

**DEVELOPMENT OF CLINICAL GUIDELINES FOR THE MANAGEMENT OF
POST-OPERATIVE PAIN WITHIN THE MEDICO-SOCIO-CULTURAL CONTEXT
OF GHANA**

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ABSTRACT

Development of Clinical Guidelines for the Management of Post-operative Pain within the Medico-socio-cultural Context of Ghana

Literature on post-operative pain indicates that post-operative pain is inadequately managed in many countries including Ghana. Little was also known about post-operative pain (POP) response and management in Ghana. This study sought to describe post-operative pain response and management among Ghanaian surgical nurses and post-operative patients within the medico-socio-cultural context. It also explored factors that influenced POP response and management and subsequently aimed to develop clinical guidelines within which post-operative pain could be managed in the medico-socio-cultural context. Research questions answered included: ‘what are the factors influencing post-operative pain responses among surgical patients and nurses; what clinical guidelines would be appropriate to guide post-operative pain management within the medico-socio-cultural context of Ghana?’

The study was designed as a multi-step focused ethnography which allowed the exploration of a specific sub-culture such as the surgical environment. The philosophical underpinnings of ethnography permit the investigator to use different data collection methods to fully understand the phenomenon investigated. Data collection during the ethnographic exploration phase involved individual interviews, clinical observations, and review of patients’ clinical charts. At the stage of guideline development, data was collected through participant/expert review, systematic literature review, and consensus forum. Participants were sampled purposively and included 53 interview participants, 27 expert reviewers, and 29 consensus panel members. Also, there were 16 sections of clinical observation and review of 44 charts. The participants included nurses, patients and their relatives, the multidisciplinary team, key informants, experts, and stakeholders. The study was conducted at the Korle-Bu Teaching

Hospital (KBTH) and Ridge Hospital, in Accra, Ghana. Appropriate ethical clearance was sought and individual informed consent was obtained.

Concurrent analysis of data was done applying the principles of thematic content analysis and data was managed with NVivo 9. Themes that emerged from the patients' data were subjectivism which described pain dimensions and expressions and factors that influenced patients' pain experience were psycho-socio-cultural factors such as personal inclinations and socio-cultural background; and health system factors such as personnel attitude and health financing.

The study also found that nurses perceived POP as an individual phenomenon and responded to pain by administering analgesics and by employing non-pharmacologic measures such as positioning and reassurance. Factors that influenced the nurses' pain response were individual factors such as commitment, discretion, and fear of addiction; and organizational factors such as organizational laxity and challenges of teamwork.

Patients' relatives were also influenced by empathy, faith, and commitment to care for their post-operative patients. The multidisciplinary team and key informants were influenced by knowledge and experience in their respective specialty areas. Subsequently, the clinical guideline developed had four dimensions which highlighted patient and family education, effective teamwork, effective leadership and monitoring, and use of contemporary evidence for POP management.

The study recommended that health professionals should be conscious of the subjective nature of pain and they should educate and involve the patient on pain management decisions. Also, hospital leadership and the multidisciplinary team should be actively involved in pain management.

KEYWORDS

Post-operative pain

Pain management

Ethnography

Pain response

Attitude to pain

Culture

Medical system

Systematic review

Guideline development

Clinical guideline



DECLARATION

I declare that *Development of Clinical Guidelines for the Management of Post-operative Pain within the Medico-socio-cultural Context of Ghana* is my own work, that it has not been submitted before for any degree or examination in any other University, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Lydia Aziato



Date: November, 2012

Signed

A handwritten signature in blue ink, appearing to read "Lydia Aziato".

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LIST OF ABBREVIATIONS

AGREE - The Appraisal of Guidelines Research and Evaluation in Europe collaboration

ANZCA - Australian and New Zealand College of Anaesthetists

APS – Acute Pain Service

APT – Acute Pain Team

ASA - American Society of Anaesthesiologists

CBEI – Cognitive Behavioural Approach Education Intervention

CHRAJ - Commission for Human Rights and Administrative Justice

CINAHL – Cumulative Index of Nursing and Allied Health Literature

CONSORT - Consolidated Standards of Reporting Trials

DANIDA - Danish International Development Agency

DDA – Dangerous Drugs Act

DVT – Deep Vein Thrombosis

EN – Enrolled Nurse

FPS – Faces Pain Scale

GHS – Ghana health Service

GRNA – Ghana Registered Nurses Association

GSS - Ghana Statistical Service

HCA - Health Care Assistant

HIV – Human Immuno deficiency Virus

IASP - International Association for the Study of Pain

ICD – Institutional Care Division

ICU – Intensive Care Unit

ID - Identification

IM - Intramuscular

IV – Intravenous

IVPCA – Intravenous Patient Controlled Analgesia

JCAHO – Joint Commission on Accreditation of Healthcare Organizations

KATH – Komfo-Anokye Teaching Hospital

KBTH – Korle-Bu Teaching Hospital

MPQ – McGill Pain Questionnaire

MOH – Ministry of Health

NHIS - National Health Insurance Scheme

NHI - National Health Insurance

NHS - National Health Scheme

NICE - National Institute for Clinical Excellence

NMC – Nurses’ and Midwives’ Council for Ghana

NO – Nursing Officer

NRS – Numeric Rating Scale

NSAIDS - Non-steroidal Anti-inflammatory Drugs

PACU - post-anaesthesia care unit

PCA – Patient Controlled Analgesia

PET - Post-graduate Enrolment Through-put Programme

PNO - Principal Nursing Officer

POP – Post-operative pain

PRISMA - Preferred Reporting Items for Systematic Reviews and Meta-analysis

PRN – *pro-re-nata* or as necessary



PROSPECT – Procedure-specific Post-operative Pain Management

QUORUM - Quality of Reporting of Meta-analysis

RCT - Randomized Controlled Trials

SIGN - The Scottish Intercollegiate Guidelines Network

SN – Staff Nurse

SR – Systematic Review

SSN – Senior Staff Nurse

TV - Television

UNICEF - United Nations Children's Fund

UWC – University of the Western Cape

VAS – Visual Analog Scale

VDS – Verbal Descriptor Scale

VHA - Veterans Health Administration

WACN – West African College of Nursing

WAJN – West Africa Journal of Nursing

WHO - World Health Organization



**Title: Development of Clinical Guidelines for the Management of Post-operative Pain
within the Medico-socio-cultural Context of Ghana**

**CHAPTER ONE
INTRODUCTION**

1.1 Background

It has been observed that pain is the most common reason why people seek health care (Collins, Gullette, & Schnepf, 2004). This observation suggests that investigations into pain related maladies are important to pursue. The current level of knowledge on the abstract concept of pain has developed through extensive research which started with the work of Darwin (1872) among animals. Over the years, researchers have studied various aspects of the pain phenomenon in countries such as the UK, USA, Australia, Jordan and South Africa (Abdalahim, Majali, & Bergbom, 2008; Beyer, McGrath, & Berde, 1990; Briggs & Closs, 1999; Buvanendran, Reuben, & Kroin, 2007; Carmichael, Henig, Ephron, & Scelfo, 2007; Carr, 2002; Klopper, Andersson, Minkkinen, Ohlsson, & Sjöström, 2006). Also, research has identified and discussed reasons why pain management has not improved to the required global and institutional standard. Some of the reasons mentioned and explored include effect of culture, attitude of health personnel, patients and their families, inadequate knowledge of health personnel, and lack of multidisciplinary approach to pain management (Carr, 2002; Mac Lellan, 2006; McCaffery & Beebe, 1994). Pain research in contemporary literature focuses on populations with specialized needs such as the elderly, children, and patients with disability (Bååth, Wilde-Larsson, Idvall, & Hall-Lord, 2009; Bjoro & Herr, 2008; Decker, 2009; DeWaters et al., 2008; Kaplan, Sison, & Platt, 2008).

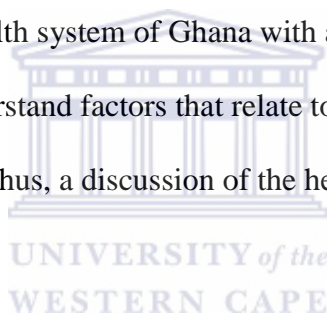
Pain is considered a personal phenomenon which is influenced by individual experiences acquired through the processes of socialization from the family and

society/community. In this regard, the individual's culture is identified as a core factor that influences the response, perceptions, and beliefs of pain. This assertion is relevant in an earlier study by Zborowski (1952) in the USA. His findings led him to conclude that children develop attitudes towards pain during childhood. Further, it is realized that some cultures encourage pain expression while others value stoicism and the Ghanaian culture is made up of over 60 ethnic different groups who could have differences in their pain expression and response (Callister, 2003; Calvillo & Flaskerud, 1991; Davis, 1998; GhanaWeb, 2012). Therefore, pain response is not an innate quality but rather what we learn from parents and from our culture or society (Beyer & Knott, 1998). Culture therefore determines how pain is perceived, the meaning assigned to the pain, how or whether a person reports pain and how the person acts or responds when in pain (Abu- Saad, Pool, & Tulkens, 1994; Helman, 2001; Honeyman & Jacobs, 1996; Lovering, 2006a; Ramer et al., 1999).

Also, it has been realized that the culture of a care provider may influence the post-operative pain management provided. For example, studies have documented that nurses do not administer narcotics as desired because of a cultural factor of fear of addiction to the narcotic analgesic. Thus, the patients' pain management is influenced by the health professional's knowledge and attitude (Lovering, 2006a). The influence of culture on Ghanaian nurses' post-operative pain (POP) management has not been documented. This presupposes that there could be some cultural factors that may interfere with effective POP management. Hence, it can be inferred from the findings that issues regarding pain response and management are multi-faceted and complex. The contributing factors include issues regarding health institutions, patients' and health personnel attitudes.

Health institutions play a role in the inadequate management of post-operative pain. It is observed that the institution may not hold professionals accountable for effective pain

assessment and management; there may be no policies for pain assessment and documentation; and there may be lack of criteria or availability of instruments for pain assessment in health care settings (McCaffery & Pasero, 1999). Thus, when health institutions make it their priority to relieve patients' pain, an enabling environment would be created where adequate resources are provided to meet the objective. The effective management of post-operative pain does not depend largely on the development of new techniques; but rather the institution could focus on utilizing existing expertise and resources (Rawal & Berggren, 1994). The identification of these barriers by researchers helped to improve pain management in some hospitals where steps were taken to overcome their specific institutional barriers (Brockopp et al., 1998; Hutchison, 2007). In this regard, the study explores the medical or health system of Ghana with a focus on post-operative pain management to identify and understand factors that relate to health institutions and its influence on POP management. Thus, a discussion of the health system in Ghana is provided in chapter two (see page 23).



Though previous studies have ensured the implementation of measures to promote effective POP management, literature continues to report that post-operative pain is under treated in many countries and about 75% of surgical patients experience moderate to severe post-operative pain (Bennett & St Marie, 2002; Donovan, Dillon, & McGuire, 1987; Mac Lellan, 2004b; Svensson, Sjostrom, & Halijamae, 2000; Warfield & Kahn, 1995). A survey among hundred post-operative patients at the Korle-Bu Teaching Hospital in Ghana indicated that seventy per cent (70%) of the patients experienced pain on the first day after surgery (Clegg-Lamprey & Hodasi, 2005). The literature available on POP has several studies that focused on the medical aspect of post-operative pain management which indicates that the medical management of acute post-operative pain is important in surgical practice. Hence, the

multidimensional and complex nature of pain calls for a research design that could explore multiple aspects of the pain phenomenon to afford a deeper understanding of the holistic surgical context. Thus, this study embraces the medico-socio-cultural dimensions of post-operative pain response and management which seems not to have been adequately addressed by previous studies within the post-operative context.

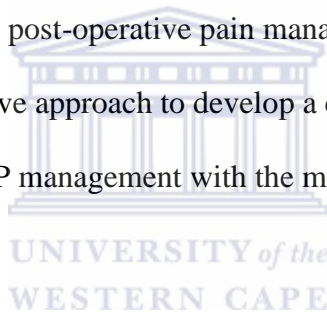
To this end, an understanding of the multifaceted factors involving pain response and management demands the use of a methodology that supports the use of multiple methods in the natural environment. A critical review of various methodologies employed by social science researchers revealed that the principles of ethnography would ensure the understanding of these multiple factors of pain response and management. The methodology, which is a qualitative approach, permits the inductive process of clinical guideline development which is of relevance to this study. Ethnography has its roots in anthropology and was used for the study of exotic cultures and communities. However, over the years, several medical sociologists, nurses and other health professionals have employed ethnography in studies involving the hospital setting. Hence, previous researchers (Clabo, 2007; van der Geest & Finkler, 2004; Zaman, 2008) have used ethnography to study entire hospitals and specific units (wards) in the hospital such as labour ward, paediatric ward, operating theatre, intensive care units, surgical ward, oncology ward, physiotherapy unit, and among others. These studies were conducted in countries like Australia, USA, Kenya, Zimbabwe, Denmark etc. The hospital and specialized healthcare units have been observed to exhibit characteristic culture that is different from other organizations and they therefore studied the 'culture' of specific phenomena in the hospital. Ethnography has been recommended by previous authors for health research because it grounds findings in the everyday lives of patients and health care providers and recommendations have high potential

of influencing practice positively (Arber, 2007; Atkinson, 1992; Hunter, Spence, & Scheinberg, 2008; Clabo, 2007; Long & Hunter, 2008; Oliffe, 2005; Pope, 2005; Roberts, 2009; Thomson; Yang & Fox, 1999). These studies set the context for the utilization of ethnographic principles to explore post-operative pain response and management within the surgical environment. This study is intended to develop a clinical guideline with a high potential of enhancing POP management as a result of the involvement of the appropriate stakeholders in the local environment. The holistic understanding derived from the ethnographic exploration and the review of appropriate wider literature, ensured the development of a realistic clinical guideline for effective POP management. The concise problem statement for this study is presented.

1.2 Problem Statement

Acute post-operative pain is associated with surgery and researchers elsewhere in Europe, America, and other developing countries have dedicated a lot of attention to post-operative pain investigations resulting in vast amounts of published empirical research (Clabo, 2007; Klopper et al., 2006; Pasero & McCaffery, 2011). On the contrary, in Ghana at the time of writing this thesis, it appears that little attention has been focused on this critical area of research resulting in a lack of understanding regarding the factors that influence POP response and management. Also, a review of the policy statement of the Ministry of Health (MOH), Ghana, shows that there is no policy statement on post-operative pain management (Ministry of Health, 2007); and there are no clear guidelines or protocols for post-operative pain management to guide health professionals in their practice in most hospitals. The lack of policy and guidelines could result in ineffective POP management as care providers would lack consistency and focus in post-operative pain management decisions.

Subsequently, an extensive review of the literature at the time of writing this thesis indicated that studies have not explored post-operative pain comprehensively within the medico-socio-cultural paradigm applying ethnographic techniques to illuminate factors influencing post-operative pain response and management as applied in this study. Though efforts have been made over the years to ensure effective management of post-operative pain globally, literature continues to report ineffective management of post-operative pain (Hutchison, 2007; Svensson, Sjöström, & Haljamäe, 2000). Similarly, in Ghana, it has been reported that 70% of 100 post-operative patients experienced moderate to severe post-operative pain (Clegg-Lampsey & Hodasi, 2005). This presupposes that knowledge gained so far in the area of post-operative pain response and management is inadequate for the realization of the goal of effective post-operative pain management. This study therefore has applied a systematic comprehensive approach to develop a clinical guideline that has a high potential to enhance effective POP management with the medico-socio-cultural context of Ghana.



1.3 Motivations for the Study

The interest in pain as an area of research started about six years ago when the researcher came in contact with a woman with lymphoedema (swollen arm) after a mastectomy (removal of the breast) that could have developed from inadequately managed pain which prevented the woman from exercising her arm post-operatively. The lymphoedema made her very uncomfortable and she was not able to sleep and perform her daily chores. That ‘picture’ (swollen arm) stirred her interest to devote research activities to find scientific avenues of alleviating pain that could prevent future complications of inadequate pain management among post-operative patients. Therefore, her first motivation for this study is that acute pain is a common problem and post-operative pain relief is important (World Health Organization

(WHO), 2007). Effective management of acute post-operative pain enhances recovery of post-operative patients and patients who experience severe pain after surgery may develop complications that have deleterious consequences (Sabiston & Lysterly, 1997; Strassels, McNicol, & Suleman, 2005c).

Secondly, previous studies indicate that nurses and patients influence post-operative pain management outcomes from their socio-cultural perspectives. These perspectives of nurses, the multidisciplinary team, patients and their relatives are developed from the knowledge, beliefs, previous experiences, and among others that they bring to bear in the response and management of post-operative pain in the surgical environment (Lovering, 2006b; Oliffe, 2005). Therefore, the researcher is confident that a comprehensive inductive approach adopted in a research would afford the full understanding of medical, social and cultural factors that influence POP management. The comprehensive approach supported by the methodological principles of ethnography would illuminate the beliefs of patients, nurses, and other informants about pain, patients' behaviour when in pain, the way patients communicate their pain, nurses' response to patients' pain, and the methods health professionals employ to manage pain. Hence, an in-depth description of factors that influence pain response and management in Ghana would be unveiled.

Lastly, the researcher believes that the use of an appropriate clinical guideline in the care of post-operative patients would promote efficiency in the management of POP. Also, the appropriate clinical guideline would incorporate contemporary evidence-based measures that would ensure the achievement of the targets of patient care outcomes regarding POP management (Dahm, Yeung, Gallucci, Simone, & Schünemann, 2009; Hewitt-Taylor, 2004; Miller & Kearney, 2004). Thus, the study would develop clinical guidelines employing systematic standard processes within which post-operative pain could be managed in Ghana.

The development of the guideline involves perspectives of the local informants and the wider literature to ensure its suitability. The significance derived from the study is highlighted.

1.4 Significance of the Study

The study being the first in its kind in Ghana, would significantly contribute to the body of knowledge on post-operative pain response and management regarding the Ghanaian context which would subsequently help in the achievement of the goal of the Ministry of Health (MOH), Ghana - to provide quality care for patients; which includes post-operative pain management. The collaboration of health professionals and all relevant stakeholders in this study would give a stronger foundation to the clinical guideline developed in this study which could be adopted by the MOH. Thus, policies and protocols for post-operative pain management could be drawn following the development of an appropriate clinical guideline in this study.

Also, the integration of the medico-socio-cultural context of post-operative pain management in this study would comprehensively illuminate factors influencing pain management. The comprehensive approach in this study would also set the stage for future studies in Ghana and other countries aimed at addressing the challenge of ineffective pain management experienced over the years. Although previous researchers have examined post-operative pain management issues, it was observed that the comprehensive approach adopted in this study adds a unique dimension to the discourse of pain research (Brown, 2008; Clabo, 2008; Qu, Sherwood, McNeill, & Zheng, 2008). It is acknowledged that previous approaches for the investigation of pain have contributed to the knowledge gained on pain so far and this study although different in approach, draws from these studies.

The clinical guidelines for post-operative pain management developed in this study could be used by other nurses from similar cultural orientation for the effective management

of post-operative pain. It is realized that the way of life of a specific group of people such as Ghanaians differs from another group 'cultural group'. Thus, the socio-cultural norms of Ghanaians could impact on pain experience and management. This study would bring to the fore, such 'hidden' socio-cultural influences on pain that could impact on post-operative pain management.

Thus, the understanding of the factors that influenced pain response and management would provide a scientific basis in developing relevant training for health professionals both in-service and pre-service to enhance their pain management skills. Again, relevant educational materials could be developed for patients and their families to enhance their knowledge and collaboration in the achievement of pain management outcomes.

Also, the context appropriate clinical guideline that would culminate could be adopted and implemented in other similar clinical and socio-cultural context locally and internationally. For example, locally, other specialties such as midwives and oncology nurses could draw from the socio-cultural factors identified in this study to plain the management of their patients' pain. Other countries with similar resources for pain management could draw from the clinical guideline developed in this study.

1.5 Research Aim

The discussion so far emphasizes that the study aims to develop clinical guidelines within which post-operative pain could be managed in the medico-socio-cultural context of Ghana. This was achieved by an initial ethnographic exploration and description of post-operative pain response and management among Ghanaian surgical nurses, post-operative patients and their relatives, and other key informants. Other steps involved systematic review of the literature which together with the local findings helped in the formulation of the clinical guideline. The researcher involved experts, the multidisciplinary team, patients and family

representatives in the development of the clinical guideline. The data collection methods employed in this study were clinical observations, individual interviews, review of documents, literature review, expert opinion and review, and consensus method. These approaches are supported by the ethnographic methodology. Though the setting of the study is Accra located at the Southern part of Ghana, yet, Accra draws people from all over the country as it is the capital city of Ghana. This means that though the findings of this study cannot be generalized to include the entire country, findings could be transferred to similar context. Thus, a study conducted in Accra could purposively recruit participants from across the length and breadth of the country.

