SCHOOL OF NURSING
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA, LEGON.

NURSES’ EXPERIENCES WITH PAIN ASSESSMENT AND MANAGEMENT IN PATIENTS WITH BURNS. A STUDY AT THE KORLE-BU TEACHING HOSPITAL.

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THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MPHIL IN NURSING DEGREE

JULY, 2019
DECLARATION

I, Linda Tetteh, declare that this thesis is my own work. I also declare that apart from the references that were made from other writers and research work, which have been acknowledged properly, this thesis is my original work produced out of my study. This work has never been submitted for the award of any degree to any institution either in part or whole.

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This thesis has been presented for examination with our endorsement as Supervisors.

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NURSES EXPERIENCES WITH BURNS PAIN ASSESSMENT

ABSTRACT

Pain experienced during burns has been linked to discomforts, preventing patients from fully participating in their care. Inadequate burns pain assessment and management has also been associated with increased morbidity and mortality. The nurse has a professional and legal responsibility to promptly assess and manage pain as well as administration of prescribed analgesics and other pain relief methods to facilitate recovery. This research sought to explore the nurses’ experiences with pain assessment and management in patients with burns using the Pain Transaction model by Keen et al., (2017) as the main conceptual framework for the study. A qualitative exploratory descriptive design was used and a purposive sampling technique was employed in the recruitment of the participants for the research. The researcher recruited 11 participants from the burns unit of the Korle Bu Teaching hospital. Findings suggested that participants of the study had general knowledge on the management of burns pain. However, they had limited knowledge on tools to assess burns pain which resulted in inadequate pain management. Again, the lack of knowledge by some nurses on pain assessment tools resulted in the prevalence of poor pain management practices such as administration of placebo, ignoring patient’s pain complain due to the fear of addiction to opioids. Additionally, it was revealed from the study that good interpersonal communication between the nurse and the patient had positive influence on burns pain management. The adverse psychological effect of burns pain management on nurses was also another finding from the study. There is the need to emphasize developing the right attitudes in nurses through adequate training and provision of resources which will lead to improved professionalism and supportive care for patients. A revision of policies on the funding of health care services, especially for patients with burns will also result in appropriate and effective care.
DEDICATION

This work is dedicated to my family, Richard, Meyoe and Dziedzorm Ablordeppey for their understanding, support and patience during my educational endeavours.
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LIST OF ABBREVIATIONS

AACN: American Association of Critical Care Nurses
GNCM: Ghana College of Nurses and Midwives
IASP: International Association for The Study of Pain
ICU: Intensive Care Unit
KBTH: Korle Bu Teaching Hospital
NHIA: National Health Insurance Authority
NM&C: Nursing and Midwifery Council of Ghana
NRS: Numerical Rating Scale
NSAIDS: Non-Steroidal Anti Inflammatory Drugs
RGN: Registered General Nurse
RPSBC: Reconstructive Plastic Surgery and Burns Centre
VAS: Visual Analog Scale
WHO: World Health Organisation
CHAPTER ONE

This section covers the background to the study, problem statement, purpose, objectives, research questions as well as the significance of the study.

1.1 Background of the Study

Pain experienced by patients within the hospital setting remains a universal problem in spite of enhanced management of pain over the years (Sawyer, Haslam, Daines, & Stilos, 2010; Wadensten, Fröjd, Swenne, Gordh, & Gunningberg, 2011). Pain does not only cause general discomfort for the patient but also affects their quality of life (Pellisé et al., 2009). It is a usual and disturbing symptom in patients who are critically ill and each individual experiences pain distinctively (Stites, 2013). The notion of pain has been understood as an “unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage” (International Association for the Study of Pain [IASP], 1979, pp 247-8).

The definition of pain put forward by IASP suggest different forms of pain, which are based primarily on the kind of damage that causes it, and the duration or severity of it. The classification of pain may be nociceptive, neuropathic and psychogenic. Pain caused by tissue damage is referred to as nociceptive pain whiles pain essentially caused by nerve damage is called neuropathic pain. Psychogenic pain is a pain caused by psychological factors. Nonetheless, pain can also be categorized by its duration, that is, whether acute or chronic and by its severity which can be mild, moderate or severe (Muralidharan, Wyse, & Smith, 2014).

Globally, burns have been rated as the fourth commonest form of trauma, after falls, road traffic accidents, and domestic violence (Institute for Health Metrics and Evaluation, 2010). In 2004, 11 million cases of burns which were severe enough to require medical attention were reported...
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globally (Peck, 2011). Peck and Pressman (2013) also posit that on the average, 95 per cent of burns occurs in low- to middle-income countries, that is, regions that are largely deprived of the essential equipment to decrease the occurrence and intensity of burns. In Africa, for instance, the year 2004 recorded at least 23,981 under five (5) years children with fire-related burn injuries and deaths (WHO, 2008). Apart from that, there was also a record of 310,000 burn-related cases worldwide out of which 40,000 occurred in sub-Sahara Africa (WHO, 2008). It has also been reported that fire-related injuries account for 265,000 deaths per year, the vast majority being from countries with low and middle-income status (WHO, Fact sheet number 365, 2014).

In Ghana, the Reconstructive Plastic Surgery and Burns Centre (RPSBC) in Accra recorded a total of 850 burns cases between January 2011 to the first quarter of 2012 out of which 328 of these cases were admitted and 90 out of this number died (Quaicoe-Duho, 2013). In 2012, the Director of the RPSBC, Dr. Ampomah reported in News brief that out of the 7,443 Outpatients who visited the RPSBC for burns treatment only 785 were on admission, 1184 went under surgical operations whereas 1,024 had physiotherapy interventions (Quaicoe-Duho 2013). In 2017, the same RPSBC reported about 300 to 360 cases of burns within the first quarter of the year representing a 50 per cent rise over 200 cases reported in the same period in 2016 (Source: Graphic online, June 2017).

Several causes of these burn injuries have been unveiled but engagement in injurious activities has been the major (Quaicoe-Duho, 2013). Adding to this, Dr. Ampomah explained that, 35 per cent of burn cases were caused by domestic gas explosion of which 51 per cent were children. Jobs that also involve the use of gas are also potential for burns injuries. Upon these disclosures, it was acknowledged that at least 75 per cent of burn cases are preventable if the public is cautious and knowledgeable in burn prevention measures (Source: Graphic online, June 2017).
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Burn injuries affect all categories of people however, numerous studies have established that the highest prevalence of burn injuries can be found among children between the ages of 0-4 (Rayner & Prentice, 2011). As a confirmation of this, Bayuo, Agyei, and Baffour (2018) also revealed the increasing occurrence of the phenomenon, particularly scalds and flame burns is prevalent among the labour force group (i.e. 15 years to 59 years). Thus, burns occur in all categories of people within any location. These dreadful facts imply that, children and the economic viable human resources are the potential victims.

Pain can be caused by any type of injury including burns. A burn is an injury to the skin, organ and or tissue largely caused by thermal or radiation, electricity, friction, radioactivity, or interaction with chemicals (WHO, 2018). It has, therefore, become a major critical clinical challenge for the past two decades. A major problem following burns is pain. One classification of burns pain is according to the degree of burns. There are superficial burns also known as first degree burns in which the epidermis, which is, the outermost layer of the skin is unblistered and extremely painful. With the second degree or partial-thickness burns, the epidermis and the dermis which is the uppermost third of the underlying skin layer are injured, with exposure of the peripheral nerve endings which are in the injured layer of the dermis making this type also painful (Connor-Ballard, 2009).

Third-degree burns usually referred to as full-thickness burn results in total damage of both the outermost layer and the whole dermis. Initially, the pain is minimal with no sensation, though it depends on which nerve tissue is destroyed. The burn area is usually yellow, leathery and sometimes dry (Mazzeo, Price & Gerold, 2015). Additionally, scarring is common even after the right therapy and care has been given (Huckfeldt, 2016). The burnt area may appear blackened, charred or whitish. A deep burn also known as a fourth-degree burn goes beyond the dermis into
the essential subcutaneous tissue, muscle, and bone. However, due to the destruction of the nerve endings, pain is absent (Connor-Ballard, 2009).

Burns injury have been associated with significant ill health and death, according to Brusselaers, Monstrey, Vogelaers, Hoste, and Blot (2010), with the effect on infirmity and death being greater in countries with low incomes, like Ghana, where prevention programmes for and immense care during the acute stages have a flexible expansion (Peck, 2011). Coinciding with this, Roman, Lewis, Kingwangala, and Wilson (2012), revealed that it is usually people living in countries with low and middle income and the minority populations in higher-income countries who are usually saddled with the burden of injuries inflicted from burns. Nonetheless, it is revealed that a clear identification of injured patients’ actions could prevent at least 75 per cent of burn injuries (Quaicoe-Duho, 2013). The complex and stressful nature of burn injury requires an equally comprehensive mode of treatment which involves doctors, surgeons, psychologists, nurses and dietitians (Durowaa, 2016).

A major problem experienced during the acute and recovery phases of burn injury that creates more discomfort for burns patient is pain manifestation (Perez et al., 2016). Furthermore, burns, apart from being a principal cause of death has also led to lengthy hospital stays, deformities, infirmities often with ensuing stigma and rejection (WHO, 2008). Injuries from burns have also resulted in a substantial amount of distress to many people globally and these people present with both psychological and physical stress compared to other forms of trauma (WHO, 2014). Among the various injuries that exist and though people suffer varying degrees of pain from these injuries, pain sustained from burns, is unique as it is acute and has both nociceptive and neuropathic elements.
Burn pain is among the most severe of all pain and a main universal health predicament. According to Alencar de Castro, Leal, and Sakata (2013) management of pain, in general, is challenging and Griggs, Goverman, Bittner and Levi (2017) maintain that it is even more challenging to manage acute pain caused by burns. This can partly be attributed to the fact that every individual who has a burn injury suffers discomfort and anguish regardless of the origin, its depth or degree of the burn (Butcher & Swales, 2012a).

Mahar (2012) also posit that four categories of burn pain exist which are background pain, breakthrough pain, procedural pain, and post-operative pain. Background pain is a persistent pain during periods of respite and movement whiles breakthrough pain is episodes of sudden intense pain, often due to healing of burns wound, during positioning of the patient, as well as in contractures which results in tightening of muscles. Procedural pain is pain felt during wound healing or therapies and post-operative pain is pain experienced after surgery, example, skin graft.

The various facets of these categories of burn pain require an equally dynamic and progressive therapeutic plan to manage it both centrally and peripherally. Likewise, this plan has to be extremely personalized and regularly modified in conformity to the patients’ exact wants (Esfahlan, Lotfi, Zamanzadeh, & Babapuor, 2010). Nevertheless, a study by McIlfatrick (2015) has shown substantial shortfalls in this regard. Consequently, pain management is considered an important issue when evaluating the effectiveness of nursing care for burn patient (Bayuo, 2018).

The uniqueness of burn pain is related to its multifaceted nature: procedural, breakthrough, nociceptive and neuropathic. At the emergent phase of burn care, Esfahlan, Lotfi, Zamanzadeh, and Babapuor (2010) describe the experience as having to give up oneself to extremely painful treatment in addition to the existing pain from the injury. At the acute phase, Waly, Yangde, and
YuXiang (2012) report that the burn-related pain is psychologically scarring and the worst physical pain imaginable which evokes fear in patients. At one week to discharge from the burns unit, Goyata and Rossi (2009) have observed the existence of pain and discomfort among burn patients. At the post-discharge phase (less than one year), Shahid, Ismail and Khan (2018) also observed the existence of moderate to severe pain among adult burn survivors and even after one year, Juozapaviciene, Rimdlka, and Karbonskiene (2012), Simons, Price, Kimble, and Tyack (2016) and Meyer III, Martyn, Wiechman, Thomas, and Woodson (2018) also observed the existence of moderate to severe pain experience among burn survivors. Additionally, a study by Dahl, Wickman, and Wengström (2012) reported that irrespective of the size of the burn, patients with burns continue to suffer psychological problems stretching even 6 to 8 months after leaving the hospital.

To attain proper results in the treatment of burns, patients with burns undergo various forms of procedures including daily wound care, surgery followed by months of physiotherapy and debridement of their wounds resulting in unending and unendurable pain (Yuxiang et al., 2012). This strongly suggests that burn-related pain is a major concern along the burn management continuum even years after discharge, age notwithstanding, and implies the need to attend to this need as poorly managed pain may worsen the already established hypermetabolic-hyperdynamic status of the burn patient (Bayuo & Agbenorku, 2015). For successful management of burn-related pain, there should be an approach which is comprehensive beginning with the use of pain assessment tools suitable for the age and patient’s condition as well as employing both pharmacological and non-pharmacological measures (Bayuo, Munn & Campbell, 2017).

Nurses have a key part in recognizing and promptly assessing pain to be able to manage it efficiently with the use of pain assessment tools, selection of the appropriate analgesic and the
observation of patient behaviour or mannerism for evidence of the absence of pain (McIlfatrick, 2015). The assessment of pain is the initial phase in deciding a pain management plan which may be mild to excruciating in burn cases (Griggs et al., 2017). Again, nurses have an ethical and legal duty to assess the pain of their patients and intervene on the patient’s behalf using laid down institutional guidelines to help address the patient’s pain experience (Bourgault et al., 2015). Nurses also have a crucial role in identifying and treating pain in vulnerable patients. Their ability to identify the cause of pain informs the method of pain relief to apply out of the options available (Polkki, Korhonen, & Laukkala, 2017). To ensure effective management, attributes such as the situation of the pain, aggravating and relieving factors, as well as the nature and amount of pain are fundamental (Alencar de Castro et al., 2013).

Though, generally, the management of wounds and pain has seen a steady improvement over the past couple of years, nevertheless, a satisfactory management of pain following burn injuries is still a universal problem as it leads to complications like infections, negatively impacts quality of patients' life and a main challenge for the health care personnel including nurses (Girtler & Gustorff 2012). Similarly, Richardson and Mustard (2009) also stated that though the untoward effect of insufficient control of pain in the burn population has over the years been documented, its control is still poor worldwide. It is therefore imperative for all health personnel involved in the management of pain (i.e. doctors, nurses, and health assistants) to be abreast with clues of both the causes, type and severity (duration) of burn pain and to apply its appropriate therapy.

The combined effect of burn pain and its healing has been described as tormenting in a burned patient (Bayuo & Agbenorku, 2015). For instance, the existence of some problems associated with mental health such as the risk of suicide is correlated with bad pain experience (Dyster-Aas, Willebrand, Wikehult, Gerdin, & Ekselius, 2008). A well-managed pain enables a patient to
participate fully in the performance of self-care activities and to be in a tolerable comfort level especially during wound care and rehabilitation activities (Yuxiang et al., 2012).

The assessment and management of pain, as well as the relief of distress, are vital factors with regards to the complete care provided by nurses (Hollywood, 2013). Therefore, consistent, continuous pain assessment and documentation is crucial in directing the therapeutic process (Richardson & Mustard, 2009). This could, in part, ensure that indicators that are secondary to the experience of burn pain are adequately dealt with (Lekule, 2013). As nurses are directly involved in the management of pain, it is also essential for them to be knowledgeable so they can adequately evaluate and interpret pain for patients with difficulty expressing their pain, for instance, in children (Topcu & Findik, 2012). This is necessary because failure to adequately assess and manage patient’s pain troubles considerably the relationship between a patient and the nurse with resulting poor patient’s compliance to the treatment regimen (Girtler & Gustorff 2012).

1.2 Problem Statement

There is evidence that pain is a significant challenge associated with patients with burns as the pain creates discomfort, prevent patients from participating fully in their care and inadequate pain assessment and management has been linked to increased morbidity and mortality (James & Jowza, 2017). In Ghana, for instance, a total number of 248 persons suffered burn injuries in 2015 out of which 110 females and 138 males and the number of children were 145 children. In total, 41 deaths were also recorded in 2016 (RPSBC- Korle Bu Teaching Hospital, 2016). The professional responsibility of the nurse includes prompt assessment of pain as well as administration of prescribed analgesics and other pain relief methods to facilitate recovery. (Pretorius, Searle, & Marshall, 2015) This means that nurses need to have appropriate
knowledge, attitudes and interpersonal skills to manage pain, nevertheless, evidence shows that there are shortfalls in that regard (Barry, Parsons, Passmore, & Hughes, 2012).

There is some general assumption that nurses working with patients in pain may have their own explicit observations and feelings with regards to the management of pain (Bergman, 2012). This assertion was supported by McNarmara, Harmon, and Saunders (2012) that pain treatment is usually affected by some misconceptions among nurses including patient’s addiction to opioids, which is usually exaggerated, not believing the patient’s reports of pain and issues centered around patient’s pain tolerance level. Aziato and Adejumo (2014) also submitted in their report that for the fear of patients getting addicted to analgesics, some Ghanaian nurses in the surgical units are hesitant to administer pain medications to post-operative patients.

Though there are studies that focus on the care, assessment, and management of pain given to patients with burns in Ghana, there is little research that has explored the experiences of nurses with regards to the assessment and management of pain in patients with burns. To the best of the researcher’s knowledge, only the study by Bayuo et al. (2017) which explored nurses’ perceptions and experiences regarding Morphine usage in burn pain management have offered some evidence of an aspect of what the study seeks to achieve in the case of Ghana.

1.3 Purpose of the study/ main objective

The study aimed at exploring the experiences of nurses in the assessment and management of pain among patients with burns at the Korle- Bu Teaching Hospital in the Greater Accra region and to understand how these experiences affected the management of patients with burns.
1.4 Specific Objectives

The specific objectives of the study were to:

1. Explore nurses’ knowledge and experiences with burns pain.
2. Ascertain the perceived pain behaviour of patients with burns.
3. Identify nurses’ perceptions of how attitude and the interpersonal communication between the nurse and patients with burns can influence pain management.
4. Assess the perceived coping strategies of burns patient when in pain.

1.5 Research Questions

1. What are the nurses’ knowledge and experiences with burns pain?
2. What are the perceived pain behaviour of patients with burns?
3. What is the perception of nurses on how the attitude and the interpersonal communication between the nurse and burns patient influence burns pain management?
4. What are the perceived coping strategies of burns patient when in pain?

1.6 Significance of the study

There is a wide acknowledgement that burns pain represents a significant public health problem in Ghana; hence, gaining much understanding and experiences through knowledge and skills of nurses will be of enormous benefits in several ways.

First, the findings of the study will be a record of Ghanaian nurses’ experiences or personal knowledge on the pain experienced by patients with burns to serve as an input for nurses' education. It will also help design other in-service programmes geared towards addressing the pain problem and increase the therapeutic relationship between nurses and patients who suffer pain in burns.
Further, the recommendations from the study will inform institutional policy formulation towards an all-inclusive nursing curriculum to incorporate current trends of managing burns pain, thus improving the care and quality of life of patients with burns. More importantly, the study is also part of the collaborative effort to address the challenges in the assessment and management of burns pain among health personnel to achieve maximum potentials in the provision of quality surgical and medical healthcare services in Ghana.

Moreover, the findings will help set priority areas in pain management in hospital management in the organization of logistics such as analgesics, opioids, and analgesics as well as scales for the rating of pain in patients with burns all in the quest to improve pain management among these patients.

Last but not least, the literature gaps in the studies on burn pain in Ghana, put the country among the countries lacking burn repository. In this regard, the final report of the study will add to the scholarly research database and literature on burns pain assessment and management among nurses’ stock serving as a source of reference for future studies.

1.7 Operational Definitions

**Knowledge:** The awareness of the nurse about the key principles related to pain in patients with burns.

**Management:** The act of handling or controlling pain in patients with burns

**Nurse:** A licensed professional nurse working at the Reconstructive Plastic Surgery and Burns Centre who cares for patients with burns.

**Pain assessment:** An evaluation of pain in patients with burns.
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**Pain:** An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.

**Patient with burns:** A person who has suffered damage to any part(s) of the skin or body tissue caused by electricity, chemicals like acids, heat (thermal), electricity, trauma or radiation.
CHAPTER TWO

LITERATURE REVIEW

This chapter presents the literature review on the experiences of nurses in the assessment and management of pain in patients with burns. It is to help relate the research to larger studies, continuing discussion in the literature, filling in gaps and spreading previous works (Marshall & Rossman, 2011). The review of the literature will be structured related to concepts and themes. The first part deals with the elaboration of the three (3) conceptual frameworks that were chosen for this study, out of which one was finally selected as the model for the study. These abstract frameworks include the PRECEDE-PROCEDE conceptual framework by Zhang, Hsu, Zou, Li, Wang, and Huang (2008), the AACN Synergy model and the Pain Transaction model by (Keen, Embree, Lancaster, & Ellis, 2017).

The limitations of the models that were not used and the justification for the use of the Pain Transaction model will all be discussed. The next section focuses on the adoption of the constructs of the Pain Transaction model in relation to the objectives of the study. Databases that were explored electronically for literature included Science Direct, Google Scholar, Wiley, Sage journal online, PubMed, CINAHL, a database of the University of Ghana and Medline. Keywords like “nurses’ experiences with pain assessment”, “nurses’ knowledge on pain assessment and management”, “nurse’s attitudes towards the pain in patients with burns”, “pain assessment and management of patients with burns”, “patients’ behaviour when in pain” and “conceptual framework on pain assessment and management” were used in searching for literature. However, due to the paucity of literature on this phenomenon, other related forms of literature on pain will be presented.
2.1 Theoretical Model Applied in the Study

2.1.1 The PRECEDE-PROCEED Model

The first model that was considered for this study was the Conceptual Framework - by Zhang et al (2008) adapted from Green’s PRECEDE model of health behaviour. This is a health-behaviour planning model invented by Lawrence Green in 1974 (Crosby & Noar 2011: Zhang et al., 2008). Green’s model was initially PRECEDE, which has now metamorphosed into PRECEDE-PROCEED. By the addition of PROCEED, it has become a significant determinant of individuals’ behaviour and health. The model emphasizes the need to improve the health conditions of people through behavioural change.

The framework identifies three classifications of features that can probably affect the health behaviour of an individual. These three classification or main constructs in the model include: predisposing factors such as attitudes, perceptions and beliefs that might inspire an individual to indulge in an acceptable behaviour; enabling factors such as the knowledge, skills and tools necessary to indulge in that behaviour and the outcome on nurses pain assessment and management when their knowledge, attitudes, and practices are improved (Zhang et al., 2008).

The conceptual model from Zhang et al., 2008 (as adapted from Green’s PRECEDE model) was not used for this study because it is obvious from its construct that the model is largely on the nurses’ assessment and management of pain with very little consideration to the patient whose pain is being assessed. However, for an accurate assessment of pain, the patient’s pain behaviour and perceived coping mechanisms is as important as the nurses’ knowledge and attitudes as outlined in the objectives of the study. This is supported by Akuma and Jordan (2011) when they argued that the behavioural signs from the patient appear to be the most essential element in the
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recognition of pain. Again for an effective assessment and management of patients’ pain, there should be a collaboration between the nurse and the patient (interpersonal communication).

2.1.2 The AACN Synergy Model

The second model that was considered appropriate for the study was the AACN Synergy Model for Patient Care. The central theme of the American Association of Critical-Care Nurses’ (AACN) Synergy Model for Patient Care, states that the competencies of the nurse are essentially driven by the patients’ and families’ characteristics or needs. Thus when the needs of the patient match the competencies of the nurse, then there is Synergy. The basic principle is that the patient comes to the health facility with some characteristics that determines the nurses’ capabilities. These patients’ characteristics are distilled into eight concepts; resiliency, vulnerability, stability, complexity, resource availability, participation in care, participation in decision making and predictability. The model also identifies some competencies of the nurse that helps to meet the needs of the patient. These competencies or capabilities include clinical judgment, advocacy, caring practices, systems thinking, collaboration, facilitation of learning, response to diversity and clinical Inquiry (Hardin & Kaplow, 2017). These mark the strengths of the model for the assessment of pain.

The AACN’s Synergy model is a multidimensional complex model (Curley, 1998). In all, there are 16 concepts sectioned into the nurse competencies and patient characteristics. Additionally, there are six major outcome quality pointers. Furthermore, when each concept is considered separately, there are many layers of complexity in that concept. This makes the whole framework complex and difficult to implement. The model also revolves around meeting the needs of not only the patient but also his/her family. Though the family is equally important to the overall recovery of the patient, this study focused on the therapeutic interaction between the nurse and
the patient with regards to the assessment and management of pain so the model was considered inappropriate for this study (AACN, 2013; Curley, 1998).

2.1.3 The Pain Transaction Model

The model considered appropriate for the study was the Pain Transaction Model (PTM). Pain is usually experienced by critically ill patients, for instance, patients with burns, and is one of the most clinically challenging problems for nurses. Hence, its recognition is equally crucial (Bloor, 2012). The conceptual framework in Figure 2.1 adapted from Keen et al. (2017) presents the PTM constructs linkage in understanding the clinical association that exists between assessment, treatment, and management of pain.

Figure 2.1: Conceptual Framework of Pain Transaction Model by Keen et al., 2017 pp 284.

The PTM framework recognizes the interpersonal communication between the nurse and the patient which is usually influenced by factors from both the nurse and the patient. These factors include the nurse’s knowledge and attitudes, patients’ pain behaviours and coping mechanism
In Figure 2.1.

Knowledge, a construct of the model, according to rationalists, is a consequence of a process of reasoning in which our sensory experience plays no function. In contrast, knowledge is defined by empiricist, as being made through our sensory interface with the material world, and finally processed by our brain (Bolisani & Bratianu, 2018). Locke (1841), also an empiricist, sustained the empiric approach by stressing that in the outer world, objects do exist and that the most important source of our knowledge is our sensory insight.

