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**ASSESSMENT OF ASEPTICS TECHNIQS AMONG NURSES IN
MANAGEMENT OF BURNS WOUND 2nd, 3rd and 4th AT
KIBOGORA HOSPITAL**

A Research Paper submitted in partial fulfillment of the requirements for the Bachelor's degree with honor in KIBOGORA POLYTECHNIQUE

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DECLARATION

We MASENGESHO ESTHER &NISHIMWE HOSIANE hereby declare that this research study entitles: “**assessment of aseptic technics among nurses in_ management of burns wound 2nd ,3rd and 4th in Kibogora hospital** ” is submitted in partial fulfillments of the requirements of the Bachelor’s degree in Nursing Sciences at KIBOGORA polytechnic ;is my original work and has not been previously submitted elsewhere. Also, we do declare that a complete list of references is provided indicating all the sources of information quoted or cited.

Date..... Signature.....

DECLARATION BY THE SUPERVISOR

I declare that this work has been submitted for examination with my approval as KP supervisor

Name:

Signed:

Date:

DEDICACE

We are most grateful dedicating this work to:

Almighty God

My parents,

My brothers and sisters,

My friends and classmates.

ABSTRACT

Background: Asepsis or aseptic refers the absence of germs, such as bacteria, viruses and other microorganisms that can cause disease. Aseptic technique means using practices and procedures to prevent contamination from pathogens. Aseptic Technic among nurses in infection control during management of burns plays a vital rol

Methods: The study was a cross sectional descriptive survey which is aimed at assessing of nursing application of Aseptic technic in case of burn wound management in case Kibogora hospital. 8 nurses as participants working in surgery ward, Analyssis was done through calculating descriptive statistics in frequency and proportions for categorical data and through measures of dispersion for Data.

Purpose of the study: **The aims of this study is to assess aseptic technics among nurses in management of burns in Kibogora hospital**

Result: On the admission before contact patient nurses was wash hand are 7(87.5%) only 1 (12.5%), good hygiene is crucial to help prevent heath care associated disinfection, Application aseptic technique during procedure ,the respondent tell us that the specific area of patient with burn are 4(50%) other 4(50%) of them tell us that no specific area, materials used by burn patient are sterilized before use 8(100%) to ensure sterile good are delived to point –of –use and undamaged ,sterile and safe for patient use is the purpose to prevent infection.

Conclusion: Nurses working in the surgery ward have a major key role in the prevention of sepsis during management of burn wound and they trying to be competent in aseptic technique practices. Most nurses have adequate knowledge on aseptic technique but they still have insufficient knowledge in fluid replacement at Kibogora hospital, therefore adequate supplies of materials and proper practice on aseptic technique will reduce mortality and morbidity rate among the patients at Kibogora Hospital.

Recommendation: Hospital should encourage staff members to hang up procedures and protocols regarding to burn on walls to follow guide line. Hospital should also provide trainings about application of aseptic technics and fluid replacement by using parkland formula in case of burn wound.in addition Hospitals should separate burn unit from other unity in surgery to prevent infection.

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LIST OF ABBREVIATION AND ACRONYMS

ABCD: Airway **B**reathing **C**irculation **D**isability

BW: Burn **W**ound

BWI: Burn **W**ound **I**nfection

ERC: Ethics and **R**esearch **C**ommittee

ICM: Infection **C**ontrol **M**easure

NI: Nosocomial **I**nfection

TBSA: Total **B**ody **S**urface **A**rea

WHO: World **H**ealth **O**rganization

CHAPTER ONE: GENERAL INTRODUCTION

This is an overall introduction for this chapter where covered background, statement of the problem, purpose of the study, basic research question, objectives, and significance of study that have interested our topic and to show well over view purpose of this research.

1.1 Background information

Patients with severe burns may die due to complications such as septicemia, Burns wound infection (BWI) is the most frequent nosocomial infection in burn units. Healthcare-associated

infection is the most serious complication of burns with sepsis being the main cause of death (Church et al, 2006).Other consequences of burn wounds include pain, discomfort, inconvenience and disability (Odabas A.B, et al. 2009). Wounds management may also lead to

financial drain. Non adherence to aseptic techniques would prolong morbidity and mortality (McRobert& Stiles, 2014).and hence cost of burn wound management at individual and national level.

The number of patients burned annually is alarming Globally it has been reported that fire related injuries account for 265000 deaths per year, the vast majority being in low and middle income countries (World Health Organization, Fact sheet number 365 of 2014).The highest number of reported deaths were in South East Asia (57 %), followed by Africa (12, 2%) and low and middle regions in the Eastern Mediterranean (11%) according to the World Health Organization (WHO, 2002).

The WHO (2008), reported that the incidence of fire related injuries, which required medical attention per year was 10, 9 million globally, with the most affected regions being South East Asia (5.9 million), followed by Africa (1, 7 million) and the Eastern Mediterranean (1, 5 million).Observably, the burden of burns is experienced mostly in developing countries where access to health care and resources are limited (Andrews E.A. 2015).

In Rwanda the cases of burn was decreased due to the Rwandan policy sited by Rwanda national police called firefighting services but there is still a cases of burns due to the house accidents, climate changes, Nyamasheke is one of district in Rwanda, development of Lake Areas. These urban characteristics contribute and relates significantly to overcrowding and the risk of burns.

Most research in the management of burn wounds focuses on the surgical management of the burn with no study focusing on the aseptic techniques in management of burns wound among nurses. Burns are currently being managed by nurses; however, their clinical practices differ extensively. There are no standards or guidelines in place to inform nursing practice and consequently not all patients benefit from evidence informed burn wound management techniques.