Thus, two hospitals in Accra - the Korle-bu Teaching Hospital (KBTH) and the Ridge hospital were involved in this study. The KBTH is a tertiary referral hospital and admits patients from other regions in Ghana; and the Ridge Hospital is a regional hospital with a large clientele. Ghana has regional hospitals with similar facilities as the Ridge hospital and this may pre-suppose that findings from the Ridge Hospital may apply to the other regional hospitals in Ghana. Further description of study setting is provided later in this thesis (see chapter 3 page 89).

1.6 Research Questions and Objectives

The research question guides the overall planning of the research in terms of conceptualizations and logistics. Hence, every activity or decision made during the research was linked to the research questions. Thus, the research questions that served as the driving force for this study were:

1. How do post-operative patients respond and describe their pain?

2. What are the factors influencing post-operative pain responses among surgical patients within the medico-socio-cultural context?
3. How do nurses perceive and respond to their patients' post-operative pain?
4. What factors influence nurses in their response and perceptions of their client's pain within the medico-socio-cultural context?
5. What factors influence the perceptions of the multidisciplinary team, key-informants, and patients' relatives on post-operative pain management within the medico-socio-cultural context?
6. What clinical guidelines would be appropriate for post-operative pain management in the Ghanaian medico-socio-cultural context?

The specific objectives of this study targeted at achieving the aim of this study are:

- a. To explore and describe patients' responses towards post-operative pain and its management within the medico-socio-cultural context.
- b. To explore and describe nurses' perceptions and responses towards their patient's post-operative pain within the medico-socio-cultural context.
- c. To explore and describe the perceptions of the multidisciplinary team, key-informants, and patients' relatives on post-operative pain management.
- d. To develop a clinical guideline that would be appropriate for post-operative pain management in the context of Ghana.

1.7 Outline of Thesis

Chapter One is an introduction to the thesis; it gives a background to the study, states the aim, rationale, objectives of the study. It also highlights the methodology, primary data collection methods and gives an overview of literature and structure of the thesis.

Chapter Two presents an extensive and critical review of the literature and is discussed in the broad areas such as acute pain, pain assessment, and socio-cultural effect on pain and guideline development processes. The first part of the chapter examines the literature on the concept of pain, the medical and socio-cultural influence on pain response and management. It examines the literature on systematic reviews and the development of clinical guidelines. The chapter involves a discussion of the processes employed in using the consensus method to obtain the input of the team on the draft clinical guideline. The conceptual framework of the study is discussed as well as the ontological and epistemological underpinnings of the study.

Chapter Three appraises the methodology of the research. It discusses the philosophical underpinnings and conceptual issues in the research. The ethnographic approach is discussed and a justification given for its appropriateness for the study. Ethnographic principles are identified and their application in the study outlined. The chapter includes a highlight on the study design. It presents setting of the study, sampling methods, data collection methods, and ethical considerations of the study. The methodology of the data analysis is discussed. The coding process and data management principles that were followed are discussed. The chapter also analysis the rigour of the study and the processes of a systematic review and consensus forum employed in this study.

In **Chapter Four**, the findings of the ethnographic exploration are presented. The chapter pulls out the critical areas of the findings that serve as the parameters for the clinical

guideline; clearly specifying the focus and limits of the clinical guideline. The second section of this chapter presents the findings of a systematic literature review on post-operative pain management based on the focus and limits stated in step one and expert reviewers' comments. The chapter ends with the clinical guideline developed for the management of post-operative pain within the medico-socio-cultural context of Ghana.

Chapter Five involves a discussion of the key findings of the study in relation to the wider literature. The chapter discusses the processes to be followed for a review of the guideline. The chapter also identifies the dissemination and implementation plans of the clinical guideline developed for post-operative pain management.

Chapter Six provides a summary of the research in a concise and clear manner. Implications for clinical practice, education, and the conceptual implications that emerge from the investigations, and further raise potential areas for further research in this field. It also delineates the limitations of the study as well as the specific recommendations derived from the study.

1.8 Conclusion

This chapter formed an introductory chapter of the thesis and it discussed the background and motivations for this study. The chapter also clearly highlights the aim, objectives, and research questions of the study. It also stated how the thesis would be organized.

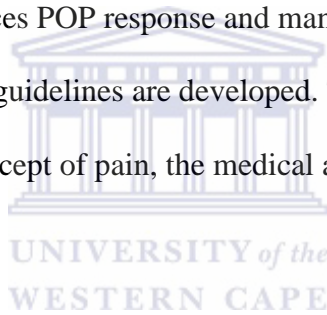
CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter examines the historical context of post-operative pain, the medical system in Ghana, and the nursing process as applied to post-operative pain management, pain assessment; the multidisciplinary team and socio-cultural influences on pain. The chapter also discusses issues related to clinical guideline development and concludes with the conceptual issues in the study and the framework within which the study is described.

The chapter is aimed at illuminating the relevant issues in the medical, social, and cultural environment that influences POP response and management as well as the theoretical framework within which clinical guidelines are developed. The first part of the chapter examines the literature on the concept of pain, the medical and socio-cultural influence on pain response and management.



2.1 The Concept of Pain

The historical perspectives of pain have a bearing on contemporary trends in the management of POP response and management. A historical appraisal is necessary in this study as it helps to contextualize the study; and also, it has been realized that a historical insight creates a better opportunity for the understanding of the present and the future. This is derived from the fact that current attitudes to POP response and management could have a historical bearing.

The word pain comes from the Latin word *poena* which means punishment; it also means a fine or penalty (Manimala, 2006). The history of pain can be traced as far back as the early humans. This assertion can be related to the Bible in Genesis 3:16a when God declared that a woman shall experience pain during delivery. It is documented that accounts of pain

were recorded on stone tablets during the period of ancient civilization. Also, pain was associated with evil, magic, and demons; and was treated with pressure, heat, water, and sun. During these ancient times, pain was managed by sorcerers, shamans, priests, and priestesses who employed measures such as herbs, rites, and ceremonies (Witte & Stein, 2009). Perhaps, this accounts for the unorthodox management of pain among some cultures in contemporary times such as the use of herbs and rituals. Later, the Greek and the Romans postulated that the brain and the nervous system contributed to the perception of pain and this was supported in the late 1400s and 1500s where the spinal cord was recognized as a pathway for the transmission of pain. Thus, in 1664, Descartes described the path-way of pain and this has been used by other researchers to develop theories of pain for example the gate-control theory by Melzack and Wall in 1965. The knowledge derived from pain theories has helped in the management of pain and POP over the years (Macintyre & Ready, 2001; McCaffery & Beebe, 1989; Watt-Watson & Donovan, 1992).

The historical discussion of pain is linked to that of surgery as POP results from surgical incision and the inflammatory response associated with surgery. Surgery was a much feared experience for patients before the discovery of anaesthesia because of post-operative pain, sepsis, and the bleeding that occurred. It is documented that alcohol, mandragora from the mandrake plant, opium, and bleeding were measures used to reduce pain. Bleeding reduced blood supply to the brain and it decreased sensibility and alcohol was used to stupefy the patient during surgical procedures to reduce pain. Opium and mandragora caused the patients to be lethargic during surgery; however, they experienced pain and are sometimes restrained physically. Literature regarding pain indicates that several attempts were made to control pain during surgery for example, the use of nitrous oxide, hypnotism, and compression of nerves and arteries. A historical landmark was the discovery of Diethyl ether

(1846) and chloroform (1847) which were able to prevent pain during surgery. The effect caused by ether was called anaesthesia and subsequently, other forms of anaesthesia such as nerve block, spinal anaesthesia, and general anaesthesia were introduced in clinical practice (Badoe, 2009; Sabiston & Lyerly, 1997). Although, anaesthesia prevents intra-operative pain, studies continue to report the persistence of post-operative pain among surgical patients over the years globally including Ghana (Clegg-Lamprey & Hodasi, 2005; Dahl et al., 2003; Qu et al., 2008). Subsequently, two of the commonly used definitions of pain are examined as it relates to this study.

A definition for pain that gives reference to the personal nature of pain was given by McCaffery in 1969; 'whatever the experiencing person says it is and existing whenever the person says it does' (cited in Lewis, Heitkemper, & Dirksen, 2004 p. 132). The subjective emphasis in this definition makes it useful in the field of pain response and management because the patient could self-report a particular feeling and relieve of post-operative pain (Peters, Patijn, & Lamé, 2007). However, it is not all patients who can effectively communicate their pain verbally due to speech impairment, language barrier or cognitive impairment (Mac Lellan, 2006) or altered level of consciousness characteristic of the immediate post-operative period. The definition could have been 'whatever the experiencing person says or 'shows' it is and existing whenever the person says or 'shows' it does'. This modification could perhaps address the verbal restriction of McCaffery's definition of pain; though, there could still be a limitation for patients who are very young and those with severe cognitive impairment. In this regard, contemporary pain studies focus on groups with special needs or deficits such as the aged (Bjoro & Herr, 2008; Chibnall & Tait, 2001; DeWaters et al., 2008). However, despite the weakness identified, McCaffery's definition gives credence to the personal nature of pain. In this context, studies have identified pain response

behaviours in many cultures (Kappesser & Williams, 2002; Stotts et al., 2007) and these responses could be similar to those exhibited by Ghanaian surgical patients.

Also, pain has been identified as an unpleasant sensation as a result of tissue damage. Thus, the International Association for the Study of Pain (IASP) (1986) defined pain as ‘an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage’ (cited in Carter, 1998 p. 86). The use of emotional and sensory experience in this definition gives an idea of the multidimensionality of the pain experience. It also makes reference to the unpleasantness of pain which sets the context for the need to relieve pain. However, the definition by IASP fails to bring to the fore the largely subjective nature of pain. Also, it has been documented that pain is accompanied by nociception (sensation of pain) but it can also arise without any physiological stimuli (Macintyre & Ready, 2001); which the definition fails to address. The pain experienced among surgical patients can be related to this definition because of the ‘actual tissue damage’ that results from surgical incision. In a previous study, post-operative pain has been related to the trauma and inflammation associated with the surgical incision. The surgical incision initiates neural, metabolic and physiological responses which could adversely affect the patient (Brown, Christo, & Wu, 2004). The study acknowledges the presence of pain associated with surgical incision and therefore includes surgical patients.

The two definitions discussed can be linked to each other because both give an idea to the abstract concept of pain – the premise of giving an unseen phenomenon defining characteristics that has helped other researchers in their work. For example, the sensory aspect of pain has been explored to describe detailed physiological processes involved in the experience of pain. In this research, the two definitions of pain are relevant and will be used

to guide the interpretation of pain this study seeks to explore due, in part, to the emphasis on the personal experience and the presence of surgical incision.

Pain perception has a strong association with the nervous system because the physiological processes involved in the pain transmission hinges on the nerves. The stimulation of specialized pain nerves (nociceptors) known as transduction, transmits impulses to the central nervous system for interpretation (brain and spinal cord). The pain impulses generated in the body are inhibited by natural processes in the body for example by the effect of neurotransmitters and this process is known as modulation. The individual becomes conscious of pain as a result of brain activity and feedback mechanism. The process involved in the individual becoming aware of a painful stimulus is referred to as perception. Previous authors have described a detailed processes involved in nociception as transduction, transmission, modulation, and perception (Hawthorn & Redmond, 1998; McCaffery & Pasero, 1999). The knowledge of the processes of pain transmission and perception helps health care experts to give effective care to patients suffering from pain. For example, some modalities of pain treatment such as local anaesthesia or regional nerve blocks are aimed at the nerves so that the patient will not feel the pain at the areas supplied by the nerves targeted either pre-operatively or post-operatively (Coughlin et al., 2010; Joshi, Rawal, Kehlet, & The PROSPECT collaboration, 2011).

Also, the multi-dimensional phenomenon of pain has been described by previous authors. The sensory-discriminative dimension of pain describes the intensity of pain, the location and duration of pain as well as the quality of pain such as aching, burning, and shooting among others. The sensory-discriminative dimension of pain enables the experiencing person to isolate pain and describe the particular sensation of pain such as the experience of post-operative pain among other sensations felt. The affective-motivational

dimension of pain also describes the unpleasant nature of pain and the desire to avoid or relieve the unpleasant sensation of pain. Over the years, efforts have been made by health professionals and researchers to relieve pain due to its' unpleasant nature and individuals equally make personal efforts to relieve their pain sensation. Hence, pain is recognized as the most common reason why people seek healthcare (Quinlan-Colwell, 2009; Pasero, 2009). The cognitive-evaluative dimension of pain also describes the influence of the individual's cognitive appraisal on the pain which subsequently affects the behaviour or response to the pain. The cognitive-appraisal dimension of pain is also influenced by the cultural values, distractions, and other hypnotic suggestions. To this end, the individuality of patients, regarding their cultural background comes to bear on their responses to the use of other non-pharmacologic activities in the management of pain. This study seeks to explore and describe the POP response in the Ghanaian context; thus, the illuminations of the various facets on the concept of pain would help in the interpretation of the data generated in this study. The influence of culture on the response to pain has been demonstrated by previous researchers in other countries (Fenwick & Stevens, 2004; Lovering, 2006a).

Further, there are different types of pain described by other authors and POP is considered an acute pain as it describes a physiological response that alerts the individual of a change or mal-functioning of the body. Acute pain has a brief duration usually less than six months; and among surgical patients, acute pain is believed to subside as healing occurs after surgery (Macintyre & Ready, 2001; McCaffery & Pasero, 1999; Wood, 2008). However, the surgical patient may also experience other types of pain such as chronic pain before or after surgery due to other factors other than the surgical incision. Chronic pain that often persists for more than six months is prevalent among cancer patients. Other types of pain the patient could experience include cutaneous pain (when it affects the skin); somatic pain (when

muscles, bones, tendons, ligaments and joints are affected); and visceral (when internal cavities are affected). There are also fast pain (transmitted by A-delta fibres); slow pain (transmitted by c fibres); psychogenic pain (pain due to psychological factors); phantom pain (pain left in a lost body part) and neurogenic pain (pain due to a disease of the nerve) (Hawthorn & Redmond, 1998; Mac Lellan, 2006; McCaffery & Beebe, 1994). Post-operative pain can manifest as a combination of these types of pain. For example, a patient who had an amputation of the limb may experience cutaneous pain due to the surgical incision, phantom pain due to the loss of the limb and neurogenic pain because of damage to nerves during the amputation. The specific treatment modalities for the different types of pain may differ and as a result, the patient and family need accurate and detailed information to facilitate the care provided.

Subsequently, the unpleasant nature of the pain demands an appraisal of inadequate pain management. The effects of inadequately treated severe acute pain has been found to affect most systems of the body such as cardiovascular, respiratory, gastrointestinal, neuroendocrine or metabolic, musculoskeletal, and psychological state of the patient. Some specific problems post-operative patients may develop include hypertension, deep vein thrombosis (DVT), infection, chronic pain, decreased gastric and bowel motility, and increased catabolic hormones for example, cortisol, glucagon, rennin, and angiotensin (Hawthorn & Redmond, 1998; Mac Lellan, 2006; Macintyre & Ready, 2001). Some of the effects of inadequate pain management for example DVT can have fatal consequences. Some of the effects of inadequately managed pain can result in other problems; for example, the release of angiotensin may cause the blood pressure to rise resulting in hypertension. The nurse and other multidisciplinary team members should explain the effects of inadequate pain management to the patient to enhance early ambulation (walk or move around) and

rehabilitation, and comfort and satisfaction. Also, effective pain management prevents complications and shortens hospital stay (Macintyre & Ready, 2001). When the patient understands these benefits and effects, he/she, to a large extent, will cooperate with the multidisciplinary team to achieve effective pain management.

It has been realized that the untoward effects of pain have economic consequences (Turk & Melzack, 2001). These consequences have been identified as direct cost which results from medical expenditure; indirect cost which results from lost or reduced work output of patients and families, indemnity cost, cost of retraining, and lost tax revenue; and intangible cost resulting from psychological and social stress (Mac Lellan, 2006; Turk & Melzack, 2001). In this light, studies have also reported the large amount of money spent on pain treatment as in the USA (Turk & Melzack, 2001). The huge economic burden of pain and its management makes it a worldwide public health issue. Hence, the WHO and the IASP pioneered a global action to draw awareness to inadequately treated acute pain which contributes to delay in healing such as in post-operative patients and injured patients (Berry & Dahl, 2000). This study explores the response of patients to the management of acute POP and the insight of the ill-effects of pain would enhance the illumination gained in this study.

Most research publications on pain in contemporary literature focuses on populations or groups with special needs such as the elderly, children, and patients with disability (Aubrun & Marmion, 2007; Bååth et al., 2009; Bjoro & Herr, 2008; Coker et al., 2010; Decker, 2009; Decruynaere, Thonnard, & Plaghki, 2009; DeWaters et al., 2008; Eid & Bucknall, 2008; Kaplan et al., 2008; Kunz, Mylius, Scharmann, Schepelman, & Lautenbacher, 2009). This study thus cites old but relevant studies that investigated issues of acute post-operative pain because the studies were found to be appropriate to this research

such as issues related to socio-cultural influences on pain response. The medical system and its' influence on POP management is discussed.

2.2 The Medical System and Post-Operative Pain

2.2.1 The healthcare system. An examination of the relevant literature identifies that Health Institutions play a major role in issues associated with pain. Health institutions or organizations constitute professional bodies made up of experts such as doctors and nurses and other paramedical personnel. These include medical doctors, nurses, anaesthetist, physiotherapists, and psychologists; and these experts are those that treat pain. However, the involvement of individual experts depends on the particular disease or type of pain. The functions of Health Institutions are controlled and monitored by global, national, and local guidelines or policies. On the globe, World Health Organization (WHO) is the body that provides leadership and offers quality standards that ensure quality health care services are provided and sustained.

Apart from the WHO, individual countries also have their own health care policies, guidelines, and are able to provide logistics, training of personnel, and address specific needs relevant to health care systems. For example, in the UK, the government through the national health scheme (NHS) provides free physician and hospital services to all permanent residents. Hence, patients suffering from pain benefit from multidisciplinary specialist care as necessary without incurring any cost. In the USA, there is no universal health care but special categories of vulnerable groups enjoy public funded care. For example, the elderly and disabled may enjoy free health care under what is known as Medicare scheme. The health institutions in developed and some developing countries have modern advanced technological facilities and well trained specialists to care for the sick such as surgical patients. An insight into the medical system in Ghana is provided in this thesis.

The Ministry of Health (MOH) is the government agency in Ghana that is responsible for the health needs of Ghanaians. The Ghana Health Service (GHS) implements policies outlined by the MOH and they are the service delivery body of the MOH in Ghana. The GHS oversees all public hospitals except the three semi-autonomous teaching hospitals which includes the Korle-bu Teaching Hospital (KBTH). The second study site – the Ridge Hospital (a regional hospital) is under the administration of the GHS.

The Vision of the MOH is to improve the health status and reduce inequalities in health outcomes of all people living in the country through the development and promotion of proactive policies aimed at providing quality and affordable health services through its agencies (Ministry of Health, 2007). Based on this vision, the MOH continues to take proactive steps to ensure improvement of efficiency in service delivery. The MOH and the GHS work closely with its relevant agencies to achieve their goals. Some of the related local agencies are the Ghana medical and dental council, the food and drugs board, the Ghana registered nurses and midwives association, among others. The MOH and the GHS also work in close association with international bodies like the WHO, United Nations Children’s Fund (UNICEF), Danish International Development Agency (DANIDA), among others to meet the health needs of Ghanaians. The financing of healthcare delivery in Ghana has undergone major reforms until the national health insurance act (Act 650) was passed in 2003 to replace a ‘cash and carry’ system that hitherto existed. The national health insurance scheme (NHIS) became operational in 2004 and is mandated to provide basic healthcare services to registrants resident in Ghana. It is beyond the scope of this thesis to examine in-depth issues related to the health insurance and health financing in Ghana. However, an overview of the NHIS in Ghana is provided.

The health insurance scheme operates through mutual and private health insurance schemes and the types of schemes are the district mutual, private mutual and private commercial schemes. The schemes operate under a national health insurance authority that is supervised by a governing council. The NHIS in Ghana covers some health services such as out-patient services, in-patient services, oral health, maternity care, emergencies, and road traffic accident among others. However, the scheme excludes a number of services such as prostheses, cosmetic surgeries, organ transplantation, and among others (Ghana Health Service, 2004). It is observed that some Ghanaians have not registered for the scheme and they self-finance their health care. Some individuals without health insurance cannot afford the cost of health care as a result of poverty. In view of this, individuals are being encouraged to register for the health insurance to defray the cost of health care. Although the NHIS has encountered some teething problems such as delayed payment and inadequate accreditation of health facilities since its inception, the scheme has been of help to many Ghanaians and leaders have taken steps to curb some of the problems associated with the scheme so as to make the NHIS efficient.

Further, in spite of efforts to improve health service delivery, the health sector is besieged with many problems that invariably affect patients. The sector is faced with inadequate and inequitable distribution of staff. The MOH reports that most of the nation's skilled professionals are found in the KBTH in Accra and the Komfo-Anokye Teaching Hospital (KATH) in Kumasi in the Ashanti region of Ghana (Ministry of Health, 2007). Although this may give the impression that these tertiary facilities are adequately staffed, the situation on the ground shows inadequate health personnel such as nurses. An insight into the nursing profession is necessary to enhance a deeper understanding of the context of this study since nurses are the health personnel that are mostly found in health institutions.