Taking an integrated perspective on the nature of knowledge, some authors like Dombrowski, Rotenberg and Bick (2014) explained that there are three forms of knowledge: (a) experiential knowledge (b) skills and (c) knowledge claim, and though they are interconnected, they all carry some specific features of their own. According to Borkman and Schubert (1994), experiential knowledge has to do with information and wisdom that is gathered from lived experiences. It essentially means a path of knowing about and seeing things and outcomes through direct participation. Experiential knowledge is produced from an interaction between spiritual, emotional and rational knowledge since it is a consequence of the active participation that exists between the mind and the whole body (Bratianu, 2015).

Skills mean knowledge that is gained from knowing how to do something. Though it is founded on experiential knowledge, it incorporates well-planned and knowledge that is action-oriented derived from repeatedly performing a particular task and learning by doing it. This “Know-how” is usually called procedural knowledge since it is principally about task performance that is in line with a given course or protocol (Bolisani & Bratianu, 2018).
Knowledge claims are what we experience, or what we think, what we know and believe is true. It is made up of explicit and tacit knowledge. Davies (2015) defines explicit knowledge, as one derived from data that is processed, organized, structured, and interpreted. Such knowledge is written down and accessible., That is, the information is easy to express and therefore easy to share. Tacit knowledge, on the other hand, is the sort of cognition that is difficult to transmit to some other person through writing it down or expressing (Isenman, 2013).

Patient’s behaviour and coping mechanisms is also another construct of the Pain transaction model. Some precise features of the patient’s population have been recognized as contributory factors to the variances in attitudes and knowledge between nurses towards managing pain postoperatively in a different clinical setting (Kiekkas et al., 2015). For instance, even when their pain intensity is relatively high, some patient’s pain with drugs is largely influenced by their beliefs thereby affecting the overall therapy (Muntlin, Carlsson, & Gunningberg, 2015). A related effect has been shown by Fry, Hearn, and McLaughlin (2012). Stability, which is a feature of a patient’s behaviour, looks at the ability of the patient to sustain a steady-state balance, irrespective of the circumstances, as this can impact the patient’s response to therapy and reduce mortality. Alternatively, quality care and appropriate nursing interventions can also influence patients’ stability (Swickard, Swickard, Reimer, Lindell, & Winkelman, 2014).

Nurses have a critical role to play not only to provide care that is personalized and holistic but also to offer treatment options after assessment of pain whiles ensuring a continual revision of treatment interventions. This, a nurse can only accomplish if he/she is well equipped with the requisites level of knowledge and an attitude that is positive towards the assessment of pain (McIlfatrick, 2015). Another construct of the PTM framework is the attitude of nurses towards pain assessment and management. Chaikin (2010) describes attitude as a set of emotions, beliefs,
and behaviours toward a particular object, person, thing, or consequences. Attitudes are often the outcome of upbringing or experience, and they can hold a potent effect over behaviour. While attitudes are permanent, they can likewise vary. Attitude is also a subjective appraisal of an individual either good or bad with an evaluation of peoples’ behaviours (Ajzen, 1991).

Intentions are the main determinants of an individual’s behaviour, and these intentions are formed through our attitudes, subjective norms, and perceived control of behavioural (Fishbein & Ajzen, 1975). Attitudes tap the overall evaluation of the behaviour, whereas subjective norms tap perceptions of the reactions and behaviours of important others (Conner, Sheeran, Godin, & He´ma-Que´bec, 2013). Narli (2010) also defines attitude as beliefs, behavioural tendencies, and individually attributed emotions.

Attitude is made up of three core components which are affective, cognitive, and behavioural. The affective component of an attitude contains the impressions and emotions one has about a particular object or event. The cognitive element of attitude mainly deals with one’s thought processes concerning places, people or objects. This component is also a reflection of the ideas or beliefs that one has about a particular thing. The third constituent of attitude is behavioural which refers to how an individual normally acts or is likely, to act towards something or someone (Kreitner & Kinicki, 2010). Current studies have submitted that how we think or feel about whether or not to engage in a behaviour can both be predictive of intentions and behaviour (Richetin, Conner, & Perugini, 2011).

A core feature of the nursing practice is the interpersonal process between the nurse and patient (D’antonio, Beeber, Sills, & Naegle, 2014). The proficiencies of the nurse, with regards to her interpersonal relationship, is critical as it encourages the patient to be involved in those activities that guarantee safe recovery and complete comfort (Peplau, 1997). A recent inspection of the
literature on healing relationships in critical care settings detailed the significance of patient-centeredness, listening in a therapeutic sense and promptly responding to the emotions and needs of patient (Kornhaber, Walsh, Duff, & Walker, 2016).

Though nurses see their interaction with their patient as meaningful and very crucial, they (nurses) are still worried as time and opportunity have become barriers they must overcome (Cleary, Hunt, Horsfall, & Deacon, 2012; Humble & Cross, 2010). Other studies focusing on the interaction between the nurse and the patient have documented that most nurses, somewhat have little one-to-one interaction with patients but rather spend most of their time on communicating with other agencies, administrative role and paperwork (McAllister & McCrae, 2017; Seed, Torkelson, & Alnatour, 2010; Sharac et al., 2010).

Palliative care, intervention-based research, assessment and management of pain, evidence-based practice and education of patient have been cited as some of the criteria when evaluating the work done by nurses (Vallerand, Musto, & Polomano, 2011). The fulfilment of nurses on their obligation to evaluate and care for the pain of patients is indispensable to improving the quality of pain care (Herr, 2011). Irrespective of the hospital setting, patients’ contentment with the quality of pain care is considered a clear indication that assessment and management of pain have been adequate (Larsen, Beck, Towsley, Berry, Brant, & Smith, 2010; Topolovec-Vranic et al., 2010).

2.2 Justification for use of the Pain Transaction Model

The Pain Transaction Model incorporates the nurses’ knowledge and attitude and that of the patient’s mechanism of coping to pain behaviours, to produce a unique collective transaction. Nurses are purposefully placed to enable patients to be involved in their care plan and to provide other tools that can aid in the alleviation of pain to the maximum level. A nurse’s knowledge and
attitude that is positive towards the assessment of pain and its treatment is very essential to building a shared relationship with the patient and efficient care plan (Keen, Embree, Lancaster, & Bartlett Ellis, 2017). Generally, management of pain can be enhanced when there is a better relationship between the nurse and the patient (Youngcharoen & Park, 2017). Additionally, the constructs of this model are in line with the stated objectives of this research and can easily be adapted to suit any work.

2.3 Nurses Knowledge on burns pain

The knowledge and skill necessary to interpret and understand pain cues, and keep patients carefully within the established haemodynamic parameters are inherent because the knowledge is informal and particular (Laserina, 2012). To attain the highest efficient and effective form of pain assessment and management, nurses require an up to date knowledge and correct attitude regarding the assessment and management of pain (Al-Shaer, Hill, & Anderson 2011). If nurses can provide excellent assessment, it is imperative for them to have good knowledge about pain, its issues, and the critical values incorporated in the present evidence (Vallerand et al., 2011). This is important because knowledge deficiencies among health professionals on pain treatment and management have all been cited as barriers to adequate pain relief in ICU patients including those with burns (Lavrentieva, Depetris & Rodini, 2017).

According to Agbeko, Argent, & MacLaren (2016), knowledge deficit is an inability to assess pain or measure the therapeutic effect of treatment regimen among the healthcare team. However, there have been contradictory findings on the knowledge of nurses concerning pain assessment and its management. For instance, in a study by Rose et al.,(2012) in Canada, 802 nurses were assessed on their level of knowledge with regards to pain assessment tools. Out of this, 561 representing 71% were not aware of such assessment and management guidelines
whiles 235 nurses representing 29% were aware of pain management guidelines published by professional societies and also used tools for pain assessment on patients who are unable to express their pain. Thus, the vast majority of nurses were ignorant of the techniques for pain assessment and its management.

In a related study, it was reported that the majority of nurses were knowledgeable on some of the pharmacological and non-pharmacological pain management available (Miftah, Tilahun, Fantahun, Adulkadir, & Gebrekirstos, 2017). On the contrary, earlier studies have also reported inadequate knowledge on the pharmacological management of pain, particularly with issues connected to opioids, including their function and/or abuse (Elcigil, Maltepe, Esrefgil, & Mutafoglu, 2011; Pretorius, Searle, & Marshall, 2015).

Delving into the specifics of the case at hand, the inadequate treatment of burns pain has been attributed not only to its complexity but also to a lack of explicit knowledge among health care professionals including nurses (Kuhajda, Thorn, Gaskins, Day, & Cabbil, 2011). Smith, Murray, McBride, and McBride-Henry (2011) after an exploratory study also buttress this assertion by reporting that nurses who are involved in the dressing of burn wounds require debriefing before the procedure to manage the resulting pain well.

Moreover, there have been several reports that attribute inadequate knowledge on pain assessment and management among nurses to the poor observation of patients’ records and pain research techniques. For example, a research conducted in Egypt and England affirmed that complex pain assessment and management can be attained through a good observation of the patient’s charts and documentation of pain assessment (Mohamed, Ahamed, & Mahmoud, 2013; Purser, Warfield, & Richardson, 2014). Additionally, Mędrzycka- Dąbrowska, Dąbrowski, Gutysz- Wojnicka, and Basiński (2016), after a descriptive exploratory survey stated that in spite
of the university education received by Polish nursing staff, they still had no substantial knowledge with regards to the usage of systematic research in their day to day duties as nurses including pain assessment and management.

That notwithstanding, there is a lack of comprehension and experience of the complexities of burn pain. According to Alenca de Castro et al., (2013), the initial step to attaining success in the management of burn pain is to understand the complexities surrounding the pathophysiological, biochemical and psychological changes in burns. A detailed understanding of the experience of patients with burns with regards to their pain is significant in categorizing the factors accounting for the underrating of burns pain and to institute guidelines and recommendations to be used clinically for the relief of pain in burns (Yuxiang et al., 2012). Nevertheless, the poor treatment of burns pain by nurses has been attributed not only to its complexity but also to inappropriate behaviour of health professionals and patients with pain.

2.3.1. Effects of Knowledge Deficit of Burn Pain

Numerous research works from various countries and hospital settings have proven that inadequate knowledge between nurses is destructive to the management of pain (Al Qadire & Al Khalaileh, 2014; Alqahtani & Jones, 2015; Duke, Haas, Yarbrough, & Northam, 2013; Moceri & Drevdahl, 2014). It is a fact that there exists a clinical gap significantly between empirical evidence and the real practices of nurses caring for patients with burns, whether experienced or not (Mann-Salinas et al., 2014).

If nurses do not have the requisite knowledge to address a patient’s pain, they usually are not able to perceive imminent worsening in the patient’s condition. Their inability to analyse and respond to key clinical cues (Considine & Currey, 2015) leads to malfeasance, poor outcomes in terms of patient’s care and patient safety (WHO, 2013). Moreover, nurses insufficient knowledge
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with regards to the role of opioids has increased worries that have to do with addiction irrespective of the guidelines by others and the American Society of Pain Management Nurses (Oliver et al., 2012; van Boekel, Brouwers, van Weeghel, & Garretsen, 2015). Though concerns linked to the untoward effects of opioids including depression of the respiratory system is guaranteed, opioids can be administered carefully with enough knowledge (Jarzyna et al., 2011).

2.3.2 Importance of Addressing Knowledge Deficiency

Generally, improved pain knowledge and empathetic care are expected to gratify patients and result in safer outcomes and of good quality (Brant, Mohr, Coombs, Finn, & Wilmarth, 2017). Nevertheless, Beck et al., (2016) after a correlational survey reported that though knowledge variances may exist, further knowledge and attitudes that are better towards pain has led to enhanced outcomes towards pain management, thus, the need for further studies. The trouble that many facilities encounter is that though some nurses are usually equipped with knowledge on pain, very little is seen on how this is translated to the management of their patient’s pain resulting in poor satisfaction related to care (Lewthwaite et al., 2011a).

Research works also recommended that there is a need for nurses to advance their knowledge and skills in the assessment and management of pain (Mohamed, Ahamed, & Mahmoud, 2013; Purser, Warfield, & Richardson, 2014). Nurses knowledge on pain should also embrace the appropriate analysis of a clinical situation as well as the combination of the right practical reaction to the management of pain (Gretarsdottir, Zoega, Tomasson, Sveinsdottir, & Gunnarsdottir, 2017).
2.3.3 Experiences with burns pain

One of the legal and ethical responsibilities of a nurse is the provision of secure, excellent and responsible management of pain (Farrar, White, & Darnell, 2017). Nurses have a very critical function with regards to the assessment and observation of patients’ pain, adopting various methods which demonstrate their skills as nurses and making a sound clinical judgement based on their own experiences and inherent beliefs for the assessment of pain (Chatchumni, Namvongprom, Eriksson, & Mazaheri, 2016). In actuality, studies have shown that about 50–70 per cent of critically ill patients including those with burns, even after recovery, still remember the traumatic experiences they had during their stay in the intensive care units (Barr et al., 2013). This can be ascribed to the fact that majority of critically ill patients, about 70 per cent, are deprived of effective analgesics during their stay in the hospital as indicated in a report by Haonga, Makupa, Muhina, and Nungu (2011). For instance, in the elderly, there are usually challenges in the use of scales or tools for assessment, most especially if there are cognitive impairments and misconceptions that pain is anticipated in ageing and should be borne rather than be managed with appropriate therapy (Jarzyna et al., 2011).

An enquiry into nurses’ assessment and management of children in an emergency unit also proved that triaging of their pain is not reliable and therefore the need for more education of these nurses (Thomas, 2015). To prevent undesirable experiences and complications, the assessment and management of pain must be satisfactory (Pasero, 2011; Tei, Dreyer, & Nikolajsen, 2012). The American College of Critical Care Medicine, through its guidelines, has endorsed various techniques such as pain assessment and observation with the use of consistent and effective tools, non-pharmacological and pharmacological methods all in an effort to ensure that critically ill adult patient, such as those with burns, enjoy an optimum level of physical and
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psychological wellbeing. Clinicians are, therefore, required to assess for pain before, during and after a procedure aimed maximizing pain control during these procedures (Barr et al., 2013). Unfortunately, there are reports of some healthcare professionals who are unable to assess the intensity of pain and also unable to understand the behaviour of patients. The misunderstood behaviours include anxiety, resulting in the administration of opioids instead of anxiolytics (Lorentzen, Hermansen, & Botti, 2012).

Abdalrahim, Majali, Stomberg and Bergbom (2011) made a point worthy of note that indicated that nurses often underrate the intensity of pain felt by patients after surgery but rather prefer to rely more on their personal opinions, the appearance of the patient and on the surgery type. Furthermore, a regular and organized re-examination of the pain of patients to assess the efficacy of therapy was not widely practised (Dowell, Haegerich, & Chou, 2016). In the absence of formal pain assessment tools, nurses used cues such as physical, behavioural, and facial expressions to diagnose a patient’s pain (Polkki et al., 2017). The motivation behind this might be that nurses trust their intuitions with regards to pain assessment without the apparent pointers, and most likely have become familiar to doing so as a result of inadequate scales for pain assessment in their units.

Adopting a non-pharmacological approach, such as relaxation techniques, psychological support, acupuncture, music therapy, to augment pharmacological management in burns will not only reduce the adverse effects connected to opioids but is also safer, easily accessible and relatively cheaper (Baron et al., 2015). This assertion was also supported in a study at 47% burns facilities (Trupkovic, Kinn, & Kleinschmidt, 2011). Other non-pharmacological management of pain in burns involves cooling in the initial stages, covering of the wound, to provide respite from the heat and pain and should be part of the overall pain management in burn victims (Davies,
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Maguire, Okolie, Watkins, & Kemp, 2013). Contrarily, supplementary research in Asian Communities has reported scarce usage of this cooling technique (Li, Jiang, Jin, Qiu, & Shen, 2012). Another study by Berger et al., (2010) discovered that the use of hypnosis in burn patients can also provide reduced scores of pain, lessen the anxiety associated with procedural pain as well as reduce hospital bills as a result of prolonged admissions.

For efficient and effective control of extreme moderate to severe acute pain, the importance of opioids, such as ketamine, as a main systemic analgesia, cannot be overemphasized in surgical patients (Huxtable, Roberts, Somogyi, & MacIntyre, 2011). Consequently, nurses do not only need to be conversant with a comprehensive assessment of pain but also to be acquainted with the possible adverse effects of these opioids and distinguish susceptible patients who are highly at risk of toxicity from opioids. (Markocic, Humphries, Tarne, Watts, & Collins, 2016). The nurse must, hence, use clinical reasoning and critical thinking skills in the administration of pain medications in a critically ill patient to prevent serious side effects and adverse reactions (Farrar et al., 2017).

To stress the importance of early analgesics, a survey at a burns place discovered that acetaminophen administration, though dosage and route were not mentioned, by a primary health facility, was linked with a significant reduction in the pain experienced throughout the other days of admission (de Jong et al., 2014). Combination therapy of opioids and anxiolytics have been proven to drastically reduce the effects of procedural and background pain in burns patient (Zor, Ozturk, Bilgin, Isik, & Cosar, 2010). Overall, safe recovery and rehabilitation have been associated with quality analgesics (James & Jowza, 2017). Unfortunately, many pharmacologic approaches are often not appropriate due to the immunocompromised state with accompanying damage to body organs in patients with burns (Lavrentieva, Depetris, & Rodini, 2017).
The Behavioural Pain Scale and the Critical Care Pain Observation Tool are pain scales that delivers organized and consistent assessment and presently, the most suitable tools when assessing the pain of critically ill patients (Skrobik et al., 2010). This notwithstanding, the Visual Analogue Scale (VAS) and the Numeric Rating Scale have also been authenticated as a subtle and efficient tool for patients with burns (Trupkovic et al., 2011). Other tools, such as the Abbey Pain Scale which is based on observation of behaviour has also been authenticated in burn patients especially for those who are unable to communicate (Baron et al., 2015). Nonetheless, the use of these tools and other interventions geared towards the assessment of pain must be timely and promptly documented (Rose et al., 2012). Even so, research has proven a related callousness to the somatic pain of patients among experienced or specialized nurses as compared to those with little experience clinically (Fink, 2000).

A mixture of knowledge, experiences, and attitudes between the health care team have all been acknowledged as influencing the healing process. Additionally, the culture within the health care facility and clinical context can generate hindrances to the management of pain (Abdalrahim et al., 2011; Brant, Mohr, Coombs, Finn, & Wilmarth., 2017; Kiekkas et al., 2015; Shugarman et al., 2010). Context is one element that has been found to determine the role of research especially in clinical practice (Helfrich et al., 2010), which in this case, is defined as the setting or circumstances surrounding the work of nurses.

Literature has proven that context can impact on nurses’ practice behaviours either negatively or positively (Cummings, Hutchinson, Scott, Norton, & Estabrooks, 2010; Latimer, Ritchie, & Johnston, 2010) and as a result is likely to influence the evidence-based practice in nursing. Again, a strong influencing factor for effective pain management practices, bearing in mind pain and context, is the subject of collaboration between members of the healthcare team (Stevens et
al., 2011). For instance, when hospital policies and medical directives support nurses in the provision of analgesics interminably, the patient will receive more analgesics for their pain (Van Hulle, Wilkie, & Wang, 2011).

2.3.4 Barriers Contributing to Poor Pain Assessment and Management

There are immense challenges, such as inadequate resources and lack of an educated task force that has been recognized as obstacles to guaranteeing optimum measures of comfort for intensive care unit patients. Knowledge deficit, inability to assess pain or measure the therapeutic effect of treatment regimen among the healthcare team have all been cited as barriers to adequate pain relief in ICU patients including those with burns (Agbeko et al., 2016). Credland (2014) also pointed out that the concerns within some units, specifically in Uganda, are centred around limited accessibility to fundamental healthcare supplies including well-trained critical nursing staff, analgesia, technologies, equipment, and evidence-based materials. Some other studies have also identified therapeutic barriers to adequate pain relief in ICU patients including low value placed on pain relief, the deficit in knowledge and a failure to assess pain or appraise the effectiveness of therapy applied (Agbeko et al., 2016; Sigakis & Bittner, 2015).

Williams et al. (2010) also maintains that inadequate management of pain might not necessarily be as a consequence of unavailable evidence, but to a greater extent from institutional and professional causes that restrict the measures aimed at alleviating pain. For example, nurses’ characteristics like work experience, age, education, and patient’s features like age, ability to collaborate have all been mentioned as factors that influence the usage of non-pharmacological methods. Organizational elements including the hospital where the patients are receiving therapy have also been cited (He et al., 2010). In cases where resources are scarce, there have been recommendations for the adoption of procedures and guidelines that can improve the making of
decisions during the assessment and management of pain (Twycross & Finley, 2013). Since the benefits are far greater than the potential effect on the workload, it is recommended that pain assessments of critically ill patients should be routine irrespective of the fact that quality evidence backing this is moderate (Barr et al., 2013).

Findings made from the analysis of studies on pain demonstrate an obvious deficient training in pain assessment and management, together with misconceptions that are common, as some of the apparent barriers contributing to the inability to relieve patients of their distress and pointing the need for more training related to the management of pain (Abed El-Rahman, Al Kalaldeh, & Muhbes, 2013). That notwithstanding, problems including the availability of medications, insufficient time, collaboration with healthcare providers, level of skills, confidence, and the attitude of nurses about pain have all been documented as impediments that have contributed to the current suffering as a result of the pain felt during procedures (Czarnecki et al., 2011).

In a similar descriptive study, to assess emergency nurses’ knowledge, attitude and clinical decision making skills about pain, it was found out that in spite of the numerous and significant previous studies, the issue of lack of knowledge, bad attitudes, and inadequate clinical decision-making skills continue to exist among nurses working in emergency units (Ucuzal & Doğan, 2015). It is the values and biases that the nurse clinician personally holds toward pain and its treatment that influences the way that knowledge and resources are used. Additionally, nurses and other clinicians may not even be aware of their own biases and pain management value system, so they cannot make important changes (Hirsh, Jensen, & Robinson, 2010).

### 2.4 Perceived Burns Pain Behaviours

Research has shown that nurses who are experts can identify indirect pain cues quickly though they might not be able to express these perceptions (Benner & Tanner, 2009; Gilmore-Bykovskyi
& Bowers, 2013). In supporting this, Puntillo et al. (2014) reported that, through critical observation, the absence of movements in critically ill-patients can be recognized as the presence of pain. Thus, observation is a vital skill for assessing burn pain. Directly linked to the above, is the facial expression of patients in pain. In a study by Connor (2012) facial ‘grimace’ was observed to be an indicator that critically ill patients were in pain especially at rest.

Conversely, patients with persistent pain also having acute pain can behave differently than other patients, in that they might not reduce their activity levels because of their pain, thus rendering behaviour a poor measure of pain level in these patients (Siedlecki, Salthouse, Oishi, & Jeswani, 2014). Generally, there is some level of misapprehension between potential treatment expected by the patient to relieve their expressed pain and the caregivers attending to them resulting in sub-standard pain management (Shavers, Bakos, & Sheppard, 2010). This misunderstanding could in part be attributed to the fact that some nurses hold the opinion that analgesics can conceal preliminary clinical features thereby obstructing the correct diagnosis and therapy (Muntlin et al., 2015). This has, nevertheless, been opposed by Manterola, Vial, Moraga, and Astudillo (2011).

The most indispensable element that can help in a complete assessment of pain and its management is the self-report of pain from a patient and, hence, patients must be regularly assessed for pain whenever possible (National Comprehensive Cancer Network, 2017). According to the Thai Association for the Study of Pain (TASP, 2012), the gold standard for the assessment of pain that aids in the efficient management of pain is the self-report of pain from the patient. Coghill (2010) also reported that since a patient’s pain cannot be seen, it only becomes apparent to care providers through individual experience, countenance and the mannerisms of the person in pain.
The main disregard for the major principles that attain the most desirable assessment of pain and control has to do with citing other people as the most dependable determinants of the patient’s pain. This could be a rationale behind why critically ill patients, including those with burns, persistently experience procedural pain, an example from wound dressing (Barr et al., 2013; Czarnecki et al., 2011). On the other hand, if a patient is not able to communicate his/her pain verbally, the most appropriate method to adopt is to assume that there will be pain considering the underlying condition and still administer any prescribed pain medications or if there is an indication that an individual with the same disease would go through some amount of pain (Herr, 2011). This is essential as a quasi-experimental study on the impact of a nurse-initiated analgesic protocol in the Emergency Department (ED), reported that there are significant improvements in patients’ perceptions of the quality of care when their pain is well managed by nurses (Muntlin, Carlsson, Säfwenberg, & Gunningberg, 2011).

2.5 Influence of nurses’ attitudes and Interpersonal communication on burn pain management

The amount of pain felt by patients within the hospital setting can be influenced greatly by a nurse’s level of knowledge and attitude to the extent that unalleviated pain has become one of the most frequent of patient’s complaints (Al Qadire & Al Khalaileh, 2014). The attitude of nurses towards the relief and evaluation of pain as well as their perception of the pain of the patients can result in ineffective pain management (Shaban, Holzhauser, Gillespie, Huckson, & Bennetts, 2012). Apart from a deficit in knowledge, pain management decisions are usually affected by negative attitudes of healthcare professionals toward patients’ complaints about pain and the administration of analgesic (Kiekkas et al., 2015).
Indeed, many nurses gain their insights about pain from their knowledge, nonetheless, knowledge deficits in this area of practice may generate negative attitudes that can interfere with their decision-making skills clinically and add to the complication on the issue of the management of pain (Abed El-Rahman et al., 2013). Though there have been various studies on burn pain, it is, however, frequently not well treated and this has been attributed to an inadequate knowledge and attitude that is wrong in the part of both patients and health professionals and also the lack of a team for the management of pain (Yuxiang et al., 2012). Though several guidelines and recommendations integrate the assessment of pain and techniques for measurement, yet, most nurses fail to utilize the available tools with ill adults (Rose et al., 2012).