A lot of studies have been conducted in relation to surgical burn wound management. Emphases have been given to operation in Burn Unit which usually requires operations. The focus of this study was to assess aseptic techniques among nurse in management of burns wound. Nurses, are expected to be competent in wound management, which is a skill taught as part of the undergraduate general nursing curriculum (Bruce, Klopper & Mellish, 2011: 176).

In addition, knowledge provides the basis for informed decision making and the framework to develop and maintain competence (Benbow, 1992). Nurses therefore have a responsibility to be competent on the principles of burn wound management. Severe and poorly managed burn infections can lead to paralytic ileus, shock, compartment syndrome and acute renal failure among others (Brunner and Siddhartha's 2010).

Chronic infections can cause septicemia or bone infection which can lead to death. Sepsis associated encephalopathy increases morbidity and mortality especially in patients (Marmaton, 2007). Burns care is complicated by numerous factors such as financial constrains, lack of resources, guidelines, healthcare personnel and patients factors, in the continent of Africa(Albertyn R, Numanoglu A. & Rode H., 2014). The role of aseptic technique measures in relation to other factors need to be identified and reinforced.

1.2 Problem Statement

Burn wound infections if poorly assessed and managed which can lead to long term disabilities, increased morbidity and mortality. The role of aseptic techniques as infection control measures in relation to other factors need to be identified and reinforced and this will enhance patients care to minimize the injuries after a severe accident, intensive care performed by specialized

professionals is required. This is hard to accomplish in a developing country, where very few specialized burns centers and trained burns professionals exist. (Chalya et al, 2011).

Infections can cause the patient more suffering and extend hospital stay. In order to prevent infection the environment around the wound should be clean (Almas et al, 2011). Therefore the need for this research is to assess nurse's application of aseptic technique during burns wound management.

1.3 PURPOSE OF THE STUDY

The aims of this study is to assess aseptic technics among nurses in management of burns in Kibogora hospital

1.4 Research Questions

1. What are factor that influence the practice of aseptic technic among nurses during the burns management in Kibogora Hospital?
2. How do u nurses use their national standard operations procedures (protocols) about aseptic technic among nurses during burns management in Kibogora Hospital?
3. What are materials available to facilitate aseptic technique among nurses in Kibogora Hospital?

1.5 Objectives

1.5.1 Overall objective

1. Assessment of aseptic technics among nurses in management of burns in Kibogora hospital?

1.5.2 Specific Objective

1. To assess to standard wound dressing technique among nurses in management of burn patients at Kibogora Hospital
2. To identify the use of national standard tools about aseptic technique among nurses during burns management in Kibogora Hospital
3. To determine materials available to facilitate aseptic technique among nurses in Kibogora Hospital

1.6. Justification and Significance of the study

Burn wound infection was the most frequent infection in burn unity. Such injuries could be severe, requiring critical care and/or surgical intervention. Burns often results to wounds. A wound may result from disruption of skin either intentional or accidental (Giacometti et al,

2010). Good application aseptic technics in nursing to manage burn wounds is a key in prevention of infection. And this enhance the positive outcome.

Apply to aseptic technics reduces the hospital severity infection on the burns patients (WHO 2012). This study is aiming assessment of nursing application of aseptic technics in case of burn unity in Kibogora Hospital to improve patient care and optimize holistic nursing management among patient admitted in surgical unity at Kibogora district hospital .

1.7 SCOPE OF THE STUDY

In time

This study will be conducted in period of 3 days from 04th-07th February 2022

In space

It is Limited at Kibogora Hospital

In domain

This study is Limited in surgery department on aseptic technique among nurses during the burns management in Kibogora Hospital

CHAPTER TWO: LITERATURE REVIEW

2.0 INTRODUCTION

This chapter will talk about the definition of burn wound injury and its program as one of the major health interventions to prevent increase of disability, morbidity and mortality

2.1 Definition

A burn is a type of injury to skin, or other tissues caused by heat, cold, electricity, chemicals, friction or radiation. Most burns are due to heat from hot liquids, solids or fire, burns can also occur as a result of self-harm or violence between people(Herndon D,ed, 2012).

2.2 Classification and principles of Management of Burn Injury

Asepsis or aseptic refers the absence of germ, such as bacteria, viruses and other microorganisms that can cause disease. Aseptic technique means using practices and procedures to prevent contamination from pathogens.it involves applying strictest rules to minimize the risk of infection, that health care using standard application aseptic technic to prevent spread of infection from open wound and other susceptible area on patient's body. (Kristeen cherney& Jamie Eske, 2018).

Burn wound results from tissue necrosis caused by application of or exposure to heat (thermal), cold, caustic chemicals or frictional force on the skin. In the case of thermal burns, extent of injury is proportional to the temperature applied, duration of contact and thickness of the skin.

The extent of burn injuries is calculated according to the Lund and Browder chart whereby the

Total body surface area (TBSA) is 100%. Inhalational burn injuries account for a further additional 10% (Brunnicardi FC, Andersen D.K, Billiar T.R, et.al 2004). Management of burn wounds are depended on size and depth of wound as described in tables1 and 2 below. Hence wounds need to be classified well for proper treatment to be administered.

1st degree (superficial)	Epidermis with erythema. Use analgesics only.
2nd degree superficial (partial thickness)	Painful, weeping blisters that involve epidermis and papillary dermis. Treatment includes infusion of fluids according to Parkland's formula, cleaning and occlusive dressing with collagen or bactigras.
3rd degree (full thickness)	Painless, waxy, leathery grey or charred and black involving epidermis, dermis and hypodermis. May require tissue flaps or even tissue excision.
4th degree	All layers of the skin and inner tissues i.e. muscle, bone and viscera

Source: Ngugi M.G. 2013 Correlation of Burn Wound Infection and Mortality of Burn Injury

Table 1:Classification of burn wound

Mild burn injury	1 - 14% TBSA
Moderate burn injury	15 – 25% TBSA
Severe burn injury	Above 25% TBSA

Source: Ngugi M.G. 2013 Correlation of Burn Wound Infection and Mortality of Burn Injury.