When experts in Health Institutions are mentioned, nurses are among those that play a key role in maintaining patient's health. This suggests nursing is a recognized profession which started many years ago, as a 'vocation' by Florence Nightingale. The profession has developed over the years and there is currently a plethora of nursing knowledge that gives credence to the nursing profession as one that seeks the welfare of patients. Many women have been drawn into the nursing profession perhaps because of the unique role of women as traditional carers and the fact also that the brain behind the profession was a woman (Masson, 1985; Mellish, 1984). The role of nurses has developed through established academic institutions that offer specialized training.

However, in Ghana, professional nursing education started in 1945 as a certificate programme but today, the basic nursing training schools have been affiliated with the University of Ghana to award Diploma certificates in Nursing. This implies that a nurse can use the diploma certificate as an entry requirement for a two or three year's Bachelor's degree in Nursing depending on the University attended (three year programme at the University of Ghana). After many years of only a post-basic diploma and a bachelor's degree in Nursing, the country now has programmes in nursing at post-graduate (Masters) levels. A few nurses have doctoral degrees from other countries serving in various capacities in the country. Many changes have occurred in the past few decades and there is now an increased interest among nurses for higher education. This interest is believed to improve patient care. However, it has been observed that the image of the Ghanaian nurse is poor. An observation that the nurse in Ghana works under very challenging circumstances for example poor working environment, lack of equipment, and obsolete technology among others should not account for rude behaviour towards patients (Oware-Gyekye, 1997).

2.2.1. 1 Historical background of surgery in Ghana. The history of surgery and POP management in Ghana seems not to have been explored by scholars; hence, there was no accessible information in books or articles searched. The researcher therefore, identified a key informant who was one of the first surgeons in Ghana to provide the historical background which was corroborated from some retired nurses. Surgical operations were introduced in Ghana by British surgeons with the use of anaesthesia during surgery. The surgeons employed globally established techniques of surgery during their practice in Ghana. In 1953, there were only two trained surgeons and they in turn trained other medical officers to operate minor cases such as hernias and caesarean sections especially at the district level so that more complicated cases were referred to the surgeons. The scarcity of surgeons resulted in increased workload for the surgeons and to date, the number of surgeons in Ghana is considered inadequate (Abdullah et al., 2010). The first few surgeons were trained abroad until a medical school at Korle-Bu was established in 1964. Over the years, the number of surgeons has increased with the establishment of specialist surgical training in Ghana since 2003. Surgery is performed by both private and government owned hospitals as well as by international organizations that perform specific surgeries occasionally in the country such as repair of cleft palate and hare-lip. There was also shortage of anaesthetists in the country so nurse anaesthetists were trained to anaesthetize patients and this has come to stay in contemporary health delivery system in Ghana. The training of nurse anaesthetists started at Kumasi in 1987 and currently, nurse anaesthetists are trained at Korle-Bu, 37-Military Hospital (a military health facility in Ghana), and Ridge Hospital. The anaesthetist specialist training for medical officers is offered at the post-graduate level in Ghana for two years. The nurse anaesthetists are trained by the specialist anaesthetist in Ghana and they provide peri-operative services. It is worth noting, however, that a review of the literature on POP

management would provide some depth and understanding to the development of an appropriate clinical guideline in this study.

2.2.2 Medical management of post-operative pain. Effective post-operative pain management has been problematic for health professionals who manage pain over the years (Rejeh, Ahmadi, Mohammadi, Kazemnejad, & Anoosheh, 2009). Hence, previous researchers have devoted time and resources to discover measures that would improve pain management. The literature has discussed several of these measures that are employed to effectively manage POP. It is also important to note that even though efforts have been made to ensure that post-operative patients experience effective pain relief, studies continue to report inadequate POP management (Idvall & Berg, 2008; Qu et al., 2008). An examination of the literature reveal some reasons for inadequate POP management, and some of these inadequacies have to do with the effects of culture, inappropriate attitude of health personnel, patients and their families, inadequate knowledge of health professionals, and lack of multidisciplinary approach to pain management (Carr, 2002; Mac Lellan, 2006; McCaffery & Beebe, 1994). Studies have further explored these key barriers; for example, health professionals' barriers for post-operative pain management include lack of knowledge, lack of regular pain assessment, and perceived lack of time to conduct pain assessment, prejudice and bias towards patients, inability to empathize and establish rapport (Abdalahim, Majali, & Bergbom, 2009; McCaffery & Pasero, 1999; Rejeh et al., 2009; Soyannwo, 2009).

Nurses have been found to contribute to ineffective post-operative pain management. According to Coulling (2005), doctors and nurses made their own judgments about patient's pain instead of relying on patient's self-report of pain. Studies have attributed most of the barriers associated with ineffective pain management to the nurse perhaps because the nurse is the only health professional who spends twenty-four hours with the patient. Thus, the nurse

plays a key role in the management of post-operative pain because it is the responsibility of the nurse to detect signs of pain and give a timely intervention. It can be inferred from the findings that the effective pain management hinges on the nurse. Thus, the tool for effective nursing care is the nursing process; and the effective application of the nursing process in the management of POP could help to manage patients' pain after surgery (Doenges, Moorhouse, & Murr, 2006).

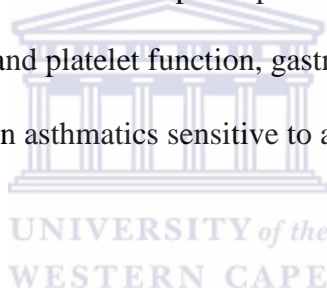
2.2.2.1 The Nursing Process Applied to Pain Management. The nursing process provides the basis for effective individualized patient care. It involves an assessment phase where the nurse takes history and carries-out other observations such as physical and physiological assessments. The assessment of patients reveals both actual and potential health problems. In the post-operative patient, the assessment of patients prior to the administration of drugs or implementation of other care activities is important because of the effect of surgery and anaesthesia on physiological processes (Pasero & McCaffery, 2011). The assessment also involves the use of standardized scales in scoring the intensity of pain. The pain scores of the patient gives an indication of the effectiveness of POP management strategies employed for a particular patient. The physiological state of a post-operative patient could also change and an effective assessment by the nurse can avert a potentially fatal situation such as respiratory depression or low blood pressure when the patient bleeds internally.

The nursing process also involves planning the care of a patient. The literature widely affirms that effective pain management is best achieved through a multidisciplinary team approach. Thus, the nurse in planning the care for the management of POP involves the relevant team members such as the surgeon, anaesthetist, and pharmacist. In this study, the need to recognize the patient as a key player of pain management decisions has been stated.

Therefore, the patient should be involved in the planning of measures for effective POP management as the condition permits (Entwistle & Watt, 2006; Fredericks, Guruge, Sidani, & Wan, 2010). The plan of care includes both long term and short term goals that should be achieved and in terms of POP, the nurse is admonished to relieve the pain within a short term goal (McCaffery & Pasero, 1999). Thus, the plan for POP management should be well prioritized ensuring that patients do not experience pain before analgesics are administered. Thus, it has been realized that when post-operative pain is well established before drugs are administered; it becomes more difficult to manage. Thus, studies recommend that analgesics should be administered at regular time intervals before the patient experiences pain (Hawthorn & Redmond, 1998; Hofer & Hofer, 1995; Mac Lellan, 2006; Sukhani & Frey, 1997).

The nursing process further involves the implementation of care. The phase requires that the actual nursing care activities that have been planned for the patient are carried out. The care rendered is to be documented to enhance continuity of care and also prevent duplication of activities such as administration of analgesics. The commitments of nurses to perform activities that have been planned for the patient have been found to be inadequate (Abdalahim et al., 2009; Manias, Botti, & Bucknall, 2002). With the introduction of modern technology, nurses require advanced skills in the effective use of some pain management gadgets. Also, nurses and other health professionals involved in POP management need regular up-date of their knowledge to meet contemporary standards of effective pain management (Rejeh et al., 2009). Thus, contemporary post-operative pain management involves a combination of different approaches to treat pain effectively. Though there may be some differences in individual hospitals regarding the specific medication used and protocols on pain management techniques, the principles are basically similar.

2.2.2.1.1 Methods of post-operative pain management. One of the methods of current post-operative pain management is the use of multimodal or balanced analgesia where different analgesics are combined to enhance pain relief. The combined analgesics provide a synergistic or additive effect that reduces the dose and adherent side effect of one drug if it was given alone in higher doses (Sukhani & Frey, 1997). It has been found that when opioids are combined with non-steroidal anti-inflammatory drugs (NSAIDS), the synergistic effect provides better pain relief (Moss, Taverner, Norton, Lesser, & Cole, 2005). However, there should be a caution with the use of NSAIDS in post-operative patients due to its adverse effects of interference with renal and platelet function, gastric and duodenal ulceration, and potential to cause bronchospasm in asthmatics sensitive to aspirin and NSAIDS (Taylor & Stanbury, 2009a).



Other well researched methods of post-operative pain management are the intravenous (IV) patient controlled analgesia and the continuous epidural analgesia. These methods demand patient monitoring in a systematic and standard process. Some facilities have guidelines that guide the nurse to manage patients using these methods of pain management. It has been shown that PCA and epidural methods of pain control are effective (Hofer & Hofer, 1995; McDonnell, Nicholl, & Read, 2003; Moss et al., 2005). However IV PCA is considered the gold standard for acute pain management. The superiority of PCA is related to its flexibility, effectiveness, and the ability to adjust doses (Polomano, Dunwoody, Krenzischek, & Rathmell, 2008). PCA is not recommended when there is no trained staff (nurse or doctor), the patient does not want to use it, the patient cannot understand how to use it especially in cases of altered mental state and language barrier, and in the elderly patient

and very young children who cannot understand how the device works (Macintyre & Ready, 2001). PCA is traditionally administered intravenously but can also be infused subcutaneously through a process called iontophoresis (an enhanced transport via the skin using a driving force of an applied electric field); this method of administration is more common in palliative care (Polomano et al., 2008).

Also, pre-emptive analgesia is a contemporary technique where local anaesthetics or opioids are given before a potentially painful procedure to prevent pain (Macintyre & Ready, 2001; Sukhani & Frey, 1997). These methods of pain management are provided by a multidisciplinary acute pain team (APT). Pre-emptive analgesia is employed by the anaesthetists before surgery and intra-operatively with the use of drugs such as morphine to keep the patient pain-free for some hours after surgery (Boni, 2009). Pre-emptive analgesia is ensured by an acute pain management service available in some health facilities where the service is either lead by a nurse or an anaesthesiologist to ensure effective relieve of POP. Research has indicated that where nurses lead acute pain services, and an anaesthetist performs a supervisory role, the programme is effective and less expensive; therefore, the need for nurses to incorporate pre-emptive analgesia in the management of POP is emphasized (Atkinson, Kluger, Lloyd, & Schug, 1999; Rawal, 1997). Therefore, nurses need to increase their knowledge on pre-emptive analgesia to enhance its use in clinical practice.

Though the contemporary methods help to manage pain, several authors emphasize effective preoperative assessment, regular and systematic pain assessment using valid pain assessment tools, ensuring individuality in pain management, and the use of a multidisciplinary team as key components of effective POP management (Hofer & Hofer, 1995; Mac Lellan, 2006; McCaffery & Beebe, 1989; McDonnell et al., 2003). The basic nursing activities and provision of non-pharmacologic ways of pain management are seen as

important components of effective pain management. An important measure of pain intensity using a valid self-report scale would give an evidence of the effectiveness of surgical pain.

However, old pain management practices include prescription of intramuscular (IM) analgesics; prescribing analgesics on ‘as necessary basis’ or *pro re nata* (PRN), the healthcare provider refusing to accept the patient’s self-report of pain; and when the analgesics are not titrated and individualized doses given. The PRN method of drug administration is believed to cause erratic and poor control of post-operative pain (Polomano et al., 2008). However, after an extensive review, Pillai Riddle & Craig (2003) concluded that analgesics can be administered on a regular basis within the first 24 hours after surgery and as pain reduces subsequently, the dosage should be reviewed or PRN method of pain management can be used.

In view of the discussions, previous studies recommend some innovative strategies to promote effective pain management. These recommendations include: further education (pre-registration and post-registration) of healthcare professionals involved in pain management; adoption of standard pain management guidelines; promotion of national laws and policies on opioid availability; decrease cost of analgesics; on-going lobbying of major stakeholders; and establishment of local pain treatment forums where both patients and professionals can discuss their pain management concerns in a non-threatening environment (Hofer & Hofer, 1995; Mac Lellan, 2006; McCaffery & Beebe, 1989). The training of the multidisciplinary team is aimed at achieving effective pain management as all team members are involved in continuing education, skill acquisition, and practice implementation (Spanswick & Parker, 2000). Thus, the exploration of perceptions of pain response and management of patients and health professionals in this study would inform the development of up-date training for health

professionals; and the involvement of patients, relatives, and health professionals in the development of clinical guideline could enhance POP management in Ghana.

Further, the nursing process also involves an evaluation of the care rendered against the goal stated at the planning phase. Thus, where the goal set is not achieved, the nurse is required to revise the plan of care based on a re-assessment to ensure that the revised plan would solve the health problem identified. The evidence of the use of the nursing process is the nursing care-plan for individual patients. The care plan delineates the nursing diagnoses, objectives, nursing orders or activities, and an evaluation of care rendered (Christensen & Kenney, 1995). In the post-operative pain evaluation, patient's self-report which is considered the gold standard in pain assessment should be used. However, some post-operative patients can be non-verbal during the immediate post-operative period and in this instance, the vital signs or physiological variables are used. Patients also exhibit some non-verbal cues of pain such as facial expression and the nurse could use these indicators in the evaluation of pain management goals (Morello, Jean, Alix, Sellin-Peres, & Fermanian, 2007; Wallin & Raak, 2007).

An individual experiencing pain may show different physiological and behavioural responses depending on the type of pain being experienced. Some indicators of pain recognized in previous research include facial or audible expression of distress, distorted ambulation or posture, negative affect and avoidance of activity (Turk, Wack, & Kerns, 1985). Other indicators of pain are the way the patient looks e.g. movements, grimaces (general) and signs which more specifically indicate clinical state e.g. increased heart rate, increased blood pressure, dilated pupils, perspiration and flow of tears (Sjöström, Dahlgren, & Haljamäe, 2000). These are consistent with findings from an earlier work by Darwin, (1872) that the signs of extreme pain are exhibited by screams, groans, clenching of teeth;

accompanied by profuse sweating, pallor, trembling, utter prostration or faintness. Contractions of muscles, rubbing the painful part, and moving or clenching the extremities have also been associated with pain expressions (McCaffery & Beebe, 1989). It has been realized that in some cases, the indicators of pain may be absent but the patient complains of pain; this makes the multidimensional nature of pain a dilemma for health professionals. In such instances, the health professional should believe the patients' self-report of pain and take pragmatic measures to relieve it (McCaffery & Pasero, 1999). The physiologic and behavioural signs stated may also be a signal of a different condition entirely; thus, the need for an effective assessment is re-emphasized.

2.2.2.2 Pain assessment or evaluation. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) acknowledges the right of all patients to have pain assessed and managed adequately (Collins et al., 2004). Thus, there are several pain assessment tools which have been used and validated in many countries and care settings for all ages by previous researchers (Abu- Saad et al., 1994; Li, Herr, & Pingyan, 2009; Liu, Chung, & Wong, 2003; Peters et al., 2007). However, none of the pain assessment tools have been validated in clinical practice in Ghana. Pain is assessed using both complex (multi-dimensional scales – scales that assess more than one dimension of pain) and simple (uni-dimensional scales - scales that assess only one dimension of pain) scales. It is realized that the use of pain assessment tools enables health professionals to apply objectivity to the subjective experience of pain. Thus, pain measurement is described as an estimation or appraisal of pain according to pre-determined objective criteria such as the use of pain scales (Bryant, 2007). Also, detailed pain assessment comprises assessment of components such as location, intensity, quality, onset, duration variations, rhythms, manner of expressing pain, what relieves the pain, what causes or increases the pain, and effects of pain (McCaffery &

Beebe, 1989). The detailed assessment of pain is useful for chronic pain as it helps in diagnosis and assessment of treatment outcomes. Individuals who experience chronic pain are able to give a full history of their pain as they had lived with the pain for some time. Hence, there are elaborate pain assessment scales such as the McGill Pain Questionnaire (MPQ) which is considered complex, time-consuming, and appropriate for research situations rather than in clinical practice. The MPQ takes 15-30 minutes to complete; and because health care organizations do not provide adequate time for comprehensive pain assessment and documentation, it is difficult to use the MPQ in clinical practice (Gould et al., 1992).

However, in acute POP, the pain results from a known cause such as surgical incision; and the patient might not have the energy or right level of consciousness to give a full history of the pain due to the physiological effect of surgery and anaesthesia. Subsequently, pain intensity is thought to be one of the key components of pain that affects the state of health of a person and the ability of that person to perform other functions (McCaffery & Pasero, 1999). Thus, among post-operative patients, the primary aim of pain assessment is not diagnostic; hence, a detailed pain assessment may not be necessary for all patients but rather an assessment of pain intensity with simple pain assessment scales. Such simple pain intensity scales include Visual Analog Scale (VAS), Verbal Descriptor Scale (VDS), Numeric Rating Scale (NRS), and Faces Pain Scale (FPS). Also, other pain intensity scales for acute pain assessment are the body diagrams, graphic rating scales, computer graphic scales, picture scales and coin scales (Hall-Lord & Larsson, 2006). It has been reiterated that post-operative pain assessment most commonly involves the assessment of pain intensity by the use of simple scales such as the NRS, the VAS and the VRS (Coll, Ameen, & Mead, 2004). However, it is observed that many pain rating scales are effectively used in clinical practice when the patient has been educated on the use of the scale before the patient

experiences pain (Peters et al., 2007). Therefore, the pain intensity scales are recommended in the post-operative ward and may be a part of the clinical guideline for post-operative pain management developed in this study. Simple and quick uni-dimensional pain scales are most likely to be used on a busy ward such as a busy surgical ward.

Also, the choice of a pain assessment tool depends on the type of pain, the type of patient, the context of care, the time available to the care provider, the competence and commitment of the care provider, and the protocol of the unit. Thus, pain assessment methods should be consistent with the context of care, the cognitive status and communicative ability of the patient (Molony, Kobayashi, Holleran, & Mezey, 2005).

2.3.2.3 Clinical practicalities of pain assessment and documentation. Pain assessment documentation has been found to be inadequate among nurses (Briggs & Dean, 1998). The inadequate documentation has been attributed to time constraints and lack of chart space to document pain assessment findings (Manias et al., 2002). Although patients expect the use of a valid pain assessment tool in their care, some health facilities such as those in Ghana do not use pain assessment tools routinely in clinical practice. Also, nurses and doctors have been found to underestimate patient's pain because of the under-use or inadequate use of pain assessment tools. For example, studies have demonstrated that though smiling and grimacing patients self-reported their pain at the same level, the nurses rated the smiling patients' pain less than that of the grimacing patient. In situations where patients complained of pain, nurses were observed to refer to the patients' medication order charts to determine when the next analgesic dose was due rather than assess patients' pain to inform the appropriate action to be taken. Also, nurses tended to identify pain specifically with incisional pain following surgery; pain from other causes was either ignored or treated in the same way as incisional pain. Nurses were observed not to offer prophylactic pain relief prior

to an activity, if patients exhibited grimacing or moaning in response to movement or mobilization, nurses would often continue with the activity until it was completed; no pain assessment prior to these activities e.g. hygiene task, wound dressing, mobilization but rather pain discussion occurred during and towards the end of activities. Also, it has been realized that there was often considerable delay between patient's request for analgesia and actually receiving pain-relieving medications (Coker et al., 2010; Devi & Tang, 2008; Manias et al., 2002; Pasero, 2009).

Also, the progress of pain management of an individual patient can be clearly seen if each pain score is charted on a graph and not just recorded as a number. In a Dutch study, majority of nurses (83.6%) felt that daily pain assessment fitted in their work routine and 78.1% liked the idea of recording the pain scores on the vital signs chart; documented pain assessment scores lead to increased communication between healthcare professionals about pain management (De Rond, de Wit, & van Dam, 2001). Thus, pain assessment charts should be part of routine post-operative observation charts; and assigning a measurement of pain gives patients some sense of control over the pain experience and helps them to cope with the pain. Pain intensity assessment also provides a means of evaluating the pain management strategies employed and the prognosis of patients' condition. However, it has been observed that without the use of documented pain assessment, many patients who appear to be comfortable may continue to suffer post-operative pain (McCaffery & Pasero, 1999). Also, many studies refer to "adequate pain relief" (Joshi, 1994), "effectively treating pain" (White, 1995) and "pain management" (Tong & Chung, 1999) suggesting that it is unlikely that patients will experience zero levels of pain but that their pain can be reduced to a "comfortable" level by an established protocol through the use of analgesia (Coll, Ameen, & Moseley, 2004). Thus, Sloman, Wruble, Rosen and Rom, (2006) asserted that it is important

to ascertain how much pain decrease is clinically meaningful from the patient's perspective. The meaningful reduction of pain can be known when pain intensity is assessed and documented. This observation goes to buttress the individuality of pain management and the need for pain assessment.