In a descriptive cross-sectional study to examine the existing knowledge and attitudes with regards to the management of pain among nurses working in a very specialized hospital in Italy, it was revealed that there is indeed an inadequate amount of knowledge and lean attitudes towards the management of pain among nurses, be it within or outside the intensive care units (Latina et al., 2015). The study also emphasized that there exists no substantial correlation between one’s level of education and attitude/knowledge on the management of pain. The inability to evaluate pain as less serious than it appears, assuming that the patient is overemphasizing his/her pain, matters related to addictions, poor knowledge associated with medications for pain, misconceptions that the management of pain can interfere with diagnostic investigations, and the influence of gender and age have all resulted in insufficient management of pain in emergency departments (Wheeler et al., 2010).

The nurse-patient communication is an essential constituent of nursing together with institutional elements that help with the growth of a constructive relationship between the nurse and the patient as this has an overall benefit of providing excellent nursing care (Happ et al., 2011). A
present-day survey into effective assessment and management of pain revealed that the participation of the patient is a major requirement (Larsson, Sahlsten, Segesten, & Plos, 2011). This participation and partnership with patients require active involvement of these patients in taking decisions as well as the chance to state her feelings about the potency of various therapies available (Vahdat, Hamzehgardeshi, Hessam, & Hamzehgardeshi, 2014b).

Various research works have pointed out that, the relationship that exists between health care providers and their patient, assessment of pain and accompanying documentation can affect the management of pain within the emergency unit (Heins, Homel, Safdar, & Todd, 2010; Iyer, 2011). Studies enlighten us that the management of pain, interpersonal relations, time of waiting and communication are common areas that need some enhancement (Frank, Fridlund, Baigi, & Asp, 2011; Pham et al., 2011). In the prospect of the findings from these studies, a satisfying interaction between health care providers should be appreciated as a means to improve the management of pain in the emergency unit (Kitson, Muntlin, & Conroy, 2014). Educating the patient on pain as well as on both the drug and drug approaches to pain management is very critical here (TASP, 2012). Assessing patient for pain without engaging them results in poor management since they are denied the chance to partake in the assessment (Bach, Forman, & Seibæk, 2018).

Empathy has been identified as an important result of the communication that exists between a nurse and a patient (Vahdat et al., 2014), together with an appreciation of the experiences of the patient and all these enables the patient to be in control of their health care (Larsson et al., 2011). Again, empathy and lack of respect towards the experiences of patients increase the danger of poor management of patients’ pain (Kheshti, Namazi, Mehrabi, & Firouzabadi, 2016). Previous surveys have shown that there is a need for nurses to develop their interaction with their patients
as this is equally necessary to define cultural differences and to deliver nursing care that has a lot of respect for patient’s unique opinions, values, and customs within the healthcare facility (Srisawang, Harun-Or-Rashid, Hirosawa, & Sakamoto, 2013; Zoëga et al., 2015). From this, it can be deduced that having a good interpersonal relationship with patients will look at the patient socially, psychologically and not just address his/her physical issues. However, most patients have described the absence of meaningful interaction with nurses often resulting from the fact that nurses want to maintain some distance or are too busy or concentrating on other duties (Moyle, 2003; Stenhouse, 2011; Stewart et al., 2015). Despite these concerns and situations that impedes on the nurse-patient interaction, the fundamental idea remains that the interpersonal meeting is a key component of the care of patients, not just for the experience of the patient and the growth of an empathetic care culture (Delaney, Shattell, & Johnson, 2017) but also for the security of the unit (Lantta et al., 2016).

2.6 Perceived Coping mechanisms of patients with burns

The concept of coping as described by Lazarus (2013) is a psychological process that is a constant behavioural and cognitive attempt to handle particular internal and external stresses that are judged as demanding and beyond the person's resources. One critical coping mechanism in handling the pain of patients is the use of observation. Observation of pain-related behaviours, physiological indicators are key to systematic pain assessment in a critically ill patient, for instance, those with burns (Gelinas, 2010). Earlier studies have reported that effective coping mechanisms for patients have resulted in positive health outcomes psychologically (Pargament, Koenig, Tarakeshwar, & Hahn, 2004). Other studies have found also submitted that improved quality of life is linked to one’s coping mechanism (Yazdi-Ravandi et al., 2013).
The most frequently diversional activities employed by patients include watching movies or television and thinking about something else (Lambing et al., 2017). This is supported by another study that stated that hospitals must improve diversional therapy in the form of watching television and movies in patient rooms to help with pain management (Tadesse, Yohannes, & Beza, 2016). However, Tuncay, Musabak, Engin Gok, and Kutlu (2008) affirm that there is no consensus as to which coping strategies is the most effective, what matters is how well that coping strategy serves the purpose of relieving emotional distress or solving problems.

The cultural background of an individual also plays an important role in the coping mechanism as Callister (2003) reports that a patient’s cultural background is a factor that greatly influences the experience of pain, thus the need for health care providers to be mindful of its impact on the treatment process. This finding is in line with an earlier study by Lovering (2006) which found out that pain perception is influenced by culture and that the differences in the experience and expression of pain buttresses the assertion that indeed one’s cultural belief is a significant determinant of the pain experience and its communication to others. The nature of patients’ beliefs on pain and the mechanisms they adapt has a significant influence on their functioning, quality of life and health in general (Main, Foster & Buchbinder, 2010; Pons, Rosnay & Cuisinier, 2010). The concept of religious coping was also explained by an earlier report by Uren and Graham (2013) that in general, benevolent religious reappraisals and positive approaches of religious coping such as seeking spiritual support is significantly linked with enhancements in health.

Another form of coping mechanism identified from literature that helps patients deal with pain was the social support provided by significant others. An earlier study by Stephens and Petrie (2015) have documented the importance of social support systems and as such emphasized that it
is very essential to educate patients and their relatives sufficiently on issues including supporting patients, financially, emotionally, and also provide support in the purchase of drugs.

2.7 Summary of literature review

There was a review of literature on “nurses’ experiences with pain assessment and management in patients with burns”. It comprised of the knowledge, experiences, perceived pain behaviours, attitudes, interpersonal communication and perceived coping mechanisms of burn patients. From the review, it was obvious that a lot of studies had been conducted on the general assessment and management of pain among nurses and doctors. However, there seems to be very little research that center on the pain assessment and management of patients with burns among nurses. Specifically, the experiences in terms of the knowledge, attitudes, and skills of these nurses with regards to pain assessment and management among patients with burns is one area in middle income earning countries, like Ghana, that has not been adequately explored. Since nurses are core healthcare givers of patients, there is an imperative need to understand nurses’ unique experiences or effects with regards to the assessment and management of pain in patients with burns. This ultimately shaped the purpose of this study.
CHAPTER THREE

METHODOLOGY

The methodology is the procedures and tools used to collect and analyze data for the study. It comprises of the research design, sample size, target population, sampling techniques, and the research setting. This chapter will also provide details of the steps that were used in gathering data, analysis, and management of the data, methodological rigour as well as ethical considerations.

3.1 Research Design

Burns and Grove (2003) described the design of a research as “a pattern for directing a study with the highest control over those elements that may affect the validity of the findings” (p.195). Parahoo (2014, p. 142) defines the design of a research as “a blueprint that elucidates how, where and when data are to be gathered and analysed”. Polit, Beck, and Hungler (2001) also described it as the overall picture that gives clues as to how the researcher intends to test the hypothesis or to answer the research questions identified.

In studies of this nature, there are three kinds of research designs commonly used. These are qualitative, quantitative and mixed methods. Mixed methods, is generally defined by most scholars as a research technique that combines both qualitative and quantitative methods to conduct research (Burns & Grove, 2003; Teddlie & Tashakkori, 2012). This method offers the broad opportunity for investigating a phenomenon like this as it offers various methods and approaches to the researcher and as well complements the advantages and the disadvantages of both qualitative and quantitative methods (Speziale, Streubert, & Carpenter, 2011).
Quantitative research is done to investigate a specific hypothesis and/or research question, which produces figures and employs the use of statistical analyses to generate statistics that are inferential and descriptive (Teddlie & Tashakkori, 2012; Yin, 2011). This method is good for collating and analysing numerical data (Morse, 2016; Yin, 2011). However, it is not good for collecting and analyzing non-numerical data that the study intends to collate. It is also deficient in exploring human experiences to gain many details (Yin, 2011).

Qualitative research, on the other hand, is defined by Holloway and Galvin (2016) as a form of social research technique that emphasizes on how individuals understand and interpret their experience and the world around them. The method can be described as giving meaning to situations and experiences of life using a systematic subjective approach (Burns & Grove, 2003). Qualitative research is usually adopted by researchers to explore the experiences, perspectives, feelings of individuals, behaviours and to stress the appreciation of these factors. Thus, the focus is on the experiences of the participants’ perspective (Morse, 2016). This perspective from the participant adds to the exclusivity of the collection and analysis of data (Speziale et al., 2011).

Qualitative research design allows the researcher to define the procedures resulting in an exact experience or behaviour relative to the context which leads to that distinctive outcome instead of just stressing on the outcome (Creswell, 2014). An approach with qualitative methods may contribute to a deeper knowledge in areas difficult to evaluate such as perceptions and experiences of patients with pain, the intrinsic mechanisms developed to handle these situations and environmental factors that could modify their experiences (Perez et al., 2016). The various forms of qualitative research designs are phenomenology, grounded theory, narrative research, case studies, and ethnographies. A qualitative exploratory descriptive research method will be used for this study.
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The qualitative research method was chosen over the quantitative research design because of a number of reasons outlined as follows: To begin with, the researcher used this design because little is known on the experiences of burns pain assessment and management among Ghanaian nurses. Besides, it enabled these nurses to give an in-depth and detailed description of their experiences when it comes to pain assessment and management in patients with burns. Finally, the choice for qualitative methods lies in the fact that the technique enabled the researcher use interview guides to conduct series of interviews with experts within the investigative area and analysed the data using thematic content analytical techniques.

3.2 Research Setting

Figure 3.1: Map of Greater Accra Region, showing the location of Korle-Bu Teaching Hospital and its surrounding environs.

The study was conducted at the National Reconstructive Plastic Surgery and Burns Centre (RPSBC) of the Korle-Bu Teaching Hospital, Korle –Bu in the Greater Accra Region. This
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Centre is one of the three burns centres in Ghana. The other centres are in the 37 Military Hospital and the Greater Accra Regional Hospital. Korle-Bu Teaching Hospital is currently the third-largest hospital in Africa. It is the sole public tertiary hospital within the Southern part of the country and the foremost health care establishment in Ghana.

The Korle Bu Teaching Hospital was built on 9th October 1923 as a colonial hospital for what was then the Gold Coast by Governor Gordon Guggisberg. The hospital is at Korle-Gonno, a suburb of Accra, in the Ablekuma South constituency. It has grown from a bed capacity of 200 to 2000 with over 4000 medical and paramedical staff and an average daily attendance of 1500 patients, from which about 250 are admitted daily for further management. The hospital functions as the national referral centre and also a referral facility for other countries in the West African Sub Region. The teaching hospital also has an affiliation with the University of Ghana Medical School (KBTH Annual Report 2016).

The hospital is equipped with three (3) main centres of excellence, namely, the National Cardiothoracic Centre, the Reconstructive Plastic Surgery and Burns Centre and the National Radiotherapy and Nuclear Medicine Centres. The hospital has diagnostic and clinical departments comprising of Obstetrics and Gynaecology, Medicine, Child Health, Pathology, Anaesthesia, Surgery, Radiology, Laboratories, Polyclinic and the Accident & Emergency Centre. Other departments include Pharmacy, Finance, Engineering and General Administration. Aside the provision of health care services, the hospital also offers training for health care personnel like doctors, nurses, anaesthetists and health inspectors.

The RPSBC of the Korle-Bu Teaching Hospital is the biggest referral centre for burns and patients needing plastic surgery in the country, hence, the reason for its selection for this study. The centre admits 360 cases of burns each year with a sizeable number of clients from the West University of Ghana http://ugspace.ug.edu.gh
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African sub-region including Togo, Burkina Faso, and Nigeria. The RPSBC has a total bed complement of 69 which is distributed among the various units of the centre.

The Reconstructive Plastic Surgery unit has 9 male beds, 9 female beds and 6 cots for children. The unit admits patients with congenital malformations, accidents, cancers and other complications resulting from burns. The Burns unit also has 10 male beds, 6 female beds, 6 cots for children and 6 beds in the intensive care unit. This unit admits all types of severe burns cases. The Leg ulcer unit also consists of males, females and children ward- 10 beds for females and children with 8 beds in the male ward. The Leg ulcer unit admits all kinds of chronic ulcers especially the Buruli ulcers.

3.3 Target Population

For this study, the population of interest were nurses who managed patients with burns at the Reconstructive Plastic Surgery and Burns Centre (RPSBC) of the Korle-Bu Teaching Hospital, Accra.

3.4 Inclusion Criteria

This study included all qualified nurses managing patients with burns within the various wards of the burns unit with at least two year’s working experience post rotation.

3.5 Exclusion Criteria

Professional nurses who were sick, on leave, be it annual, study or maternity were all excluded from the study.

3.6 Sampling Method

The selection of participant or participants is one of the initial steps in conducting a research. This procedure is referred to as Sampling and a Sample is the objects or people who are selected
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from a particular population (Marvasti 2004). Polit et al (2001) also described a sample as being a fraction from a population. Purposive sampling was used in this study. Parahoo (2014) describes purposive sampling as an approach to sampling where participants are intentionally chosen by the researcher as a result of their (participants) ability to provide relevant information to the study conducted. The, the non-probability purposive sampling technique was used in this study as participants were selected based on the purposive personal judgment of the researcher. Hence, nurses within the burns unit, Korle-Bu who were eligible for this study were those who were purposively selected by the researcher as they could best inform the research questions and thus enriched the phenomenon under study.

3.7 Sample Size

The researcher recruited 11 participants for the study. The selection of this size of participants was based on the premise that this number is necessary to fully inform all important aspects of the phenomenon under study (Sargeant, 2012). Participants who gave their consent were recruited and interviewed. Saturation, which is the point where no new data emerged from the participants was attained on the tenth participant, however, an additional participant was interviewed, though an in-depth appreciation of the phenomenon under study had been reached.

3.8 Data collection tool

Conducting interviews helps to discover the experiences of individuals as well as the meaning these individuals attach to their experiences through a sequence of questions and answers (Green & Thorogood, 2018). Interviews can be structured or semi-structured. Semi-structured interviews allow for probable follow-up questions that arise during the interview whiles still using pre-defined questions (Grossoehme, 2014). A semi-structured interview guide was used to collect data from the participants as it allowed for probable follow-up questions that arose during the
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interview whiles still using an interview guide. The interview guide had two sections A and B (Appendix E).

Section A was on demographic information such as gender, age, years working with patients with burns, marital status and specialisation in nursing. Section B questions were designed to illuminate the nurse’s knowledge, experiences, attitudes, perceived pain behaviours of burns patient, interpersonal communication, coping mechanisms, burns pain assessment and management. Responses from these participants were recorded with the use of an audiotape recorder and field notes were also taken to enrich the discussion.

3.9 Data Collection Procedure

Prior to the data collection, the researcher presented the formal permission and ethical clearance that was sought from the Noguchi Memorial Institute for Medical Research Institutional Review Board and the Korle Bu Teaching Hospital Institutional Review Board to the Reconstructive Plastic Surgery and Burns Centre which was the main outlet of recruitment. Formal permission was also sought from the Head of the Department of the Reconstructive Plastic and Burns Centre using an introductory letter from the School of Nursing and Midwifery, University of Ghana.

A copy of the consent form and the ethical approval letter was shown to the nurses who served as participants. The interview of the participants was done at their place of work but at a time convenient for them. Data collection was ensured throughout the interviews. The consent form was given to the participant one week before the interview for them to have ample time to reflect on the study before appending their signatures. The interview for each participant lasted between 45 and 60 minutes with the use of the interview guide and the responses elicited was recorded using an audiotape and field notes taken with the consent of the participant. The field notes
focused on the participant’s behaviour and context. Details of the field notes included the environment, interpretations and biases, gestures, the researcher’s feelings and ideas.

The interview was centered on the nurses’ knowledge on burn pain types, their experiences with burn pain assessment and management and perceived behaviour of burns patient when in pain. The interview also focused on the influence of attitudes and interpersonal communication between the nurse and the patient on burns pain management as well as the coping mechanisms of patients with burns when in pain. The researcher employed the use of probes to elicit the responses from the participants after which the expressions and comments from the participants were summarized. Each response given by the participants was accepted as no response was neither right or wrong. To appreciate the participants for their time, snacks were provided after the interviews. The participants were all also informed that should there be a need for any clarification, the researcher will return for more information.

3.10 Pilot Test

According to Holloway and Wheeler (2010), pilot tests are not usually used in qualitative studies but novice researchers could conduct pilot interviews, to get use to the type of data collection. A pilot test was conducted to orientate the researcher to the research work and afford the researcher more insight into the phenomenon whiles developing the interview skills of the researcher. The instrument (semi-structured interview guide) was piloted at the Accident Centre of the Korle-Bu Teaching Hospital, Korle-Bu.

This unit was selected for the pilot test because nurses in this unit also have experiences with the management of patients with burns as those in the main study setting. Two nurses who met the inclusion criteria were interviewed using the interview guide. Their responses were analysed and
the appropriate changes were made in the interview guide that was given to the main participants.

3.11 Ethical Consideration

This relates to moral ethics that a researcher must consider in all phases of the research design. To ensure these moral ethics, a researcher must adhere to the three principles of the Belmont Report which are justice, respect for human dignity and beneficence (Polit et al., 2001, p. 234). Ethical clearance was sought from the Institutional Review Board of the Noguchi Memorial Institute for Medical Research with a research proposal and a letter from the School of Nursing and Midwifery. Permission was also sought from the institutional review board of the Korle-Bu Teaching hospital with an introductory letter from the School of Nursing and Midwifery and a proposal to have site approval to conduct the research.

A consent form was administered to participants before they were engaged in the research. Their freedom to participate, as well as their risks and benefits, were all detailed in the consent form (Appendix D). Participants were informed that they could withdraw from the study at any point and such withdrawal will not in any way affect them. The consent forms were taken after a week which allowed the participants ample time to consider participating in the study. Participants who met the inclusion criteria and agreed on their participation were given the consent form to append their signatures signifying their willingness.

Privacy was ensured throughout the interview. The interview was conducted at the participants’ place of work at a time convenient for the participants. Confidentiality and anonymity were ensured with the use of identification codes for each participant. The participants were then informed that the raw data collected will only be for academic purposes and will only be
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accessible to the principal investigator, supervisors, translator and independent coder. Participants were educated on the fact that the data and other study documents such as consent forms, voice recordings and transcripts would be kept under lock and key for at least five years after the study.

3.12 Methodological Rigour

Rigour has been associated with trustworthiness. According to Holloway & Galvin (2016), it “is the true worth of research”. Research work can also be termed as trustworthy when it is a genuine reflection of the ideas and reality of the participants (Ary, Jacobs, Irvine, & Walker, 2018). Yin (2011) postulates that trustworthiness involves the following elements: credibility, dependability, confirmability and transferability.

According to Polit et al. (2001), credibility refers to the confidence of the data. Credibility of research exists when the findings of that study indeed reflect the views of the subjects under study. In this study, an exact image of the phenomenon under study was projected to ensure its credibility. The study’s findings were a reflection of the views of the participants under study as the responses for each participant was verified after each interview before conclusions were drawn. There was an independent coding by the researcher and supervisor which identified divergent and comparable responses. The appropriate amendment was done.

Dependability of a research, according to Polit et al. (2001), refers to the ability for data to be stable over time irrespective of the conditions. Yin (2011) described a dependable study as one that is consistent and accurate. In this study, clear questions were asked to produce responses that answer the research questions to ensure the dependability of the study. The researcher was honest and transparent in her decision trail with regards to the analysis. The preliminary ideas regarding the themes and categories were discussed between the researcher and supervisors.
The subject of confirmability hinges on the features of the data. Polit et al. (2001) posits that “confirmability is associated with the objectivity or neutrality of data” (p. 234). This means that the findings of research are a true outcome of the study and not the researcher’s preconceptions or assumptions. To ensure confirmability, the research findings were presented from the data collected to indeed reflect the experiences of the nurses about pain assessment and management in patients with burns. The responses of the participants were recorded and transcribed verbatim, out of which themes and subthemes were developed.

Holloway and Wheeler (2016) defined transferability as the ability to apply the findings of a study to similar participants or situations. Thus, the knowledge gained within one setting can be applied and investigators who research in a context can equally transfer their originally developed concepts to another. To confirm transferability, a detailed description of the research setting, that is, the Reconstructive Plastic Surgery and Burns Centre of the Korle-Bu Teaching Hospital, Korle Bu, the methodology as well as features of the individual participants were provided. For future reference, the field notes and the data that were transcribed were kept.

3.13 Data Management

Individual codes were given to each participant for easy identification before the commencement of the interviews. The codes given to the participants were “BN 1”, “BN 2”. “B” represented Burns and “N” was for Nurse and the numbers denoted the number of nurses that were interviewed. The data that were collected during the study was safeguarded to preserve the participants’ confidentiality. A file was generated for each participant’s response containing the field notes and interviews that were transcribed. The transcripts, field notes, and original audiotapes and consent forms were preserved in a safe cabinet which is only accessible to the
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researcher and supervisors. The raw data from the participants were stored on an external hard drive to prevent loss of data. This data will be kept for five years until it is discarded.

3.14 Data Analysis

Data analysis refers to the organization, structuring and making meaning of data. With qualitative data, the analysis is an interactive and active process (Polit et al., 2001). The collection and analysis of data were done simultaneously. The analysis of the data was done with both thematic and content analysis which was based on the objectives and literature review of the study. The analysis of the data involved: Data reduction, Data display, Drawing conclusion and Verification (Huberman & Miles, 1994). The recorded interviews were transcribed verbatim and the transcripts were read several times to recognize related and divergent thoughts and ideas.

Similar words, ideas, and thoughts were coded and regrouped to form themes and subthemes. Quotations that were derived from the participants were used to support the themes. A file was created that comprised of subheadings made up of identified categories and codes. New categories and themes that were identified were then added to the file and this continued until the transcribed data were exhausted.

Comparable themes were clustered into categories. This represented the Data reduction stage of the analysis which is the summarizing, coding and grouping of the data that has been transcribed (Huberman & Miles, 1994). Follow-up questions were asked to confirm the elicited responses from the participants. The findings were then interpreted and conclusions drawn afterwards from the categories and themes to reflect the experiences of the participants on pain assessment and management in patients with burns. This formed the data conclusion and verification stage of the content analysis.
CHAPTER FOUR

RESULTS/FINDINGS

This chapter presents the findings of the study based on the data generated and analysed aimed at exploring the nurses’ experiences on pain assessment and management in patients with burns at the Reconstructive and Plastic Surgery and Burns Centre of the Korle- Bu Teaching Hospital. Verbatim quotations and codes were used to ensure the anonymity of participants and to support the themes and sub-themes. The findings were organized according to the constructs of the Pain Transaction Model (Keen, Embree, Lancaster, & Ellis, 2017), and in line with the research objectives. The first part of this chapter looks at a detailed description the demographic characteristics of the participants, the second part presents a thematic and content analysis of the findings and the last part gives a summary of the chapter.

4.1 Demographic characteristics of participants

Eleven (11) nurses working at the Burns Unit of the Reconstructive and Plastic Surgery and Burns Centre of the Korle-Bu Teaching Hospital in Accra participated in this study. Four (4) participants were males, and females were seven (7), representing 36 % and 64%, respectively. Of the total participants, nine (9), representing 82% were between the ages of 30 -39years, one (1), representing 9% was between the age of 40- 49years, and one (1), representing 9% was also between 26-29 years. Seven (7) of the participants, representing 64% had gained 6-10 years of working experience in the healthcare service, one (1) participant representing 9% had 1-5 years, and three (3) participants, representing 27% had 11-15 years of working experience. Concerning the educational level of participants, the total sample, all eleven (11) participants had Tertiary education representing 100%. Regarding, nurses’ field of specialization, it emerged that only two (2) representing 18% were specialized in Public health and Advanced Burns care, with the
remaining nine (9), representing 82% without any specialisation. Furthermore, most of the participants (6) were Senior Nursing Officers (SNO), with one (1) a Principal Nursing Officer (PNO) and three (4) were Nursing Officers (NO).

