited it as a major problem during implementation and affects consistency of patients care and less than a half of the respondents reported shortage of equipment has less variable score in these study. Furthermore the greatest observation made by the respondents
showed that of the patients attendants’ participated fully in the care of the patients with pressure ulcers, the lowest statistical number of the nurses would involve themselves in caring patients with pressure ulcer and these could be due to their poor attitude towards the care of patients. More to that the measures to prevent pressure ulcer as given by respondents include; Health education of the patient and family, repositioning, assessment, use of reliving devices, proper bladder and urine care and others measures.

5.3 Recommendations:

The study put forward the following recommendations as the measures to improve pressure ulcer among admitted patients they include;

**MOH:**

A smarter health system with the capacity to provide pressure ulcer patients with the necessary continuum of quality care to avert progression of pressure ulcer. Health information that empowers communities, health facilities to change their perceptions about obesity/ BMI and high risk diets and to link healthy choices now to future health again. Health educators should plan with patients and clients on how to overcome barriers to life style change especially in ways familiar to those predominantly at health facilities.

Purchase of devices that may be used to relief pressure ulcer predisposed patients at health facility. Provide training and guiding manuals on pressure ulcer to health personnel and community members.
Hospital:

Nurses therefore need to be aware that risk factors to pressure ulcer are high. Therefore, as they conduct their routine activities in the hospitals they should identify those at risk and recommend them for regular screening. In addition health talks about pressure ulcer to increase awareness can be held.

The health workers should also endeavor to recommend pressure ulcer patients for screenings even if they have come with complaints not related to pressure ulcer since they can either develop it in the hospital or at home.

Health education to create a critical mass of the population to be aware of life style diseases so as to promote change both at the individual and health care level

Perioperative administration members should participate in developing and monitoring an organization-wide risk control plan for pressure ulcer prevention and management.

All admitted patients should be considered at risk for pressure ulcer development and standard pressure ulcer prevention precautions should be implemented.

The facility should have a screening process and criteria at outpatient to help determine at risk patients for pressure ulcer development and guide in patient care needs.

Effective use of Pressure-reducing surfaces and positioning devices (examples, pillows, foam wedges) in the care are some of the factors that may influence pressure ulcers in specific types of admitted patients.
Community members:

The community based-health workers, village health team direct observation therapy, should be able to health educate, identify, screen, and refer the clients at risk for pressure ulcer timely for intervention especially patients who are resettled at home for follow up.

5.4. Implication of this research to nursing science.

Research findings will help to draw better sensitization programs that are clear to create awareness about factors contributing to pressure ulcer among the admitted patients.

The findings will help to identify the factors contributing to pressure ulcer and challenges encountered during prevention strategies.

5.5. Areas of future research.

1. The role of nursing process in mitigating factors contributing to pressure ulcer among the admitted patients.

2. The role of health education on factors contributing to pressure ulcer among admitted patients.

3. Factors affecting implementation of pressure ulcer guidelines.

4. Assessment of knowledge and attitude of Nurses towards pressure ulcer.
REFERENCES.

Agency health care Research and quality.(n.d).on time prevention of pressure ulcer retrieved
October,8,2009 from http://ww.ahrq.gov/research/pressure ulcers/puqi 02.htm

Ariken, Clark, Sloan Lake and cheney 2008, on patient mortality and Nurse outcome .journal
of Nursing Administration,38(5),223-229.

Benoit and Mions et al 2012, risk factors of pressure ulcer development in critical ill
patient’s Research in Nursing and Health .Advance online
publication,.dio:10.1002/nur.2148.

Castel and Engberg 2009, the health consequences of using physical restrains in Nursing
patients medical care, 47(11), 1164-1173


C.K.Sen,G.M.Gordillo,S.Roy et al Human skin wounds a major and snowballing to public

Coleman S, Gireck N and Nelson EA 2013 patient risk factors in pressure ulcer development
American journal of critical care.

Colman S Girecki N and Nelson EA 2013 immobility a risk of pressure ulcer in patients ,
Journal of Nursing care pp 367.

Dorner et al ,2009 ,the role of Nutrition in pressure ulcer prevention and treatment; Nationa


Nonnemacher et al, 2008 nutritional status a predictor of pressure ulcer journal of clinical Nursing, 18(1), 99-107


NICE guide lines (CG 179).2014.pressure ulcer prevention and management<http:www.nice.org.UK\guidance\CG 179\chapter\1- Recommendation and management-adults> Read 7.3.2.2016.


Tayyib N, Cover .F Lewis P (2013) pressure ulcer in Adult patients in ICU
APPENDICIES

APPENDIX1:

CONSENT FORM

Dear respondents, am Agan Adam a student undertaking a diploma in nursing at Kampala International University School Of nursing Sciences, I am conducting a study on Factors contributing to pressure ulcers among admitted patients in Moroto Regional Referral Hospital. Please you are kindly requested to participate in this study. All the information provided will be treated with confidentiality and there is no need of writing your name on the questionnaire provided, only respond to the questions asked, participating in the study is purely voluntary and you are free to withdraw from the study if at any point you feel uncomfortable to continue with the study. The wider community and the health sector stand to benefit from this study if findings are adapted.