Nurses are responsible for monitoring the effects of medications which include PRN or as required medications, epidural infusions and patient controlled analgesia (PCA) but they have been found to administer medication at the lower end of the dosage range or they refuse to discuss patient's medication needs with doctors. Also, nurses have been reported to give inadequate analgesia for fear that patients may develop respiratory depression and may become addicted; and in situations where the ward is over-crowded, nurses do not respond to patients' pain early. Thus, the nurse is expected to assess the patient, decide whether analgesia is indicated, choose the most suitable drug when more than one is prescribed, have knowledge of possible side effects and evaluate effectiveness of the medication regimen (Campbell, Dennie, Dougherty, Iwaskiw, & Rollo, 2004; Carr, 1990; Manias, 2003; Randal et al., 2004; Watt-Watson & Donovan, 1992).

Although technological advancement and implementation of various strategies have improved POP management to some extent, patients continue to experience moderate to severe POP in many countries including Ghana. Perhaps the observation that health care professionals have failed to acknowledge the patient as an expert about his/her pain could have contributed to the inadequate pain management over the years (McCaffery & Beebe, 1994; Turk & Melzack, 2001). Also, from the review of the literature, the effective use of the multidisciplinary team plays a major role in the achievement of post-operative pain management objectives. Therefore, this thesis examines the key multidisciplinary team involved in post-operative pain management in the healthcare system such as the patient, the

nurse, the surgeon, the anaesthetist, and the pharmacist. In some facilities the clinical psychologist and the religious leader are part of the team and their roles are better appreciated when the patient has chronic pain; therefore, in the context of acute surgical pain, they are not considered vital members of the multidisciplinary team. This study explores the perceptions and contributions of members who play key roles in post-operative pain management in the development of a clinical guideline for post-operative pain management.

2.3 Multidisciplinary Post-Operative Team

The multidisciplinary concept involves team work which describes the concept of joint action of two or more individuals where each contribute a different skill, express opinion or interest so that the group can be more efficient in achieving its targets (Nelson & Venhaus, 2005). There are many types of concepts that relate to managing post-operative pain. In this thesis, the concept of multidisciplinary team is more relevant to the focus of this study because the management of surgical pain involves the collaboration of different experts. The theoretical basis of a multidisciplinary team is derived from the benefits of effective team work. This study further explores the core components of the multidisciplinary team and the extent to which it is based on emphasis of the individuality of the patient, effective communication, good inter-personal relationship, understanding the roles or expertise and limitations of individual team members, and the appreciating need for flexibility and adaptation. The effective integration of these components is believed to help the team achieve its goal of effective post-operative pain management (Hofer & Hofer, 1995; Hojat et al., 2003; Middleton, 2004; Taylor & Stanbury, 2009a). The literature has confirmed the significance of using a multidisciplinary team to manage pain effectively (Brown & Richardson, 2006; McCaffery & Beebe, 1994; Spanswick & Parker, 2000; Turk & Okifuji, 1998). This implies that a mono-disciplinary approach to pain management is not

recommended in contemporary pain management. It is also important to acknowledge the fact that working in teams have challenges when individual team members do not make the conscious effort to pursue the interest of the group which, in this context, is the effective management of post-operative pain (Prichard & Stanton, 1999).

The discussion of the multidisciplinary team concept also relates to the effective harmonization of team players of post-operative pain management. Thus this study considers the patient as an important team player of post-operative pain management because the patient is considered the focus of all the health professionals and he/she is considered the expert about his/her pain. Thus, detailed preoperative assessment of the patient, effective communication and involving the patient in decision making about his/her care are necessary to achieve effective pain management (McCaffery & Pasero, 1999; Turk & Melzack, 2001).

2.3.1 Patient dimensions that influence post-operative pain management. In a review, Rotbøll Nielsen, Rudin, & Werner, (2007) realized from the work of other authors that preoperative anxiety of patients led to higher levels of post-operative pain (Carr, Nicky Thomas, & Wilson-Barnet, 2005). The incidence of preoperative anxiety has been stated to range from 11% to 80%. The anxiety leads to distress, fear, and activation of the autonomic nervous system which triggers other physiological responses like increased heart rate. Hence, some clinicians administer benzodiazepines preoperatively but this has been noted to have minimal or negative effect on post-operative pain. However, clonidine and gabapentin have been noted to lower post-operative pain in patients with preoperative anxiety (Hidalgo et al., 2005; Menigaux, Adam, Guignard, Sessler, & Chauvin, 2005). In this regard, the need for pre-operative assessment of anxiety is important as it has an effect on the severity of post-operative pain the patient experiences. The Ghanaian surgical patient may experience preoperative anxiety which may subsequently affect the severity of post-operative pain.

Another preoperative variable of importance is the presence of pre-operative pain. It has been observed that post-operative pain increases when the patient had pain before surgery. The patient may require an increased morphine dosage of about 50% in the first 24 hours after surgery (Fischer & Simanski, 2005). Surgical patients come in to the post-operative ward with different preoperative histories and these may be overlooked if attention is not drawn to this variable. In some facilities in Ghana, the patient is sent to the theatre from the emergency ward so the nurse and other multidisciplinary team members on the ward may not have any contact with the patient until during or after the surgery. Hence, the need for a higher dose of medication may not be realized and the patient could suffer undue post-operative pain.

Also, an assessment of the menstrual history of a pre-menopausal surgical patient is also necessary because pain sensitivity has been seen to fluctuate during the menstrual cycle with the luteal phase (the phase after the release of the ovum) being the most susceptible period to pain. This has been attributed to the increased level of progesterone. However, it has been realized that pain threshold decreases significantly in late pregnancy related to levels of estradiol and progesterone in the blood. The post-operative woman who falls within this category should be assessed by the multidisciplinary team for effective pain management. This may presuppose that women are more prone to pain than men. It follows therefore that female patients have been seen to be more susceptible to vomiting when given opioids than male patients (Fillingim, 2000; Fillingim, King, Ribeiro-Dasilva, Rahim-Williams, & Riley Iii, 2009; Rotbøll Nielsen et al., 2007). Severe post-operative nausea and vomiting may lead to bleeding, increased intracranial and intraocular pressures among others and hence must be treated with all seriousness when it occurs to avoid these complications (Larsson, 1996). Other patient determinants have also been identified such as depression,

neuroticism, genetics and pharmacokinetics. A review of all the preoperative factors that affect post-operative pain is beyond the scope of this thesis.

Again, the context of care and peculiar patient needs also play a role on effective POP management. Post-operatively, the patient may be nursed in intensive care unit (ICU) immediately after surgery until the patient regains consciousness and the general condition has stabilized; or the patient may be sent directly from the operating room to the ward as happens in some hospitals in Ghana. The surgical nurse also faces patients with varying levels of consciousness depending on the type of anaesthetic drug used and the method of administration. The duration of surgery, location, size of surgical incision may help the care provider to have a fair idea of the intensity of pain the patient may experience and hence the amount and frequency of medication to be administered (Rotbøll Nielsen et al., 2007). It has been noted that the patient experiences less pain in laparoscopic procedures than open surgical procedures (Abraham, Young, & Solomon, 2004). The nurse should therefore be informed in advance so that she can prepare effectively to care for a particular post-operative patient. It is paramount for a pain management team to share vital information about a particular patient and take the best decision that will achieve effective pain relief.

2.3.2 Relationships among the multidisciplinary pain team and patients. A good interpersonal relationship between the multidisciplinary team as a unit and between individual team members plays an important role in effective post-operative pain management. The nurse-patient relationship has been studied in many countries with varying reports of negative and positive outcomes (Hadley et al., 2007; Jewkes, Abrahams, & Mvo, 1998). A good interpersonal relationship requires a positive attitude which represents the response to a particular stimulus which is regarded in a particular culture as appropriate. Attitudes are seen to consist of three components: the evaluative aspect where the individual

appraises whatever situation he/she is confronted with; the belief or cognitive component that deals with the mental appraisal; and the action or behavioural component that involves overt or covert actions (Bell, 2000). The belief and action aspects of attitudes are vital when it comes to pain management; for example, the nurses are supposed to believe the patients' self-report of pain or consider the patient as an authority over his/her own pain and carry out actions that will relieve the pain. Also, actions or behaviour of health professionals play a role in pain management as it is not always that the patient requires pharmacologic interventions. Nurses' non-pharmacologic interventions help relieve the patients' post-operative pain as patients have reported that they found pain relief in simply talking to the nurses, a light bodily touch, a smile or a joke, repositioning, and the nurses offering a drink. These activities are also seen to improve the nurse-patient relationship and Ghanaian nurses may use these measures to foster a good nurse-patient relationship (Closs, Briggs, & Everitt, 1997; Hofer & Hofer, 1995).

Also, positive surgeon-nurse relationship occurs when the two experts work together and share responsibilities for decision making that concerns the patient's care needs. In Ghana, the surgical nurse on the ward works in more closer or regular basis with the surgeon than the pharmacist or anaesthetist. The extent of mutual relationship between the surgeon and the nurse vary at institutional and individual levels. It has been reported that educational factors, prescribed societal roles and cultural norms affect the relationship between the surgeon and the nurse (Hojat et al., 2003). For example, hierarchical relationship exists where nurses have little autonomy as occurs in the Middle East (Meleis & Hassan, 1980) and Jordan (Abdalahim et al., 2009) where nurses are confined to carrying out surgeons orders. However, in complementary relationships, the surgeon and the nurse share power regarding patient care. A complementary relationship focuses on the significance of shared autonomy,

education, common experiences, and mutual authority (Hojat et al., 2003). The Ghanaian surgeon-nurse relationship is not fully understood; however, anecdotal evidence and personal observations suggest that the surgeon-nurse relationship in the surgical environment could be a blend of hierarchical and complementary relationships. Hence, post-operative pain may be poorly treated where the surgeon takes all the decisions about the pain management without communication and consultation with the other team members such as the anaesthetist.

Thus, the anaesthetist plays a major role intra-operatively ensuring that the patient stays pain free during the surgery. After the surgery, he/she assists the nurse to ensure that the patient recovers from the anaesthesia and is physiologically stable. The literature indicates that the anaesthetist plays a leadership role in the management of post-operative pain especially where acute pain teams have been established and facilities such as patient controlled analgesia (PCA) and epidural analgesia are available (McDonnell et al., 2003; Nagi, 2004; Rawal, 1997). In Ghana, the anaesthetist does not routinely play an active role in the post-operative pain management when the patient is on the ward. The anaesthetist usually assists in managing the patient at the intensive care unit in the Ghanaian context. The anaesthetist screens patients for elective surgery; and therefore, should be thorough in the assessment and identification of potential problems that could affect pain management post-operatively (Rotbøll Nielsen et al., 2007). The anaesthetist may communicate with the patient in a relaxed manner and explain the need for a detailed preoperative assessment so that the patient would not feel threatened (Guo, East, & Arthur, 2012).

In addition, the pharmacist is also a member of the multidisciplinary team involved in POP management. In some countries like the UK, the pharmacist plays an active role to ensure that post-operative patients receive the right drug (s) by auditing the patients' treatment chart on the ward (Nagi, 2004). In Ghana, the pharmacist does not review patients'

clinical documents routinely. The nurse, surgeon, or anaesthetist may however consult the pharmacist to take a decision on the medication of a particular post-operative patient. As a member of the multidisciplinary team, the pharmacist may exhibit the core components that ensure effective team work such as good inter-personal relationship with all the other members, develop good communication skills, and be ready at all times to play his/her role to ensure that post-operative pain is adequately treated. The role of the pharmacist in the management of POP in Ghana is not fully explored.

Similarly, communication is regarded as an important determinant of a good relationship between team members. Poor communication has been shown to be very stressful for nurses (Foley, Kee, Minick, Harvey, & Jennings, 2002). In a study to investigate communication between surgeons and nurses, it was realized that surgeons wanted nurses to be more prepared when called to meet the needs of patients. The nurses however wanted more respect from the surgeons for what they know and their competence; hence they found calling surgeons about patient care stressful (Nelson & Venhaus, 2005). Nurses may also expect surgeons' prescriptions for analgesia to be clear and unambiguous. The Ghanaian multidisciplinary team may have problems communicating with each other and this could have adverse effect on POP management; and the dynamics of communication in the Ghanaian medical system is not fully understood.

In addition, the multidisciplinary team faces some degree of stress in their attempt to work together to meet the numerous needs of surgical patients. Increased levels of stress have negative effects such as impaired judgment and decision making, strained communication with colleagues and patients, and errors during care activities (Nelson & Venhaus, 2005; Ozolins & Hjelm, 2003; Wetzel et al., 2006). Surgeons in the UK have also reported stressors they face in their day-to-day work. Researchers reported that the surgeons became stressful in

several situations such as unexpected bleeding during surgery, operating high risk patients, and in cases of equipment failure during surgery. During such stressful situations, experienced surgeons involved in the study recommended the use of coping strategies such as reassessment of the situation, effective team communication and leadership, and effective intra operative planning (Wetzel et al., 2006). This presupposes that all the multidisciplinary health team should acknowledge that the services they offer surgical patients have a toll on each of them; and they should understand each other and support one another during stressful situations. In Ghana, surgeons are usually the leaders of the surgical team and may also experience some degree of stress although this has not been extensively explored.

Also, the surgeon-patient relationship has evolved over the years from a paternalistic model where the surgeon makes all the decisions for the patient to a contemporary patient-centred approach where the surgeon tries to incorporate the patient's view in the care provided (Kaba & Sooriakumaran, 2007). In Ghana, the surgeon-patient relationship may be seen as a blend of paternalistic and patient-centred models. Most patients in Ghana are not enlightened about their disease and expect the surgeon to make the best decision for their care. Those who are educated may take part in the care decisions about their illness. Surgeons do not have prolonged contacts with patients in Ghana; therefore, their individual relationships with the patient may vary from that of mutual respect to one devoid of empathy (Hellström, Lindqvist, & Mattsson, 1998; van Dulmen, 2002). The need for a good surgeon-patient relationship has been identified and surgeons should endeavour to communicate at a level the patient can understand (Ong, de Haes, Hoos, & Lammes, 1995; Shaw, Ibrahim, Reid, Ussher, & Rowlands, 2009; Vick & Scott, 1998).

Subsequently, the interdependence of the multidisciplinary team to achieve effective post-operative management has become necessary due to the desire for early discharge in

contemporary health care and constraints on resources. Early discharge of patients eventually reduces cost of treatment (Polomano et al., 2008). However, it is realized that an attempt to improve post-operative pain management demand increased cost and time from the multidisciplinary team as well as resources but the long term benefit of such an attempt may supersede the cost of inadequate pain management (Hofer & Hofer, 1995).

Thus, for the team to achieve the target of effective post-operative pain management there should be a culture of knowledge sharing in the clinical environment. Nurses have been reported to lack knowledge and understanding of basic pain management principles as well as opioid usage (Barber-Parker, 2002; Brunier, Carson, & Harrison, 1995; Taylor & Stanbury, 2009a). This lack of knowledge may lead to the presence of misconceptions about pain management. The literature indicates that in the contemporary acute pain management strategies, nurses have been empowered through education to play leadership roles in the acute pain management teams. Nurses are also now required to manage patient controlled analgesia (PCA), epidurals, interpleurals, and other regional blocks and infusions on the post-operative wards (O'Loughlin, 1999; Rawal, 1997). Thus, there may be the need for continuing education and advanced educational preparation for nurses to be able to meet the challenge of their role in the multidisciplinary team (Brunier et al., 1995; Taylor & Stanbury, 2009a). When nurses enhance their knowledge, they would be able to teach patients about effective pain management to enable them make informed choices among different treatment options (Barber-Parker, 2002). It is worth adding that the knowledge gap of Ghanaian surgical nurses regarding POP management has not been fully explored.

The importance of patient teaching cannot be overemphasized in the achievement of POP management goals. During the period of provision of direct patient care, the nurse may have the chance to assess the patient's learning needs and involve the other team members to

address the learning needs identified as appropriate. However, many factors serve as barriers for effective patient teaching such as inadequate time due to shortage of staff and hence work-overload. The nurse may also be limited by poor or insufficient teaching material as well as poor patient receptivity due to ineffective communication (Barber-Parker, 2002; O'Loughlin, 1999). These barriers are not insurmountable if the team makes concerted effort to ensure that the patient and family are well educated about their care needs such as POP management. When the patient is knowledgeable about his/her condition, it will enhance cooperation during care and prevent some complications that results from ignorance. The literature has not examined areas that need patient teaching in Ghana and this study identifies such needs during the ethnographic exploration.

Effective post-operative pain management means that the patient's pain should be relieved over a 24-hour period. However, it has been realized that POP is poorly managed at night and leads to anxiety and disturbed sleep. It has been observed that during the night, nurses find it more difficult to pick up non-verbal pain cues as a result of tiredness especially at the early hours of the morning when analgesics have worn off. Also, patients do not inform nurses when they are in pain because they feel too tired and they do not want to disturb the busy nurses. Thus, patients rather prefer to wait until the nurses offer them analgesics (Carr, 1990; Closs et al., 1997). A study among orthopaedic patients introduced a patient information leaflet and structured pain assessment for the nurses' use and it was realized after the intervention that the patients reported lower levels of pain (Closs, Gardiner, & Briggs, 1998). Thus, the multidisciplinary team should endeavour to ensure adequate pain relief for post-operative patients during the night. In Ghana, there are no buzzers or bells on most of the surgical wards to alert the nurse when the patient is in pain at night. Hence, regular monitoring of the patient may be necessary to improve pain management at night. For

example, a multidisciplinary approach in the development and implementation of comprehensive evidence-based programme for post-operative pain management has been shown in Canada and other countries to improve pain management and improve sleep, ambulation, and patients' general activity levels (Bédard, Purden, Sauvé-Larose, Certosini, & Schein, 2006). The post-operative patient may require movement and handling equipment depending on the condition and if this is not done properly, it may increase the patients' pain both during the day and in the night. There was no movement and handling equipment within the context of this study.

Therefore, the care of surgical patients requires skills of movement and handling especially at the unconscious phase where the patient has to be transferred from maybe a stretcher onto the post-operative bed and moving during subsequent care when the patient has not yet ambulated. There is therefore the need for handling and movement equipment and training of personnel to effectively use these equipment on the post-operative wards. These equipment may not be available on the surgical wards in Ghana and nurses are therefore required to lift patients physically. This may have health implications for the nurse where several of them may develop slip disc and other musculoskeletal problems. However, in the USA, Holman, Ellison, Maghsoodloo, and Thomas, (2010) reported that some nurses did not use the movement and handling equipment available to them. Some of the reasons they gave were that there was no time as in emergency situations; there was no room to use the equipment because of the shape and size of the patient's room or obstruction by the door or furniture. Other reasons were that it was faster not to use it and that the patient is not large enough to justify the use of equipment. In some occasions the equipment was not available or other nurses were using it. This indicates that the provision of equipment for handling and moving patients does not guarantee its use when nurses do not commit themselves to use it to

protect both themselves and the patients from injury. For example, the patient may experience more pain if the operated site is mishandled and he/she may also bleed from the operated site. In cases where the patient is obese, the nurse may be at a higher risk of developing musculoskeletal injury if proper precautions are not taken such as adopting the correct posture when lifting. In such instances, a team support is necessary to lift patients as necessary. A complete discussion of the clinical concerns of the multidisciplinary team regarding POP management is beyond the scope of this thesis because the study aims to draw on the insight gained from the review to develop an appropriate guideline for post-operative pain management in Ghana rather than a total focus on the multidisciplinary team dynamics.

In Ghana, surgical patients are managed according to the competence of health professionals in a particular health facility. For example, specialized and complex surgical procedures such as cardiac surgery and renal surgeries are performed only at the tertiary level such as the Korle-Bu Teaching Hospital (KBTH). Also, technological devices for pain management such as the patient controlled analgesia are not common in the Ghanaian health system. Specialist pain nurses and acute pain teams are also not readily available. The roles and dynamics of the multidisciplinary team have not been explored and this pre-supposes that the clinical issues concerning post-operative pain management are not illuminated. Pain response and management is also found to be influenced by the social and cultural background of the patient and health professional (Lovering, 2006a).

2.4 The Socio-Cultural System and Post-Operative Pain

Pain response and management has been associated with the cultural background and socialization of the individual. The response to a painful stimulus is not an innate characteristic but rather learned through socialization from the individual's culture (Beyer & Knott, 1998; Calvillo & Flaskerud, 1991; Ogala-Echejoh & Schofield, 2010). In view of this

assertion, the bio-cultural model was postulated to integrate social learning theory and the physiology of pain development and perception. It is believed that the social learning theory hinges on the cultural group of the individual (Bates, 1987). The culture of a group of people largely influences their behaviour as it involves the beliefs, knowledge, practices, values and everyday life activities (Callister, 2003; Leininger, 1997; Oliffe, 2005; Pope, 2005).