4.2 Emerged Themes and Sub-Themes

The concepts that emerged, following the data analysis, were classified into themes and sub-themes to reflect the experiences of participants on pain assessment and management in patients with burns. Four (4) themes and (20) sub-themes were identified following the data analysis and in line with the objectives of the study. There were two(2) additional themes with five(5) subthemes that emerged from the analysis of the findings. These have been presented in Table 1 below.
Table 1: Synthesis of Themes and Sub-Themes

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub-Themes</th>
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<tbody>
<tr>
<td><strong>Knowledge and experiences on burns pain.</strong></td>
<td>a. Types of burn pain</td>
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<td></td>
<td>b. Aggravating factors of burns pain</td>
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<td></td>
<td>c. Consequences of unrelieved burns pain</td>
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<td></td>
<td>d. Sources of knowledge on burns pain assessment and management</td>
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<td>e. Knowledge on burns pain assessment</td>
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<td>f. Burns pain management</td>
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<tr>
<td></td>
<td>i. Pharmacological</td>
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<td></td>
<td>ii. Non–pharmacological</td>
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<td></td>
<td>g. Experiences with burns pain assessment</td>
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<td></td>
<td>h. Experiences with burns pain management</td>
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<tr>
<td></td>
<td>i. Evaluation of relieved burns pain</td>
</tr>
<tr>
<td><strong>Perceived pain behaviour of patient with burns</strong></td>
<td>a. Verbal expression</td>
</tr>
<tr>
<td></td>
<td>b. Non verbal expression</td>
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4.3 Knowledge and Experiences on burns pain

The first objective of the study was to explore nurses’ knowledge and experiences of pain among patients with burns. The main theme of knowledge and experiences of nurses on burns pain sought to answer the research question, “What is the nurses’ knowledge and experiences on burns pain?”. To answer this question, nine (9) subthemes were identified following the data analysis: knowledge on burns pain types, aggravating factors of burns pain, consequences of unrelieved burns pain, sources of knowledge on burns pain assessment, knowledge on burns pain assessment and burns pain management. The other subthemes derived from this main theme included experiences on burns pain assessment, burns pain management and evaluation of relieved burns pain. For the theme on perceived pain behaviour of patients with burns, two (2) subthemes, that is verbal and non-verbal expression of pain were derived.

The theme on the influence of attitude and interpersonal communication on burns pain assessment also emerged positive and negative attitudes and positive and negative effects of interpersonal communication. For the theme on perceived coping mechanisms of patients with burns, five (5) subthemes emerged which are diversional therapies, positional changes, religious coping, cultural beliefs and social support. From the study two additional themes emerged which were not part of the constructs of the model. These were the Non-physiologic causes of pain and the psychological effect of burns pain management on the nurses. Three (3) subthemes namely adapting to present condition, grieving, cost of healthcare emanated whiles two (2) subthemes namely self-motivation to recover and coping mechanisms were also developed from the psychological effect of burns pain management on the nurses.

The participants described burn pain types as being associated with the degree of burns, that is, first, second, third and fourth degree burns whiles others described it as being mild or severe.
Some aggravating factors for burns pain that were identified were positioning, change of wound dressing, physiotherapy and surgical procedures. Most of the participants were aware of some physiological and non-physiological effects of unrelieved pain in patients with burns. These physiological effects included high blood pressure and pulse rate. Lack of sleep, anorexia and lack of cooperation with care were some of the non-physiological effects.

With regards to sources of knowledge on burns pain assessment, majority of the participants reported having acquired their knowledge on this key indicator through formal training which included departmental workshops, in-service training and previous conferences or personal studies (reading books or browsing the internet). The pain management techniques these participants used in the management of the pain were pharmacological and non-pharmacological. Reassurance, engaging patient in conversations, watching television as a form of diversional therapy was mostly some of the non-pharmacological techniques employed by these nurses to manage the pain of patients with burns. Accordingly, the pharmacological techniques were mostly used during procedures, for instance, change of wound dressing. Regarding nurses’ experiences with burns pain, the participants elaborated on the various techniques they used to assess and manage burns pain as well as how they evaluated the effectiveness of therapy given. Details of the findings are illustrated below:

4.3.1. Knowledge on burns pain types

The study explored the knowledge of participants on the types of burns pain. Some participants associated the burn pain types with the degree of the burns with the first and second degree having the highest level of pain as nerve endings are exposed hence, making the patient very sensitive to pain. Other participants, from the interviews conducted, also ascribed less degree of burns pain to third and fourth-degree or deep burns as a result of damage to the nerve endings
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thereby rendering the patient insensitive to pain. The third and fourth degree burns, according to the participants, goes down to the dermis.

*With the burns, with the first and second-degree burns, their pain threshold is high as compared to the third and the fourth-degree burns where the pain threshold has been destroyed with the nerve endings so they don’t have much pain. So somebody might come in charred like charcoal and will be lying down there, cannot express pain, the patient doesn’t have any pain sensation ...* (BN-1)

*You know, burns have stages especially with the first and second degree burns where the superficial, that is, just the epidermis has been burnt off, that one it is, the nerve endings and all other things are exposed so when you touch it, there is pain. With the very deep burns, you know, the third and fourth-degree burns, since the skin burns down to the dermis and sometimes fatty tissues, nerve endings are gone, so most of them don’t feel pain at all* (BN-9)

Other participants categorised the extent of the burns pain with whether the burn is superficial or deep. The superficial burns they described as having minimal pain though very painful whiles the deep burns are less painful.

*The degree of the pain will be different because the superficial burns will have minimal pain even though it is still painful whiles the deep pain will have less pain* (BN-3)

*The superficial ones like the scalds, are painful, so those are the types of pain I know the patients with burns go through* (BN-1)

Classification of burns pain may not be exactly as classified above, from the responses analysed, but there could still be some clear indication from the extent of the damage. Some participants talked about burns pain as being mild or severe.

*You see, I can’t just give you the exact thing but you see in assessing you realized that some of them the pain is mild, some they are very severe* (BN-4)

One participant, however, classified and described the burns pain types in terms of the damage to the layers of skin.
With burns, once you are burnt, you will automatically be in pain because the epidermis is off. There are times that we have the epidermis and dermis going off and its goes deep and very painful (BN-6)

However, some of the participants were not familiar with the burn pain types that existed or were not able to describe the burn pain types as they had either forgotten or were not familiar with them.

I am not familiar with types of burns pain (BN-3).

I have read about the burns pain types but frankly, I have forgotten about them. (BN-2).

4.3.2 Aggravating factors of pain

From the study conducted, it was realised that some factors aggravated the pain for patients with burns and also causes much anxiety for them. Some of the factors identified according to these participants were a change of wound dressing, physiotherapy and surgical procedures including the Skin Split Graft (SSG). These factors resulted in changes in the patient’s vital signs including high blood pressure and palpitations. Some adult patients even cry during and after the change of wound dressing.

You see, even before dressing, when you check, you realise that patient is having palpitations, BP is high, and from everything you know the patient is anxious. Sometimes the moment you mention the patient’s name for dressing after you’ve given all the painkillers, he’ll say that I want to visit the loo (BN-9)

During procedures, most at times during the change of dressings, the person will really be in pain and secondly during physiotherapy time, that is the time that they feel the pain the most (BN-7).

I have realised that when they come from the skin grafting, the donor site is very painful since most often the nerve endings are affected and so they feel the pain. So when they come you realize that they are in pain, and when you ask them where the pain is and they will show you the donor site (BN-4).

Some do cry, they cry, especially when they come back from theatre and the dressing room, they cry a lot, both adults and children (BN-8).
However, another participant described their pain as timeless and thus always present irrespective of the time of day or season:

Their pain is timeless because it is always there. They don’t have a specific time, say in the morning or it is worse in the afternoons or it’s mild in the rainy season, no, once the pain is there, it is there (BN-6)

4.3.3 Consequences of Unrelieved Burns Pain

This subtheme described both the physiologic and non-physiologic effect of unrelieved burns pain on the patient. Some of the non-physiologic consequences of pain participants articulated were lack of sleep, anorexia and inability to communicate. Other non-physiologic effects of pain included the inability to ambulate and reduced activity levels

Pain affects everything, when they are in pain, they don’t even feel for food because of the pain (BN-1)

It affects their feeding too, it affects their communication, sometimes they shout at nurses all because of the pain (BN-8).

The pain affects their activity levels. You know we usually encourage them to ambulate, so if the person is in pain, the person will not like to move about. It affects ambulation since the person will not want to ambulate (BN-3).

High blood pressure (BP) and pulse, high temperature, breathing problems, were some of the physiological consequences of unrelieved burns pain identified by the participants.

The pain affects their breathing pattern, making them breath faster than normal. It affects their vital signs, sometimes their BP’s shoot up and their temperatures also begin to rise (BN-1)

Sometimes when they are in pain, you check their pulse and you realize that it is going up, and sometimes it even causes some patients temperature to go up too (BN-10)
Another participant also expressed her sentiments about the fact that unrelieved burns pain can delay wound healing due to the inability to clean the wound well.

_A few times, because of the pain, you say, ok, let's go over the dressing and cover it, next time we clean it so we don’t clean the wound well and all that will delay the healing_ (BN-9).

4.3.4 Sources of knowledge on burns pain assessment and management

From the study, majority of the participants (8) reported having acquired their knowledge on burns pain assessment through formal training which included departmental workshops, in-service training and previous conferences or personal studies (reading books or browsing the internet). One of the key sectors from which nurses acquired their knowledge of pain assessment and management was through formal education. One of the nurses reported that she had her training from school:

_I learnt about pain assessment and management during my Registered General Nursing training several years ago_ (BN-5).

_We were taught about pain assessment during our degree training_ (BN 3)

However, another participant articulated that their knowledge on pain assessment acquired from school was not easily applicable as the burns unit is an area of speciality and hence, things were done quite differently.

_Burns is something like an area of speciality, so most of the things we learnt in school on pain assessment, when you come here, you realise that things are quite different_ (BN-8).

Another key source from which the majority said they acquired their knowledge on pain assessment and management was from the weekly departmental training and presentations
organized by the burns unit. These trainings were organized for doctors and nurses on

Wednesdays and Thursdays respectively.

\textit{Here at our department every Wednesday there is a presentation by the doctors’ and that of the nurses’ is on Thursdays} (BN-11).

\textit{We normally do presentations, that is, the doctors presentations and the nurses presentations. The doctor’s presentation is on every Wednesday where they look at the wards and select cases of interest. We do everything about burns. The nurses also have their presentations but that one they do it every Thursday. They will choose a topic and we go for the presentation} (BN-2)

These departmental trainings were, however, not only centred on pain assessment and management but burns care in general:

\textit{Since I started working here, I have not seen or heard of any workshops organized mainly for pain assessment. We learn these things in the ward} (BN-8).

\textit{The conferences we have had was not on pain management alone, it is a package of management of burns cases and besides, pain management was one of the topics we discuss there} (BN-1)

Another articulated this:

\textit{Within the units, we do presentations on burns management and burns pain so more or less almost every quarter we hear of management of burns pain} (BN-6).

It was also identified that they acquired their knowledge through occasional workshops organized by the hospital. This training according to one participant, was infrequent as the last one took place about a year or two ago.

\textit{Once a while there are workshops organized by Korle Bu also on burns and pain management. The last one was, I think last year or last two years} (BN-10).

Another participant reported:
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I've had some workshops on pain management from the main hospital but the last one was about 2 or 4 years ago (BN-5).

Some nurses also recounted that they learnt about burns pain through personal reading and search from the internet to stay abreast.

Occasionally I read on the internet because there are times we get cases that are not like the ones that we usually have and such cases because it may be new, you may need to do your research on it on the internet for you to be abreast with the management (BN-6).

I think I've read; I've been reading about burns pain (BN-2)

If you read too in the literature in the books and you come to the ward, it helps (BN-10).

4.3.5 Knowledge of pain assessment tools

Majority of the participants (7), had some knowledge about the Numeric Rating scales (NRS) and the Visual Analog scales and could describe it, though the burns unit did not have available tools to assess pain or conventional protocols to assess patients with burns’ pain at the time of conducting this research.

We were taught using the number on the scale of one to 10 and then there is another one which is the faces. With that one, there are facial expressions and each face with its expression tells how the patient is experiencing the pain (BN-10)

I know the visual analogue scale which shows some faces. Each face with its expression tells the level of pain of the patient. The Numeric Rating Scale rates the patient’s pain using numbers. It has a range of, I think, zero to 10. With zero being no pain and then 10 being the maximum level of pain experienced (BN-2)

Normally we have a scale of 0 to 10 with zero being no pain and 10 being the highest pain and that will be for the normal people who are in pain. But for people who are burnt with, say, hot oil or hot water, automatically you don’t need that pain assessment scale (BN-6).
The remaining four (4) participants in the study had neither heard nor seen any pain rating scales used to assess pain in burn patients:

*I have never heard of any tools that we use to assess pain. So you can tell me if we have anything like that to assess patient’s pain* (BN 10)

*Frankly I heard about the pain assessment tools in our workshops here but I haven’t seen one before* (BN-10)

Majority of the participants (9) talked about the fact that the unit did not have any pain assessments tools to assess the pain of the burns patient or the intensity of the pain:

*We don’t have any tools and since I came here I have not used or we do not use any tool to assess pain* (BN-4)

*I learnt about pain management or assessment of pain but, in reality, we don’t use the scale or tools here in this unit* (BN-7)

*Here we do not use the tools or scales we usually rely on what the person tells you or their facial expression and all that* (BN-8)

### 4.3.6 Burns pain management

To further explore the general knowledge of nurses on burns pain among patients with burns, the analysis identified knowledge on burns pain management technique as one of the key indicators. Generally, the majority of the participants outlined some pharmacological and non-pharmacological techniques in the management of a patient’s pain. This implied in general that the majority of the participants were able to tell which drugs were usually prescribed as well as when these drugs should be administered.

#### 4.3.6.1 Pharmacologic management of burns pain

Most of the participants listed both the Non-Steroidal Anti-inflammatory drugs (NSAIDs) and the Opioids as the main classes of drugs used for the pharmacologic management of burns pain. Similarly, nurses in the burns unit had knowledge regarding the differences between NSAIDs
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and opioids which are different forms of medication administered to patients. Some of the NSAIDs identified included brufen, naklofen, diclofenac. They also use paracetamol (as an analgesic and antipyretic). For the Narcotics or opioids, tramadol, pethidine, morphine and ketamine were the drugs of choice enumerated for severe burns pain.

_The NSAIDs we use mostly here is diclofenac. The NSAIDs sometimes works with the pyrectics, the paracetamols (BN-1)._  

_For the burns patient, we give paracetamol, we give them tramadol and diclofenac. Diclofenac is normally given when they come right away. Then we give the IV paracetamol and tramadol. In severe cases, we give them morphine or pethidine (BN-2)._  

_Here basically we use pethidine, morphine, diclofenac, for our freshly admitted patients and later we give them the paracetamol and diclofenac tablets to relieve their pain. Usually, before their change of dressing, we give them ketamine (BN-10)._  

Some participants also mentioned the use of anxiolytics and sedatives to help calm and relax these patients with burns and to help them sleep when they are in severe pain:

_If we realize that you are anxious, we give some anxiolytics like Midazolam to calm them, so that, at least they can sleep and have a relaxed mind (BN-1)._  

_We give Diazepam when the patient is complaining that he can’t sleep and you have done everything possible but it is not working, we give Midazolam as a sedative, 7.5 mg (BN-5)._  

4.3.6.2 Non pharmacological techniques in pain management

The nurses also adopted various non-pharmacological strategies in the management of burns pain such as reassurance and engaging patient in conversations:

_We try to reassure them, we try to tell them that though they have this big wound, if we don't clean your wound, is going to get infected At least, for some of them, just the size of the wound scares them so if you don’t psychologically prepare them, it gives a lot of trauma to the patient (BN-9)._
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Non-pharmacological means, that is, specifically, we engage the person in conversations to take their mind off the pain (BN-5)

Sometimes, you just talk to the patient, like some kind of reassurance you know, so when you go and talk to the patient and give the reassurance touch, it sorts of calms the patient down before the doctor arrives (BN-8).

Contrary to this, one participant believed that these patients’ expression of pain was a means of seeking attention to themselves:

Sometimes they need attention especially when they think you are paying more attention to a patient than him or her. So they start calling you that they are in pain so when you go and talk to them and also reassure them, then they relax (BN-4).

Other non-pharmacological means employed by these participants included the use of diversional therapies such as watching television and hilarious movies that make these patients laugh:

If there is a program on the television, we encourage them to watch and that one is just diverting their attention from the pain (BN-7)

When they are in pain, we make them watch movies especially the ones that will make them laugh and all that helps take the minds of the pain (BN-5).

At times too, when they are complaining of pain, we switch on the television for them to watch these local movies or Kumawood that will help them to laugh to ease their mind off the pain (BN-9).

Some of the participants also talked about changing a patient’s position in bed or assisting the patient to assume a comfortable position in bed to help reduce or relieve the pain:

If the patient complains of pain in one part of the body, you can equally change the way the person is positioned in bed and it sometimes helps (BN-10).

We also do ask them which side they feel the pain the most. If I turn it in a particular way, does it aggravate the pain or not. So you see that he/she will tell you the position that best relieves the pain, so it’s not always the medications (BN-3).
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You know with burns, when they are in severe pain they will not be stable on their bed not that they will be walking about, they will be tossing and turning in bed trying to find a comfortable position for themselves, so that’s where you go in and help put them in a better position (BN-4).

4.3.7 Experiences with burns pain assessment

In the absence of pain assessment tools, some participants described the various means or measures they use to assess the level of burns pain or its intensity. To assess the patient’s pain, most of the participants expounded on the fact that they used the size of the burns, the depth of the burn and the surface area covered to ascertain the amount of pain the patient will have and manage accordingly:

Once the burns patient comes, and you see the burns areas on the skin, you don’t wait for somebody to tell you that this patient will be going through the pain, you will just know (BN-9).

You know when you look at the the burns, you know that this one is superficial or deep partial burns. So you will know that this patient must be experiencing much pain. So we normally make our pain assessment from the depth of the burn injury and surface area to assess the level of pain (BN-5)

Some participants also highlighted some strategies they used to estimate the intensity of the pain by asking the patient to use signs to measure how big or small the pain is in the local dialect. The participants also reported that some of the patients also equate the intensity of the pain to a gnawing or throbbing pain.

A few times, if you are not sure of what the person is saying, you just ask the patient how painful or what is the extent of the pain you are feeling? Then you make signs with your hands, when you measure, how big or small is it? You know with them, you use the language that the patient will understand and then they will tell you this is how big or small my pain level is, and then you can know what is going on with the patient (BN-11).

How painful is it? Is it gnawing, burning or throbbing pain, you know something to describe the pain in a way so you can try to figure out what the person is saying because they are not able to use the numbers to describe the pain intensity (BN-5).
Another participant emphasized the fact that a patient’s response to pain medications is another way by which they assessed a patient’s pain within the burns unit. Thus when a patient still complains of pain even after the administration of pain medications, then it is an indication that indeed the patient is still in pain. On the other hand, no complaints indicated that pain has been adequately managed.

At times, with all the pain medications, say morphine or tramadol plus paracetamol, and this person is still complaining of pain that shows that truly there is pain because the person cannot be on morphine and still complain of pain. Even at times, you will give pethidine before dressing the person’s wound and he will still complain, so for the pain to persist after all these drugs, you can say that patient is indeed experiencing pain. So that is how we assess their pain (BN-8).

4.3.8 Experiences with pain management

With regards to the management of pain, some of the participants explained that for faster relief from burns pain, they use their discretion to either increase the dosage of the drug given or add another drug to achieve faster results. These, according to some of the participants, are usually not documented.

So if you’ve given Pethidine earlier we can say, let’s add IV paracetamol or suppository Diclofenac to it and that one no doctor will come and tell you. Those things we don’t usually document but once a while we will write it in the nurses’ notes but we don’t have it on the medicine chart (BN-7).

We use our discretion. Usually, for the high percentage of superficial burns, we prefer ketamine or pethidine and then we add some paracetamol to it. If it is a normal or small wound, we use diclofenac and tramadol plus paracetamol (BN-9).

There are times we send a patient with about 150 kg to the treatment room and we want to take care of his wound, sometimes a house officer will come and say give 75mg of Pethidine. This patient is 150 kg so how do I give 75mg? So with that one me, I won’t give 75mg, I’ll give more because at least if I don’t know anything at all, I know that 1mg of the drug per Kg body weight, so I’ll give you more (BN-6).

The opioids most of the time, we go in for the pethidine or tramadol and if the pain is not going down, we step it up with the pethidine and the morphine or we even increase the doses ourselves to achieve what we want (BN-1).
However, one participant articulated that for fear of causing respiratory depression, they do not re-administer pethidine irrespective of the pain intensity of the patient but will wait for the doctor’s review of the patient before giving any additional pain medication:

*You know there are times that you give patient, for instance pethidine, and 15 minutes later the patient tells you that the pain is back and with such a patient you don’t administer another Pethidine because we have the dosages that we are supposed to administer. If we don’t take care we may cause respiratory depression or harm because that is the side effect of Pethidine. So in such a case, we try to explain things to the patient for him or her to understand whilst waiting for the doctor’s arrival for review of the patient (BN-6).*

Some participants also explained that for a faster relieve of burns pain, the intravenous route (IV) or the injections are preferred. The capsules or tablets are given as the patient gets better.

*It sometimes depends mostly when they come first and the pain is very severe, then we start with the IV pain relievers and as time goes on and the pain reduces, we convert from the IV’s to the capsules or tablets (BN-5).*

*Mostly here when they come initially, we give them the injections but with time the oral pain medications are prescribed (BN-11).*

Another participant talked about the fact that sometimes to have a sustained effect of these drugs, they siphoned perfusors from the newly established but yet to operate ICU (Intensive Care Unit) to give a continuous infusion of morphine especially for those with large surface burns area.

*Sometimes a few cases, we have a new ICU that we’ve not been able to operate yet so we have been siphoning perfusors from the ICU, you know, perfuse morphine usually one gram per hour. When it is so severe, especially patients who have large surface area burns, they can’t bear the pain so we continuously have to perfuse the pain drugs and we usually give them morphine (BN-9).*

One participant, however, mentioned the use of cold water on the affected area to reduce and soothe the pain:
One thing, though which is not documented is maybe when you pour cold water, that is if the weather is not cold but warm, you can just pour ordinary cold water on the fresh burns and it soothes and calms the patient's down and brings the pain down to the barest minimum (BN-6).

Some participants talked about some challenges that affected pain management of these burns patient. One of these challenges included the effects of alcohol or drugs on the potency of these pain medications:

There are drug addicts who sometimes will be walking around the market place and they will go and steal people’s things and they will pour hot water on them and sometimes set them ablaze and are brought here. So for such a person no matter what you do or the drug you give, the guy will still be awake and complaining of pain (BN-8).

Alcohol does affect their response to pain medications. For such people who are alcoholics or drink a lot of alcohol, we give pethidine it won’t work, we give it will still not have any effect, so after more questioning, we then realize that the patient takes in alcohol and that is why the drug is not working (BN-7).

Sometimes we are supposed to give patient Diclofenac injection. We give, they still complain of pain, we give again and still nothing. Then we ask them, do you drink alcohol? and the patient will say yes (BN-2).

Other participants elucidated on other challenges such as the inability to purchase pain medications or access prescribed drugs from the pharmacy as another challenge affecting burns pain management. This is because the pharmacy withdraws its supply of drugs when there is no payments for already supplied drugs. Apart from this, the pharmacy at the burns unit closes by 4 pm on weekdays, hence patient who come in afterwards and do not have money to purchase from the main pharmacy will have to endure the pain. The nurses sometimes use leftover drugs from other discharged patients especially during night duties and weekends when the pharmacy is not opened.
Sometimes, initially, when you go for the drugs from the pharmacists they supply but if the patient is not making any further payments, the pharmacist also withdraws and so you don't readily get the analgesia so you keep on begging for drugs. The peak of our problems are mostly on the weekends and also in the nights and latter part of the afternoon shift (BN-1).

Some of them don’t even have money to buy the drugs at all so when you have leftovers from patients who have been discharged and all that, we sometimes use them for other patients (BN-11).

For most of the drugs here, the health insurance doesn't cover so when the patient does not have any money to purchase the pain medication, that means the patient will not receive the drug. Sometimes we have to wait till a family member comes to get the drug and it makes managing the pain very difficult. And those that the insurance covers too might be difficult to obtain if the pharmacy is not opened (BN-2).

4.3.9 Evaluation of relieved burns pain

With the evaluation of relieved pain in patients with burns, the participants mentioned various techniques that they used to determine if a patient’s pain had been relieved or not. These included patient verbalizing the absence of pain, relaxed facial expression, being able to move around, sleeping comfortably, chatting with others, stable vital signs and performance of physiotherapy:

*For adults you will see that the person has relaxed facial expression, some of them will go to sleep comfortably or you can see that he is having a good sleep which tells you that the pain is gone. For those who like talking too will start talking all over and then they will begin to do things they wouldn't have done if they are in pain like walking around and all that will give a clue that the pain medication is working (BN-4).*

*Usually when they complain that nurse I have pain here or I'm feeling pain here and you give the medications, after a while, we ask, right now is it ok then the patient will tell you yes it has subsided or I am ok. At times after giving the medications, they can do their physiotherapy which tells shows you that the pain has subsided (BN-7).*

*Apart from they telling us that the pain is no longer there, we normally check their vital signs too and if it is within the normal ranges, then we know that the pain medication has been effective (BN-1)*
4.4 Perceived pain behaviour of a burns patient

The second objective of the study was to explore the perceived pain behaviour of patients with burns. Following the data analysis, the study identified two significant sub-themes to achieve the stated objective. These subthemes revealed participants’ perception of the behaviour of patients with burns when in pain. In summary, the perceived behaviour of burns patient when in pain was categorized into two broad sub-themes: verbal and non-verbal expression. The verbal expression of pain by patients included shouting, praying and screaming. For the non-verbal expression of pain, participants reported facial expressions like frowning, changing position in bed and body movement. Men were known to be more aggressive when in pain compared to their female counterparts. As indicated in the first objective above, the use of pain assessment tools to assess burns pain was rare in the burns unit, thus, these nurses’ assessment of pain among patients with burns is dependent on patients’ expression of pain through both verbal and non-verbal ways.