Table 2:Burn injury severity using partial thickness

2.3 Pathophysiologic Response to Burn Injury

Burn injuries provoke an inflammatory response which results in increased cellular, endothelial

and epithelial permeability, hyper metabolism and extensive micro thrombosis. Most manifestations of this response disappear in 72 hours except for hyper metabolism which remains until wound coverage is achieved (Alberto M. 2010). Associated clinical states include fluid and electrolyte imbalance leading to burn shock, nutritional deficiencies with muscle catabolism, immunologic and neuroendocrine. There is hypercortisolemia and elevated levels of glucagon (Alan DM 2000). Further, treatment of burn wounds is dependent on equipment, part of the body affected, how well the burn facilities are kept and maintained.

2.4 Management of burn wound

The burns patient has the same priorities as all other trauma patient .we must assess airway, breathing (beware of inhalation and rapid airway compromise) circulation (fluid replacement) Disability (compartment syndrome) Exposure (percentage area of burn).that essential management are stop burning or stop source of burning, check ABCDE, Determine the percentage area of burn (rule of burn) apply parkland formula to replace the fluid loss, also patient may take balance diet contain energy and protein than other requirement high due to the catabolism of trauma ,heat loss, reduce infection in promotion regeneration of tissue
.....WHO surgical care 2007

INITIAL ASSESSMENT

This can be done quickly using the rule of nines; in this method, the areas burned are plotted in the burn diagram and very area burned is assigned an exact percentage

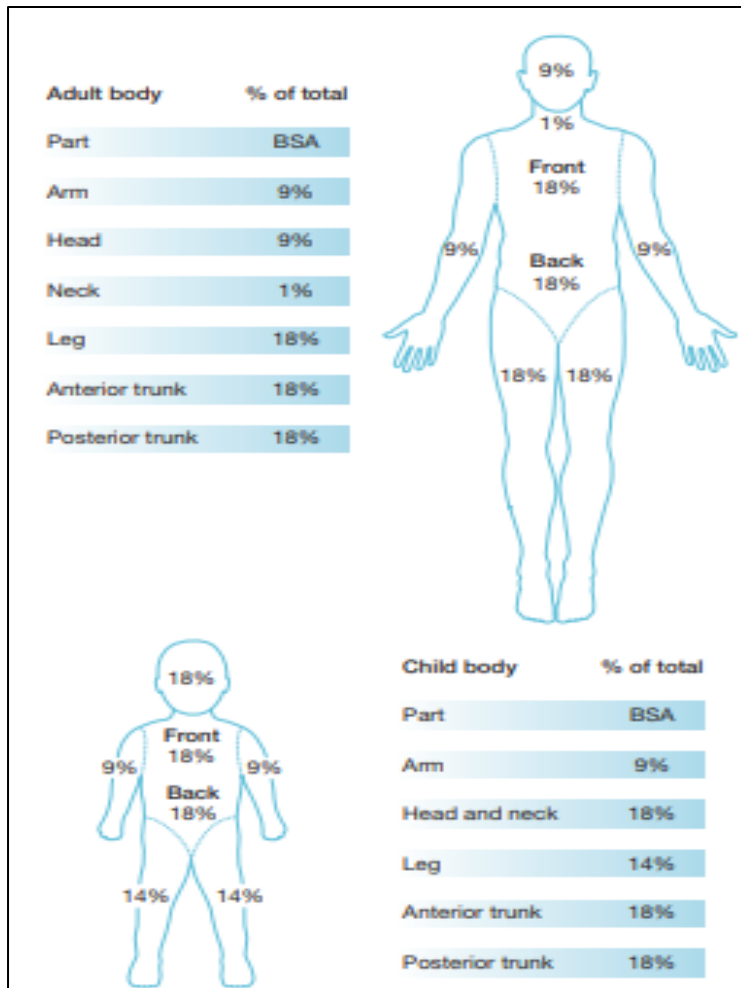


Figure 1:rules of nine

In facilitate to know surface area with burn. Also use formula parkland, the initial 24-hour fluid replacement with lactated Ringer’s solution

$$4\text{ml} \times \text{Body weight in Kilograms} \times \% \text{total burned surface area (\%TBSA)}$$

2.5 Factors influencing aseptic technique Measures

The outcome of burn wound management is depended on the type of first Aid given to the injured patient. Burns assessment and management are critical in elimination of infections.

The

initial care starts right from the point of burn and the type of first aid given. Intense early inflammation associated with untreated burns can cause progression of depth over 48 hours

an

so prompt first aid can limit the extent of the primary burn injury (Tobelem et al. 2013). If cooling is commenced within 3 hours of injury, it can significantly reduce pain and edema, decrease cell damage by slowing cell metabolism in hypoxic tissue, decrease inflammatory response, stabilize vasculature and ultimately improve wound healing and reduce scarring (Cuttle L et al (2009)). Cooling should be done with cool running water is preferred more than cold compress as this can cause vasoconstriction. Prolonged cooling of extensive burn wounds

(>20% total body surface area [TBSA] in adults ;> 10%TBSA in children) can cause hypothermia and thus cooling should be suspended if hypothermia is suspected (Cuttle L, & Kimble R 2010).