Therefore, it can be inferred from the foregoing that the expressions of the behavioural signs (verbal and non-verbal) depend on the culture of the individual. In Kenya, for instance, Hastings, (1995) reported variation in pain expressions where some participants were stoic and others openly expressed their emotions. However, previous studies have reported specific pain response among identified ethnic groups (a unique descent group) who exhibit characteristics similar or different from the wider cultural group studied. It was inferred from the behaviours of these ethnic groups that an individuals' probability to behave as expected of a cultural group is attributed to the person's integration with the group. Also, racial differences in pain response have been documented in other countries such as the USA (Davis, 1998; Kposowa & Tsunokai, 2002; Nguyen, Ugarte, Fuller, Haas, & Portenoy, 2005; Plesh, Crawford, & Gansky, 2002).

Therefore, it is affirmed that culture determines how pain is perceived; the meaning assigned to the pain; how or whether a person reports pain; and how the person acts or responds when in pain (Abu- Saad et al., 1994; Helman, 2001; Honeyman & Jacobs, 1996; Lovering, 2006a; McCaffery, 1972; Ramer et al., 1999). For example in Jordan, Abu-Saad, (1984) found that girls are more emotional, sensitive and expressive than boys when it comes to behavioural expressions and this could account for behavioural differences in pain expression among men and women reported in some studies (Fillingim et al., 2009). According to Leegaard and Fegermoen, (2008), pain experiences among women after cardiac

surgery depended on what the women's expectations of pain were and none of them wanted to complain about their painful experiences. Most of the women did not want to use pain medication and others waited until pain was unbearable before taking medication. Also, the women required individualized information about self-management of pain after discharge and they had difficulties remembering the information they had received. Also, in a Kenyan study, Hastings, (1995) realized that the acceptable outward expressions of pain experience differs between tribes with some viewing stoicism as desirable and some engaging in ululation (wailing), weeping, and singing to express emotions. Hence, it is necessary that the multidisciplinary team is enlightened about the culture of the specific group of patients they manage. Also, the culture of the care provider may be different from that of the patient and one should not impose his/her cultural values or beliefs on the other.

Further, it has been realized that the culture of the care provider may influence the post-operative pain management provided. For example, studies have documented that nurses do not administer narcotics as desired because of a cultural factor of fear of addiction to the narcotic analgesic (Loving, 2006a). Also, in an Australian study by Fenwick and Stevens (2004), it was reported that Non-Aboriginal nurses have inadequate knowledge about post-operative pain experiences of central Australian Aboriginal women and hence, they used pain assessment tools and techniques for pain management that were ineffective and culturally inappropriate. The study also indicated that nurse/client interactions related to language and role interpretation were in cultural conflict. The nurses expected the Aboriginal women to adopt pain behaviours as understood from the nurses' culture. The nurses anticipated that the client would contribute to their own care by communicating pain experience in ways that are familiar and are believed to be universal. However, the Aboriginal women also expected the nurses to conduct business similar to that of their own traditional tribal healers 'to see within'

and to 'just know' (p.24). The findings indicate that health professionals' understanding of patients' culture is necessary to provide effective pain management (Calvillo & Flaskerud, 1991; Leininger, 1997).

Lovering, (2006a) found that Tswana and Saudi cultures were strongly against the use of narcotics due to its' sedative effect but the Afrikaans thought narcotics were addictive. In the Filipino and Asian cultures, narcotics were only used as a last resort and they had fear for narcotics because of its dependence. The Irish thought narcotics could be used for pain relief under controlled conditions. The influence of the Ghanaian culture on surgical health team regarding pain response and management has not been understood indicating the need for further exploration. Hence, the study draws on the phenomenon of culture as a core underpinning for pain response and management. However, drawing on McCaffery's definition of pain, individual differences in pain experience and management is also considered a core component of the study in the medico-socio-cultural context.

A cultural effect was realized in Bangladesh, where nurses were found to spend less than 6% of their working hours in direct patient care especially in government hospitals. This is because the nurses are stigmatized and are considered to be commercial sex workers due to cultural reasons and this has subsequently reduced their chances of getting married. They therefore use nurse surrogates such as patient relatives and hospital support workers to perform 'nursing' activities that may include pain management activities (Hadley et al., 2007). In Ghana, nurses are not stigmatized as commercial sex workers but their image in the public domain may not be good as a few of the nurses do not exhibit good behaviour. This observation about nurses' behaviour was also as reported in South Africa (Jewkes et al., 1998). The respect and recognition given to the nurse is an important factor that may enhance the relationship between the nurse and the patient as well as other team members. Again, it is

reported that nurses in Jordan pay little attention to pain assessment or pain management due to the present gap between nursing education and the actual nursing practices. Nurses lack knowledge of culturally specific methods of pain assessment and management. However, there is a range of cultural practices in relation to pain assessment and management that needs to be integrated in the nursing curricula (Gharaibeh & Abu- Saad, 2002).

Also, in order for the health team to communicate effectively with patients from different cultural background, the health team should adopt cognitive and behavioural strategies that allow respect for the patient's culture/language. Also, the health team should appreciate cultural diversity and be tolerant of cultural differences (Coiffi, 2003). Sometimes individuals may think that their culture is superior to other peoples' culture. When this occurs, there would be a communication gap and this could impede effective post-operative pain management. As the multidisciplinary team work with people from different cultures, they may try and learn each other's culture and that may promote a better relationship among members of the team. Nonetheless, individual team members should be aware of one's own cultural values and biases, and also believe in cultural relativity. When one's own biases are identified, it will place the person in a better frame of mind to deal with them so that relationships are maintained to afford better working relationships and subsequent improved post-operative pain management (Andrews & Herberg, 1999; Coiffi, 2003).

The socio-economic status and age also influences pain response. The linkage between culture and pain expression is based on the premise that children's response to pain and illness is learned from parents and from the culture (Beyer & Knott, 1998). Also, gender differences could be attributed to the socialization of children within a culture where children are highly valued especially males because they perpetuate the family's name and provide security to their parents. Also, some children especially boys are not encouraged to express

their pain, and if they show signs of pain, they are considered weak (Alabas, Tashani, & Johnson, 2011; Helman, 2001). Though this study is conducted among adult participants, cultural behaviours associated with pain from childhood experiences or cultural expectations may influence pain response in adulthood.

The literature on the socio-economic status and pain response shows conflicting findings. For example, it is reported that the poor and the elderly have greater ability to tolerate physical and emotional pain, whereas the younger generation and the rich do not have a comparable pain threshold (Lovering, 2006a).

Culture also influences verbal or linguistic expression of pain as evident in the Ghanaian context. Abu-Saad et al, (1994) argued that there is the need for translation of existing pain scales in other cultures and recommended the need for specifically designed pain measures for each culture. This argument may be true if measures being used are culturally specific and rely on language or reflect values or ways of communication within a particular culture. Making culturally competent pain assessment is the first step to decreasing health care disparity; after all, pain is what brings many patients to the hospital (Collins et al., 2004). Consequently, accurate and culturally sensitive assessment tools provide objective information for health professionals to develop appropriate interventions for pain management (Adams, 1990; Beyer & Knott, 1998).

Thus, in Ghana, pain is expressed differently by the various ethnic groups and a few examples are provided in this thesis to illustrate the diversity of pain expression according to one's cultural background. The expression of pain in Twi (which is the most common spoken language in Ghana especially in the study population) and other major languages e.g. Ga, and Ewe are described. According to the Ghana Statistical Service (GSS), (2005), the predominant ethnic groups in the Greater Accra region are Akan (40%), Ewe (25.5%) in the

Ga district and Ga-Dangme (29%) in the Accra Metropolis (at the time of writing this thesis, the 2010 census report was not finalized). Other minority ethnic groups are Guan, Guma, Mole-Dagbani, Grusi, Mande and others (GhanaWeb, 2012). Thus, the researcher focused on pain expression of the three most common languages in the study population. The expression of pain intensity e.g. 'I have a little/mild pain' is expressed in Twi as "ɛyɛ me ya kakra"; the Ewe expression is "mele veve sem vie"; and the Ga is "eewa mihe fio". Severe pain is expressed in Twi as "ɛyɛ me ya papapaa"; the Ewe is "mele veve sem sesei or akpa or ɲntɔ" and the Ga is "eewa mihe waa." The latter expressions can also be used for very severe or unbearable pain. The expression 'kakra', 'vie' and 'fio' can be likened to a 'small' or 'little' and the expression 'paa', 'ɲntɔ' and 'waa' also relates to much or plenty. The Ewe severe pain expression 'sesei' relates to 'hardness'. It is noted that pain is not normally expressed in numerical terms in Ghana.

Further, according to the GSS, (2005), the percentage of illiterates in Ghana is 18.4%; those who are literate in English and a Ghanaian language are 48.2% and only 2.3% are literate in a Ghanaian language alone and 30% of the population in the Greater Accra region are literate in only English. Thus, some care-givers may not speak or understand their patient's dialect (language) which could be a potential source of barrier in pain assessment and management. This further calls for the need for health professionals to gain adequate knowledge about the socio-cultural context of their patients. Also, the importance of employing an appropriate clinical guideline to ensure effective POP management has been stressed. Hence, clinical guidelines assist health professionals to make appropriate decisions during pain management. In this regard, effective team work ensures successful use of clinical guidelines to achieve pain management targets (Hewitt-Taylor, 2004; Keeley, 2003).

2.5 Guidelines for Post-Operative Pain Management

The development of clinical guidelines follows standard processes established by recognized bodies such as the National Institute for Clinical Excellence (NICE) in the UK, the Scottish Intercollegiate Guidelines Network (SIGN) in Scotland, and The Appraisal of Guidelines Research and Evaluation in Europe (AGREE) collaboration. This study draws from the processes outlined by the clinical guideline development authorities to develop the clinical guideline for post-operative pain management in Ghana. It is observed that the clinical guidelines are developed at the national and local levels. The recognized bodies of clinical guideline developers mostly develop guidelines at the national level for specific conditions or procedures; and therefore such guidelines have a wider spectrum than is anticipated in this study. This study seeks to develop a clinical guideline that has a 'local' connotation (Hewitt-Taylor, 2004).

Clinical guidelines are statements that are developed systematically to help care providers and patients to make appropriate decisions about specific clinical issues. The statements of a clinical guideline are based on the best available evidence relating to the specific aspect of care or procedure. The first process for guideline development involves establishing the scope or the parameters of the guideline. This step forms the foundation of a particular clinical guideline where the specific limits of a guideline are clearly stated such as: the objective of the guideline, the target patient group and the specific procedure or patient care activity involved (Hewitt-Taylor, 2004; National Institute for Health and Clinical Excellence (NICE), 2011; The Appraisal of Guidelines Research and Evaluation in Europe (AGREE) Collaboration, 2004). On the surgical ward, there may be different guidelines or protocols for various procedures that guide the health professional to provide the best of care to the patient. For example, there are guidelines for the administration of drugs such as

opioids; nursing a patient on PCA or epidural; and administering IV fluids (Pasero & McCaffery, 2011; Rolley, Salamonson, Wensley, Dennison, & Davidson, 2011). Such guidelines reflect current standards and are reviewed from time to time to reflect contemporary standards. Clinical practice guidelines may be a procedure based, unit based, institution based or a national protocol about a particular topic such as post-operative pain management. In post-operative pain management, clinical guidelines could be developed for specific surgical procedures such as cardiac surgery or for specific components of pain management such as pain assessment. Thus, post-operative pain management involves multi-faceted activities that demands tailoring to fit a particular patient and context. Therefore, it is necessary for the limits of a particular clinical guideline to be well demarcated to avoid ambiguity and confusion regarding its' use as this could have negative repercussions (Blenkharn, Faughnan, & Morgan, 2002; Carr, 2001; Haljamäe & Stomberg, 2003; Huang, Cunningham, Laurito, & Chen, 2001; Hurwitz, 1994; Lindenfeld & Kelly, 2010; Rolley, Salamonson, Dennison, & Davidson, 2010; Rolley et al., 2011; Wulf, Neugebauer, & Maier, 1997). In this study, the scope and limits of the clinical guideline would be derived from key findings from the ethnographic exploration to ensure that the guidelines are appropriate for the local Ghanaian context.

The second step in the development of clinical guideline is the identification of a multidisciplinary team or stakeholder involvement. The multidisciplinary team ensures that the guideline developed takes the interest of all relevant areas into consideration and also that the resultant guideline is not skewed or biased. At the national level of clinical guideline development, the multidisciplinary team are the main developers of the guideline. The team should have a balance of disciplines; and the membership should be kept at a manageable size to ensure effectiveness. The team membership is recommended to be between ten to

twenty members with varying expertise. The guideline developing team are cautioned to be team players as issues of group undercurrents could adversely affect the effectiveness of the group (Hewitt-Taylor, 2004; Keeley, 2003; NICE, 2011; Scottish Intercollegiate Guideline Network (SIGN), 2004; AGREE Collaboration, 2004). The importance of the multidisciplinary team in pain management has been discussed earlier in this chapter. Therefore, this study involved stakeholders such as representatives of patients and patients' relatives, nurses, doctors, anaesthetists, pharmacists, and hospital administrators of the hospitals involved in the study in the development of the clinical guideline for post-operative pain management. In this study, the researcher will develop the first draft of the clinical guideline for post-operative pain management in the local Ghanaian context and the multidisciplinary team or stakeholders will make inputs during the refinement process.

The third step of clinical guideline development involves the systematic review of the evidence. Systematic review involves a scientific process of focused literature review that identifies, critically appraises, selects, and synthesises all relevant research evidence about a particular research question. The scientific process applied ensures that bias is minimized as much as possible (Cook, Mulrow, & Haynes, 1997; Scottish Intercollegiate Guideline Network (SIGN), 2004). Recognized bodies for systematic reviews such as The Cochrane Collaboration identifies steps of a systematic review process such as: as define the review question and develop criteria for including studies; search for studies; select studies and collect data; assess risk for bias in included studies; analyse data and undertake meta-analysis; address reporting bias; present results; and interpret results and draw conclusions (The Cochrane Collaboration, 2011). This study draws from the established processes of a systematic review to ensure that the systematic review undertaken in this study achieves

credibility and minimizes bias. The clinical guideline developed in this study would incorporate findings from the systematic review on post-operative pain management.

Thus, the initial step in a systematic review has been identified as defining the problem; where the criteria for including studies are delineated based on a specific research question. The second step is the search for studies which involves a process of extensive search of the best evidence which is done systematically such that all relevant studies are included. The best evidence could be generated through rigorous research in the specific area, clinical expertise, and patient's experience. The process of searching should be clearly described such that another researcher could replicate the search. Thus, the search terms, databases, and all sources employed should be specified. The dates included in the search as well as the inclusion and exclusion criteria used during the search of the evidence should be delineated. During the process of searching, both electronic and manual processes are used to ensure that no evidence is skipped (Keeley, 2003; NICE, 2011). The third step of a systematic review is selecting studies and collecting data. The relevant studies are selected based on the specified inclusion criteria and it is recommended that at least two authors select eligible studies independently to avoid bias. Data is then collected or extracted ensuring that all relevant areas are examined (Cook et al., 1997; Crowe et al., 2008; Garside, Britten, & Stein, 2008).

Subsequently, a systematic review also involves the process of appraisal of the evidence and this is based on an established hierarchy of the evidence. It is realized that the chronological order of the evidence is systematic reviews and meta-analysis, randomized controlled trials (RCT), cohort studies, case-controlled studies, cross sectional surveys, case reports, expert opinion, and anecdotal evidence (Garside et al., 2008; Keeley, 2003). The appraisal of the evidence is based on the type of studies involved in a particular systematic

review. For example, the criterion for appraisal of quantitative studies is different from that of qualitative studies. Hence, recognized bodies of systematic reviews have established criteria for evaluating studies that serve as evidence for the development of clinical guidelines such as The Cochrane Collaboration. Data extracted is analysed by statistically combining the results of the eligible studies in systematic reviews involving quantitative studies. Also, the findings are synthesized, summarized, and conclusions are drawn from the findings (Abou-Setta et al., 2011; Coughlin et al., 2010). In this study, the type of systematic review is based on the key findings from the ethnographic exploration and stringent measures are ensured to avoid a biased review. For example, external reviewers are involved in the process of systematic review. The highest rated studies (systematic reviews and meta-analysis and RCTs) are mostly studies with quantitative or positivist orientation.

In this chapter, the personal and multidimensional nature of pain and the quest to understand the response to pain and pain management have been emphasized. These issues may demand a review of qualitative studies; because qualitative studies allow the researcher to understand an abstract concept such as pain. The literature has enlightened the issues involved in systematic reviews of quantitative and qualitative studies. Health research was initially dominated by quantitative studies but it is observed that quantitative studies are not adequate to investigate complex health problem such as studies involving the abstract concept of pain. In this light, it is not conclusive to develop one framework for the evaluation of studies in a systematic review (Hewitt-Taylor, 2004).

Further, the next step for clinical guideline development is incorporating expert opinions and consulting on provisional guidelines. In post-operative pain management, depending on the type of clinical guideline to be developed, stakeholders may include the nurse, anaesthetist/nurse anaesthetist, doctor, pharmacist, hospital administrator, and

psychologist, a representative from social services, pastoral care, physical, respiratory, and occupational therapy, patient and an appropriate consultant (McCaffery & Beebe, 1994). It is recommended that the panel should be made up of about ten members because when the number is large, the committee may become ineffective. Also, the draft guideline should be subjected to peer-review and pretesting or piloting. This phase ensures that input are received from stakeholders so that the final guideline introduced into the clinical area is used effectively and it also achieves the purpose for which it was developed.

The final step of clinical guideline development constitutes finalizing, publishing, and disseminating guidelines. The literature has examined the characteristics of clinical guidelines which this study draws from; such as the recommended statements should reflect the current evidence of post-operative pain management. The guideline should involve less rigid instructions that give the flexibility required in pain management. The flexibility is key because this study emphasizes the individual nature of pain (Keeley, 2003; McCaffery & Pasero, 1999). The literature notes that there is no single format for a clinical guideline; and this study would allow the target users of the guideline to make an input in the formatting of the guideline (Miller & Kearney, 2004; Thomson, Lavendar, & Madhok, 1995). Guideline developers are entreated to identify the procedures for the review of the guideline and it is essential that a pain management clinical guideline is reviewed or up-dated periodically to accommodate the current evidence in the area. The production of more effective analgesics and the development of sophisticated gadgets and technological advancement for less invasive surgical techniques call for regular up-date of clinical guidelines for post-operative pain management. The processes for review of the clinical guideline developed in this study are delineated in this thesis (NICE, 2011). The strategies of implementation and dissemination of the clinical guideline developed in this study are also specified in this thesis

and are consistent with recommendations from previous researchers. The process for guideline implementation involves education of health professionals to gain full understanding of the guideline; and this could lead to an acceptance of and actual use of the guideline. Thus, the effective use of the guideline could lead to change in practice that enhances post-operative pain management (Grol, 1992; Miller & Kearney, 2004; Smith & Hillner, 2001).

Therefore, the systematic rigorous processes involved in clinical guideline development led to the belief that guidelines prevent ineffective and irrelevant practices that may have adverse consequences (Hewitt-Taylor, 2004; Keeley, 2003). The guideline or protocol provides the clinician with clear instructions that guide both decision making and practice based on scientific evidence. However, the clinician using a protocol should also incorporate his/her expertise in clinical judgment since the guideline may not apply to all patients and may also not be the only best way to handle a particular situation (O'Loughlin, 1999; Scott, 1997). Thus, clinical guideline developers are admonished to provide an assessment of factors that may limit the protocol or impede its implementation. Thus, previous discussions in this chapter have identified several factors that may hinder post-operative pain management. Therefore, the guideline users have the task of identifying the specific factors in their institution that may affect the effective implementation of the protocol. When such factors are identified, appropriate steps are to be taken to solve them; or the guideline should be revised in a way that the limitations would not hinder its implementation.

2.6 Conceptual Issues in the Study

There are conceptual issues in this study that drives the research and ensures the rigour and maintenance of ethical principles. Thus, the core issues that relate to the

understanding of knowledge (epistemology), and of reality (ontology), and value-enquiry (axiology) are relevant to this research (Edwards, 2001; Findlay, 1970). The conceptual issues are drawn from the appropriate methodology (ethnography) which is extensively discussed in the next chapter. The conceptual issues in this study informed the development of a framework for this study.

The principle of ontology in nursing applied in this study relates to the person as a biological human being with inseparable mind and body; or described as a bio-psycho-social being. The study considers the person (patient) as a bio-psycho-social being who is able to feel post-operative pain and also describe what he/she experiences. The person's experience of pain is also influenced by biological (the action of nerves and the brain) (Brown et al., 2004) and socio-cultural factors due to the socialization process (Lovering, 2006a). Thus, patients' relations could be affected by the patients' surgery as a result of their socio-cultural ties. Thus, the experiences of patients' relatives are explored through individual interviews in this study. The study holds that health professionals are able to describe the personal experiences of caring for people with pain in the surgical milieu. The health professionals who work with other colleagues may experience psychological and social consequences of team work and other relationships. Therefore, other health teams – doctors, pharmacists, and anaesthetists are involved in the study due to their impact on the nurses and subsequently on post-operative pain management. The biological nature of the health professional predisposes him/her to the effects of stress and hence physiological effects that may arise from working under unfavourable conditions. Also, the study holds that experts in the field of post-operative pain management and clinical guideline development, the multidisciplinary health team, and representatives of patients and relatives are able to share their expertise and

experiences in the development of an appropriate clinical guideline for the management of post-operative pain (Hewitt-Taylor, 2004; NICE, 2011).