4.4.1. Verbal expression of burn pain

Participants identified various forms of verbalization expressed by burn patients when in pain.

Some patients with burns expressed their pain verbally by praying, shouting, screaming, crying, and in rare instances verbally abusing the nurses.

When they are in pain, some of them, they will shout and scream, and they will be screaming that they are in pain... (BN-1)

Most of them whenever they are in pain, they can’t keep quiet. You will see them screaming and shouting and even rain abusive words on you when they feel you are not attending to them (BN-10).

Similarly, some participants said that some of the patients with burns cry when in pain:

Some of the patients cry, some of them shout, in fact, a lot of these patients when they are in pain cry, even the older people also cry a lot... (BN-2)
Sometimes when you come in the morning and you ask them if they have any complaints or problems this morning, the person will cry and tell you he/she is pain (BN-3)

Some of the patients you will see them crying, some will be frowning, some too will simply verbalize that they are in pain (BN-3)

Another participant stated that the verbal expression like screaming and shouting, hardly happened in the burns unit, unless the patient’s previously administered pain medication had worn off and the patient had not been given the needed attention:

Screaming, shouting hardly happens unless the drug has worn off and the patient has not been attended to but it hardly happens (BN-9)

Others resorted to prayers when in pain or better still communicated directly with nurses:

Some of them pray because they are in pain, some of them you hear them calling your name often and then some tell you they are actually in pain (BN-2)

Overall different burn patients expressed their pain differently, as reported by these participants.

4.4.2 Non-verbal expression of burn pain

Some of the major non-verbal ways patients with burns used to express their pain included facial expression, body movement and frequent changing of position on the bed.

4.4.2.1 Facial expression

Some of the facial expression elucidated by these participants during the study included the closing of eyes severally, crying, frowning and a reduced sense of humour:

First and foremost, what I have observed is that when they are in pain, you see that the person will be closing the eyes not once not twice, but several times and if you see all that, you will ask the patient? are you ok? and he’ll say no, am feeling pain here (BN-5).
Well automatically, when someone is in pain, the person doesn’t smile so the person will frown, even if you are trying to crack jokes with the person, they won’t smile (BN-6).

4.4.2.2 Body movements

Other participants also described body movements as some of the perceived behaviours of patients with burns when in pain. Some of the body movements that were identified included sitting uncomfortably in the chair and shaking of their legs.

When they are in pain you realize that they will be sitting in a chair raising their buttocks as if someone who wants to defecate and that one alone should tell you that this patient is in pain not necessarily screaming or shouting (BN-1)

Their mannerism, like shaking their legs in bed and sweating will tell you that something is going on wrong, and usually when you probe further, you find out that that he’s in pain (BN-10)

Through burns patient’s frequent body movement or changing position in beds, nurses can identify those in pain, and the necessary arrangements are made to help curb the situation.

You know with burns, when they are in severe pain they will not be stable on their bed, not that they will be walking about, you know, turning and other things they just want to find a comfortable position for themselves, so that is where you go in and help put them in a better position (BN-4)

In most cases, critically ill patients with inhalational injuries are usually intubated making verbalization difficult. Thus, body movement becomes one of the means intubated burns patient expressed pain as they cannot talk. These patient’s vital signs, that is high blood pressure, and pulse is other indicators that the participants used to ascertain that the intubated patient is in pain.

In extreme cases, they become very aggressive of the pain:
Yes, critically ill patients, especially those with inhalational injury when they come we intubate them, so a few cases they can’t talk so when they are in bed and they are feeling pain, you will see they become restless and sometimes very aggressive… (BN-9).

Sometimes when they become unconscious, like after surgery, we use their vital signs like the blood pressure and the pulse to know whether they are in pain or not (BN 1).

4.4.2.3 Individuality of pain

Some of the participants also expounded on the fact that the expression of pain among patients with burns was an individual phenomenon as they expressed pain in different ways; male adults were perceived to express pain more aggressively compared to their female counterparts.

Men, they are the worst when it comes to tolerating pain and a few times, a few of the females too cannot tolerate the pain but it is the men or guys who fight us in the treatment room because of the pain. So when you compare men and women the men are the worst (BN-9).

As for the men they cannot stand pain at all. They are too known in the heart but they can’t withstand pain (BN-2).

4.5. Influence of attitude and interpersonal communication on burns pain assessment and management

The third objective of the study was to explore the perception of the participants on how the attitude and interpersonal communication between the nurse and the patient affected burns pain assessment and management of patients within the burns unit. The major themes that sought to capture participant’s attitudes towards patients with burns pain were categorised under two broad subthemes: positive and negative attitudes. The positive attitudes identified included: acknowledging the presence of pain in patients with burns, a willingness to help and regular communication with patients with burns. The negative attitudes were: not prioritizing pain
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management, exaggeration of pain by patients, fear of addiction to opioids, administration of placebo (water for injection) and frustrations expressed by some participants. From the findings, many negative attitudes of nurses were established compared to the positive attitudes.

Participants were also asked about the effects of good interpersonal communication on burns pain assessment and management. All eleven (11) participants confirmed that having good interpersonal communication with patients had a positive impact. It greatly improves not only pain assessment and management but also healthcare delivery in general, particularly within the burns unit. The participants also enumerated some negative effects of bad interpersonal communication between nurses and patients with burns.

4.5.1. Positive Attitudes

The positive attitudes identified included: acknowledging the presence of pain in patients with burns, a willingness to help and regular communication with patients.

4.5.1.1 Acknowledging the presence of pain in patients with burns

Most of the participants said that they accept the patient complains of pain as “he who feels it knows it” and thus they do not “joke” with patients with burns’ pain.

*If the patient is in pain, the patient is in pain there is nothing you can do about it because he who feels it knows it so if the person feeling it says I am in pain, then he is in pain (BN-5)*

*Every nurse here knows that once the patient is in pain, he is in pain and since you know the patient is in pain you will need to try and relieve the patient of the pain (BN-2)*

*Whenever they complain of pain, we always respond to them because we know that when it comes to burns and pain, they are like friends so we don’t joke here with burns pain (BN-7).*

*Personally, I don’t like pain so when they complain of pain, it gets to me because I know how it feels (BN-9).*
Willingness to help was identified as another positive attitude of nurses towards patients with burns issues. Majority of the participants revealed that burns are very painful and expensive to treat, and thus patients should be given the needed attention at least to minimise their pain (both psychologically and physically). Responding to patients complains, looking out for other possible causes of pain, and making the needed referrals were the critical indicators of participants’ willingness to extend help. This was elucidated in the words of some of the participants:

*We try to look out for other causes of stress for the patient and whenever it is in our means to help, we try to find the appropriate solutions..... (BN-1)*

*A few times we have to take money from own pockets to buy dressings for them and all that because seriously most of the people who come here are the people who rather do not have money (BN-11).*

4.5.1.3 Regular Communication

Communication was one of the emerged positive attitudes exhibited by the participants towards patients with burns. Majority of the participants (9) showed interest in ascertaining patients well-being by constantly talking with them to know their health status. They interacted with these patients and also listened to them:

*You know, in the beginning when you interact with the patient, you will know how he/she does his things so from there, you realize that if the person is in pain, or if the attitude has changed then you realize that there is something wrong somewhere and that is where you approach the person and ask if he is in pain or needs something (BN-2)*

*Well, well, for this particular question, I will not talk for everybody. I will talk for myself. For me, I think it is a gift. I will say it is a gift and I like to talk, not just talk. But I like to listen and communicate with my patients (BN-11)*
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4.5.2 Negative Attitudes

The study also established some negative attitudes of nurses towards the pain of patients with burns injury. These negative attitudes included not prioritising pain management of patients with burns injury, the feeling that burns patient exaggerate their pain, frustrations with pain management, fear of addiction to drugs and administration of placebo (water for injection).

4.5.2.1 Not prioritizing pain management

Delay in initial pain management was found to be one of the negative attitudes exhibited by nurses in the burns unit towards patients with burns pain. Although the nurses recognize that injuries from burns are very painful and demands immediate attention, most of the time, nurses are not able to respond immediately when patients complained of pain within the burns unit. The delays are mostly due to heaviness or immerse workload of the unit, inadequate staff, and nurses busily attending to other duties/patients.

The burns unit is heavy if there are lots of patients especially when there are mass disasters like gas explosions, it becomes quite difficult to manage pain because you are attending to one thing and something is also happening here so you weigh priorities in a way. If you need to suction a person, you can’t go and attend to the pain so that might cause a delay (BN-5)

As for burns units, a few cases nurses we overlook or might delay in responding to the patients’ complains of pain. So we tell ourselves that this one is not a big wound, this one he can cope and this normally happens when the ward is so heavy and we are busy, we have a lot to do (BN-9)

I must admit there are cases where we delay in assessing and managing their pain. You know working here is really hectic especially when the ward is full, the male ward is there, female ward is there, children’s ward is there, so you see, you become busy and the problem is that some of the patients cannot withstand pain so it makes it even more difficult (BN-8)

One participant described these patients as hysterical:
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I think truthfully there are times we realize that some of them are being hysterical so we don’t always rush to them. Sometimes you are attending to other patients and so it means that they go through the pain for a moment and then when you are finally or eventually free then you get closer and then you try to do something. (BN-2)

4.5.2.2 Exaggeration of pain

Some of the participants also believed that some of these patients with burns sometimes exaggerate their pain to receive some particular pain medications, specifically pethidine.

For some of them they intentionally exaggerate the pain especially when they complain and you give pethidine, so the person, you see, has realized that this is what I give him for the pain so if you don’t figure it out, you will just keep giving the medications like that (BN-3).

They do exaggerate their pain not just a little, but a lot. You will see someone that you have given the medication right on time, and you expect that this one he is going to cope with the pain but they are the ones who will be fighting with us in the treatment room because of the pain (BN-9)

One participant, however, pointed out that the underlying cause of the pain must be ruled out before concluding that the patient was exaggerating:

Some do exaggerate. But what is the tool for you to use and say that someone is exaggerating, you should find out if there’s any underlining cause so you don’t just brush someone’s pain aside (BN-11)

Another participant also expounded on the fact that some of these patients overrated their pain intensity. That is, the expression of their pain is more than the actual pain felt:

Sometimes from the way the patient will express himself, shouting and all that, you will think that this pain, from afar it’s about 5 when you rate it, but when you get closer and assess it, you realize that this pain is probably around 2 (BN-2).
4.5.2.3 Frustrations

Caring for patients with burns injury is demanding and involves overwhelming efforts and time, which leads to frustrations. A good number of the participants reported about their frustrations at the burns unit, in terms of pain assessment and management. Though pain assessment and management is generally the call of nurses, but sometimes situations, according to the participants, can cause nurses to overreact negatively. Situations like patients’ attitude or financial constraints.

Sometimes we can’t bear their pain we frown, we turn our frustrations on them especially, from those who even come in and cannot pay for anything. We scream and shout at them (BN-1)

At times, if you give the pain medication before wound dressing, the patient has already set his mind that what they’re going to do for me is painful so he will be sleeping and still shouting. So you ask yourself, somebody, who is sleeping earlier on, why is he now shouting? where is the pain? and some of these things can be frustrating for some of us (BN-9).

4.5.2.4 Fear of addiction to drugs

Some of the nurses also expressed their views about the risk of patients getting addicted to some of the drugs, especially Pethidine, hence, they sometimes ignored burns patient complaints of pain.

You know sometimes, from my detection, I realize that the way they are talking about the pain, because they know we’ll be using certain drugs like pethidine, so if you don’t use your discretion you will give them a lot of maybe pethidine, you know and they will be addicted (BN-4)

Some of the patients cannot stand pain at all. Actually when some get to know about pethidine, always they request for it. For patients like that, when they keep asking pethidine, pethidine, we sometimes ignore them so they don’t get addicted (BN-8)
4.5.2.5 Administration of Placebo (water for injection)

To prevent patients from getting addicted to pethidine, some participants said they sometimes give a placebo (water for injection). The participants reported that some of the patients still sleep very well after the placebo has been administered whiles other patients have to be convinced that indeed it was pethidine that was given:

*There are times when we give placebos and they still sleep very well because that is how the person has psyched the mind, that it is only one drug, particularly Pethidine that can help relieve the pain (BN-3)*

*Sometimes, we give placebo and when you give it, you go out and come and the patient still says the pain is there. You tell him/her that I have given you the Pethidine, and he says this one it is like it is not working. So you have to convince him that it was Pethidine you gave (BN 10).*

*So sometimes when you go to them and you realize but the pain is not severe as you anticipated, we intentionally give them something like a painkiller, that is the placebo and they will still cool down (BN-7).*

4.5.3 Positive effects of interpersonal communication on burns pain assessment and management

According to the participants, good communication is very important in the assessment and management of burns pain. Even in the absence of medication, a simple conversation with burns patient could help relieve pain. This was what some participants had to say:

*Sometimes even though we may not get medicines for them, that is the analgesics, but we can give them soothing words, it helps calm them down as well. So I can say that it is not only medicines that work on the patient, the interpersonal relationship also has a higher percentage in their care (BN-6)*

*I will say interpersonal communication affects pain management because when you are on good terms with the patient, often communicating with him/her, definitely if maybe the pain medication is not due and you involve the patient in a conversation, at times it helps (BN-7)*

*Good interpersonal communication improves pain assessment and management such that even when you not on duty, they wish you were around to communicate more with them (BN-11)*
Another participant narrated that good interpersonal communication makes patients open up to nurses and tell them everything.

*Usually, when they are getting better they become friends with us. They sometimes open up to you and tell you everything about them. Family life and problems, work issues and the like (BN-9)*

*It is good when you have a good relationship with them, they tell you almost everything all the time, every little thing they want to tell you (BN-10)*

Another participant who had previously worked in another unit of the hospital before being transferred to the burns unit described the interpersonal communication between the nurses and the patient in the unit as excellent as compared to other units.

*Well, I have worked on other wards before but for burns, I think if I’m supposed to score them on a scale of zero to 100, I will give them 90 because they have an excellent interpersonal relationship with the patients, their families, their friends (BN-4)*

Participants enumerated several ways of establishing good interpersonal communication with patients. Establishing good interpersonal communication involves establishing rapport with patients, showing empathy, and treating patients with burns with compassion. The participants believed that when patients are shown with these care, they feel loved and they turn to open up, and that is when nurses know the real problem of their patients.

*I will also want to say that interpersonal communication is based on the rapport you establish with the patient when he comes. Let the patient know that you have empathy for him or her and the patient will open up. No matter how the patient’s pain threshold is, treating the patient with compassion helps, it goes a long way to help alleviate some of these plight (BN-1)*

*When you show compassion and empathy to them it helps calm the pain for them. Just knowing that you understand their pain is sometimes all that they need (BN-11).*

*When you interact with the patient, you get to know how he/she does his things, so from there if you realize that if the person is in pain or if the attitude has changed, then you realize that there is something wrong somewhere (BN-4).*
Good interpersonal communication between nurses and patients helps patients appreciate what nurses are doing for them and they participate significantly in their management. This was found in the narration of some of the participants.

*Let me tell you, patients contribute to their pain management when they understand what you’re doing for them as some of them will be having money and hiding it but when your communication with them is good, they will show you where it is to buy drugs and other items for them* (BN-10).

*They participate with you in their care when they have good communication with you* (BN-5).

Similarly, another participant believed that in the burns unit, patients should be acknowledged and treated uniquely according to their needs and wants. There should not be any form of discrimination because of the patient’s status in society. Trying to know and manage individual burns patient is a very good way to initiate good interpersonal communication.

*The way you respond to the patient is very important because, some are Kings already somewhere and when they come, they want to be treated as such. Some too, when they come, they just want to be treated as normal individuals and due to individual differences, you try to manage it because you are the centre of attraction so you should manage all of them* (BN-5).

4.5.4 Negative Effects of interpersonal communication on pain assessment and management

Ten (10) out of the eleven (11) participants observed that bad interpersonal communication and lack of respect for patients resulted in a reduced level of cooperation during caregiving and endurance of pain from these patients. In as much as the patient needs the nurse to survive, the nurse also needs the patient’s cooperation to do his/her work well. Both nurses and patient complement each other for effective pain assessment and management in the ward:

*There are some patient when you don’t have a good interpersonal relationship with them, no matter what, they will never tell you even if they are in pain but*
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when another person comes they will tell the person easily. Probably he has observed how you relate with him and sometimes how you relate with others. So there are certain things they will tell one nurse they won’t tell the other nurse (BN-3).

At times what I have realized is that they will rather keep quiet about their pain and not tell you if you don’t have good communication with them. You can see clearly that the person is in pain by just looking at the face but when you ask him if he’s in pain, he will say no (BN-11).

If you do not have good interpersonal communication with them, they will not even partake in their management (BN-1).

The language barrier was identified as a constraining factor hindering nurses’ interpersonal communication with patients with burns. Majority of the participants believed that not understanding each other’s language on the ward has always been a huge problem to establishing good interpersonal communication and thus subsequently affected pain assessment and management, given that the hospital receives several referrals from different people from diverse tribes all over the country. Participants believed that care given becomes very difficult when patients do not speak English (the common language used in Ghanaian healthcare facilities). This was found in the expression of some of the participants:

Language has always been a barrier because Korle-Bu here, we receive referrals from all over the country The person may say he is in pain and I will understand it to be another thing and managing such people sometimes is a challenge because you really don’t get to understand what they are saying and you are not able to really give them the actual care or manage their pain as needed (BN-6)

Language can affect pain assessment and management. Some of them come in and they don’t understand anything, for instance, I am an Akan I have stayed here for some time I can’t speak Ga and so when they say they are in pain and you don’t understand what they are saying, they feel frustrated and angry (BN-1).

Sometimes patients with burns become physically aggressive when they feel that nurses do not understand the pain they are going through.
With these burnt patients, once they are in pain and we are not able to understand the pain so for them to get aggressive, the pain very high (BN-6)

4.6 Coping mechanisms by patients with burns injuries when in pain

To answer the fourth research question “What are the perceived coping mechanisms employed by patients with burns when in pain?” The main theme extrapolated was coping mechanisms by patients with burns. Coping mechanisms are strategies and ways adopted by patients with burn injuries to reduce their pain. The subthemes that were derived were diversional therapies, positional changes, religious coping, cultural beliefs and social support.

4.6.1 Diversional therapies

This is one of the major strategies burn patients adopted in coping with pain emanating from burn injuries. The major diversional therapy adopted by these patients is the watching of television. This was captured in the narration of some of the participants:

For some of them when they are in pain, they would want to watch programmes on the television that will make them laugh to divert their attention... (BN-1)

They use diversional therapy a lot and that is how come we have the television in every ward. We change the channels to the one that they feel comfortable with and then they watch to take the pain away (BN-6)

4.6.2 Positional changes

Another common strategy that was identified by the participants as what burn patients adopt to cope with their pain is positioning or elevation of the lower limbs to reduce their pain.

Usually, if the lower limbs are burnt, we elevate it so sometimes when we elevate it on the pillow they get tired and then they put it on the bed. But when they realize that the pain is back, they elevate it to reduce the pain for them and sometimes too they have positions that they assume to make them comfortable (BN-10).
You see sometimes the position in which the patient is also aggravates the pain. And so you see them turning or changing the position to a much more comfortable one and that is some of their ways of trying to cope with the pain or reducing the pain for them (BN-2).

4.6.3 Religious Coping

Religious belief is one important attribute of most Africans, especially Ghanaians. Even in the hospital bed when patients with burns are in pain, they resort to seeking God’s intervention either by praying or by singing.

Sometimes when they are in pain you will see some of them praying silently to themselves” (BN-2).

One thing that I have realised is that when they are in pain, they sing a lot especially those who are Christians (BN-10).

4.6.4 Cultural beliefs

Participants in the study reported that some patients, especially those from the northern part of the country, chose to suppress their pain because of cultural beliefs. This was found in the words of some participants:

Patients from the north suppress their pain, because their culture does not allow them to express pain openly...(BN-3).

I know that some cultures have even taught their people to suppress pain and so even when they are in pain you realize that they will be sitting on the chair and be raising the buttock but will never admit that they are in pain (BN-1).

Here, one thing I have also observed is that the northerners don’t scream or complain when they are in pain unless it is severe but the Southerners do complain a lot (BN-10).

Some patients also managed their pain by being calm and keeping quiet about it even though the nurse might suspect that the patient is in pain;
Some of them, you the nurse feel the thing is painful but they will be accommodating it and keeping quiet about it, they won’t even tell you, they won’t cry, they won’t give you any sign, not even any facial expression to tell you that it is painful (BN-4).

You know sometimes people can talk but because of the environment or they think that they are complaining too much so they keep quiet about their pain (BN-2).

One participant mentioned that these patients, when in pain just ask for a lot of water to make them comfortable:

*I am not getting it but sometimes when they are in pain some of them they request for water, the person just want to drink water and they are fine. It’s individual basis so you can’t use it for all* (BN-5).

4.6.5 Social support

Another coping strategy that was identified during the study included family support and the adoption of a Clinical Psychologists to talk to the patient. This was illuminated in the narration of some participants.

*Yes, we have a clinical psychologist and this is her office. The psychologist is solely for the unit and so when we notice any form of depression or a need for a psychologist, we just refer and she sees them* (BN-6)

*At times some of them become so quiet they don’t respond to the environment; they are just quiet they are thinking about themselves especially for those who lose other relatives in a fire explosion at home. They ask questions like, will I survive and all that. That is where we engage the clinical psychologist* (BN-5).

*There are times when we see that they are in pain and their relatives are around, we say, you, we have opened the door for you go and sit at the reception with your visitor, maybe, for 30minutes if anything come and call us. Once they have seen their relatives, they forget the pain and happily walk out with the relative, then we know he/ she will be fine* (BN-9).

4.7 Non-physiologic causes of pain

From the study conducted and the analysis that was done, another main theme that emerged was the non-physiologic causes of burns pain. Although this theme was not part of the
constructs of the model used or the objectives of the study the researcher included it due to its importance in the management of pain in patients with burns. These were factors that were known to cause or aggravate the pain for patients with burns though they do not have any physiological basis. The subthemes that emerged were adapting to their present condition, grieving and cost of healthcare.

4.7.1 Adapting to present condition

Some participants articulated that some patients with burns, especially those with facial burns, for fear of being shunned by members of the society become anxious and worried which, according to the participant, translates into pain.

*Sometimes the screaming, the gnawing, the lamenting is not only due to the burns pain but sometimes when you probe further, there may be other underlying issues. For instance, psychosocial like how are people going to take my new look now that I’m burnt or my face is burnt. So the patient will be screaming not necessarily because of pain but because of some of these problems (BN-1)*

*I think I once had a student who got burnt, the person couldn’t go to school and the person had to defer and start all over again and she had paid school fees already since she is going to start all over and adapt to the new environment if there are scars how people will see her, how will they react to her new looks, especially since it is a facial scar everybody will be looking at you and knowing all those things they worry and it causes anxiety and psychological pain for them (BN-5).*

*Let me cite this example, we had this patient who had electrical burns a while ago and the person was an IT person who was fixing something and then their pole went to touch the high tension and he got burnt. Unfortunately for him, when he got here, some of the toes of the right hand were off, so the hand was amputated at the end. This patient was always complaining of pain despite the medications we gave. Eventually, we had to involve the psychologist, and then we the nurses also counselled him to be able to gain firm grounds and from that time he hardly complained of pain. So you see that his pain was more psychological than physical (BN-6)*
4.7.2 Grieving
One participant also explained that burns patient whose loved ones or relations die in a fire explosion or outbreak at home express pain which cannot be managed pharmacologically as they are grieving over this loss.

*With burns, I won’t say all the pain is physiological, some are psychological and they don't need drugs but they just need someone to talk to them about their situation especially those who lose loved ones in a fire explosion. Even when you give drugs for their pain, the pain is not gone the only thing is that the person might sleep and then when she wakes up it'll still be there* (BN-5)

*We look out for other causes may be the patient is grieving. So you realize that now it is not the pain but there’s some underlying problem which is causing that pain more because psychologically the patient is not stable. So as much as you've given you all the pain relievers, psychologically the patient is not stable so he/she will be screaming and shouting and lamenting* (BN-1).

4.7.3 Cost of healthcare
Most of the participants lamented about the high cost of burns treatment in Ghana comprising of items for wound dressing, medications, feeding, surgical procedures and physiotherapy. Unfortunately, most of these items are not covered by the National Health Insurance scheme which leaves the patient with a lot of financial burdens. The cost of each dressing is between Ghs50 and Ghs100 depending on the severity of the burns. Thus, the financial burdens triggers anxiety and worry for the burns patient which, according to the participants, sometimes translated into pain.

*Here, most of the drugs is the patient who affords it so when it comes to a time that the family or friends are not showing up again, because they might also be broke, the patient will be just there and crying and that one too can contribute to the pain though it is more of financial problem* (BN-6).

*let me tell you management of burns cases is one of the most expensive things we know in this country. A patient’s wound can be getting rotten and there’s no money to buy items for dressings. The country too has not put anything in place to manage some of this paupers, you know, so they will be shouting of pain only for*
you to find out later that the shouting was because they could not afford to buy 

wound dressing items or drugs (BN-11)

Normally with humans, when you are thinking of other things it can trigger a lot of 

things like pain. So, when they start thinking about other things like the cost of 

their treatments, that's where they start complaining about small pains everywhere 

(BN- 4).