The type of intervention to be given to a burn patient would depend on whether or not the injured is an adult or a child. Patients' demographic is also another concern in clinical management of burn wounds according to Burns management guidelines (McRobert J & Stiles K 2014).

Management of burn wound is depended on the cause of the burn. The cause of burn is also another variable to wound management and thus infection rate. For instance, electrical burns or electrocution injury can cause deep cutaneous burns, cardiac arrhythmias, limb loss, and serious systemic effects (Hettiaratchy S & Dziewulski P 2004). This will depend on whether or not injury is caused by domestic (low) versus industrial (high) voltage injury. The Low voltage

electrical injuries will cause localized, deep burns and may initiate arrhythmias while high voltage injury will cause severe tissue damage, penetrating through fat, muscle, and bone. Chemical burns will require different type of management. Chemical burns continue to cause cutaneous damage until completely removed.

Clinicians are warned not to wrap chemical burn wounds in polyethylene wrap (cling film) as it will contain the chemical, causing further tissue damage. Alkalis cause deep, penetrating burns and will require prolonged irrigation. In this case the aim of water irrigation is to achieve a pH of 7. The extent of chemical burn injuries can be limited by prompt and copious irrigation guided by pH testing strips (Palao R et al 2010). This makes the cause of the burn wound another variable in this study.

The outcome of the burn wound management will be influenced by health care worker factors,

Burn unit factors as well as the size and depth of the wound. Assessing the burn wound's size and depth is key in clinical decision-making and wound management. Extent of Burns is recorded as a percentage of TBSA. The percentage of body area burned classification using Lund and Browder's as cited by Jones WG, Minei JP, Barber AE (1990) method charts can easily help to determine the percentage of burn for easier management (Lund CC, & Browder NC1944). Deep dermal burns take a long time to heal and may require skin grafting (Cubison T et al 2006). Size and depth of wound determine the type of treatment and the percentage of exposure to Infections. For instance, prolonged use of hydrogel dressings, especially in children and older people with larger burn areas, can cause hypothermia and should be avoided (Cuttle L, Kimble R 2010). Again, size and depth can lead to Oedema. Oedema occurs most commonly in the first 48 hours following burn injury. Oedema interferes with tissue perfusion and wound healing by increasing the diffusion distance between capillaries and cells thus where possible, the wounded area should be elevated to reduce swelling hence pain (Evers LH et al 2010).

Key wound management is the knowledge of health care workers and how they also manage treatment. Depending on depth, burns wounds can be exceedingly painful. Analgesia will be required. How pain is managed can influence patient's comfort and uptake of treatment such as pain free wound dressing and hence healing process (Latarjet L. 2002). Evidence suggests that emotional stress due to pain may slow down wound healing and compliance with physiotherapy (Gouin JP, Kiecolt-Glaser JK. 2011).

2.6 Complications of burn injuries

Acute complications include; Fluid and electrolyte imbalance leading to burn shock, Hypovolaemia results in acute tubular necrosis which culminates in acute renal failure, Hypokalaemia causes arrhythmias and cardiac arrest, Burn wound infection. Gastric and duodenal ulceration and Anemia from bleeding wound and thrombosis within the injured vessels (Oncul O, Yuksel F, Altumay H, et al. 2002) and (Mungara MG. 2004). Long term complications include; Hypertrophic scars, Keloids, Chronic ulcer, Heterotrophic ossification of joints which are painful (Bhibi PB 1989) and (Bhatt JR 2003).

2.7 Theoretical Framework

Dorothea Orem's theory of self-care will be used in this study on the assessment of aseptic technique among the nursing staff in burns wound healing among patients in Kibogora

district hospital. Orem's general theory of nursing is in three related parts: Theory of self-care, Theory of self-care deficit and theory of nursing system.

This theory explains the concept of nursing as an art, helping service and technology to assist the recovering burn patients. Nursing aims at maintaining a state of health regain normal or near normal state of health in the event of burns and stabilize, control or minimize the effects of chronic poor health or disability. The nursing actions deliberately selected and performed by nurse to help individuals using the aseptic technique procedures for patient with burns wound recover quickly and to maintain or change condition in themselves or their environment

(Basavanthappa, 2010).

In her theory Dorothea Orem , believes human being as a total being with universal, developmental needs and capable of continuous self-care. A unit that can function psychologically, physiologically, socially, symbolically and biologically and that health of the

patient is when they are structurally and functionally whole or sound to perform their activities

after full recovery from burn wound.

The theory encompasses: self-care, where the burns patient practices activities that initiates like having an inner motivation and a positive will to accept the care being provided by the health professionals' nurses for the implementation of the wound management. By meeting the

health deviation requisites (factors affecting wound healing) pathology may be controlled in its early stages (secondary prevention) and in the prevention of defects and disability (tertiary prevention).

According to Orem the factors (requisites) may be temporary or long term duration and have to be identified for proper burn wound management to be effected by the nurses (Taylor S, 2011) Self-care deficit exists when an individual's self-care demands exceed his or her ability to perform self-care needs and therefore nursing care is needed to identify the factors needed for and provide the effective self-care quick wound healing and enhance quality of life.

Nursing system explains how the patients self-care needs will be met by the nurse, patient, or both. According to Orem the burns patient needs can either be wholly or partly compensatory

or supportive education system depending with the degree and percentage of burns and other factors affecting wound healing like age, presence of other systemic infections, malnutrition and obesity (Orem D. 2001). This study is based on the nursing system sub theory where Orem

recognized that specialized technologies should be developed by members of the health profession to guide in the management of the burns wound heal.