Further, the epistemological stance of this ethnographic research rests on the premise that knowledge is derived from a particular local environment from the insiders' perspective. This implies that individuals in a particular culture have cultural knowledge and awareness and a phenomenon cannot be studied outside the particular social and cultural context. This knowledge acquired may not be explicitly taught and the individual may not even be aware of it (tacit knowledge) (Atkinson & Hammersley, 1998; Atkinson & Lesley Pugsley, 2005; Spradley, 1979a). The researcher however, is cautioned to report his/her background and how he/she participated in the culture of the participants to help understand the interpretations drawn from the data. This is because an ethnographic research is interpretive in nature and the researcher's background affects the type of questions asked, the relationship with participants, and what he/she learns during the research (Hammersley & Atkinson, 2007; O'reilly, 2005; Silverman, 2001). This study rests on the premise that the locally generated knowledge and knowledge gained from a systematic review of the existing literature forms core components of an appropriate clinical guideline for post-operative pain management. This stance of the study emanates from the assertion that contemporary strategies of post-operative pain management have been investigated extensively by previous researchers and such recommended strategies of POP management can be understood through the review of the existing literature (Bromley, 2000; Lanigan & Luffingham, 1998; Logan & Rose, 2004; Miaskowski, 2005; Nagi, 2004; Taylor, Hall, & Salmon, 1996).

The value-enquiry or axiology demands that the researcher takes systematic steps to ensure that ethical principles are followed to ensure that participants are not exploited or harmed and they are not coerced to participate in the study. Also, axiology involves rigour

which demands that steps are taken by the researcher to ensure reliability and validity of the study such as member-checking and prolonged field-work (Findlay, 1970; Kirk & Miller, 1986; Mason, 2005). To this end, a discussion of rigour and ethical principles which this study employed are presented in the next chapter (see pages 129 and 136).

2.7 Conceptual Framework of the Study

The study draws from the conceptual issues discussed to derive a conceptual framework within which the research process can be described. The purpose of the framework is to provide a synoptic view of the study and have a pictorial representation that can succinctly describe the study. Thus, the conceptual framework of this study attempts to link all the aspects of the study and shows clearly in a simplified format, the processes involved in the study to achieve the end-point of an appropriate clinical guideline for POP management. The choice of colours for the component parts of the framework has no scientific relationship to the study. However, it may be seen as providing the viewer with a clear pictorial representation of the framework.

The assumptions for the study on which the framework is linked to the core foundations of the study are that:

- a. The context of the study (medical, social, and cultural) and the evidence from a systematic literature review form the base of an appropriate clinical guideline. From the review of the literature in this chapter, it was indicated that clinical guidelines must suite the population for which it would be used and must incorporate the current relevant evidence obtained from a systematic review of the literature (Miller & Kearney, 2004). The context of this study is understood through ethnographic exploration of the medical, social, and cultural context of the Ghanaian post-operative environment. The evidence of contemporary POP management is delineated through a

systematic literature review and the findings from a systematic literature review would be reflected in the appropriate clinical guideline developed in this study.

- b. A draft clinical guideline should have input from expert reviewers, the multidisciplinary health team, clients and their family members, and a synthesis by the researcher. This process of synthesis ensures that the final clinical guideline developed would appropriately ‘fit’ the medico-socio-cultural context of the study and incorporate the input of all relevant stakeholders.

Subsequently, the study is designed to be carried out in five main steps congruent with standard processes of developing clinical guidelines and within the framework presented (Hewitt-Taylor, 2004; Miller & Kearney, 2004; NICE, 2011; SIGN, 2004; AGREE Collaboration, 2004). The design of the study is elaborated in the next chapter (see page 83).



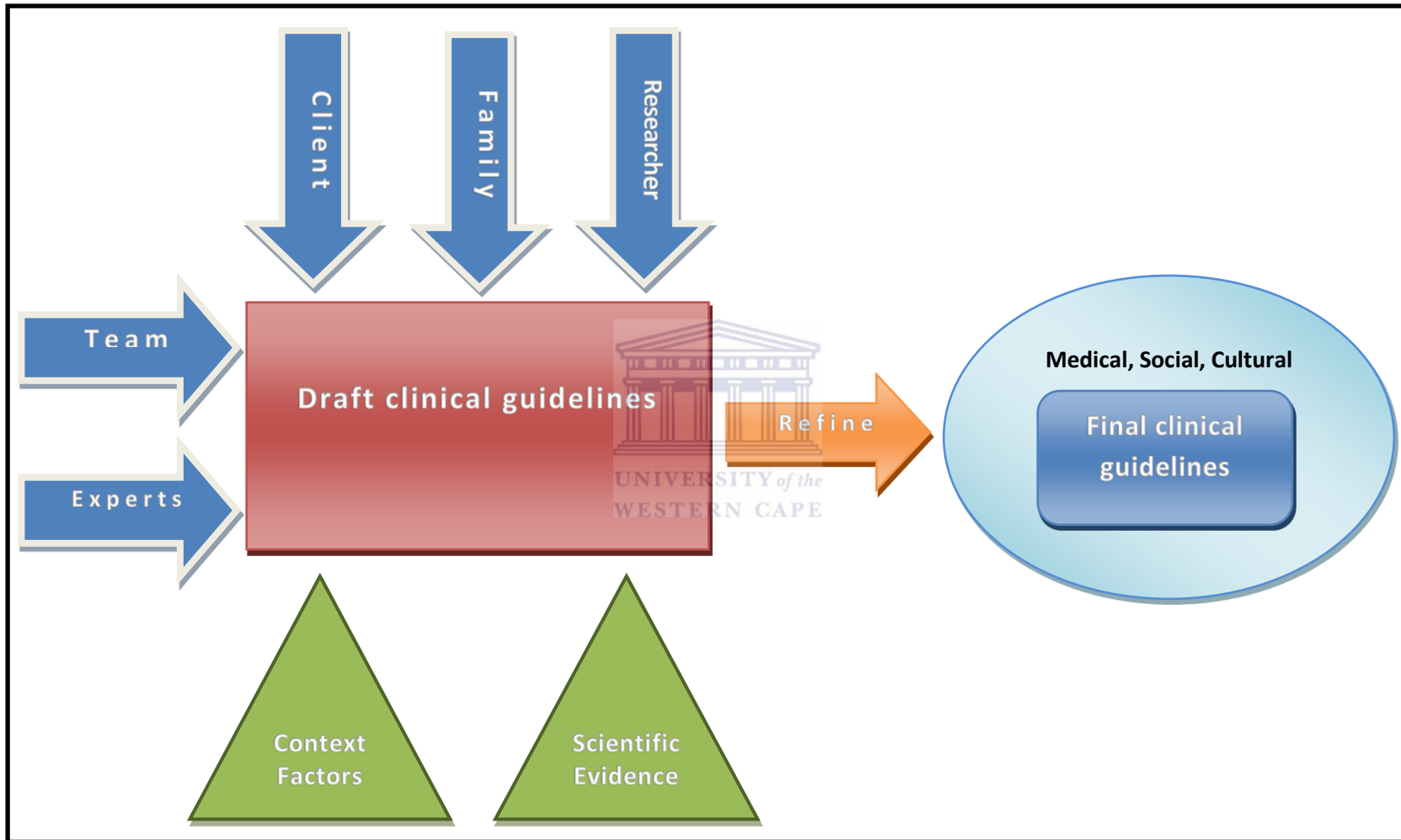


Figure 1: Framework for Research Process (Clinical Guideline Development)

2.8 Conclusion

This chapter has examined the concept of pain and described extensively the medical system in relation to post-operative pain management highlighting the personal nature of pain and the need for effective pain assessment. The chapter also discussed the key multidisciplinary team that is necessary for effective post-operative pain management. The need for effective communication, interpersonal relationship and an understanding of the uniqueness and complexity of patient variable were discussed. Clinical issues relevant for post-operative pain management such as patient teaching, continuing education for the team especially the nurse, and the need for the use of movement and handling equipment were also highlighted. Socio-cultural issues relevant to pain management have equally been examined in this chapter. Also, the processes involved in the development of a clinical guideline were discussed. The chapter ended with an examination of the conceptual issues in the study as well as a framework for the research.

The extensive review of the literature suggests that not much has been explored on the views of those involved in multidisciplinary team in post-operative pain to have a holistic picture of the situation in a particular clinical environment. The discussions presented establish the fact that effective pain management is highly dependent on multidisciplinary team approach. Hence this study will explore the factors that may improve post-operative pain management in Ghana from the perspectives of the multidisciplinary team. The holistic illumination may give a better foundation for the development of guidelines or protocols that may improve pain management in Ghana.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter illustrates the methodology of the research. The chapter is divided into two main sections. The first section examines the qualitative paradigm and the philosophical underpinnings of the study. The main qualitative approaches are discussed with a justification for the appropriateness of ethnography for this study. Also, ethnographic principles are identified and their application in the study outlined. The section includes a highlight on the study design. The second section of the chapter describes the primary data collection process. It presents setting of the study, sampling methods, data collection methods, ethical considerations, and rigour of the study. The methodology of the data analysis is discussed as the chapter ends with a subjective reflection on ‘the researcher role’ and its’ effect in this qualitative study.

The study seeks to develop a clinical guideline for the management of post-operative pain by understanding patients, nurses, multidisciplinary team, and patients’ family response to post-operative pain (POP) and its’ management within the medico-socio-cultural milieu. The understanding derived from the exploration and a systematic review of the literature influenced by the development of a clinical guideline for POP management within the medico-socio-cultural context of Ghana. Thus, this study adopted an innovative ethnographic approach that was designed in five steps to achieve the objectives of the study.

3.1 Situating Study within the Qualitative Paradigm

The study employs a qualitative approach because it is interested in studying naturally occurring phenomenon (pain); understanding and interpreting behaviour (pain response) based on the individual’s perspective; and it explores an area where little is already known

especially in the Ghanaian context. An in-depth review of the principles and assumptions of the two main methodological paradigms employed in social research (quantitative and qualitative) indicated that qualitative paradigm is best suited to answer the research questions in this study. Qualitative and quantitative paradigms have unique epistemological and ontological assumptions and they view the world from different perspectives. The quantitative paradigm focuses on numbers, statistical analysis, and a highly structured and controlled research process with an aim of generalizability. Data is collected in quantitative studies through questionnaires, structured interviews, observations, and other measuring tools. On the contrary, qualitative research focuses on word, meaning or understanding through the use of open-ended questions, and flexible designs aimed at understanding why and how a phenomenon exists with a particular context. In qualitative research, data may be collected through naturalistic observations, semi-structured or unstructured interviews, focus group discussions, self-reflection, and case studies and the researcher can use a range of interconnected methods during the study (Denzin & Lincoln, 1998; Nelson, Treichler, & Grossberg, 1992; Silverman, 2001).

The qualitative approach provides the appropriate environment for the study objectives to be met; thus, it is the best approach to employ. This assertion is made because the study sought to explore in-depth and understand POP response and management; data was collected in the natural environment of participants; participants' perspectives (emic perspective) were highlighted integrating the researchers' reflections; and employed concurrent data analysis to gain full understanding and develop an appropriate clinical guideline.

The reasons stated buttress the suitability of qualitative research approach for this study. However, the researcher is by no means placing the qualitative approach above the

quantitative approach. The emphasis on the qualitative approach is based on its' suitability to answer the research question. It is also noted that both approaches are used in nursing research and other healthcare studies based on their appropriateness for a particular study. However, both qualitative and quantitative research approaches have been criticised by previous authors.

Quantitative research is criticised for the following reasons: its inability to explain human experience; its insistence that the social environment always be controlled; the fact that the subjective nature of human experience cannot be 'measured'; the point also that human behaviour cannot always be predicted; and fact that the cause-effect relationship may be determined in all circumstances. Also, qualitative research approach has been criticised with regards to its unstructured design; subjectiveness; less rigorous; and its inability to generalize findings. However, it is also contended that the core emphasis for qualitative studies rest on what is happening rather than what is predicted (Creswell, 1998; LeCompte & Schensul, 1999a; Patton, 2002; Polit & Hungler, 1995). The philosophical underpinning or the metatheoretical framework of the study is examined.

Previous authors have identified major metatheoretical frameworks or paradigms that guide social research – positivist, interpretivist, and critical paradigms (Patton, 1990). The positivist paradigm has a strong link to quantitative research; and qualitative studies align itself with the interpretivist paradigm. In this thesis, the metatheoretical framework, philosophical underpinning, and research paradigms are used interchangeably to represent paradigms or world views that guide social research. This researcher realized that although some authors try to differentiate these terminologies, they all conclude that these paradigms drive a particular research and a researcher aligns the study to a particular orientation

(paradigm) based on the purpose or goal of the study (Guba & Lincoln, 1994; LeCompte & Schensul, 1999b; Patton, 2002).

Positivism has its roots in sociology and was founded by Comte and it is used in most natural science studies (Patton, 2002). Researchers, who employ positivism, use the deductive approach where a hypothesis is tested. The positivists believe that knowledge is objective; study environment should be controlled, and behaviour can be predicted and verified. Positivist investigates studies that focus on cause and effect relationships. Positivists are criticized based on the lack of focus on meaning attributed to experiences and that the social contexts of phenomena studied are not highlighted (Creswell, 1998; Patton, 2002; Polit & Hungler, 1995).

Also, the critical paradigm was derived from interpretivism and seeks to answer research questions with an emphasis on ‘change’ or ‘improve’; and operates to reconstruct or deconstruct the social context through a participatory approach. Studies that align with the critical paradigm investigate sources and aspects of inequality in systems explored. Thus, the researcher is seen as an ‘intellectual advocate’ (LeCompte & Schensul, 1999b p. 45). The systematic process that is followed in the development of a clinical guideline to guide POP management is not done in a controlled context. Also, even though, this study develops a clinical guideline that is hoped to improve POP management, the emphasis of this study is not to change practice or address inequalities in the medico-socio-cultural system of Ghana. Therefore, the positivist and critical paradigms are not appropriate metatheoretical frameworks for this study. This study is situated in the qualitative paradigm; and aligned in the domain of interpretivism.

Interpretivists and constructivists concede that the human mind and behaviour is an independent world and cannot perfectly describe the reality of human consciousness and

experiences (Schwandt, 1997). The qualitative paradigm holds strongly the examination and analysis of subjective experience of the individual and their constructions of the social world (Creswell, 1998; O'reilly, 2005). Many other world views of the qualitative research have been propounded for example the interpretivist/constructionist directs research activities to understand individual human action/behaviour with a focus on subjective meanings and interpretations. Thus, the interpretivists conclude that knowledge is constructed within the social domain and reality is ultimately subjective (O'reilly, 2005; Saks & Allsop, 2007). In this study, post-operative patients and their relatives, and surgical nurses and the multidisciplinary team constructs and interpret their world (emic perspective) and the researcher employed reflection to interpret participants' views, experiences, and inputs as the study progresses (etic perspective). LeCompte and Schensul (1999b) observed that interpretivists culture has cognitive and affective components and these are shared as individuals interact; and this highlights the 'local' or context specific relevance of a study. The interpretivist paradigm allows the researcher to employ participatory approaches during the study; and this is significant to this study as the views of participants are incorporated in the development of the clinical guideline. Interpretivism has been criticized as focusing on subjectivism and relativism and this could bias data generated due to subjective interpretations imposed on the data; and thus, limits its generalizability. However, the study aligns with the philosophy of constructivism and interpretivism. Literature has identified other perspectives that drive social research which emanated from positivism and interpretivism (Guba & Lincoln, 1994; LeCompte & Schensul, 1999b). Subsequently, the type of qualitative approach employed in this study is discussed.

3.2 Choosing a Qualitative Approach

Researchers using the qualitative approach choose from a variety of methodologies and the three main approaches employed in nursing research are phenomenology, ethnography, and grounded theory. The three approaches answer different research questions and they originated from different disciplines. This accounts for their distinct methodological foundations and perspectives (As de Vos, Strydom, Fouché, & Delpont, 2011; Creswell, 1998; Patton, 2002). A closer review of these approaches revealed that ethnography is the best methodology to use for this research. An overview of ethnography and a discussion of its appropriateness for this study are provided in this thesis.

3.2.1 Overview of ethnography. Ethnography originated from anthropology and it was coined from two words ‘etho’ which denotes folk and ‘graph’ derived from writing. Therefore, it refers to social scientific writing about particular folks or cultural groups. The methodology commenced with the research of Malinowski (1922) when he studied the social life of the Trobriand Islanders in the Western Pacific. Over the years, ethnographical studies have focused on tribes, subcultures, the public and private organizations, and social problems. Ethnography seeks to understand a phenomenon being studied from the perspectives of the participant in the particular situation. This method emphasizes that a particular phenomenon is understood better in the local context due to the effect of the activities of particular individuals in a defined setting. It is also characterized by a fluid and flexible design. The researcher is seen to have an extensive amount of field work to be able to understand the beliefs, views, and perspectives of the people being studied (O'reilly, 2005; Silverman, 2001). This study seeks to understand the factors that influence POP response and management and develop clinical guideline that will be used to guide POP management. The development of the clinical guideline will involve the perspectives of health professionals, experts, patients

and their relations. Therefore, the ethnographic methodology is the most appropriate approach for this study. The literature however, identifies types of ethnographic designs and a few of these are reviewed and the type of ethnography appropriate for this study is identified.

In a review, Roberts (2009) identified types of ethnography for example, classical ethnography where the researcher has prolonged contact with the participants and it is mainly utilized by anthropologists; in interpretive ethnography, the researcher tries to discover the meanings of social interaction; and in descriptive ethnography, the ethnographer describes what is happening.

However, this study aligns itself with the particularistic or focused ethnography where the ethnographic holistic approach is applied to the medico-socio-cultural context of Ghana with a focus on post-operative pain management (Boyle, 1994). A focused ethnography may also be related to a time-limited exploration of a specific phenomenon (Muecke, 1994). Other authors refer to focused ethnography as mini-ethnography which is described as an ethnographic study with a specific focus. Hence, this study adopts a focused ethnography because the study is focused on POP and the development of a clinical guideline for POP management (Leininger, 1985).

Other authors also identify auto-ethnography as a type of ethnography and this has several terminologies enumerated by Patton, (2002, p. 85) which involves investigating the researchers' own culture and recognizing the 'self' as an integral part of that culture and the complex nature of the culture is reported and discussed in relation to the self (Patton, 2002). In this study, even though the researcher is a Ghanaian, a nurse educator, and has undergone three previous surgeries, the focus of the study is to develop a clinical guideline that will be culturally relevant; therefore, the involvement of key participants is considered very crucial to this study. Also, pain is a personal experience and the researcher's encounter with post-

operative pain through caesarean section may be different from other patients who undergo general surgery (the context of study) such as haemorrhoidectomy or mastectomy. The socio-cultural circumstances of having a baby and surgical pain could interfere with pain experience since attention would be focused on the baby. An auto-ethnography therefore, is not an appropriate type of ethnography to apply for this study.

It is to be noted however that, ethnography emphasizes the involvement of local actors or informants. It is observed that the effective post-operative pain management is achieved through the coordinated efforts of a multidisciplinary team of health professionals and cooperation of the patient (McCaffery & Pasero, 1999). Thus, this study involves the multidisciplinary team of health professionals, key informants, experts, and patient and their relatives in the development of a clinical guideline that would guide POP management (Neal, Brown, & Rojjanasrirat, 1999).

3.2.2 Ethnography and nursing research. Ethnography is considered the oldest qualitative methodology. However, the use of ethnographic methodology is relatively new in nursing and it is recorded that nurses started employing the methodology in the 1960s to learn and have a holistic contextual understanding of nursing phenomena (Buller & Butterworth, 2001; Oliffe, 2005; Roper & Shapira, 2000). Nurse researchers over the years have realized the usefulness of the methodology as it has helped them to understand the meaning of patients' experiences and subsequently develop better ways of providing patient care. Subsequently, several nurse researchers have employed the ethnographic methodology to investigate several healthcare and nursing issues such as pain, breastfeeding, labour, HIV (human immune deficiency virus), communication, and among others (Arber, 2007; Burnard & Naiyapatana, 2004; Clabo, 2008; Cricco-Lizza, 2007; Dykes, 2005; El-Nemer, Downe, & Small, 2006).

Thus, Leininger, derived the ethno-nursing methodology from ethnography that was a major contribution in the provision of appropriate transcultural nursing care. She asserted that different cultures perceive, know, and practice care in different ways; however, there are some commonalities about care among all cultures of the world. This study identifies with Leininger's assumption that a clinical guideline for POP management should be developed from the cultural knowledge of the local context. Also, pain, being a universal phenomenon, the study derives knowledge from previous work on POP globally in the development of the clinical guideline since much is not known from the Ghanaian context. However, this study did not employ ethno-nursing methodology because ethno-nursing drives at identifying nursing knowledge from the perspectives of the local nurses and actual or potential users of nursing services. Leininger (1985) stated that *'Ethno-nursing has been conceptualized, developed and used as a specific research method focused primarily on documenting, describing, and explaining nursing phenomena'* (p. 38). Although, this study conceptualizes, describes and explains nurses' POP management practices, the focus of this study is to develop a culturally appropriate clinical guideline for POP management that incorporates the wider literature (Hewitt-Taylor, 2004; NICE, 2011). Therefore, ethno-nursing methodology is not an appropriate method to adopt for this study. Next, the features of focused ethnography as applied in this study are discussed.