4.8 Psychological effect of burns pain management on nurses

Another theme that emerged from the study conducted and the analysis is the psychological 
effect that the management of burns pain has on these nurses. Some participants talked about 
the fact that when they have used both pharmacological and non-pharmacological means to 
manage burns pain and are not successful, it causes psychological and emotional problems for 
them. Self-motivation to recover and coping mechanisms were the subthemes that emerged.

4.8.1 Self-motivation to recover

Some of the participants spoke about the fact when they feel depressed seeing the pain that 
the patients with burns go through especially during change of wound dressing, they tell 
themselves that dressing of the wound is essential for wound healing so they must continue.

This helps them overcome the depression they feel.

 Personally anytime I dress their wounds especially those with the large surface 
area burns and they keep shouting even after all the medications that we’ve given, 
I get so sad. Sometimes it is even difficult for us to go on with the dressing which is 
also not good for the wound. The first day I saw the large burns wound, I turned 
and went back, gathered myself before coming back. I couldn’t stand it as I felt so 
sad for them. It is not easy for us here. I always have to brace myself before doing 
their dressing. Even the students who come here for the first time some of them 
break down and cry when the patient is crying (BN-4).

It is very difficult for us here. Here you are, dressing the patient’s wound and the 
patient keeps screaming and shouting and you also know that you have given all 
the medications you need to give. So what do you do? You just have to continue 
and not allow the screaming and shouting to affect you. After all, that is why you 
are here (BN-6).
4.8.2 Coping mechanisms

Some participants also described other mechanisms they used to cope with the psychological effect that managing burns pain has on them. Some of these coping mechanisms included prayer, cracking jokes and conversing in the treatment room so they don’t get affected by the pain that the patient is going through.

A few times we break down because if you have done everything for the patient to relieve him/her of the pain and still it is like your best is not enough, sometimes we break down, as for that one, it is human. So in the dressing room, we try to make ourselves happy by conversing, cracking jokes and laughing together to take our minds off it (BN-9).

4.9 Summary of Findings

The knowledge and experiences on pain among patients with burns were described under the following sub-themes: types of burns pain, aggravating factors of burns pain, consequences of unrelieved burns pain, sources of knowledge on burns pain, knowledge on burns pain assessment, pain management techniques, (pharmacological and non-pharmaceutical), experiences with pain assessment, management and evaluation of relieved burns pain. It was evident from the responses that participants had adequate knowledge of the types of burn pain but limited knowledge about the pain rating scales used in the assessment and management of severe burn pain.
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Perceived pain behaviour of patients with burns was also substantiated under the following sub-themes: verbal expression and non-verbal expression of pain. These verbal expressions included shouting and screaming whiles the non-verbal expressions included facial expression, body movement and frequent changing of position in bed. On the influence of attitude and interpersonal communication on burn pain assessment and management, two sub-themes emerged: positive and negative attitudes and positive and negative effects of interpersonal communication.

Most nurses exhibited positive attitudes which translated into effective burns pain assessment and management. Acknowledging the presence of pain in patients with burns, regular communication with patients and a willingness to help were some of the positive attitudes exhibited by most nurses at the burns unit. However, the study did not fail to point out some negative attitudes like not prioritizing patients with burns pain, the feeling of exaggeration of pain by burns patient, fear of addictions to drugs and administration of placebo (water for injection) which mitigated effective burns pain assessment and management.

Under the coping mechanisms adopted by burns patient when in pain, five (5) sub-themes emerged, namely: diversional therapies, positional changes, religious coping, cultural beliefs, and social support systems. Additional two findings emerged from the study which were not part of the constructs of the Pain Transaction Model by Keen et al., (2017). These findings were the non-physiologic causes of pain and the psychological effect of managing the pain of patients with burns on the nurses.

The detailed discussions on the main findings from the study are presented in the next chapter.
CHAPTER FIVE

DISCUSSION OF FINDINGS

This chapter discusses the findings of the study in relation to the wider literature. The ultimate purpose of this study was to explore nurses’ experiences with pain assessment and management in patients with burns at the Burns Unit of the Korle Bu Teaching Hospital. This chapter discusses chronologically nurses’ knowledge and experiences with burns pain, perceived pain behaviours of patients with burns, the influence of attitude and interpersonal communication on burns pain assessment and management, and the coping mechanism of patients with burns when in pain. The study was guided by the Pain Transaction Model (PTM) framework by Keen et al., (2017) which recognizes the interpersonal communication between the nurse and the patient influenced by factors from both the nurse and the patient. These factors included the nurse’s knowledge and attitudes, patients’ pain behaviour and coping mechanism when in pain and its influence on the assessment, treatment, and subsequent management of pain.

5.1. Knowledge and experiences on burns pain

One of the objectives for this study was to assess the nurses’ knowledge of pain among patients with burns. During the study, nurses’ knowledge on burns pain types, the consequences of unrelieved burns pain, aggravating factors of burns pain, burns pain management and how these affected burns pain assessment and management were identified. The participants’ experiences with burns pain assessment and management and evaluation of relieved burns pain were also identified. These are discussed below.

Five (5) out of the eleven (11) participants categorised burns pain into severe and mild. Severe pain was associated with first and second degree burns whiles mild pain was associated with
third and fourth-degree burns based. This finding is consistent with an earlier report which
categorised burns into first to fourth-degree burns with its associated characteristics. First degree
or superficial burns affected the epidermis, which is the outermost layer of the skin, unblistered
and extremely painful. Second degree or partial-thickness burns are characteristically painful and
affect both the epidermis and the dermis which is the uppermost third of the underlying skin
layer, with exposure of the peripheral nerve endings which are in the injured layer of the
dermis (Connor-Ballard, 2009).

A third-degree burns, usually referred to as a full-thickness burns, results in total damage of both
the outermost layer and the whole dermis. A deep or full-thickness burns also known as a fourth-
degree burns goes beyond the dermis into the essential subcutaneous tissue, muscle, and bone.
Both third and fourth-degree burns are characteristically not (or minimally) painful due to the
destruction of the underlying nerves (Mazerro, Price & Gold, 2015). The findings of the study
are also supported by Morgan et al.,(2018) who reported that the degree of burns pain is
determined by the depth of the burns, with areas of superficial burns causing greater pain than
areas of full-thickness burns, where there is a structural compromise or loss of nerve endings.
However, this form of pain is only a facet of burn-related pain described as background pain
which serves as the basis for the existence of the other aspects of burns pain. At the acute phase
of care, procedural pain can occur when the adult burn patient has to undergo various procedures
such as dressing change/ wound care; breakthrough pain can also occur suddenly even in the
absence of an ongoing therapeutic procedure. At discharge, when wound closure may still be
occurring, neuropathic pain may occur (Goyata &Rossi, 2009).

Taken together, the assertion suggests that burn-related pain is multi-faceted and successful
management will depend on a broader knowledge base among nurses. As seen from the findings,
it may be argued that the current knowledge base of the participants may enhance the management of background pain at the acute phase but may be inadequate to manage the other aspects of burn pain. Besides, Butcher and Swales (2012) have posited that every individual who has a burn injury suffers discomfort and anguish regardless of depth or degree of the burns. Thus, there is a need for a comprehensive approach to managing burns pain irrespective of the size or degree of burn. To achieve this, training programmes have to be tailored to the unique needs of nurses. The study findings offer some direction in this regard, in that, nurses need to be able to see the bigger picture of burn pain and that may help manage it.

Regarding the factors that aggravated the pain of patients with burns, some participants mentioned the change of wound dressing, physiotherapy and after surgery (Skin Split Graft). These fall under procedural and post-operative pain. This finding is supported by Mahar et al. (2012) who asserts that patients with burns experience amongst others, procedural pain, which is pain felt during wound healing or therapies and post-operative pain, which is pain experienced after surgery, example, skin graft. Wound care procedures, such as dressing removal, wound cleansing and passive range of motion exercises in affected joints have all been cited as causing procedural pain in burns patient (Connor-Ballard, 2009). The identification of aggravating factors is important as they inform the ability to identify the cause of pain and the method of pain relief to apply out of the options available (Polkki et al., 2017). This is supported by findings of Alencar de Castro et al., (2013) who asserts that to ensure effective management, attributes such as the situation of the pain, aggravating and relieving factors, as well as the nature and amount of pain, are fundamental. The report from a similar study also showed that the identification of pain in patients informs the right action (Wadensten, Frojd, Swenne, Gordh, & Gunningberg, 2011).
It is important for nurses to be knowledgeable on these aggravating factors of pain experienced by burns patients, as lack of this knowledge could be detrimental to its management. This observation is supported in a study by Kuhajda, Thorn, Gaskins, Day and Cabbil (2011) who reports that the inadequate treatment of burns pain has been attributed not only to its complexity but also to a lack of explicit knowledge among health care professionals including nurses. Smith, Murray, McBride, and McBride-Henry (2011) after an exploratory study also reported that nurses who are involved in the dressing of burns wound require debriefing before the procedure to well manage the resulting pain. There is a need, therefore, to administer appropriate analgesics (Smith & Laufer, 2014) and to reduce the pain from their physiotherapy, patients with burns should be encouraged to begin their mobilisation early but at a gradual pace (Wang and Tsai (2010) to enhance their recovery and help lessen the patient’s stay in the hospital (Edvardsen et al., 2015). Thus, for effective management of burns pain, adequate knowledge on the aggravating factors cannot be overemphasized.

Knowledge of the consequences of unrelieved burns pain informs the level of urgency nurses give to the management of burns pain. Nine (9) of the participants of this study identified both physiological and non-physiological consequences of pain. These physiological consequences included high blood pressure and pulse, high temperature and abnormal breathing patterns. This finding is supported by a report from a previous study, that physiologically, unrelieved pain has been found to affect almost all the systems in the body because it precipitates a generalized sympathetic response such as increased susceptibility to disease, dependence on medications, tachycardia and increased blood pressure (Dionne et al., 2008).

Some of the non-physiological consequences identified in the study included reduced appetite, lack of sleep, inability to ambulate and reduced activity levels. Sinatra (2010) supports the above
findings as the author reported that acute pain such as that of burns, significantly impairs the sleep of patients, and decreases the ability to perform physical activities. It is apparent that unrelieved burns pain can have negative implications not only on the health of the patient but also on the quality of life. The knowledge of these consequences when applied can prevent the development of other conditions such as hypertension or increased arterial blood pressure in burns patient as well as some non-physiological consequences which could negatively affect the nurse-patient relationship.

This is supported in a report that pain inflicted on patients with burns during procedures like a change of wound dressing, sometimes mar the relationship between the patient, and the health care personnel (Girtler & Gustorff 2012). Hence, bearing in mind the consequences of unrelieved pain in patients with burns, it is essential to effectively manage the pain to attain positive outcomes (Bayuo, Munn, & Campbell, 2017). Moreover, improved sleep, wound healing, quality of life and recovery as well as participation in activities of daily living have all been linked to good control of burns pain (Griggs et al., 2017).

Majority of the participants were not knowledgeable on burns pain assessment. It emerged from the findings that there was inadequate training for nurses on pain assessment and management as most of the participants at the burns unit did not have adequate knowledge from their nursing education, even though 100 per cent of the nurses had diploma certificate. Additionally, infrequent in service training and also the lack of emphasis placed on burns pain assessment and assessment tools during these training can largely be attributed to the lack of knowledge on burns pain assessment by these nurses. This current finding is consistent with a report from other countries that there was inadequate information on pain management during training and workshops organized for nurses (Van Niekerk & Martin, 2001).
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This deficit in knowledge can affect the management of complex pain, such as that of burns, because pain assessment, as well as its documentation and observation of patient’s chart, is vital in the management of pain (Mohamed, Ahamed, & Mahmoud, 2013; Purser, Warfield, & Richardson, 2014). If nurses do not have the requisite knowledge to address a patient’s pain, they usually are not able to perceive imminent worsening in the patient’s condition. Their inability to analyse and respond to key clinical cues (Considine & Currey, 2015) leads to malfeasance, poor outcomes in terms of patient’s care and patient safety (Leonard & Kyriacos, 2015). Thus, it is imperative to increase the knowledge of nurses on the assessment and management of pain (Francis & Fitzpatrick, 2013).

The participants who were aware of pain assessment tools or its usage acquired it through formal training which included departmental workshops, in-service training and previous conferences or self-education (mostly from reading books or the internet). However, the acquisition of knowledge through these channels and its subsequent usage on patients’ care were found to be at parallel. This is because the participants who knew about the pain assessment tools did not apply it despite known pain scales namely the Numeric rating scale (NRS), Colour Circle Pain Scale (CCPS) Wong-Baker faces (FPS) that are applicable within the Ghanaian hospital setting and which had been validated by (Aziato, Dedey, Marfo, Asamani, & Clegg-Lamptey 2015). This is because the tools were not available or possibly the workload within the burns unit did not give these nurses ample time to use these tools to assess the patient’s pain adequately.

This disconnect between the application of knowledge gained and practice is confirmed by Lewthwaite et al. (2011), that though some nurses are usually equipped with knowledge on pain, very little is seen on how this is translated to the management of their patient’s pain.
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resulting in poor satisfaction related to care. It is also consistent with earlier findings by Rose et al. (2012) who reported a correlation between low levels of knowledge, the use of pain assessment tools and guidelines among nurses. Nurses have a key part in recognizing and promptly assessing pain to be able to manage it efficiently with the use of pain assessment tools, selection of the appropriate analgesic and the observation of patient behaviour or mannerism for evidence of the absence of pain (McIlfatrick, 2015). Since pain is a subjective phenomenon, health professionals including nurses need pain assessment tools to assist them to quantify the pain into objective terms to be able to manage the pain effectively (Aziato, Dedey, Marfo, Asamani, & Clegg-Lamptey, 2015).

Though seven (7) out of the eleven (11) participants had some knowledge about the Numeric Rating scales (NRS) and could describe it, the burns unit did not have available tools to assess pain or conventional protocols to assess the pain of patients with burns, suggesting a need for an improvement in this area. This is also consistent with a previous study in Southern Ethiopia where the majority of the participants (87.7%) reported that there were no standardized protocols for pain assessment and management within their hospitals (Tadesse et al., 2016). The remaining four (4) participants in this study had inadequate knowledge about pain rating scales used to assess pain in burn patients as they had neither heard or seen them and thus could not adequately explain them. This observation, is worrying because, for effective management, assessment of the pain cannot be overemphasized as asserted by Richardson and Mustard (2009) since consistent, that continuous pain assessment and documentation is crucial in directing the therapeutic process.

Additionally, Mędrzycka-Dabrowska, Czyż-Szypenbejl, and Pietrzak (2018) after a descriptive exploratory survey stated that in spite of the university education received by Polish nursing
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staff, they still had no substantial knowledge with regards to the usage of systematic research in their day to day duties as nurses including pain assessment and management. Again for successful management of burn-related pain, there should be an approach which is comprehensive, beginning with the use of pain assessment tools suitable for the age and patient’s condition as well as employing both pharmacological and non-pharmacological measures (Bayuo et al., 2017). Hence the inability to assess burn pain adequately with pain assessment tools by these participants can result in a failure to manage the burn pain properly.

For the management of burns pain, the participants outlined various pharmacological and non-pharmacological means of managing burns pain within the burns unit. The participants described the pharmacological means they used to manage the pain of patients with burns. Their description was adequate as they reported the use of opioids, like ketamine, morphine and pethidine and the NSAIDS like brufen, diclofenac and paracetamol (acetaminophen) as the main classes of drugs used before and after procedures like a change of wound dressing. The use of these drugs is widely accepted for the pharmacological management of pain as confirmed by a previous study of a burns unit in the Netherlands (de Jong et al., 2014). The findings of that study show that acetaminophen administration was linked to a significant reduction in the pain experienced throughout the days of admission.

This also suggests sufficient knowledge of pharmacological means of managing burns pain in the burns unit of Korle Bu Teaching Hospital, contrary to an earlier report that states that majority of the nurses lacked adequate knowledge on the pharmacological management of pain, particularly with issues connected to opioids, including their function and/or abuse (Elcigil et al., 2011; Pretorius et al., 2015) The findings in this study is again consistent with that from a related study, which reported that the majority of nurses were knowledgeable on
some of the pharmacological and non-pharmacological pain management techniques available (Miftah et al., 2017).

According to the participants, for those with a higher percentage of superficial burns as well as those going for surgery (Skin Split graft), ketamine was the preferred prescribed drug. This is also in line with the fact that for efficient and effective control of moderate to severe pain, the importance of opioids, such as ketamine, as main systemic analgesia cannot be overemphasized in surgical patients (Huxtable et al., 2011). Though from the study ketamine was given to some specific patients who were undergoing procedures like a Skin Split graft, studies show that it is good for managing all painful procedures including change of wound dressing (Griggs et al., 2017). The participants also mentioned the use of anxiolytics like midazolam and pethidine to calm patient and reduce anxiety during procedures such as change of wound dressing and help the patient sleep well. This is also in line with a report that combination therapy of opioids and anxiolytics have been proven to drastically reduce the effects of procedural and background pain in burns patient (Zor et al., 2010).

For the non-pharmacological management, the participants mentioned some measures they adopt including reassurance, engaging patient in conversations and diversional therapies. These measures were found to be in line with accepted non-pharmacological means of managing pain. A study conducted by Baron et al. (2015) reported that adopting a non-pharmacological approach, such as relaxation techniques, psychological support, acupuncture, music therapy, to augment pharmacological management in burns does not only reduce the adverse effects connected to opioids but is also safer, easily accessible and relatively cheaper. Some determinants like nurses’ characteristics with regards to work experience, age, education, and patient’s features like age, ability to collaborate have all been mentioned as
factors that influence the usage of non-pharmacological methods (He et al., 2010). However, the question that remains is how effective these approaches are in resolving the complex burn pain. Further studies are therefore needed to evaluate these non-pharmacological measures used by nurses in the Burn Unit to underpin effective pain management strategies.

Additionally, other literature document non-pharmacological interventions as having significant effect on pain alleviation before and after wound care (Perez. et al., 2016). None of the participants mentioned the use of music therapy and relaxation techniques in managing burns pain, suggesting that there is a low level of knowledge on some of these non-pharmacological techniques or low emphasis on this method due to equipment constraints. Music therapy in patients with burns has been proven to be significantly effective before, during, and after the change of burns dressing (Hsu, Chen, & Hsiep, 2016). According to a study, analgesics along with preferred patient’s music has been proven to decrease pain and improved the level of relaxation during and after wound care procedure (Najafi, Mohades Ardebili, Rafii, & Haghani, 2017). Thus, there is a need to research into the practicality of using music therapy during procedures within the burns unit of the Korle-Bu Teaching Hospital.

In the absence of pain assessment tools, some of the participants shared their experiences on how they assessed burn pain. Observations also made during the study revealed that pain assessment tools were not used before or during the change of wound dressing. The nurses’ skills they used to assess the pain of patients with burns can be likened to the use of a particular pain assessment tool, for instance, the verbal and non-verbal expression of pain from the patient can be equated to that of the Visual Analog scale. Other skills used included the use of burn size, the depth of burns and surface area covered by burns. Though the use of burn size and depth of a burn for
assessment is key to its entire treatment including its pain management, this, even for experts can be very challenging (Monstrey, Hoeksema, Verbelen, Pirayesh, & Blondeel, 2008).

Since the pain in patients with burns has an evolutionary character, both peripherally and systematically, a conventional classification that depends on the thickness and area affected by the burns is not always proportional to the pain experienced clinically by these patients (Johnson, 2018). Another means by which some participants assessed burns pain was by the occasional feedback of the patients to help describe the severity of pain usually with gestures or descriptions such as “biting”, stabbing or throbbing pain and a burning sensation. Such feedback is helpful for the assessment of pain and requires the nurse’s understanding, experience and knowledge to assess correctly the degree of pain and to manage it. This is in line with a report that nurses have a very critical function with regards to the assessment and observation of patients’ pain, adopting various methods which demonstrate their skills as nurses and making a sound clinical judgement based on their experiences and inherent beliefs for the assessment of pain (Chatchumni et al., 2016).

Laserina (2012) also supports the claim that nurses play a critical role in assessing pain. She maintains that the acquisition of knowledge and usage to interpret and understand pain cues and keep patients carefully within the established haemodynamic parameters are inherent, and individual. Carlson (2013) also noted in a study that if nurses can provide quality care in the areas of rehabilitation, trauma recovery and critical care for patients with burns, they need judicious clinical skills. Though experience count, Abdalrahim, Majali, Stomberg, and Bergbom (2011) made a point worthy of note that nurses often underrate the intensity of pain felt by patients after surgery as they rather prefer to rely more on their personal opinions. Though
experience is important for the critical assessment of burns pain there is the need to balance the subjectivity of experience with pain assessment tools.

For the management of patients’ pain, some participants reported that they sometimes used their discretion to either increase the dosage of the pain medications or add other drugs to relieve the patient of the burns pain especially those with a higher percentage of superficial and partial thickness burns. For instance, adding Paracetamol to already administered drug-like Pethidine. This practice is not out of place as Johnson (2018) reports that extreme pain is associated with partial-thickness burns and therefore advocates various approaches to its initial management including the administration of opioid analgesia in large quantities. Markocic et al. (2016) however cautions that nurses do not only need to be conversant with a comprehensive assessment of pain but also to be acquainted with the possible adverse effects of these opioids and identify susceptible patients who are highly at risk of toxicity from opioids.

Some participants also mentioned the use of perfusors to administer a continuous infusion of morphine. This is supported by a study which reports that for adequate pain management of moderate pain such as that of background pain or pain at rest, which is usually present in burn patients, the use of moderate but potent drugs which provides a relatively constant concentration of the drug in the plasma is necessary. This can be achieved, for example, with continuous intravenous opioid infusion (Alencar de Castro et al., 2013). Huxtable et al. (2011) also asserts that to effectively manage background pain, continuous infusion with intravenous opioids must be recommended.

Some participants also mentioned that to avoid depression of the patient’s respiratory system, they do not re-administer pethidine irrespective of a patient’s pain intensity or the cause of it.
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This is supported by a related study that there is a risk of respiratory depression with the use of opioids when compared to the side effects of other drugs (Gregory & Haigh, 2008). Contrary to these findings, a study by Jarzyna et al. (2011) points out that though concerns linked to the untoward effects of opioids including depression of the respiratory system is guaranteed, opioids can be administered carefully with enough knowledge. To reduce the chances of side effects related to opioids whiles optimizing their analgesic results, it is important for the doses to be given judiciously especially during the initial phase of the injury and after surgery (James & Jowza, 2017). The nurse must, hence, use clinical reasoning and critical thinking skills in the administration of pain medications in a critically ill patient to prevent serious side effects and adverse reactions (Farrar et al., 2017).

An observation made by some participants as affecting the pharmacological management were the effects of alcohol on the potency of the drugs. These findings corroborate the observation by Kao et al. (2017) that the use of alcohol can exert a host of influences on the analgesic requirement and the perception of pain though the actual mechanism underlying the relationship between increased postoperative opioid consumption and frequent alcohol drinking remains uncertain. They also reported that clinically, it is perceived that patients with a history of frequent alcohol consumption require more opioids for postoperative pain control. Previous studies have also validated that the use of opioids and alcohol interfere with the pain signalling in the brain by activating the same neural receptors (Witkiewitz & Vowles, 2018).

Another factor affecting the pharmacological management of burns pain is the reluctance of the hospital pharmacy to supply drugs after a period of non-payments of already supplied drugs. This has devastating effects or consequences on pain management. This report is supported by a previous one made that when hospital policies and medical directives support nurses in the
provision of analgesics uninterruptedly, the patient will receive analgesics for their pain (Van Hulle et al., 2011). Williams et al. (2010) also buttress this by asserting that inadequate management of pain might not necessarily be as a consequence of unavailable evidence, but to a greater extent from institutional and professional causes that restrict the measures aimed at alleviating pain. Other studies have also supported this by reporting that lack of logistics such as medications and assessment scales have all resulted in challenges for nurses with regards to the management of pain effectively (Czarnecki et al., 2011; Twycross & Finley, 2013; Ware, Bruckenthal, Davis, & O’Conner-Von, 2011).

From their experiences, the participants also highlighted that in addition to the reassurance, diversional therapy and the engagement of patient in conversations, another non-pharmacological measure they used to alleviate the pain of patients with burns was the application of cold water on the part burnt to reduce the heat from the burns and grant subsequent pain relief to the patient. This technique is backed by literature by Davies et al. (2013) who reported that another non-pharmacological management of pain in burns involves cooling in the initial stages and covering of the wound to provide respite from the heat and pain.

Participants also shared their experiences in reassuring patients, engaging them in conversations as well as adopting diversional therapies as part of their non-pharmacological management of patients with burns pain. These measures were found to be in line with acceptable non-pharmacological means of managing pain. A study conducted by Baron et al. (2015) reported that adopting a non-pharmacological approach, such as relaxation techniques, psychological support, acupuncture and music therapy to augment pharmacological management in burns does not only reduce the adverse effects connected to opioids but is also safer, easily accessible and relatively cheaper.
With regards to how the participants within the burns unit evaluated the effectiveness of administered analgesia, most of them talked about the patient’s verbalization of the absence of pain, relaxed facial expression, being able to move around and sleeping comfortably as indicators that the patient had been relieved of the pain. Evaluation of relieved burns pain is important as effective pain management is considered an important issue when assessing the effectiveness of nursing care for burn patients (Bayou, 2018). Furthermore, frequent and continuous evaluation of the patient’s response is very important due to the various stages that the hospitalized burn patient goes through, as well as a combination therapy with analgesic and non-pharmacological measures (Alencar de Castro et al., 2013).