The nursing team should be able to assess, diagnose, plan, implement and evaluate the relevant factors that would be needed for the specific individual patient in the process adhering to the aseptic procedures. In the social or interpersonal technologies should help guide the nurse use the appropriate communication skills in respect to health status and age, maintaining a therapeutic relationship with the burns patient and their relatives and this will help in coordination of the attaining the goal of achieving aseptic wound healing.

In Regulatory technologies the nurse assisting the patient either wholly or partly, in maintaining

and promoting life processes, turning the patient and assisting in movement, application of aseptic infection procedures in regulating physiological modes of functioning In health and disease hence assisting in quick patient recovery. The nursing processes have been used as a guide on the implementation of the theory into practice. From a nursing perspective with respect to burn wound management, this theory is grounded on four pillars namely (Capenito,2013) Dressing Preparation, Proper Assessment, Effective Diagnosis and intervention.

As conclusion of the literature review, Aseptic technique is therefore a vital clinical competency used to protect patients from contamination and infection during invasive clinical procedure .poor standards in aseptic technique have been reinforced by the myth that something as ‘established as aseptic technique, it is common for key health care guidance to instruct clinical staff need to understand in order to apply safe aseptic to perform aseptic technic, but fail to define what aseptic technique is and how it is actually practiced.

CHAPTER THREE: METHODOLOGY

3.0 INTRODUCTION

This chapter outlines the method that was used to conduct the study. It covers the setting in which the study was done or area description, the study design, the target population (with inclusion and exclusion criteria) and sampling strategy and size, method of data collection (including the design of the data collection instrument, limitations, ethical considerations and data analysis.

3.1 STUDY AREA DESCRIPTION

The study was conducted in Kibogora hospital surgery ward, burn unit .Kibogora hospital is the one of district Hospital in western province, Nyamasheke district, Kanjogo sector. The hospital Host have many beds and offers specialized services including burns care services among other departments. The hospital serves people from Nyamasheke district and other parts of neighboring districts.

The wards provide inpatient care to the burns patients. There are small number of qualified nurses working in surgery ward and burn unit with resident doctors, consultants and one physiotherapist working in surgery ward and burns unit.

3.2 RESEARCH DESIGN

The study was a cross sectional descriptive survey that was carried out on the number of nurses I surgery, burn unity at Kibogora Hospital 3 days from 04th -07th 2022.This method is retrospective method in conducting our study.

3.3 TARGET POPULATION

The nurses working in surgery that was allocated on dressing procedure at the time of data collection within the provided period. The population was chosen because most of the burns patients that was admitted with burns in the surgery ward.

3.3.1. Inclusion criteria

This study included all Registered nurses who worked in surgery department at the time of the study who directly handle burn patient's management

3.3.2. Exclusion criteria

All other Registered nurses who are not worked on aseptic technics among nurses in management of burns in Kibogora hospital during our study period.

3.4 Sampling technique

For this study, the entire population of the nurses working in surgery was included in the sample as the study population was small enough to allow for a sample to be picked from it and all different degree of nurses was responsible for the dressings, therefore a small sample of a certain degree would not be reflective of the entire population and Sampling unit was the participant nurse. We will use simple random sampling technique the total populations of the nurses in surgery ward.

3.5 Sample size

Sample size was 8 nurses as participants working in surgery ward at Kibogora Hospital. The aims of the study was to assess nursing application of aseptic technique in case of burn wound management

3.6 REASERCH INSTRUMENT FOR DATA COLLECTION

In our research, a slight modified questionnaire provided, was used to collect data. Questionnaire of this study is composed of 2 parts and the total questions 8. The first part is socio-demographic factors and affecting influencing aseptic technique of nurses and it is composed by 4 questions, second part is knowledge and aseptic technique during procedure related questions and it will be composed by 4 questions, For all section the respondents have mark the response with a cross (√) in the box provided and writing in provided space. The collected data by the questionnaire will be used in the study of aseptic technics among nurses in- management of burns in Kibogora hospital in annual leave.

3.7Data collection methods

Question was done to 8 nurses working in surgery wards, who was subsequently excluded from the survey. The tools was then revised and finalized on the basis of the pre-test results. Reliability was ensured by use of mixed method research to collect quantitative and qualitative information on the assessment of nursing application of aseptic technic practice among nurses during burns wound management and by training and supervision of the research assistants during the data collection period.

3.8 Data analysis procedures

Analysis was done through calculating descriptive statistics in frequency and proportions for categorical data and through measures of dispersion for Data. Qualitative data from observations was also tabulated thematically into themes.

3.9. DATA COLLECTION PROCEDURE

Before conducting this study, we asked permission to ethical committee of Kibogora polytechnic. After receiving the permission from ethical committee, we asked permission to ethical committee at Kibogora Hospital to collect data and sign consent by participants. After getting permission to conduct research at Kibogora Hospital, we started the process of data collection but before we provided more information to the participants regarding to the study research such as purpose of the study, instructions to consider during data collection period and tools used to the administration of Kibogora hospital especially surgery unit staff.

Finally, after the explanation of the research to the available participants, and after obtaining consent from the hospital's administration to have access to the concerned files we started filling of information from the file picked randomly to the questionnaire so as to answer the questions provided on the questionnaire without writing down their names. The answers provided, acted as basis for analysis and conclusion.

3.10 Ethical considerations

Ethical clearance was obtained from Kibogora Polytechnic review Board and the permission was sort to Kibogora hospital .clearance to carry out the study in Kibogora hospital was sought from the department of ethics and research Kibogora hospital. The Principles was taken to ensure the rights of participants not to be violated so that Approval from both staff was obtained. Several strategies was utilized to protect their rights those who was agree to participate in this study. First, oral verbal consent of the staffs was obtained prior to the administration of the questionnaire. Both staff was informed of the purpose of the study, and that they had the right to refuse to participate. Also the voluntary nature of participation was stressed as well as confidentiality.