3.3 Features of Ethnography Applied in Study

A review of the key features of ethnography indicates that the methodology employs the naturalistic model which emphasizes that the participants' world should be represented faithfully and data should be collected from the participant's natural environment. One common data collection method used in ethnography is observation also known as naturalistic observation where researchers observe participants in their 'natural' environment.

It is noted that researchers should analyse the most basic interactions they observe and not just the obvious during observations (O'reilly, 2005; Saks & Allsop, 2007; Silverman, 2001). According to Maynard (1989), the researcher in this context draws a picture of the phenomenon under study from an insider's perspective especially in relation to the culture of the insider. Therefore, in this study, patients and their relatives and health professionals were observed on the surgical ward and detailed field notes were written after each observation. The feature of naturalistic approach to the research, projects the specific realities of POP response and management and therefore, the clinical guideline developed by integrating the 'natural' context would more likely enhance POP management. The study highlights the emic perspectives of POP response and management with thick descriptions of findings to ensure the 'voice' of actors are projected (LeCompte & Schensul, 1999a; Spradley, 1979a).

Observation in the natural environment recognized as a distinguishing feature of ethnography has been examined extensively by previous researchers and types of observations have been described (Atkinson & Hammersley, 1994; Roberts, 2009; Roper & Shapira, 2000). Spradley, (1979) identified participant and non-participant observation and this was related to concepts such as immersion. Thus, he explained total and partial immersion, and spot observations. The researcher drew from Spradley's work to undertake clinical observations in this study. He described a type of participant observation in which the researcher fully participates in the activities of the group or phenomenon being studied. The 'full-participant-observer' is however, limited in the writing of field notes and holistic observation as the researcher would not be able to observe all aspect of the phenomenon due his/her full participation. In partial immersion, the researcher is present at the natural environment, establishes rapport with the participants, but he/she does not participate in the activities of the group or the phenomenon under study. Partial immersion is employed when

‘going native’ is not vital to the study. Also, spot observations involve observations of unique or single occurrence at the study site (Emerson, Fretz, & Shaw, 2001; Spradley, 1979b). The observation techniques involved in this could be described as partial immersion since the researcher did not work on the ward as a nurse during data collection. However, it is important to note that her status as a Ghanaian nurse and a previous surgical patient contributed in early integration and acceptance at the study sites because she could understand terms used on the ward and also appreciate the patients’ signs of distress. However, this identity status raised some methodological concerns which is addressed later in this chapter. Partial immersion was suitable for this study because the process of clinical guideline development demands an iterative process where the researcher had to return to the ‘field’ from time to time for review and input of participants.

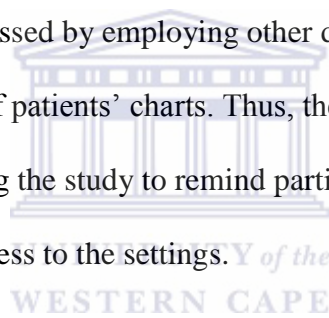
Another distinguishing feature of ethnographic studies is its holistic and contextual nature. Thus, the concept of holism acknowledges the complex nature of social groups as may be the case of a surgical environment and the abstract concept of pain described in chapter two (see page 14). Ethnography emphasizes that participant’s behaviour can best be understood in relation to the appropriate context which is more than the physical environment. Therefore, this study drew from the wider medical, social, and cultural context of Ghana to provide a holistic and contextual understanding of the phenomenon under study. Thus, the clinical guideline developed has a strong relevance to the context of the study. Therefore, the context of this study includes the social meaning and purpose within which the behaviour occurred (Barton, 2008; Boyle, 1994; Hammersley & Atkinson, 2007). This study interprets the behaviour of participants (patients and health professionals) with a clear link and description of the context. Also, a holistic picture of findings presented at the end of the study provides explicit interrelationships of the issues involved in post-operative pain

management in medico-socio-cultural context of Ghana. The holistic, comprehensive, and contextual approach to this study demanded prolonged field work which is a characteristic feature of ethnography.

Ethnographic studies are noted for prolonged field work lasting from months to years. The design of this study has integral 'fieldwork' components (step one to four). The prolonged fieldwork makes it possible for the researcher to go native and therefore, participants will not be self-conscious in the performance of their activities. Thus, in this study, the researcher's prolonged presence on the ward made the nurses respond and manage POP routinely as the study progressed. This minimized observer bias or the halo effect during clinical observations. The prolonged time on the field also afforded a full understanding of the medical, social, and cultural context of POP response and management. It also helped in the full participation of actors in the development of the clinical guideline (As de Vos et al., 2011; Creswell, 1998; Patton, 2002; Spradley, 1979b). The limitations of prolonged fieldwork are that the researcher could be too familiar with the actors and therefore miss some important observations. Also, the participants may disclose some personal information that they did not intend to say if they were conscious of the researcher's presence. In this study, the researcher employed personal reflections and personal memos to record and analyse personal information that was picked up because of the familiarity and trust that was developed with the participants. Hence, prolonged fieldwork has a close association with the identity status of the researcher.

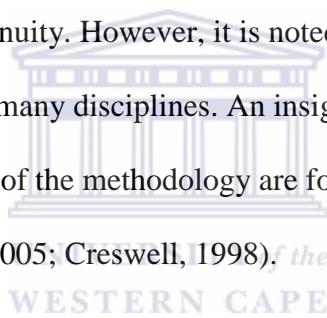
The identity status of the researcher during fieldwork is linked to gaining access to the setting. Previous authors identified the ethnographic researcher as a friend, a stranger, confidant, among others. The researcher should ensure that participants know what role he/she is playing (the researcher role); and the activities involved in the study for example,

observation. The identity issue also demands that the researcher identifies his/her gender since participants may say different things about the same phenomenon to different researchers based on their gender (Atkinson & Hammersley, 1994; Atkinson & Hammersley, 1998; Hammersley & Atkinson, 2007; Spradley, 1979b). Thus, the participants in this study were given full information about the study and were told the activities involved in the study as specified on the information sheet [see Appendix 2 (English); Appendix 3 (Twi)]. The phenomenon under study (POP) is not a natural gender sensitive topic such as issues concerning sexuality; as such, the female gender status of the researcher may not lead to skewed contributions from participants. However, her background (a nurse) may influence some patients or even the health professionals to give socially desirable answers to questions asked. This probability was addressed by employing other data collection methods such as clinical observation and review of patients' charts. Thus, the researcher emphasized her 'researcher' role frequently during the study to remind participants. It is noted that her status as a nurse helped to negotiate access to the settings.



Access in ethnography can be described as overt (open) or covert (close). In overt access, participants are fully aware of the research and they consent to be part of the study while in covert access, the researcher does not have full consent and the participants are not fully aware of the study (O'reilly, 2005; Silverman, 2001). This study was carried out with full awareness of participants. Participants involved in the study were fully informed about the study before participation at all stages of data collection. Emergency admissions during clinical observations did not form part of the study until their conditions were stabilized and they gave consent. Information about the study was made available on the ward at all times during the study. Gate-keepers (the Ghana Health Service, hospital authorities and ward in-charges) were informed about every aspect of the study during negotiation of access.

Ethnography has been criticized largely because of participant observation which is one of its' common data collection methods. It has been argued that data from participant observation may not be valid because the presence of the ethnographer will affect the behaviour of participants. However, proponents of ethnography maintain that prolonged fieldwork in ethnography counteract such observer effects (Atkinson & Pugsley, 2005; Brink & Edgecombe, 2003). Another criticism of ethnography relates to the subjective nature of participant observation and analysis. Here again, it has been refuted that ethnographers carefully observe what participants do and say and make careful notes which they analyse systematically (Atkinson & Pugsley, 2005; Hammersley & Atkinson, 1995). Also ethnography has been criticized for producing studies that have been described as case studies without the requisite continuity. However, it is noted that ethnographic studies have attained comparable standards in many disciplines. An insight into such criticisms helped to ensure that the guiding principles of the methodology are followed to ensure credibility of this study (Atkinson & Pugsley, 2005; Creswell, 1998).



3.4 Study Design

A research design gives an indication of the structure of the study indicating the major parts of the research. It is noted that the best research design for a study depends on the research questions that need to be answered (Patton, 2002). Therefore, the design of this study was developed to answer the following questions:

1. How do post-operative patients respond to and describe their pain?
2. What are the factors influencing post-operative pain responses among surgical patients within the medico-socio-cultural context?
3. How do nurses perceive and respond to their patients' post-operative pain?

4. What factors influence nurses in their response and perceptions of their client's pain within the medico-socio-cultural context?
5. What factors influence the perceptions of the multidisciplinary team, key-informants, and patients' relatives on post-operative pain management within the medico-socio-cultural context?
6. What clinical guidelines would be appropriate for post-operative pain management in the Ghanaian medico-socio-cultural context?

The questions served as a basis for the formulation of the design for this study. The design was supported by the tenets of the ethnographic methodology and therefore, the choice of the qualitative paradigm for this study. The design provided the plan of action within which the research questions could be answered. It incorporated an avenue for ethnographic exploration that made it possible to answer questions; it also afforded a systematic process that culminated in the understanding of context specific factors that helped in the development of an appropriate clinical guideline for POP management. The design of this study also ensured a systematic process of clinical guideline development based on standard procedures recommended by recognized and accredited bodies such as National Institute for Health and clinical Excellence. Therefore, the ultimate aim of the study that is linked to research question six was achieved by the use of this innovative research design.

It was noted that a research design equally specifies what data are to be collected, the sources and processes of data collection, and how the data will be analysed (LeCompte & Schensul, 1999b; Polit & Hungler, 1995). Hence, the research design for this study specified the data sources as health personnel, key informants, experts, patients and their relatives and systematic review of the literature; and data was collected through individual interviews, clinical observation, documentary review, and expert review. The data generated was

analysed concurrently applying the principles of thematic content analysis and synthesis of comments on draft guideline.

The research design of the study was derived from a review of the processes involved in the development of standard clinical guidelines. Thus, the study was designed to be carried out in five main steps congruent with standard processes of developing clinical guidelines (Hewitt-Taylor, 2004; Miller & Kearney, 2004; NICE, 2011; SIGN, 2004; The Appraisal of Guidelines Research, 2004). The design of this study can be described as a multi-step focused ethnography. The steps of the design are:

3.4.1 Step 1. Establish the parameters of the guideline – The focus and limits of the guideline was clearly demarcated and this was informed by findings from ethnographic exploration of the medical, social, and cultural factors influencing post-operative pain response and management in the Ghanaian context.

3.4.2 Step 2. Search, appraise, and synthesize the evidence through systematic literature review – a systematic literature review was done and external reviewers with expertise in systematic reviews assessed the findings (evidence) of current post-operative pain management. The first draft of clinical guidelines was developed based on findings from Step 1 and the systematic literature review.

3.4.3 Step 3. Identify multidisciplinary team – Input was sought from an identified team including nurses, doctors, pharmacists, anaesthetists, hospital administrators, and patients' and relatives' representatives from the hospitals involved in the study.

3.4.4 Step 4. Seek and incorporate experts' opinion – The revised draft was reviewed by external experts on post-operative pain management to ensure that guidelines generated were within the required standard of contemporary POP management and applicable to the

context of Ghana. The reviewers were given a synopsis of the findings from step one and the context of the study to inform the review.

3.4.5 Step 5. Finalize, publish, and disseminate guidelines – there was final editing and formatting of the guidelines and procedure for the review of the guideline were also delineated. Plans for dissemination of the clinical guideline and its clinical implementation were also identified in this thesis.



Table 1: Foot-prints of Research Process as per Study Design

Step	Activity	Participants	Process
Step One	Establish the parameters of the guideline based on findings from ethnographic explorations through Clinical observation, Individual interviews, and Chart/documentary review.	Post-operative patients and surgical nurses were initially interviewed and as the study progresses, patients' relatives and other health professionals were interviewed to fully develop an emerging theme	<p>Non-participant clinical observation, writing field notes with concurrent data analysis</p> <p>Individual Interviews, transcription, and on-going thematic content analysis</p> <p>The focus and limits of the guidelines was clearly demarcated</p>
Step Two	<p>Search, appraise, and synthesize the evidence through systematic literature review</p> <p>Develop the first draft of the clinical guideline after reviewers' feedback</p>	Expert reviewers reviewed the researcher's conclusions of the evidence	State objectives of review, eligibility criteria, tabulate, assess, and analyse results of eligible studies, prepare a structured balanced and unbiased report of review
Step Three	Identify multidisciplinary team and organize two or three meetings	nurses, doctors, pharmacists, anaesthetists, hospital administrators, and patients' and relatives' representatives	Presentation on the 'evidence' from systematic review and step one; (gave draft guideline to review for about two weeks).

Step	Activity	Participants	Process
Step Four	Seek and incorporate expert opinion Organize consensus forum	Experts on post-operative pain All relevant stakeholders	Reviewers were given a synopsis of the findings from step one and the context of the study to inform the review. Discussion of comments on draft guidelines and called for consensus on each statement
Step Five	Finalize, publish, and disseminate guidelines	-	The final editing and formatting of the guideline was done by the researcher in collaboration with the GHS



3.5 Primary Data Collection

This section describes the primary data collection process. It describes the setting of the study, sampling methods, data collection methods, ethical considerations, rigour of the study and data analysis method employed. The section ends with a reflection of the researcher role and its effect on the study.

3.6 Study Setting

The study was conducted in Ghana to ensure that a clinical guideline developed within the medico-socio-cultural context would help in the effective management of post-operative pain (POP) among Ghanaian surgical patients. The focus of qualitative studies is not that of generalizability (Parahoo, 2006; Patton, 2002; Polit & Hungler, 1999); therefore, an ethnographic study aimed at the entire nation, Ghana, would be unfeasible for this study. The setting for the study (Accra) attracts Ghanaians from almost all parts of the country. This presupposes that the patient mix in the hospitals in this multicultural city would provide diversity in the data generated.

Ghana is a tropical developing country in West Africa made up of ten regions of which the Greater Accra region forms the seat of government. The official language is English and nine others languages are also government sponsored or recognized in Ghana. The languages that are widely spoken in Ghana are Akan, Ewe, Ga, and Dagomba. There are several other languages in Ghana peculiar to the diverse tribes. The major ethnic groups in Ghana are Akan, Ewe, Mole-Dagbane, Guan, and Ga-Adangbe; and there are other minor groups who are predominant in specific regions even though most urban cities are multi-cultural in nature. The various ethnic groups have their peculiar believes and practices that give them a unique identity. The beliefs and practices of individual ethnic groups could influence pain response and perceptions of participants. The population of Ghana is currently

about twenty-four million (GhanaWeb, 2012). The seat of government which is also the capital of the nation Accra was considered the best setting for this study.

Accra is located in the south-eastern part of Ghana and the Accra district shares boundaries with Ga district to the north-west, Tema district, to the east and the Gulf of Guinea in the south; and it has six sub-districts. It is also the administrative, commercial, educational, and cultural centre of the nation. The indigenous people in Accra are Gas and their primary occupation is fishing. In the formal sector there are professional, technical and managerial works; as in the informal sector, employment is in small business and construction among others.

Accra has drawn migrants from all over the country and from abroad. There is cultural diffusion in Accra because apart from the Gas, other major ethnic groups are also found in the city, these include: Adangbe, Akan, Ewe, Dagomba, Frafra, Gonja, and among others. The city forms the centre of internal and international communication networks and has the only international airport (Kotoka) in the country. Accra has a total population of over three million which forms about 16.1 per cent of the total population of Ghana. There are many public and private schools in the metropolis and has the premier University of the nation (University of Ghana). Accra also has modern communication systems and improved road network. Despite these, the city is plagued with perennial problems of flooding during the rainy season. The city has settlements that are well organized and other areas which are considered slums. The adult literacy rate in Accra is over 70% which is higher than the national literacy rate average of 67% (UNICEF, 2012). The map of Ghana is shown in Appendix 1 and indicates the location of study (Accra). There are several health facilities in the capital, both private and public. It has the largest hospital in the country (Korle-Bu

Teaching Hospital); a regional hospital (Ridge Hospital); four polyclinics; and other hospitals.

The Ministry of Health (MOH) is the government agency in Ghana that is responsible for the health needs of Ghanaians. The Ghana Health Service (GHS) implements policies outlined by the MOH and the GHS is the service delivery body of the MOH. The GHS oversees all public hospitals except the three semi-autonomous teaching hospitals in Ghana. The health system has four levels of service delivery – tertiary, regional, district, and sub-district. However, surgical procedures are mainly performed at the tertiary, regional, and district level hospitals. Most district level hospitals do not have a ward for only surgical patients as they are nursed with other patients with different conditions. The vision of the MOH is to improve the health status and reduce inequalities in health outcomes of all people living in the country through the development and promotion of proactive policies aimed at providing quality and affordable health services through its agencies (Ministry of Health, 2007). Despite efforts to improve health service delivery, the health sector in Ghana is besieged with many problems that invariably affect patients. The sector is faced with inadequate and inequitable distribution of health personnel. The MOH reports that most of the nation's skilled professionals are found in the tertiary hospitals although the number of these professionals is considered inadequate due to increased number of patients (Ministry of Health, 2007).

Ethnographers study particular contexts of interest to their research question. Over the years, the focus on studying whole communities has dwindled and ethnographers have applied the tenets of the methodology to study specific cultural context such as the labour ward (Machin & Scamell, 1997; Roberts, 2009). It is observed that the researcher focuses on the phenomenon of interest within an identified context; hence, the need to describe the

context of this study (LeCompte & Schensul, 1999b; Silverman, 2000). The description of the context of this study would also help in the appreciation and discussion of findings in this study. The context of the study provides the basis for decisions in the development of the clinical guideline for POP management.

The study was carried out at the Korle-Bu Teaching Hospital (KBTH) and Ridge Hospital in Accra, Ghana. These hospitals fall within tertiary facility and regional level health facilities respectively and they have facilities for surgery. Also, the facilities at the Ridge hospital are similar to other regional hospitals across the country. An average of 12 surgeries is performed at the Ridge hospital daily and an average of 18 general surgeries is done at the KBTH daily. Participants were drawn from these hospitals to ensure that data generated captures wider scope experiences of patients and nurses. Also, the use of two different levels of hospitals ensured that patients with different backgrounds are recruited to afford complexity in the data. At the KBTH, there are four 38-bedded wards and one 32-bedded ward and there are about 30 to 36 patients on admission daily on each of the ward with a high turn-over of patients. There are demonstration rooms, doctors and nurse's offices, treatment rooms, kitchens, and offices/stores for the PNO in-charge. There were day rooms for patients' relations with televisions (TVs), nurses' stations also with TVs, and changing rooms. There were sluice rooms, toilets and baths for patients and staff also had their toilet facilities. There were two beds with oxygen and suctioning facilities at the female wing and four beds at the male wing (two at each section) with oxygen facilities. There were 12 to 15 nurses on each floor of the surgical ward at the KBTH assigned to various shifts. The observation ward at the KBTH had similar facilities as other surgical wards involved in the study.

The Ridge hospital has a 32-bedded surgical ward (8 cubicles with 4 beds each) and a corridor with 14 beds; and there were about 35 to 40 patients on admission per day and the

patient turn-over was also high. The surgical ward has 5 cubicles for male patients and 3 cubicles for female patients and the corridor beds are referred to as *'floor cases'*; the beds on the corridor are used when the cubicles are full. The ward has toilet and bath facilities, sluice end, and nurses' station. There are televisions (TVs) for the patients and one at the nurses' station. The ward has oxygen cylinder with the necessary accessories. Also, the ward had 1 Principal Nursing Officer (PNO), 3 Nursing Officers (NO), 1 Senior Staff Nurse (SSN), 3 Staff Nurses (SN), 4 Superintendent Enrolled Nurses (EN), and 3 Health Care Assistants (HCA) at the time of the study. Similarly, at the time of the study, there were 3 nurses on night shift per day, morning shift had an average of 5 nurses, and afternoon shift had 3 nurses on duty per day.

There were 2 notice boards that displayed rota for nurses and doctors, hand-washing procedures, and other temporary information such as a reminder of meetings and among others. The doctors were made up of about 15 with about 10 consultants. The ward admits surgical cases of all specialties such as neurology, genito-urinary, and general surgery. Major ward rounds were done on Wednesday. A detailed description of the observation ward at the KBTH is provided to enhance the understanding of the context of the study and the appropriateness of the clinical guideline developed.

The total nursing personnel at the surgical ward at the KBTH for day shift comprised 2 PNOs, 1 SNO, 2 NOs, 3 SNs, 2 ENs, and 3 HCAs. The night staffs were made up of 2 SSNs, 1EN, and 1 HCA. These nursing personnel were scheduled to give a 24-hour cover for the ward. A rota was prepared for the nurses so that some can have their day-off while others can proceed on such leaves as maternity leave, sick leave, and other special holidays. A monthly rota was prepared at the time of study. The nurses were assisted by student nurses,

student HCAs and orientation nurses from time to time. The number varies according to their schedule at a particular time. Some of the students run shifts and work on weekends.