In general, the overall nurses’ knowledge and their experiences were found to be pivotal for effective and efficient pain assessment and management among patients with burns. The findings highlight the need for adequate knowledge and skills to attain the highest efficient and effective form of pain assessment and management. For instance, according to (Al-Shaer et al., 2011), nurses require an up to date knowledge and skills set for effective pain evaluation and management. If nurses want to provide excellent pain assessment and management among patients with burns, it is imperative, though not sufficient, for them to have a good knowledge and skills set about pain types, management techniques, assessment tools, assessment issues, and the critical values found in the present study. Additionally, the sharing of experiences should be an intentional aspect of daily discussions to leverage individual discoveries for the good of the team and its patients.

5.2 Perceived pain behaviour of patients with burns

One of the objectives of this study was to assess the perceived behaviour of burn patients when in pain. Majority of the participants described both verbal and non-verbal means that were used
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by these patients with burns to express their pain. The findings from the study revealed that most nurses made burn pain assessment based on the patient’s behaviour like praying, shouting, screaming and crying of patients. Though this finding is consistent with a report by Coghill (2010) who points out that since a patient’s pain is not instantly obvious to health caregivers, it only becomes apparent to care providers through individual expressions, countenance and the mannerisms of the person in pain, it raises some concern. First, a patient behaviour which is evident to nurses may suggest that the pain is unbearable which will suggest an increase in the dose of analgesia to be administered. Thus, the notion of having to give higher doses may be interpreted as a manifestation of addiction when in reality, it is just severe pain. Secondly, the complexity of burns pain requires an ongoing assessment at regular schedules and not just when the patient is screaming or crying.

Nurses have a key part to play in recognizing and promptly assessing pain to be able to manage it efficiently with the use of pain assessment tools, selection of the appropriate analgesic and the observation of patient behaviour or mannerism for evidence of the absence of pain (McIlfatrick, 2015). Akuma and Jordan (2011) also support this assertion by stating that an accurate assessment of pain and patients’ behaviour is as important as the nurses’ knowledge and attitudes. Also, research has shown that nurses who are experts can identify indirect pain cues quickly though they might not be able to express these perceptions (Benner & Tanner, 2009; Gilmore-Bykovskyi & Bowers, 2013).

This notwithstanding, some participants also talked about the fact that the pain expression from the patient might not be equal to the actual pain felt by the patient. These findings are in line with an earlier report made by Shavers et al. (2010) who posit that generally, there is some level of misapprehension between potential treatment expected by the patient to relieve their expressed
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pain and the perception of the pain by the caregivers attending to them resulting in sub-standard pain management. Hence, attaining an effective assessment and management of patient’s pain involves the collaboration of both caregivers and patients. Consequently, any attempt that seeks to attain effective pain assessment and control through only the lenses of nurses’ will be incomplete.

Some of the participants said irrespective of the pain expression from these patients, verbalising of the pain by the patient is the most reliable. This is also consistent with the current finding by the National Comprehensive Cancer Network (2017) that self-report is by far the most reliable element that can help in a complete assessment of pain and its management. Similarly, the Thai Association for the Study of Pain (TASP, 2012) reported that the golden standard for the assessment of pain aiding in its efficient management is the self-reporting of pain from the patient. This is because there is often an underestimation of the patient’s pain from the assessment of the healthcare providers including nurses (Prigent, Amorim, Leconte & Pradon 2014; Shugarman et al., 2010).

This proves that to be able to effectively manage patient’s pain, it is essential for nurses to trust the self-report by the patient even if it appears to be unequal to the verbal or non-verbal behaviour of the patient (Al-Shaer, Hill, & Anderson, 2011). Contrary to this, Chatchumni et al. (2015) also stated that realistically, it is the mixture of the perception of nurses regarding patients in pain and their experience in pain management that leads to optimal care, hence a disengagement between the perception of nurses and management of pain can affect the quality of care.

The findings from the study also revealed that some patients who were unable to communicate their pain verbally, such as those who had inhalational injuries and had been
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intubated. They expressed their pain through body mannerisms like facial expression, movement and frequent changing of position in bed. Increased blood pressure, tachycardia (increased pulse rate) and abnormal breathing pattern were also cues the participants used to identify and manage these intubated burn patients. This finding is consistent with a study by Connor (2012) that facial ‘grimace’ was observed to be an indicator that critically ill patients, including those with burns, were in pain especially at rest. This is also supported with an earlier study that the observation of pain-related behaviour including the physiological indicators involving the vital signs is key to a systematic pain assessment in critically burnt patients (Gelinas, 2010). Also consistent with the current findings are the study findings of Akuma and Jordan (2011), who reported that the behavioural signs from the patient appear to be an essential element in the recognition of pain.

The nurses also adopted the method of initiating analgesic protocol and administered some form of prescribed pain medication even if there was no clear expression or indication of patients with burns in pain, for instance in wound dressing. This finding is in line with an earlier finding that most nurses assume that there will be pain considering the underlying condition and past experiences of similar cases and administer prescribed pain medication to mitigate pain (Her, 2011). In a quasi-experimental study on the impact of a nurse-initiated analgesia protocol in the ED, it was reported that there are significant improvements in patients’ perceptions of the quality of care when their pain is predetermined and managed by nurses (Muntlin et al., 2011). In a related study by Finn et al. (2012), they submitted that it makes sense when even before the doctor’s assessment, nurses within an emergency unit assess patient’s pain and administer pain medications that conform to an approved protocol as it lessens the time to analgesia. Thus, there is a need to advocate for nurse-initiated analgesia
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protocol within the burns unit as this will help reduce the delay to analgesia and save the patient from unnecessary pain.

Furthermore, it emerged from the findings that the expression of pain among patients with burns is generally an individual phenomenon as they expressed pain in different ways, depending on their age, gender, cultural beliefs and sometimes their psychological status. What has emerged out of the study as the most important factor which influences patients with burns’ behaviour when in pain is the patient’s psychological status. The finding is consistent with a similar study by Stites (2013), who observed that disturbing symptoms in patients who are critically ill is unique and each experiences pain in a distinctive way. For an efficient pain assessment and management as well as the general care of patients with burns, nurses should be encouraged to be very observant and endeavour to engage actively with burn patients to be able to meet the specific needs of each individual patient.

5.3 Influence of attitude and interpersonal communication on burns pain management

One of the objectives of this study was to assess the influence of nurses’ attitudes towards patients with burns pain and examine the effect of interpersonal communication between nurses and patients on burns pain management. The nurses identified three main positive attitudes that could facilitate effective assessment and management of pain in burn patients. These positive attitudes included acknowledging the presence of pain in burns patient, willingness to help and regular communication.

Regarding the acknowledgement of the presence of pain in burns patient, most of the participants talked about the fact that they accept and recognize the burns patient complaints of pain anytime as “he who feels it knows it” and thus they do not “joke” with burns patient’s pain resulting in their willingness to manage the pain. Thus, the nurses understood the pain felt by
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these patients. This finding is contrary to that of a study by Rejeh et al. (2009) who reported that despite nurses desire to help in the reduction of patient’s pain, they still tend to have the attitude that since pain is a usual phenomenon after surgery, patient should be ready to accept a little pain. Some of the participants also described their pain experiences from different sources such as labour, trauma and hence acknowledged the patient’s complaints of pain. This finding was supported by a similar study that the personal experiences of nurses are a determining factor of their attitude towards the pain of their patients (Morgan, 2014).

Acknowledging the pain of their patients, according to the participants, involves showing empathy in the management of pain among patients with burns. This is also in line with a report from a previous study that it was part of nurses’ responsibility to show patients empathy and compassion as these enable the patient to be in control of their own healthcare (Larsson et al., 2011). The participants expressed empathy for patients with burns because they believed that during procedures like wound cleaning, post Skin Split Graft, and physiotherapy, burns pain was unbearable. This is also supported in a study by Bourgault et al. (2015) who posited that for optimal management of pain, empathy is key. Thus, empathy appears to be an integral component of effective pain management and a lack of it may, therefore, increase the probability of poor management of patient’s pain (Kheshti, Namazi, Mehrabi & Firouzabadi 2016; Teo et al., 2012). Nonetheless, Derkson et al. (2013) postulated that though nurses are empathetic, their empathy does not reflect on their effective pain management postoperatively. What remains unclear, however, is how empathy would empower the nurses to actively manage the patient’s pain.

The willingness to help was identified as another positive attitude of nurses towards patients with burn pain. Majority of the participants believed that burns injuries are very painful and thus
patients should be given the needed attention to at least minimise their pain. Thus, they try to respond promptly and timely to patients complains, looking out for other possible causes of pain. Trying to gather resources from their pockets for those who were not able to purchase their drugs, and making the needed referrals to ensure patients wellbeing in the burns unit. The findings, however, revealed that the willingness of nurses to help was mainly from interaction of other factors such as individual inherent character and the subjective belief that every burn patient will continue to experience unbearable pain until all the needed care is rendered and the patient is eventually out of any danger. This finding is in line with the work of Street Jr et al. (2009) that the interventions of nurses centred on helping the patient can result in positive satisfaction for both the patient and family.

Thirdly, effective and regular communication was identified as a vital component for effective burns pain assessment and management within the burns unit. Effective communication facilitates patients’ understanding during procedures like change of wound dressing, forms the basis for feedback between the nurse and patient and enhances patients’ appreciation of caregiving procedure, which in turn results in patients significantly contributing to their pain management. The participants also reported that having healthy communication with one’s patient bridge cultural differences, and enhance health delivery. Previous findings have shown that there is a need for nurses to develop their interaction with their patients as this is necessary to bridge cultural differences and to deliver nursing care that has a lot of respect for patient’s unique opinions, values, and customs within the healthcare facility (Srisawang et al., 2013; Zoëga et al., 2015). However, most patients have described the absence of meaningful interaction with nurses as unhealthy, often detecting that the nurses want to maintain some
distance or are too busy concentrating on other duties (Moyle, 2003; Stenhouse, 2011; Stewart et al., 2015).

Despite the significant positive attitudes showed by nurses towards pain management, they exhibited some weaknesses or negative attitudes. These negative attitudes included not prioritizing burns pain assessment and management, exaggeration of pain by patients with burns, fear of addictions to drugs, administration of placebo and frustrations. These findings are also consistent with an earlier study that acknowledges that apart from knowledge deficiency, lack of training, and inadequate clinical decision-making skills, bad attitudes also existed among nurses working in emergency units (Ucuzal & Doğan, 2015). These findings concurs with that of Kiekkas (2015) who reported that apart from a deficit in knowledge, pain management outcomes are affected by negative attitudes of healthcare professionals toward patients’ complaints about pain and the administration of analgesics.

Not prioritizing burns pain assessment and management was found to be one of the negative attitudes exhibited towards patients with the burns pains by nurses in the burns unit. Although, the participants acknowledge that injuries from burns are very painful and demands immediate attention, most of the time they are not able to respond immediately when patients complained of pain within the burns unit. The delays in time to commence pain assessment in the burns unit were not of the nurses own doing but is mostly due to the immense workload in the unit, inadequate staff, and the nurses attending to other duties/patients which hampered prompt pain assessment and management.

From my observation, I noted that two professional nurses and an auxiliary nurse each were assigned to the female (6 beds) and children’s ward (6 cots) whiles three professional nurses and
two auxiliary nurses were assigned to the male ward (10 beds) all within the burns unit. The treatment or dressing room had four nurses, each from the various wards, who were involved in the dressing of the wound of every patient who was due for change of dressing within the unit. They usually dress the wounds of 10 to 12 patients per day. Thus, the nurse is saddled with the duty of dusting, writing reports on patients, monitoring of vital signs, dressing of burns wounds, obtaining and administering medications, feeding via NG tube, maintaining the fluid status of the patients, obtaining items for their wound dressings and chasing patient’s laboratory results. All these duties affected the nurses’ response to the patient’s complaint of pain.

Earlier studies have demonstrated that some nurses have little contact with patients instead, spend most of their working hours on communicating with other agencies and doing administrative and paperwork (McAllister & McCrae, 2017; Seed et al., 2010; Sharac et al., 2010). This is also supported by report from another study that some facets of the care provided by nurses is dominated by the workload of caring for critically ill patients (Weyant, Clukey, Roberts, & Henderson, 2017). In relation to this, various studies agree that there is a need to address the issues of heavy workload by increasing staff numbers in order to resolve the complaints of nurses centered around heavy workload and shortage of staff (Akuma & Jordan, 2011; He et al., 2010; Twycross & Finley, 2013).

Though the nurses had empathy for these patients, some believed that these patients with burns sometimes exaggerated their pain to receive some particular pain medication, specifically Pethidine or because they needed attention, and therefore sometimes ignored their frequent complaints. This is consistent with a similar report that bad attitudes exhibited by health professionals including nurses have been found to affect the recovery behaviour of patients with burns as they downplay the patient’s symptoms and label them as exaggerating their pain and
therefore, disbelieving their complaint of pain (Morgan, 2014). This assertion is also buttressed by a report from Chat. (2010) that the inability to evaluate pain as less serious than it appears, assuming that the patient is overemphasizing his/her pain and matters related to addictions have all resulted in insufficient management of pain in emergency departments.

Furthermore, the attitude of nurses towards the relief and evaluation of pain as well as their perception of the pain of the patients can result in ineffective pain management (Shaban et al., 2012). Nurses can also contribute to ineffective management of pain as reported by Morgan (2014) and knowledge deficits among nurses may lead to negative beliefs and attitudes toward opioid analgesics and the underestimation of the patients’ post-operative pain (Mongkhonthawornchai, Sangchart, Sornboon & Chantarasiri 2013; Srisawang, Hirosawa & Sakamoto 2013). Indeed real differences exist between the level of the pain patients experience and the intensity of the pain perceived by nurses (Bourgault et al., 2015).

The administration of placebo (water for injection) was also another negative attitude exhibited by some nurses within the burns unit. The participants said that in their quest to relieve the patients with burns of their pain, they administered the pain medications when patients complained of pain but to prevent patients from getting addicted to opioids, particularly Pethidine, they sometimes administer placebos and patients still respond positively to it by either sleeping soundly or verbalizing the absence of pain though some of the patients, however, still complain of the pain afterwards. The findings from this study are also consistent with other studies which reported that to prevent addictions and side effects to analgesia, most nurses were not willing to manage pain adequately (Dongara, Nimbalkar, Phatak, Patel, & Nimbalkar, 2017; Verghese & Hannallah, 2010). A study of nurses working in postoperative acute care unit found
that they were moderately empathetic but their empathy had no bearing on the quality of their pain management (Reynolds, 2017).

These findings are also consistent with an earlier submission from Aziato & Adejumo (2014) which states that for the fear of patients getting addicted to analgesics, some Ghanaian nurses in the surgical units are hesitant to administer pain medications to post-operative patients. This administration of placebo can have detrimental consequences as Sinatra (2010) reported that failure to administer appropriate analgesic treatment may result in worsening of pain and more frequent hospital redmissions, adding to the already high economic burden associated with pain therapy. However, some of the participants also resolved to use the non-pharmacological rather than the pharmacological strategies to prevent these patients from getting addicted to the opioids, as supported by one study (Lui, So, & Fong, 2008).

Some nurses also get frustrated when health delivery efforts does not yield the expected favourable outcome and there is no support either coming from the patient him/herself or the relatives. Some of the factors resulting in this frustration included unavailable logistics to work with and the unavailability of pain medications especially during the night and weekend duties. This frustration, according to the participants, is usually displaced on the patient especially those who are not able to afford their pain medications but are always complaining of pain. Meanwhile, effective pain assessment and management among patients with burns are largely dependent on not only nurse’s knowledge but also on the availability of the resources such as pain medications (Kizza, Muliira, Kohi, & Nabirye, 2016).

The Pain Transaction Model (PTM) recognizes the interpersonal communication between the nurse and the patient as an effective channel to achieve excellent pain assessment and
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management. Majority of the participants, eight (8) identified both positive and negative effects of interpersonal communication on pain assessment and management. Some participants highlighted that good communication is very important in the assessment and management of burns pain as this helps the patients open up to the nurse about their pain complaints. Even in the absence of pain medications, a simple conversation with burns patient could help relieve their pain. Peplau (1997) revealed that the proficiencies of the nurse, with regards to interpersonal relationship, encourages patients to be involved in those activities that guarantee safe recovery and complete comfort.

An earlier study also supports this by reporting that the relationship that exists between health care providers and their patients, assessment of pain and accompanying documentation can affect the management of pain within the emergency unit (Heins et al., 2010; Iyer, 2011). The participants, believed that good interpersonal communication between nurses and patients helps patients appreciate what nurses do for them and they, in turn, participate significantly to their pain management. This is consistent with a previous survey that revealed that for an effective assessment and management of pain, the participation of the patient is a major requirement (Larsson et al., 2011). Consistent with previous studies (Frank et al., 2011; Pham et al., 2011), the current study highlights the need for increased interpersonal relations, reduction in time waiting and communication as key to effective pain management among patients with burns.

Chatchumni et al. (2015) in their study also reported that to meet the goals of nursing care and attain positive pain management outcomes, there is a need for healthcare providers to build good interpersonal communication and understanding with their patients. The building of good interpersonal relationships between patients and caregivers is strongly recommended, as this could improve understanding and meet nursing care goals for positive outcomes of pain.
management. Overall, a satisfying interaction between health care providers and patients should be appreciated as a means to enhance the management of pain in the emergency unit (Kitson et al., 2014). Again, greater communication between nurses and patients can result in more effective pain management (Youngcharoen et al., 2017).

Majority of the participants, ten (10) observed that bad interpersonal communication and lack of respect for patients results in a reduced level of cooperation during caregiving and endurance of pain from these patients. Thus, both nurses and patients complement each other for effective pain assessment and management in the ward. This is in line with an earlier report that showed that assessing patient for pain without engaging them results in poor management since they are denied the chance to partake in the assessment (Bach et al., 2018). Vahdat et al. (2014) also supported this by stating that the participation and partnership with patients require the active involvement of these patients in taking decisions as well as the chance to state their feelings about the potency of various therapies available.

The study, however, revealed that the language barrier was one major impediment to the interpersonal communication between nurses and patients with burns. According to some nurses, language barrier breeds communication gap, mistrusts, hampers teamwork thereby affecting effective communication between nurses and patients, delaying the conveyance of urgent information especially on pain, and interfering with the exchange of essential pain medications for effective pain relief. This is also in line with a similar study that revealed that nurse-patient communications are of concern as conflicts can arise as a result of a language barrier since the nurses anticipate that the patients’ expression of pain will be in a manner that they can comprehend (Zoëga et al., 2015).
Despite these concerns and situation that impedes on the nurse-patient interaction, the fundamental idea remains that the interpersonal communication is a key component to the care of patients, not just for the experience of the patient and the growth of an empathetic care culture (Molin & Lindgren 2016), but also to foster a peaceful working atmosphere in the unit (Delaney et al., 2017).

5.4 Coping Mechanisms of Burns patient when in Pain

Coping mechanisms are strategies and ways adopted by patients with burns injuries to reduce their pain. Earlier studies have reported that effective coping mechanisms by patients have resulted in positive health outcomes (Pargament et al., 2004). Other studies have also submitted that improved quality of life is linked to one’s coping mechanism (Yazdi-Ravandi et al., 2013).

The participants were asked about what strategies they think patients with burns usually employed when in pain. Strategies like diversional therapies, positional changes, religious coping, cultural beliefs and social support were mentioned. Tuncay et al. (2008) affirm that there is no consensus as to which coping strategy is the most effective, what matters is how well that coping strategy serves its purpose of relieving emotional distress or solving problems.

The participants reported that one of the major strategies patients with burns adopted in coping with pain emanating from burn injuries was the use of diversional therapy. The major diversional therapy adopted by these patients is the watching of television to take their minds off the pain. This finding was congruent with an earlier study that showed that the most frequent diversional activities employed by patients included watching movies or television and thinking about something else (Lambing et al., 2017). This is supported by another study that stated that hospitals must improve diversional therapy in the form of watching television and movies in patient’s rooms to help with pain management (Tadesse et al., 2016).
Religious belief is one important attribute of most Africans, especially Ghanaians. Even on the hospital bed when patients with burns are in pain, some of them resorted to seeking God’s intervention either by praying or by singing. This finding is congruent with an earlier report by Uren and Graham (2013) that in general, benevolent religious reappraisals and positive approaches of religious coping such as seeking spiritual support is significantly linked with enhancements in health.

From the study, some participants described how some patients chose to “suppress” their pain because of cultural beliefs. Patients with burns from the northern part of the country, according to some of the participants, hardly expressed their pain as compared to patients with burns from the Southern part. This finding is in line with an earlier research that a patient’s cultural background is a factor that greatly influences the experience of pain Callister (2003), thus the need for health care providers to be mindful of its impact on the treatment process. Similarly, a study by Lovering (2006) also found out that pain perception is influenced by culture and that the differences in the experience and expression of pain buttress the assertion that indeed one’s cultural beliefs is a significant determinant of the pain experience and its communication to others. The nature of patients’ beliefs on pain and the mechanisms they adopt has a significant influence on their functioning, quality of life and health in general (Main et al., 2010; Pons et al., 2012).

In this current study, another coping strategy that was identified was the existence of social support from family members, spouses, friends, colleagues and the adoption of a Clinical Psychologists to talk to the patients with burns. These supports from family members and spouses took the form of emotional support, financial assistance and prayers. An earlier study by Stephens and Petrie (2015) have documented the importance of social support systems and as
such emphasized that it is very essential to educate patients and their relatives sufficiently on issues including supporting patients financially, emotionally, and also provide support in the purchase of drugs.

The findings from this study revealed that the burns unit had a Clinical Psychologist who is considered a core part of the burns care team. This is because the pain from burns injuries and the frequent wound dressings coupled with the extended stays in the hospital can result in damaging psychological effects and ultimately their quality of life. This finding is in line with an earlier submission by Jain, Khadilkar and De Sousa (2017) that high rates of depression and anxiety are related to injuries from burns and depth of burns. This also corroborates a study that reported that clinical psychologists often help other members of the multidisciplinary health care team to develop behavioural interventions aimed at achieving success in the therapeutic process and also to ensure optimum social, psychological and physical recuperation in patients (Reuben, Hughes, & Medina-Walpole, 2000). A study by Dahl et al. (2012) also supports this by pointing out that irrespective of the size of the burns, patients with burns continue to suffer psychological problems stretching even 6 to 8 months after leaving the hospital.

A similar study showed that during initial admission of patients with burns, clinical psychologists manage patient’s pain tolerance, anxiety level and mental status to offer comfort to the patient and expedite physical rehabilitation (Cambiaso-Daniel, Suman, Jaco, Benjamin, & Herndon, 2018). Another research conducted by Griggs, Goverman, Bittner, and Levi, (2017) also showed that an early introduction of burns patient to other members of the multidisciplinary team including psychologists and pain management specialists will reduce anxiety thereby alleviating the pain experience and promote wound healing in the recovery phase.


5.5 Non-physiologic causes of burns pain

An additional theme that was not part of the constructs of the model but emerged from the findings was the non-physiologic causes of burns pain. These were factors that were known to cause or aggravate the pain for patients with burns though they did not have any physiologic basis. These were adapting to present condition, grieving and cost of healthcare. These findings are consistent with reports from other studies such as Hodges and Humphris (2009) and Uren and Graham (2013b) who found out that patients with burns are inflicted with countless problems that are connected to self-esteem, body image, excess worrying which may probably have negative consequences on their psychological functioning. Other studies have also buttress this point by pointing out that after hospitalization, patients with burns have challenges with their physical and psychological recovery process from scar formation and as such, the patients have to deal not only with functional impairments but also changes with body image (Summer, Puntillo, Miaskowski, Green & Levine 2007; Thombs et al., 2008).

From the study, all the participants lamented about the high cost of burns treatment comprising of intricate medical and surgical procedures and prolonged hospital stays. This resulted in a strain on the finances of the patient. A similar study also revealed that economic or social burden is also secondary stressors for patients with burns (Pearlin et al., 1990).

5.6 Psychological effect of burns pain management on nurses and their coping mechanisms.

Another finding that emerged from the study outside the constructs of the Pain Transaction model was the psychological effect of burns pain management on nurses. Subthemes that emerged were self-motivation to recover and coping mechanisms adopted by the nurses to deal with these psychological effects. From the study, it was revealed that some nurses in the burns unit become psychologically disturbed and feel helpless when all efforts to control the patient’s
pain before, during and after procedures proved futile. This finding corroborates the observation made by Kornhaber, Wilson, Abu-Qamar, and McLean (2014) that nurses who care for patients with burns are very likely to experience feelings of hopelessness emanating from the performance of painful traumatic procedures and change of wound dressing daily for patients with burns. This is also consistent with a report which claimed that control of pain in patients with burns, among others, is one of the contributory factors to the distress and anguish of nurses (Bayuo, 2018).

A previous submission by Negble, Agbenorku, Ampomah, and Hoyte-Williams (2014) also buttress the assertion that health professionals who were more exposed to distress and anguish were nurses. This is also in line with a previous report that showed that compared to other members of the health team, nurses face bigger stress (Greenfield, 2010) as they are with the patient the whole day. Thus these nurses need support to help address their emotional and psychological issues. When the psychosocial needs of healthcare providers including nurses are not met, poor mental health may ensue (Kim, Kashy, Spillers, & Evans, 2010).