3.11 DATA ANALYSIS

Data have to be entered and analyzed by using Microsoft excel by displaying data in different tables and charts. The data analyses will be focused on descriptive statistics whereby variables, frequencies and percentages.

3.12 LIMITATIONS OF THE STUDY

The limitations that we met during our study were the following; there was shortage of published studies conducted burn wound management in Rwanda, where we found only one published study on the same topic and we had no other research before.

3.13 VALIDITY AND RELIABILITY OF INSTRUMENTS

Validity is the extent to which an instrument measures what is supposed to measure and perform whereas reliability refers to the extent to which the same answers can be obtained more than one time (**polit, 2017**)

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

4.1 INTRODUCTION

In this chapter, the findings on data collected are analyzed and interpreted. The study result are described, discussed, analyzed and presented in tables. The statistics have presented by using Microsoft excel and charts. Analysis was done through calculating descriptive statistics in frequency and proportions for categorical data and measures of dispersion for continuous data. Qualitative data from observation was tabulated thematically into themes.

4.2 Demographic factor

In nurses involved in this observation, the mean age of the respondent was in the range 40-45percentage are 4 (50%) range of 30-39 the percentage are 3 (37.5%) years above 50 age percentage are 1(12.5%).majority in this area many are female 5(62.5%) and male are in 3(37.5%) , nurses have diploma are 3(37.5%) while bachelor degree are 5(62.5%),on their experience years between 0-5 is 1(12.5%)saying have experience 6-10 are 4(50%) and other 11-15 are 3(37.5%) .According to this study many nurses involved had experience above 10 years that good percentage to confirm about the information taken. And also show the image have done every day.

	Frequency n	Frequency n	Frequency n
Age	3	4	1
Sex	5	3	0
Level of quality	5	3	0
Year of Experience	1	4	3

3:Table of demographic

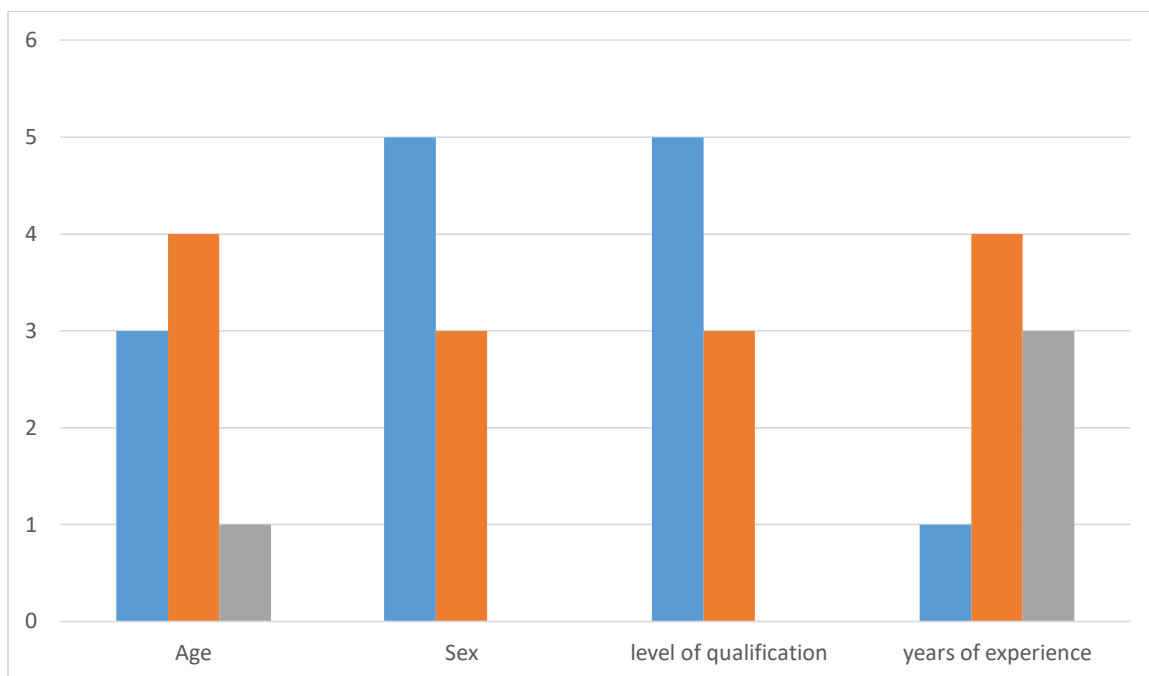


Figure 2:Chart of demographic

4.3 Patient admission

Before contact patient nurses was wash hand are 7(87.5%) only 1 (12.5%) provide painkiller based on the intensity of pain are 8(100%) that are good application to reduce pain for the patient. also in calculation total body surface area and give fluid based on the loss of calculated are 7(85.5%) one of them are not calculated1 (12.5%), in admission basic wound care are providing by all nurses (100%) for this observation patient are getting all needs in management of burn wound.

Variables	Present and n %	Not present and n %
Wash hand	7(87.5%)	1(12.5)
painkiller based on intensity	8(100%)	0
Calculate total body surface area and give fluid based on the loss	7(87.5%)	1(12.5)
Basic wound care at admission	8(100%)	0

Table 4:patient on admission

4.4 Assessment of patient during care

Nurses assessment of patient using parkland formula to provide fluid are 4(50%) and 4 (50%) are not using parkland formula, also using pain tools are 4(50%) while 4 (50%) others are not using pain tools, nurses give other medication are 6(75%) and two of them are not give other medication 2(25%) .Observation patient are badly treated according to the parkland's rule.