Respondent:

I have read the information and understood the significance of the study and ready to participate.

Respondent: Signature…………………Date…………………………
Researcher: I have explained the topic and its objectives to the participants and they have understood the topic and its objectives and voluntarily consented to participate in the study.

Researcher’ or Research Assistant signature……………………….Date……………. 
APPENDIX 2

QUESTIONNAIRES

1. Introduce yourself to the respondent
2. Explain the purpose of the interview
3. Get verbal consent from the interviewee
4. Assure the respondent of confidentiality and anonymity
5. Do not write the name of the respondent on the schedule to ensure anonymity
6. Tick the next to the chosen response, for questions with alternatives and fill responses, in the space provided
7. Write all responses clearly.
8. Thank the respondent at the end of each interview.

SECTION A: DEMOGRAPHIC CHARACTERISTICS OF NURSES

1. How old are you □

2. What is your sex?

   A. Male □

   B. Female □

3. Which religion do you pray?

   A. Catholic □
4. What is your occupation?

A. Employed but on probation

B. Part-timing

C. Fully Employed

5. What is your marital status?

A. Married

B. Single

C. Divorced

D. Others (Specify)

6. Which level of education have you attained?

A. Primary

B. Secondary

C. Tertiary/university

D. Others (Specify)
7. What is your level of qualification?

A. Nursing assistant
B. Certificate Nurse
C. Diploma Nurse
D. Bachelor Nurse
E. Masters in Nursing

8. For how long have you worked?

A. Less than 6 month
B. One year
C. Two year
D. Others (Specify) ……………………………………………………

SECTION B: PATIENT FACTORS RELATED TO PRESSURE ULCER:

9. What do you know about pressure ulcer?

A. Its due to Patient nutritional deficiency status
B. They are caused by prolonged pressure
C. Habits like smoking can lead to pressure ulcer
10. Which of the following patient is at most risk of developing pressure ulcer?

A. An immobile patient  
B. Patient with low weight prolonged in bed for 2 hours  
C. Patient with an older age  
D. BMI

EITHER ANSWER TRUE OR FALSE, CIRCLE

11. The patient pre existing condition can lead to pressure ulcer:

A. True  
B. False

If true in 2.3 above give examples of those conditions  

12. Which people are mostly affected with pressure ulcer?

A. Males  
B. Females

13. Which of these diseases can predispose a patient to pressure ulcer?

A. Hypertension  
B. Diabetes  
C. Stroke
SECTION C: HEALTH RELATED FACTORS TO PRESSURE ULCER:

14. Which of the following do you think can cause pressure ulcer in health care setting?
   A. Its due to compression shear forces in bed
   B. As a result of patients restrains
   C. Use of sedative drugs
   D. Moisture
   D. Others (Specify)………………………………………………..

15. How many staffs are allocated on ward per duty?
   A. Less than 2
   B. 3
   C. 4
   D. Others (Specify)…………………………………………………

16. Do you have any available pressure relieving device in this ward:
   A. Yes
   B. No
   If yes give example
   …………………………………………………………………………………

SECTION C: PREVENTIVE MEASURES TO PRESSURE ULCER:

17. How can you prevent pressure ulcer?
A. Health education of the patient and family

B. Repositioning

C. Proper bladder and urine care

D. Assessment

E. Use of reliving devices

Others (Specify) ………………………………………………………..

18. What problems do you face when preventing pressure ulcer:

A. Inadequate time

B. Lack of pressure ulcer related knowledge

C. Poor documentation

D. Nurse patient’s ratio

E. Shortage of equipments

D. Others (Specify) ………………………………………………………..

19. Which people are involved in prevention of pressure ulcers?

A. Nurses

B. Patient

C. Attendants

D. Others (Specify) ………………………………………………………..

20. How often do you turn a pressure ulcer patient in ward?

A. Two times in 24 hours

B. They times in 12 hours

C. Two hourly turning in 24 hours
D. More than four times in 24 hours

21. According to guide line, which pressure relieving devices do you use?

A. Air ring
B. Special mattresses
C. Pillow
D. Cushions
D. Others (Specify)………………………………………………

22. Do you assess the patient with pressure ulcer?

A. Yes
B. No

If yes in 4.6, what do you assess?

A. Nutritional assessment
B. Sensory
C. Wound
D. moisture

Others (Specify)…………………………

23. Have you ever attended any training, CME or read any guide line about pressure ulcer?

A. Yes
B. No
C. Not sure

24. If yes in 4.7, how many times in the?

A. Week……………..
B. Month………………

C. Year………………

D. Others (Specify)…………………………………….

In your department, do you have any management policy about pressure ulcer?

A. Yes

B. No

If yes which one……………………………………………………………

Thanks for your participation.
APPENDIX III: LETTER OF APPROVAL
APPENDIX IV: MAP OF UGANDA SHOWING MOROTO DISTRICT