For their coping mechanisms, majority of the participants reported that they converse and laughed amidst sharing jokes with the patients, and among themselves to take their minds off the stress of seeing the patients suffer in pain especially, during wound dressing. This finding is also congruent with another study which reported that to build resilience, nurses individually adopt strategies like thinking positively, employing positive reaffirmations, and upholding a positive attitude by engaging in laughter and humour (Jackson, Firtko & Edenborough, 2007).

Another coping strategy identified by the participants from the study was that to avoid getting affected by the patient’s expression of pain during procedures, like wound dressing, they (nurses) try to tell themselves that though the procedure is painful, it is for the good of the patient after
they have administered the appropriate pain medications. This was also revealed in a study by Matzek (2011) who admits that coping strategy employed by healthcare providers include making meaning of the situation. To help nurses deal with these psychological issues, there is a need to find reliable mentors for motivation, guidance, role modelling and emotional support as these can be very helpful (Ebrahimi, Hassankhani, Negarandeh, Gillespie & Azizi, 2016; Ferguson 2011; Fowler 2011).

5.7 Evaluation of the Pain Transaction Model

The Pain Transaction Model developed by Keen et al., (2017, p. 284) was the conceptual framework that was used for the study and was found to be very beneficial as the model’s constructs guided the development of the interview guide that was used for the study. The model recognizes the interpersonal communication between the nurse and the patient which is usually influenced by factors from both the nurse and the patient. These factors which were the constructs of the model included the nurse’s knowledge and attitudes, patients’ pain behaviours and coping mechanism and its influence on the assessment, treatment, and subsequent management of pain.

A major theme that emerged from the study was the knowledge and experiences of burns pain among patients with burns which was from the construct, nurse’s knowledge and attitudes. A modification was made to the construct “nurses’ knowledge and attitude” by replacing the “attitude” with “experiences” to reflect how the nurses’ knowledge on the various factions of burns pain was applied in the clinical setting. Experiences with burns pain assessment and management as well as evaluation of therapy given were some of the subthemes under the experiences. Two constructs of the model, “interpersonal communication” and “attitude” were merged in the study as it was noted by participants that there was a direct correlation between
attitudes of nurses and the interpersonal communication between the patient and the nurse. Hence the new construct adopted was “the influence of attitude and interpersonal communication on burn pain management”.

The patient’s pain behaviours were also modified to mean “perceived pain behaviours” of patients with burns as the participants for the study were only nurses in the burns unit. This construct comprised of the behaviours that were exhibited by the patient indicating that the patient was experiencing pain. Two subthemes that emanated were the verbal and non-verbal expression of pain. The coping mechanisms of the patient in pain were also amended to “perceived coping mechanisms” of burns patient when in pain as the study only focused on nurses as participants. Five (5) subthemes that emerged were diversional therapies, positional changes, religious coping, cultural beliefs and social support.

Two new themes that emerged from the data collected which were not part of the constructs of the Pain Transaction Model by Keen et al., (2017, p. 284) were the non-physiologic causes of pain and the psychological effect of burns management on the nurses. Three subthemes were generated out of the new theme “non-physiologic causes of pain” and two themes were derived from the “psychological effect of burns pain management on the nurses”.

In total, six major themes were developed form the study and four of them were consistent with the model that was used to guide the study and the other two emanated from the findings of the study. Out of these six themes, 25 subthemes were generated.
5.8 Recommendations to the Conceptual Framework

The researcher recommends that the Pain Transaction Model by Keen et al., (2017, p. 284) integrate the experiences of nurses when it comes to pain assessment and management as additions to the model. Non-physiologic causes of pain could also be added to the model as other sources of stress and anxiety such as adapting to present condition, grieving and cost of healthcare can affect the overall pain assessment and management of burns patient. Again, for nurses to effectively assess and manage the pain of burns patient, they (nurses) need to be in stable mental health. Hence, the psychological effect of burns pain management on the nurse must be considered and inculcated into the model.

The next chapter presents the summary, implications, limitations, conclusions, and recommendations made from the findings of the study.
CHAPTER SIX

SUMMARY, IMPLICATIONS, LIMITATIONS, CONCLUSIONS AND RECOMMENDATIONS

The chapter presents the summary of the whole research and the implications of the findings to nursing research, practice, management and education. The limitations of the study as well as recommendations for future research are also presented.

6.1 Summary

Patients with burns within the Burns Unit of the Korle-Bu Teaching Hospital daily undergo a lot of pain first from the burns injury itself and from the therapeutic procedures that are carried out on them. Unfortunately, the majority of the time, the pain that accompanies these procedures are not managed adequately. This unrelieved pain has resulted in a lot of negative effects on patients with burns either temporarily or permanently. This research, therefore, was aimed at exploring the experiences of nurses in the burns unit on their pain assessment and management in patients with burns. This research employed a qualitative exploratory descriptive design.

Semi-structured interview guide which was developed from the Pain Transaction Model by Keen et al., (2017) was used. The participants for the study were nurses who had been working for 2 years post rotation in the burns unit of the Reconstructive Plastic Surgery and Burns Centre of the Korle-Bu Teaching Hospital. During the interviews conducted, saturation was attained on the tenth participant, nonetheless, an eleventh participant was interviewed. To analyse the data collected, a thematic and content analysis was employed. From the data collected, four (4) major themes emerged which were: knowledge and experiences on burns pain, perceived pain behaviour of patients with burns, the influence of attitude and interpersonal communication on
burns pain management and coping mechanisms of patients with burns when in pain. However, two new findings emerged from the study which was not part of the constructs of the model used for the study. These two additional findings were the non-physiologic causes of burns pain and the psychological effects of burns pain management on the nurses.

The nurses expressed both knowledge and experience in the assessment and management of burns pain. The findings revealed that the nurses within the burns unit had sufficient knowledge regarding the types, aggravating factors, consequences of unrelieved burns pain and sources of burns pain including knowledge on the burns pain assessment. Though the majority of the participants, seven (7), had adequate knowledge on the use of assessment tools for the pain of patients with burns, four (4) did not have any knowledge on these pain assessment tools. The nurses also had adequate knowledge of the pharmacological means of managing burns pain but had insufficient knowledge on the non-pharmacological means of managing burns pain.

The participants expressed both positive and negative attitudes towards pain assessment and management of patients with burns. While the majority of the nurses acknowledged the pain in patients with burns and expressed empathy for these patients, some believed that these patients sometimes exaggerated their pain to receive attention from the nurses or medications such as Pethidine. Though some nurses were willing to help these patients by administering analgesics to relieve the burns pain, some were also of the opinion that too many analgesics could result in addiction to these drugs thus leading to the administration of placebos (water for injection).

The nurses also reported both positive and negative effects of interpersonal communication between the nurse and the patient. When nurses had good interpersonal communication with their patients, it led to patients opening up on their pain, cooperating and participating in their care whiles a bad interpersonal communication between the nurse and the patient resulted in lack
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of cooperation from the patient. Patients should, therefore, be encouraged to speak candidly with their caregivers and providers regarding their pain and the effectiveness of their pain management.

With regards to the coping mechanisms employed by these patients when in pain, as perceived by the nurses, diversional therapy, positional changes, religious and cultural beliefs and social support systems were mentioned. Two themes that emerged from the study which were not part of the constructs of the Pain Transaction Model were the non-physiological causes of pain and the psychological effects of burns pain management on nurses.

6.2 Implications of the study

The findings from the study have direct relevance to nursing practice, education, management, and research.

6.2.1 Nursing practice

To improve the assessment of burns pain within the burns unit, it is a necessity for the unit to provide tools that will aid in the diagnosing of underlying burns pain and evaluating the effectiveness of therapy given. This must be anchored by a nurse with specialty in Pain management whose role will be to focus on the management of burn’s pain in the unit. The assessment of burns pain must be done frequently with supervision from the ward supervisors and pain assessment must be documented in the patients’ monitoring or vital signs chart. The documentation must include the duration, site, severity frequency, nature of pain, aggravating factors as well as the pain medications given to relieve the burns pain. There is a need for nurses to include a report on their pain assessment and management during each shift. For proper and effective management of the pain of burns patient, the positive attitudes identified such as
acknowledging the presence of pain, willingness to help and regular communication with patients which provides comfort for burns patient must be emphasized and practiced by all the nurses.

In the burns unit, there was no prevailing guideline for pain assessment and management in patients with burns which could explain some participants’ inability to assess the burns pain. Hence for effective management of burns pain, there is a need for the unit to design protocols and policies for the assessment and management of burns pain which must be communicated to all nurses in all the wards of the burns unit. This will ensure consistency in pain management, recommendations on the appropriate selection of drugs and dosages as well as titration of these drugs to ensure efficiency and safety among nurses in this regard.

6.2.2 Nursing Education

The findings of the study discovered that the nurses did not have adequate knowledge of the tools used to assess burns pain. It is important to train nurses on how to apply modern and various kinds of pain assessment tools in patients with burns. Therefore, nurse tutors within the various training colleges must be knowledgeable and abreast with new methods of assessing pain including how to apply these tools so that they can impact this knowledge to their students to help in their daily nursing of patients. The current nursing curriculum must be reviewed and the assessment and management of pain management should be inculcated into this curriculum for all cadre of nurses.

6.2.3 Nursing Management

There is a need for nurse managers to organize more departmental training as a continuing education program to educate not only nurses but also other medical staff on the use of current
and validated tools for the assessment and management of patients with burns, applicable within their settings. In addition, to promote the quality of patient’s care, there is a need to accentuate professionalism in the practice of nursing as well as during all nursing workshops and seminars. There is also the need for nurse managers to stress on the importance of frequent assessment of pain on burn patients during these training.

Since lack of pain medications and inadequate staff were identified as some of the barriers to the effective management of burns pain, nurse managers should also ensure that logistics, in the form of pain medications, are always readily available and assessible irrespective of the shift or time of day. Nurse managers should also work at assessing and reviewing the number of nurses in the burns unit as this will help increase the number of nursing staff. This increment will result in an efficient and effective assessment and management of patients with burns’ pain.

To help nurses deal with the psychological effects of burns pain management on them, there is a need to institute systems that can encourage nurses who work within the burns unit to express their feelings and concerns to encourage each other.

6.2.4. Nursing Research

Some suggested areas for further research are:

a. Impact of the poorly managed relationship between medical teams and patients with burns e.g. Pharmacy not available 24/7, nurse to patients’ ratio on the wards.

b. Is there an abuse of analgesics’ due to lack of knowledge in assessing pain?

c. Ascertaining the relationship between the nurses’ pain knowledge and experiences with patients’ pain intensity.
6.3 Limitations of the study

The study was conducted in one tertiary hospital, although there are other Burns Centers in Ghana, hence, studies are recommended in other tertiary hospitals. This will integrate bigger and more varied sample of nurses working with patients with burns to have a broader understanding of this phenomenon.

6.4 Conclusions

There should be a social support system in the form of clinical psychologists to address not only the psychological, social and emotional needs of patients with burns but also for the nurses caring for these patients. This social support may reduce events that are potentially stressful on nurses and lessens their initial impact. There is also a need to address the negative attitudes of the nurses towards the assessment and management of patients with burns as this can affect the effective management of burns pain. The findings of the study were consistent with the Pain Transaction Model by Keen et al., (2017) as information attained was centered around the constructs of the model. However, two additional findings that evolved from the study were not part of the model’s constructs.

6.5 Recommendations

From the study, the following recommendations were made to regulatory bodies and the management of the Korle-Bu Teaching Hospital and other interest groups.

6.5.1. Nursing and Midwifery Council of Ghana (NM&C)

- There is a need for NM&C as part of its curriculum development mandate to review the current curriculum regarding pain assessment and management.
• The Council also needs to be committed to the incorporation of pain management into the existing curricula for all cadre of trainee nurses.

6.5.2 Ghana College of Nurses and Midwives (GCNM)

• There is a need for GCNM to develop a specialist programme in burns for nurses so they can be well equipped with adequate, appropriate, relevant and appropriate information aimed at improving the knowledge and practices of pain management for patients with burns.

6.5.3 National Health Insurance Authority (NHIA)

Form the study, it was revealed that the majority of patients with burns were people of low income earning status and are faced with financial problems during the process of recovery. Unfortunately, most of their drugs and items for wound dressing are not covered by the health insurance scheme saddling the patient with financial stress apart from the existing stress and pain that patients with burns go through.

• Thus, there is a need for a revision of policies on the funding of health care services, especially for patients with burns for it to be appropriate and effective.

6.5.4 Management of Korle-Bu Teaching Hospital

• The management of the hospital must formulate policies which will address the availability of pain assessment tools, availability of pain medications and adequate nursing staff for the burns unit. Recruitment of more nurses for the burns unit will help reduce the workload on the existing ones.

• Also, an introduction of a non-pharmacological methods such as a Public Address (P.A.) system to play music within the burns unit especially the treatment room will be helpful
as music therapy has been proven to alleviate stress, promote wellness and relieve pain associated with burns wound dressing.

- The social welfare unit of the hospital must also be empowered to be able to care effectively for patients who are not financially stable so that their socioeconomic needs can be adequately addressed.

- There is a need for a chaplaincy team to be instituted within the Burns unit to adequately meet the spiritual needs and also help improve the religious coping mechanisms adopted by these patients with burns.
NURSES EXPERIENCES WITH BURNS PAIN ASSESSMENT

REFERENCES


Barry, H. E., Parsons, C., Passmore, A., & Hughes, C. M. (2012). An exploration of nursing home managers' knowledge of and attitudes towards the management of pain in residents
NURSES EXPERIENCES WITH BURNS PAIN ASSESSMENT


NURSES EXPERIENCES WITH BURNS PAIN ASSESSMENT


NURSES EXPERIENCES WITH BURNS PAIN ASSESSMENT


NURSES EXPERIENCES WITH BURNS PAIN ASSESSMENT


NURSES EXPERIENCES WITH BURNS PAIN ASSESSMENT


Jain, M., Khadilkar, N., & De Sousa, A. (2017). Burn-Related Factors Affecting Anxiety, Depression And Self-Esteem In Burn Patients: An Exploratory Study. *Annals of Burns and Fire Disaster, 30*(1),301-34. PMID 28592931


NURSES EXPERIENCES WITH BURNS PAIN ASSESSMENT


NURSES EXPERIENCES WITH BURNS PAIN ASSESSMENT


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NURSES EXPERIENCES WITH BURNS PAIN ASSESSMENT


NURSES EXPERIENCES WITH BURNS PAIN ASSESSMENT


APPENDIX A: INTRODUCTORY LETTER

UNIVERSITY OF GHANA
DEPARTMENT OF ADULT HEALTH
SCHOOL OF NURSING

SON/A.12

The Head
National Reconstructive Plastic & Burns Centre
Korle- Bu Teaching Hospital
Accra

Dear Sir/Madam,

LETTER OF INTRODUCTION

This is to introduce to you Linda Tetteh, an MPhil second year student of the School of Nursing and Midwifery.

The Scientific Review Committee of the School has approved the thesis topic: “Nurses Experiences With Pain Management In Patients With Burns: A Study At The Korle- Bu Teaching Hospital, Accra”.

I hope that the unit will approve the proposal to enable her collect data.

Counting on your usual co-operation.

Thank you.

Yours faithfully,

Prof. Lydia Azriatu
Ag. Dean

COLLEGE OF HEALTH SCIENCES
- P.O. Box LG 43, Legon, Accra, Ghana.
- Telephone: +233 (0) 302 513 250 / 0289 531 213
- Email: adulthealth.son@chs.ug.edu.gh
- Website: www.nursing.chs.ug.edu.gh
APPENDIX B: NOGUCHI ETHICAL CLEARANCE

NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH
Established 1979A Constituent of the College of Health Sciences

INSTITUTIONAL REVIEW BOARD

University of Ghana
Post Office Box LG 581
Legon, Accra
Ghana

9th January, 2019

ETHICAL CLEARANCE

FEDERALWIDE ASSURANCE FWA 00001824
NMIMR-IRB CPN 014/18-19

IRB 00001276
IORG 0000908

On 9th January 2019, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) at a full board meeting reviewed and approved your protocol titled:

TITLE OF PROTOCOL: Nurses experiences with pain assessment and management in patients with burns at the Korle-Bu Teaching Hospital

PRINCIPAL INVESTIGATOR: Linda Tetteh, MPhil Cand.

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

Please report all serious adverse events related to this study to NMIMR-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till 8th January, 2020. You are to submit annual reports for continuing review.

KORLE BU TEACHING HOSPITAL
P. O. BOX KB 77,
KORLE BU, ACCRA.

Tel: +233 302 667759/673034-6
Fax: +233 302 667759
Email: Info@kbth.gov.gh
pr@kbth.gov.gh
Website: www.kbth.gov.gh

21st January, 2019

LINDA TETTEH
SCHOOL OF NURSING AND MIDWIFERY
UNIVERSITY OF GHANA
LEGON

NURSES' EXPERIENCES WITH PAIN ASSESSMENT AND MANAGEMENT IN PATIENTS WITH BURNS AT THE KORLE BU TEACHING HOSPITAL
NURSES EXPERIENCES WITH BURNS PAIN ASSESSMENT
MEDICAL DIRECTORATE
KORLE BU TEACHING HOSPITAL

22nd January, 2019

THE HEAD
DEPT. OF PLASTIC SURGERY
KORLE BU

LETTER OF INTRODUCTION – LINDA TETTEH
"NURSES’ EXPERIENCES WITH PAIN ASSESSMENT AND MANAGEMENT IN-PATIENTS WITH BURNS AT THE KORLE BU TEACHING HOSPITAL"

I have the pleasure to introduce to you the above named Investigator from School of Nursing and Midwifery, University of Ghana, Legon. Linda Tetteh sought and has been granted approval to conduct a study entitled “Nurses’ experiences with pain assessment and management in-patients with burns at the Korle Bu Teaching Hospital” in your Department.

She is to contact you to discuss the commencement date of the study.

Please verify her identity with a Government issued National ID card and accord her the needed assistance.

Attached is the Scientific and Technical Committee and Institutional Review Board approval which specifies the terms.

Sincere regards,

Dr. Samuel Asiamah
Director of Medical Affairs
For: Chief Executive

Cc: The Chief Executive
Korle Bu
CONSENT FORM

Title: Nurses’ experiences with pain assessment and management in patients with burns

Principal Investigator: Linda Tetteh

Address: University of Ghana,
College of Health Sciences
School of Nursing & Midwifery
P. O. Box LG 43, Legon
ltetteh@gmail.com

General Information about the study
This study seeks to explore the experiences of nurses with the assessment and management of pain in patients with burns at the Korle- Bu teaching hospital. The study will investigate the knowledge and attitudes of nurses in the Reconstructive Plastic Surgery and Burns Centre on burns pain. The study will also investigate the nurse's perceived behaviours and coping mechanisms of burns patients when in pain as well as the experiences of these nurses in the assessment and management of pain in patients with burns. I would like to interview you because you are a nurse working in the RPSBC and directly involved in the management of burns patients including the assessment of their pains to enable me to achieve the objectives of this study. The interview will be recorded on tape, with your permission, and will last between 45 to 60 minutes. If you decide to be part of this study you will be required to sign this consent form after which the interview will be conducted. I assure you of total confidentiality. The transcripts, audiotapes and field notes will only be accessible to the researcher and supervisors.

Possible Risks and Discomforts
This study is not expected to pose any risks and discomforts to you as a participant, but due to the sensitive nature of the information you will be giving, there may be emotional discomfort when you are describing your experiences with pain assessment and management in patients with burns.
Possible Benefits

This research will not provide an immediate benefit(s) to you. However, I hope and expect that your participation will inform policy makers and health workers to appreciate the specific needs of nurses in the assessment and management of pain in patients with burns. This will enable health workers and relevant bodies and institutions involved to organize programs designed to meet the needs of nurses involved in the assessment and management of pain in patients with burns.

Confidentiality

The information you will give about yourself will be protected and not disclosed to other people. Your name and identity will not be written on any document used in this study or appear in the report of this study. Pseudonyms will be used to anonymize data collected from you. The transcripts, audiotapes and field notes will only be assessable to the researcher and her supervisors. The information will be kept on an external drive for 5 years after which it will be discarded.

Compensation

Though you will not be given any monetary compensation directly for participating in this study, you will, however, be provided with spring rolls, drink, and water as a form of refreshment.

Voluntary participation and Right to leave the Research

Participation in this research is purely voluntary. You have the right to withdraw from the interview at any point in time during the study. Your decision to withdraw or decline participation will not attract any penalty or affect you in any way.

Contacts for Additional Information

If you have any concerns or need answers to pertinent questions about the research and whom to contact in a case.
of any research related injury, please feel free to contact the researcher or her supervisor on the following address and contact numbers

Linda Tetteh (Researcher)
C/O School of Nursing and Midwifery
College of Health Sciences
University of Ghana, Legon.
P.O. Box LG 43, Legon
Mobile and email address: 0244991917. ltetteh@gmail.com

Prof. Lydia Aziato (Supervisor)
School of Nursing and Midwifery
College of Health Sciences
University of Ghana, Legon.
P.O. Box LG 43, Legon
Mobile and email address: 0244719686. aziato@gmail.com

Institutional Review Board for Medical Research
Korle- BuTeaching Hospital
Korle-Bu
Tel. no. 0302666766
Email addresses: rdo@kbth.gov.gh
Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Korle Bu Teaching Hospital Institutional Review Board (KBTH-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302739510 or email addresses: rdo@kbth.gov.gh

This document describing the benefits, risks, and procedures for the research title (name of research) has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks, and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

__________________________
Name and signature of witness:  

__________________________
Date:

I certify that nature and purpose, the potential benefits, and the possible risks associated with participating in this research have been explained to the above individual.

__________________________
Name Signature of Person Who Obtained Consent:  

__________________________
Date:
APPENDIX E: INTERVIEW GUIDE

INTERVIEW GUIDE

SECTION A
Demographic information
Gender
Age
Sex
Educational level
Rank
Number of years working in the Burns Unit
Ward
Specialty

SECTION B
GUIDING QUESTIONS

1) What is the nurses’ knowledge and attitudes on pain among patients with burns?

Knowledge
Probes:

a. Formal training on pain
b. Types of burn pains
c. Effects of burn pains
d. Pain assessment tools
e. Drug used in pain relief
f. Evaluating the effectiveness of pain relief given
NURSES EXPERIENCES WITH BURNS PAIN ASSESSMENT

g. Intensity of pain

Attitude

Probes:

h. Response to the pain of burns patients

i. Perception of patients’ pain

j. Usage of pain assessment tools

k. Beliefs and values

2. What is the perceived pain behaviour of burns patients and their coping mechanisms when in pain?

Pain Behaviour

Probes;

a. Facial expression

b. Verbal or non-verbal cues

c. Physiological indicators like increased blood pressure

Coping mechanisms

a. Positioning

b. Self -medication

c. Prayer

3. What is the perception of nurses on how the interpersonal relationship that exists between the nurse and burns patient can influence burn pain assessment and management?
Probes:

a. Cordial
b. Age
c. Language
d. Empathy
e. Respect
f. Participation in care
g. Comfort
h. Mental support
i. Trust

4. What are the experiences of nurses on assessment and management of pain among burns patients?

**Probes**

a. Use of pain assessment tools
b. Drug administration
c. Non pharmacological means
d. Challenges
### APPENDIX F: DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

#### TABLE 1: DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

<table>
<thead>
<tr>
<th>Participant ID</th>
<th>Age</th>
<th>Sex</th>
<th>Marital status</th>
<th>Rank</th>
<th>No. of years working</th>
<th>Specialty</th>
<th>Educational Level</th>
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<td>SNO</td>
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<tr>
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<tr>
<td>BN 9</td>
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<td>F</td>
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<td>SNO</td>
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<td>Dip. In Burns care</td>
<td>Tertiary</td>
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<tr>
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<td>F</td>
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</table>

*Source: Field Data 2019*
## APPENDIX G: SUMMARY OF THEMES AND SUBTHEMES

### TABLE 2: SUMMARY OF THEMES AND SUBTHEMES

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub-Themes</th>
</tr>
</thead>
</table>
| Knowledge and experiences on burns pain.       | a. Types of burn pain  
|                                                | b. Aggravating factors of burns pain  
|                                                | c. Consequences of unrelieved burns pain  
|                                                | d. Sources of knowledge on burns pain assessment and management  
|                                                | e. Burns pain management  
|                                                | i. Pharmacological  
|                                                | i. Non-pharmacological  
|                                                | f. Experiences with burns pain assessment  
|                                                | g. Experiences with burns pain management  
|                                                | h. Evaluation of relieved burns pain  |
| Perceived pain behaviour of burns patient      | a. Verbal expression  
|                                                | b. Non verbal expression  |
| Influence of attitude and interpersonal        | a. Positive attitudes  
| communication on burns pain assessment and     | b. Negative attitudes  
| management                                      | c. Positive effects  
|                                                | d. Negative effects  |
| Coping mechanisms of burns patient when in    | a. Diversional therapies  
| pain                                          | b. Positional changes  
|                                                | c. Religious coping  
|                                                | d. Cultural beliefs  
|                                                | e. Social support  |
| Additional themes                              |                                                                           |
| Non-physiologic causes of pain                 | a. Adapting to the present condition  
|                                                | b. Grieving  
|                                                | c. Cost of healthcare  |
| Psychological effects of burns pain management | a. Self-motivation to recover  
| on nurses                                      | b. Coping mechanisms  |