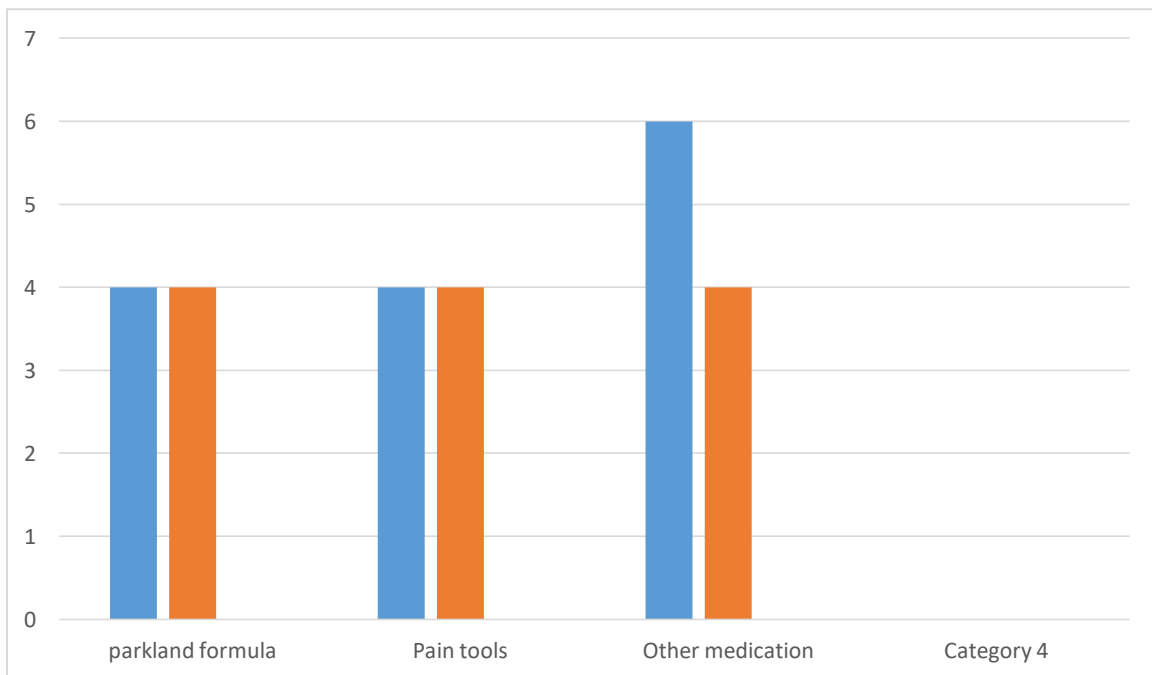


Figure 3:Assessment of patient during care chart

4.5 Applies aseptic technique during procedure

The respondent tell us that the specific area of patient with burn are 4(50%) other 4(50%) of them tell us that no specific area, materials used by burn patient are sterilized before use 8(100%), nurses and all health personnel applies sterile technic in very activities toward the burn patient (100%), nurses told us all patient cared in specific bed are 4(50%) and not specific are 4(50%). Nurses apply standard steps during wound cleaning are 8(100%), nurses document all information regarding to wound care after every activity are 4(50%) and not documented are 4(50%), and nurses who manage waste well in burn wound care unity are 6(75%) and not managed are 2(25%)

Variables	Application and n %	Not application and n %
Specific area	4(50%)	4(50%)
Sterilized before use materials	8(100%)	0
Applies sterile technic in very activity toward the burn patient	8(100%)	0
Specific bed	4(50%)	4(50%)
Step during wound cleaning	8(100%)	0
Documentation	4(50%)	4(50%)
Manage waste	6(75%)	2(25%)

Table 5:applies aseptic technique during procedure

4.6 Discussion

As consider, The study show any statistical significance for age In nurses involved in this observation, the mean age of the respondent was in the range 40-45percentage are 4 (50%) range of 30-39 the percentage are 3 (37.5%) years above 50 age percentage are 1(12.5%), that are shown how nurses have experience in work and easy to collaborate with patient. Majority in this area many are female 5(62.5%) and male are in 3(37.5%), the high number of this female shown the gender in service.at the times, task –oriented behavior by the leader may crash with needs of the group may inadvertently impede the successful performance of the both the leader and patient that high performance teams are characterized by synergy between task accomplished and individual need fulfillment. (Saunder 2012) nurses have diploma are 3(37.5%) while bachelor degree are 5(62.5%), that are good in service because their rise up wisdom and knowledge in the things done. On their experience years between 0-5 is 1(12.5%) saying have experience 6-10 are 4(50%) and other 11-15 are 3(37.5%).insufficient knowledge on aseptic this affirm the study findings from et al (2015) on assessment of research utilization by nurses and the influencing factors, inadequate facilities for implementation, this lack of facilities could be a barrier to implementation of aseptic

technique. According to this study patient gain adequate care and also to train number of nurses have less experience in order to continue to provide good image about the image service.

On the admission before contact patient nurses was wash hand are 7(87.5%) only 1 (12.5%), good hygiene is crucial to help prevent health care associated disinfection. (Neil Wigglesworth 2019) that are facilitating to reduce spread of infection from patient to other. Provide painkiller based on the intensity of pain are 8(100%) physical techniques focus on altering physiological processes to reduce pain and these include massage and application of heat and cold(Estele et la 2019) that are good application to reduce pain for the patient in order to respect right of the patient. Also in calculation total body surface area and give fluid based on the loss of calculated are 7(85.5%) one of them are not calculated 1 (12.5%), nurses have capacity to prevent hypovolemic shock on the patient. in admission basic wound care are providing by all nurses (100%) for this observation patient are getting all needs in management of burn wound on admission due to promote wound healing.

Nurses assessment of patient using parkland formula to provide fluid are 4(50%) and 4 (50%) are not using parkland formula, this formula helps appropriately restore intravascular volume and limit the development of hypovolemic (how well does the parkland formula estimate actual fluid resuscitation volume j burn care Rehabil.2002)) nurses must trained about this in other to balance the fluid provide to patient as rule said. also using pain tools are 4(50%) while 4 (50%) others are not using pain tools, first aid measures have been effective non-steroidal anti-inflammatory drug such ibuprofen (burn wound healing and treatment al Matthew p.Rowan 2015) this session nurses may read in other to modify the pain of patient have and the medication may take according to pain . nurses give other medication are 6(75%) and two of them are not give other medication 2(25%).Observation patient are goodly treated wound and promote healing .

Application aseptic technique during procedure ,the respondent tell us that the specific area of patient with burn are 4(50%) other 4(50%) of them tell us that no specific area, materials used by burn patient are sterilized before use 8(100%) to ensure sterile good are delived to point –of –use and undamaged ,sterile and safe for patient use is the purpose to prevent infection (Michele demeo 2021), nurses and all health personnel applies sterile technic in very activities toward the burn patient (100%),aseptic technique means using practices and procedures to prevent contamination from pathogens, it involves Applying the strictest rules to

minimize the risk of infection (Kristeen cherney 2018) nurses told us all patient cared in specific bed are 4(50%) and not specific are 4(50%). Nurses apply standard steps during wound cleaning are 8(100%), nurses document all information regarding to wound care after every activity are 4(50%) and not documented are 4(50%), showed documentation was often fragment and information sometimes hard to find, often describing caring needs but lacked interventions and evaluation (Andrew A.E2015) and nurses who manage waste well in burn wound care unity are 6(75%) and not managed are 2(25%), it was observe that availability of decontamination solution in the procedure rooms in some wards had to dilution , ratio of the disinfectant used and the duration of time the instruments had been decontaminated owing to the prolonged use without replacement, decontamination was being carried out with less than three buckets steps required (Gichuhi2015) .

This observation are showing how nurses are Applying aseptic technincs on the patient, and use of sterile materials to control infection.

CHAPTER 5: CONCLUSION AND RECOMMENDATION

Chap 5 .1 introduction

This chapter covers the conclusion of our study where all relevant points are outlined, and the recommendations on what to do at different level to apply aseptic technic in case of wound management.

5.3 Conclusion

Nurses working in the surgery ward have a major key role in the prevention of sepsis during management of burn wound and they trying to be competent in aseptic technique practices. Most nurses have adequate knowledge on aseptic technique but they still have insufficient knowledge in fluid replacement at Kibogora hospital, therefore adequate supplies of materials and proper practice on aseptic technique will reduce mortality and morbidity rate among the patients at Kibogora Hospital.

5.4 Recommendation

To Kibogora Hospital

Hospital should encourage staff members to hang up procedures and protocols regarding to burn on walls to follow guide line. Hospital should also provide trainings about application of aseptic technics and fluid replacement by using parkland formula in case of burn wound.in addition Hospitals should separate burn unit from other unity in surgery to prevent infection

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APPENDICES

Appendix 1: Research instrument: Questionnaire for nurses

Questionnaire n°.	Facility:	Ward:
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INSTRUCTIONS

- ♣Please do not write your name anywhere in the questionnaire.
- ♣Put a tick (✓) in box next to the right response.
- ♣Where no responses/choices are provided please write the response in the spaces provided

PART A: DEMOGRAPHIC FACTORS AND AFFECTING INFLUENCING ASEPTIC TECHNIQUE

Interview Date

1. What is your Age in years
2. Sex? Female..... Male.....
3. What is your Level of qualification? Auxially

a.	Certificate	<input type="checkbox"/>	level
b.	Diploma	<input type="checkbox"/>	level
c.	Bachelors	<input type="checkbox"/>	level
d.	masters	<input type="checkbox"/>	level
e. If others, specify.....			
4. How many Years of experience in burns management in nursing practice do you have?

a.	0	<input type="checkbox"/>	-5
b.		<input type="checkbox"/>	6-10
c.	11-	<input type="checkbox"/>	15
d.		<input type="checkbox"/>	16-20
e. If over 21 years, specify number			

Appendix 2: Research instrument: observation check list

1. How do you admit burn patient in this unity?

- a. Wash hands before contact with patient Yes No
- b. Provide pain killer based on the intensity of pain? Yes No
- c. Calculated total body surface area and give fluids based on the loss calculated?
Yes No
- d. Provide basic wound care at admission? Yes No

2. How do nurse assess the patient during care?

- a. The assessment is done by using parkland formula to provide fluid? Yes
No
- b. Assessment of pain using different tools (Specified.....) Yes
No
- c. Which other medication apply? Specify... Yes No

4 How nurses applies aseptic technique during procedure?

- a. Do you have specific area for burn patient? Yes No
- b. Are the materials used by burn patient sterilized before use Yes No
- c. Are nurses and all health personnel applies sterile technic in very activities toward the burn patient? Yes No
- d. Do all patients cared in specific bed? Yes No
- e. Do you nurses apply standard steps during wound cleaning? Yes No
- f. Do nurses document all information regarding to wound care after every activity ?Yes No
- g. Are waste well managed in burn wound care unity? Yes No

Thank you!!!