The doctors at the surgical ward observed were also made up of 2 house officers, 3 residents, and 4 consultants (1 retired). The residents and house officers may rotate from unit to unit and therefore are not permanent doctors for the unit. There were medical students on the ward from time to time. Their numbers varied according to their placement schedule. House officers, student nurses and HCAs and orientation nurses added to the number of staff on duty from time to time. The student nurses and HCAs were accorded supernumerary status in all hospitals in Ghana.

The observation ward at the KBTH scheduled major operations on Wednesdays and minor operations were done on Thursdays; Mondays and Tuesdays are pre-operative preparation days. The surgical team may have a weekend duty from Friday to Monday and this was rotated among the various teams. When a team was on duty, emergency surgeries were performed and such patients were admitted to the ward. Major ward rounds were done every Friday.

There were two notice boards at the nurses' station. The notice boards had information on guidelines for pre-operative care, emergency numbers, health personnel contact numbers, ward state, operation list, information on national health insurance scheme (NHIS), and research information and among others. .

3.7 Study Population

The management of surgical patients involves complex and interlaced activities and processes that one expert cannot provide. It is therefore necessary for the multidisciplinary team to be flexible and adapt their behaviour and roles depending on the situation at hand so

that their goal would be achieved (Prichard & Stanton, 1999). Thus, the appropriate participants for a study relates to the objectives of the study. To this end, it was realized that surgical patients and nurses formed the key members of the surgical environment and they are the two groups of natives in the surgical environment that are mostly present at any particular time. However, patients' relations, key informants, and other health professionals who contributed in the management of POP were also considered important participants in this study to fully understand the medico-socio-cultural factors that influenced POP management.

Thus, the **specific objectives** of the study that informed the recruitment of participants were as follows:

1. To explore and describe patients' responses towards post-operative pain and its' management within the medico-socio-cultural context.
2. To explore and describe nurses' perceptions and responses towards their patient's post-operative pain within the medico-socio-cultural context.
3. To explore and describe the perceptions of the multidisciplinary team, key-informants, and patients' relatives on post-operative pain management.
4. To develop a clinical guideline that would be appropriate for post-operative pain management in the context of Ghana.

Researchers who employ ethnography recruit informants who they initially did not anticipate as participants to follow-up on emerging themes (Atkinson & Hammersley, 1994; O'reilly, 2005; Spradley, 1979a). Thus, the study recruited other key informants such as herbalist, retired nurses, surgeon, surgery tutors, in-service coordinators, and student nurses

to fully understand emerging themes on POP management within the medical, social, and cultural context of Ghana (themes described in the next chapter).

The study sought to develop a clinical guideline that would be appropriate for post-operative pain management in the context of Ghana. Therefore, following the ethnographic exploration and a systematic literature review of the literature, a draft clinical guideline for post-operative pain management was developed with input from the multi-disciplinary health team involved in the management of post-operative pain, representatives of surgical patients and relatives, and experts in the area of post-operative pain management. These individuals were involved to avoid bias and ensure that the guideline developed was appropriate for the target population (Keeley, 2003; NICE, 2011; SIGN, 2004; AGREE Collaboration, 2004).

The **inclusion criteria** for the study were: professional nurses who worked at the surgical wards involved in the study for at least 3 months; adult post-operative patients who underwent emergency or planned surgeries; surgeons, anaesthetists, and pharmacists involved in post-operative pain management at the KBTH and Ridge; key informants related to pain management; patients' relatives involved in direct care of post-operative patients; stakeholders of pain management in Ghana; and pain experts or consultants.

3.8 Sampling Techniques

Ethnographic studies employ purposive, convenience, snowball, and theoretical sampling techniques as necessary. In purposive sampling, the researcher ensures that the participant he/she believes will have the desired experience investigated is recruited. Convenience sampling involves sampling participants available during the time of recruitment and this type of sampling is sometimes referred to as accidental sampling. In snowball sampling, the researcher is led to other participants who meet the study criteria by those previously sampled especially when the study involves for example groups with secret

membership. Theoretical sampling is employed by ethnographers to specifically sample appropriate informants during the process of data collection to fully develop an emerged theme or theory (Atkinson & Hammersley, 1998; O'reilly, 2005; Silverman, 2001).

The sampling techniques involved in this study were purposive and convenience sampling. The purposive sampling ensured that participants who met the inclusion criteria were recruited. Thus, surgical nurses were recruited to include senior nurses and junior nurses who had three or more months' working experience at the surgical ward. Also, purposive sampling ensured that adult surgical patients with different surgical procedures, different backgrounds, those with and without previous surgical experiences, and those who had emergency or planned surgeries were recruited. Patients' relatives and the multidisciplinary team (doctors, anaesthetists, pharmacists) and other key informants were purposively recruited as themes emerged during data collection. Sampling strategy in this study involved convenience sampling because only those patients, relatives, and health professionals available at the time of data collection and met the inclusion criteria were recruited (Mason, 2005; Morse & Field, 1996; Silverman, 2001). Tables 3, 4, 5 and 6 show the background of participants sampled for this study. Purposive sampling was also employed to recruit experts during the development of clinical guideline.

3.8.1 Sample size. The sample size in ethnographic studies is not large as in all qualitative studies; recruitment stops when saturation (no new or little information is emerging from data) occurs and categories and themes are fully developed. The aim of qualitative research is not to present what is representative of the wider population of interest but to have in-depth understanding of the phenomenon under study. Also, very large samples in qualitative studies do not guarantee depth of exploration. This study was committed to have a full understanding of the factors that influence POP response and management within

the medico-socio-cultural context of Ghana. It was realized that the medical, social, and cultural dimensions explored in this study demanded comprehensive and holistic contextualization; however, large sample sizes of participant categories were not targeted but the study aimed at saturation of themes. Thus, participants of this study included a total of 149 (Morgan, 1998; Ulin, Robinson, & Tolley, 2005). (Table 2 shows number of participants involved in this study).

Individual in-depth interviews conducted involved 13 patients, 11 nurses, 12 key informants, 12 patients' relatives, and 5 multidisciplinary team members including doctors, anaesthetists, and pharmacists. Forty-four patients' charts were reviewed at the observation ward.

Clinical observations included: 41 post-operative patients (23 females and 21 males), 8 nurses, and 7 doctors. The clinical observations were done over a period of four weeks. A total of 16 day-shift observations were done.

Clinical guideline development involved: 13 clinical nurses, 4 surgeons, 4 anaesthetists, 3 pharmacists, 6 patients, 4 patients' relatives, 1 international expert, 6 hospital leaders, 6 nurse educators, 1 lawyer, 2 physiotherapists, 1 WHO representative, and 1 GHS representative in the development of the clinical guideline

3.8.2 Recruitment. Recruitment of study participants involves actual processes undertaken to elicit commitment of individuals who meet the inclusion criteria as participants. It is noted that access to a field does not guarantee successful recruitment of participants as an individual participant may refuse to participate in a study even though the authorities or gate-keepers had granted approval for the study (Spradley, 1979a). Again, some social researchers give some form of incentive to aid the recruitment process in cases where it

is difficult to recruit adequate participants. This has been criticized to imply that such participants become part of the study because of the incentive and may provide wrong information to meet the inclusion criteria. These incentive driven participants may give socially desirable information that could tend to be bias towards the study results (Hammersley & Atkinson, 1995; O'reilly, 2005; Spradley, 1979b). In this study, no incentive was offered during recruitment of participants. Recruitment of study participants was done by employing the following strategies:

1. Approaching individual potential participants personally
2. Nurses explaining the study to patients and other colleagues
3. Volunteering (individuals who read information sheets provided on the wards).
4. Recommendation by key informants
5. Telephone conversation to book an appointment

The study did not consider recommendations for the recruitment of participants such as key informants as snowball sampling in this study because the phenomenon under study is not a 'secretive' issue and the study did not recruit from a 'closed' group as is a key feature of snowball sampling (Parahoo, 1997; Patton, 2002). The researcher made information about the study available on the wards for potential participants who could read and write to be informed about the study. However, only one patient relative was recruited through this method. Most of the participants in this study were recruited through personal interactions.

Patients for planned surgeries were recruited pre-operatively and those for emergency surgeries were also recruited post-operatively as their condition stabilized. Patients in pain at the initial point of contact were not recruited as they were seen to be distressed. The recruitment process in this study was not all smooth; the researcher made several fruitless visits to the study site and venues chosen by participants especially the multidisciplinary team

who kept postponing the interview for one reason or another. Only one patient cancelled an appointment because he was unavailable.

Clinical observation involved one ward at the tertiary hospital to promote early integration to the ward. This helped in early acceptance on the ward as a 'natural' or native member of the surgical ward. The significance was that nurses and other health team members were able to continue their daily clinical routines without being self-conscious and this minimized bias in the data generated (Atkinson & Hammersley, 1998; Roper & Shapira, 2000). Surgical ward three of the KBTH was purposively sampled for clinical observation because it has similar facilities with the other wards and the researcher was unfamiliar with most of the nurses working on the ward.

The unfamiliarity of the researcher with the nurses informed the choice of purposive sampling because it enhanced the 'researcher role or identity'. Where participants are already familiar with the researcher, they may divulge some information to the researcher in his/her role as a 'friend' and this would pose ethical and moral challenges for using such information as data (LeCompte & Schensul, 1999b; Silverman, 2000; Spradley, 1979b).

During the phase of clinical guideline development, purposive sampling recruited the multi-disciplinary health team, patients and relatives, and experts to ensure that all relevant categories of health professionals and relevant stakeholders were involved in the development of the clinical guideline. The involvement of all relevant stakeholders is congruent with recommended standards of clinical skill development (Hewitt-Taylor, 2004; Keeley, 2003; NICE, 2011; SIGN, 2004; AGREE Collaboration, 2004). Participants for clinical guideline development are shown in Table 2.

Table 2: Number of Participants Recruited

Category	Number	Total
Interviews		
Patients	13	53
Nurses	11	
Relatives	12	
Key informants	12	
Multidisciplinary team	5	
Clinical observation		
Patients	42	4 patients, 2 surgeons, and 3 nurses interviewed (already counted) = 48
Nurses	8	
Surgeons	7	
	57	
Expert Reviewers (first draft)		
Clinical nurses	10	27
Surgeons	2	
Anaesthetists	2	
Hospital leaders	2	
Patients	4	
Patients' relatives	4	
Nurse educators	2	
International Expert	1	
Consensus Forum		
Clinical nurses	5	2 nurses, 1 surgeon, and 1 anaesthetist involved in expert review; 1 pharmacist, 1 surgeon, 2 nurses interviewed (already counted) = 21
Surgeons	3	
Anaesthetists	3	
Pharmacists	3	
Patients	2	
Physiotherapists	2	
Nurse educators	4	
Hospital leaders	4	
WHO representative	1	
GHS representative	1	
Lawyer	1	
	29	
Grand Total		149

3.9 Methods of Data Collection

This study employed multiple data collection methods to achieve its' objectives. Ethnographic principles allow the researcher to use methods of data collection such as individual interviews, focus group discussion, observation, documentary and artefact review, and use of questionnaires (As de Vos et al., 2011; Patton, 2002; Roper & Shapira, 2000; Silverman, 2004; Spradley, 1979a, 1979b). The data collection methods used in a particular study depends on the study objectives and the phenomenon understudy. Hence, the methods of data collection in this study during the ethnographic exploration were: clinical observation, individual interviews, and documentary review. Also, expert/participant review, consensus method, and systematic literature review were employed during the process of clinical guideline development.

3.9.1 Clinical observation. Participant observation is considered a major landmark of ethnographic studies. Perhaps this assertion was partly due to the roots of ethnography where anthropologists used participant observation in their ethnographic studies (Brink & Edgecombe, 2003; Spradley, 1979a). Studies have also realized that there is incongruence between what health professionals claim they do in an interview and their observed clinical actions (Clabo, 2008; Dihle, Bjolseth, & Helseth, 2006). Therefore, the aim of this study '*to develop an appropriate clinical guideline for POP management*' has a major clinical orientation; and clinical observation as a method of data collection in this study is considered significant. The 'realities' in the clinical environment observed informed the clinical guideline developed for POP management within the medico-socio-cultural context. However, this study did not consider clinical observation higher than any of the data collection methods. This was because pain is a personal phenomenon and individual interviews are equally important to fully understand the phenomenon under study (As de Vos

et al., 2011; Mulhall, 2003; Spradley, 1979b). It is noted that the application of multiple methods together gave the study the depth and comprehensiveness desired and this improved the overall research.

A participant observation with partial immersion approach was employed which ensured that the researcher had adequate concentration on what is being done on the ward. The partial immersion approach to clinical observations was adopted because of reasons identified which are also supported by previous researchers (Allan, 2006; Atkinson, 1992; Barton, 2008; Spradley, 1979a, 1979b).

In this study, the researcher's full participation in the activities on the ward would interfere with observations since the researcher could be drifted into direct care patient activities instead of observing activities on the ward. Also, the researcher did not have employment with the hospitals understudy and seeking to work in the hospitals as a clinical nurse would have taken some time to negotiate. Even though the researcher is a professional nurse, working on the ward would have been illegal without an employment status or a valid contract. Again, partial immersion also gave the researcher the opportunity to observe the ward – patients and health professionals holistically. Working on the ward could have led to assignments that could have resulted in missing vital observations.

Further, as a novice observer, the researcher had no prior experience in applying observation in a research; therefore, partial immersion ensured the researcher had the space to learn and apply the rudiments of observation as a data collection method by being 'an observer' as opposed to being 'a nurse' on the ward in this study. Also, a full participant observer role was not a key requirement for the standard systematic steps in the development of a clinical guideline. Therefore, the partial immersion approach in this study was considered suitable to achieve the objectives of the study.

Thus, the participant observation with a partial immersion approach in this study focused on the multidisciplinary health team, patients and their relatives on the ward as they went about their daily routines or ‘natural activities’. The central focus of the observations was response and management of post-operative pain. Thus, the activities, conversations about post-operative pain, pain reactions (facial expressions and body language), and relationships of health care professionals and patients as they go about their activities on the ward were observed. Each observation section lasted for 2 to 3 hours which ensured that detailed accounts were written as field notes. The researcher had informal interactions with participants during and after observations as necessary to clarify themes as the study progressed (Atkinson & Hammersley, 1994; Hammersley & Atkinson, 2007). Observations were done at appropriate times depending on the ward routine that ensured all emerging themes were observed. For example, nurses were observed during medication rounds and handover to obtain information on pain management (Atkinson, 1992; Morse & Field, 1996; Pope, 2005; Silverman, 2001). (Appendix 4 gives a summary of clinical observations in this study). Apart from the observations on the ward, the facilities, personnel, routines, and information displayed on the ward were also observed as indicated earlier in this chapter. These provided data to describe the broader context of the findings that emerged.

The surgical ward at the Ridge Hospital was not observed because the ward admitted specialty surgical conditions such as patients with neuro-surgical conditions. Thus, an observation of such patients could bias the data generated from an observation ward for general surgical patients. Field notes were developed from the observations and the process is described.

Items needed for effective writing of field notes such as small pocket note books, pencils, pens, and erasers were prepared. The researcher also reviewed the observation guide

to ensure that all critical areas relevant to the study are observed and recorded. Also, abbreviations or words used in the form of 'short-hand' were reviewed so that they will be consistently applied in recordings on the field to limit errors.

Writing field notes in this study started from the period of negotiating access to the study sites. Sketchy notes were written whilst on the field and typed in the form of elaborated accounts shortly after return from the field. Sketchy notes were written in the 'rest rooms'; office of the nurse-in-charge; the corridor; and hospital canteen. The researcher sometimes recorded an account of what was observed on a digital voice recorder in the 'rest room' and nurses-in-charge's office. These measures afforded a flexibility that ensured that the required in-depth data was captured. In another pocket note book, the researcher wrote sketchy subjective thoughts, hunches, and personal ideas that occurred during the observation. Gaps or incomplete themes were written and followed as the study progressed. As the study progressed, the same note book was used for reflections on interviews and documents reviewed. This was to ensure that the etic (personal) perspectives are clearly separated from emic (participants') perspectives and this aided analysis of the data.

Field notes were dated and labelled appropriately. Also, omissions and errors were checked for to ensure accuracy of the notes. The researcher went through the sketchy notes and compared it with the typed notes and voice recordings. Thus, the study applied the ethnographic conventions of data collection, reflection, and concurrent analysis. (Appendix 5 is a sample field notes/observation notes).

3.9.2 Individual interview. Individual interviews were employed in this study because it gave participants the opportunity to express their perceptions, beliefs, and cultural values about POP response and management. The patients and their relatives had the chance to describe their POP experience and the health professionals were able to share their views

on POP management. Ethnographic interviews may be formal (planned and use of interview guide) or informal (unplanned interaction with participant); and these formal or informal interview may occur at scheduled times or be unscheduled according to the situation on the field. Also, previous authors have dealt extensively on the types of questions asked during ethnographic interviews; such as descriptive, structural, and contrast questions (As de Vos et al., 2011; Spradley, 1979a). The researcher asked questions appropriately to have an in-depth understanding of the phenomenon under study or follow-up on themes that emerged.

Before interview sections, the researcher had informal interactions with participants to enable them relax before each formal planned interview. Digital voice recorder was tested and battery strength checked. Participants' background information was obtained before the interview as shown in tables 3 to 6. The background information provided further context and illumination to the findings. It also ensured that participants recruited met the inclusion criteria for the study; and that the span of participants required for meeting the study objectives were recruited and interviewed.

Hence, semi-structured interviews were done and during the interview, follow-up questions were asked on participant's comments. Open-ended questions were asked to stimulate elaborate accounts from the participants; for example, to elicit cultural beliefs about pain from participants, '*What are your beliefs about pain?*' was asked. (Appendix 6 states data collection instrument). Strategic silence was used to allow participants to reflect on their thoughts or questions asked during the interview. Conscious effort was made by the researcher to avoid leading questions that would portray any bias in the results. The interviews lasted for between 45 minutes to 1 hour.

The researcher listened carefully and actively to participants' comments and restated or summarized participants' contributions during and at the end of the interviews for

confirmation that their views have been accurately captured. Non-verbal communications that might be a sign of discomfort or distress during interviews were observed and none of the participants showed signs of distress during interviews. During the process of concurrent analysis, specific follow-up questions were asked during individual interviews to help in the full development of themes. All the interviews involving health professionals, key informants, 2 patients' relatives and 5 patients were conducted in English; 8 patients' relatives, and 7 patient interviews were conducted in Twi, and 1 patient interview and 2 patients' relatives interviews were conducted in Ewe. All the participants consented for the interviews to be audio-taped.

The patients involved in the study had different surgical procedures such as appendicectomy, laparotomy, haemorrhoidectomy, herniarrhaphy, mastectomy, and removal of renal cyst. The ethnic background of patients included Akan, Ga, Fante, Ewe, Krobo, and Dagomba. The interviews were carried out when the patients were recovered and ambulant on the ward and when they were discharged. The background information of interview participants (patients and relatives) is shown in Table 3.

Table 3: Background Information of Patients Interviewed

ID code	Sex	Age	Ethnicity	Occupation	Previous Surgery	Type of Surgery	Interview Language
FP1	F	46-50	Akan	Trader	Myomectomy	Laparotomy	Akan
FP2	F	41-45	Krobo	Baker	None	Mastectomy	Akan
FP3	F	41-45	Akan	Self-employed	None	Laparotomy	English
FP4	F	36-40	Akan	Seamstress	Caesarian section	Laparotomy	Akan
FP5	F	26-30	Ga	Community Health Nurse	None	Appendicectomy	English
FP6	F	36-40	Fante	Hairdresser	Caesarian section	Haemorrhoidectomy	Akan
FP7	F	18-25	Dagomba	Teacher	None	Removal of Renal cortical cyst	English
MP1	M	26-30	Akan	Student	None	Appendicectomy	English
MP2	M	25-28	Fante	Student	None	Haemorrhoidectomy	English
MP3	M	41-45	Ewe	Mason	None	Laparotomy	Ewe
MP4	M	36-40	Ga	Driver	None	Laparotomy	Akan
MP5	M	31-35	Akan	Trader	Herniarrhaphy	Herniarrhaphy	Akan
MP6	M	18-25	Fante	Auto Mechanic	None	Herniarrhaphy	Akan

The patients' relatives were made up of 10 females and 2 males and they were aged between 18 and 45 years. The ethnic background of participants included Ga, Akan, and Ewe. All the participants were Ghanaians and Christians. The study included 4 wives, 4 daughters, 2 mothers, 1 husband, and 1 fiancée (male). At the time of recruitment, no 'son' was involved in the care of patients on the surgical ward. The participants had relations (patients) who had various surgeries such as mastectomy, laparotomy, herniorrhaphy, appendectomy, and amputation. The patients' relatives' occupational background included traders (4), seamstress (1), hairdresser (1), caterer (1), carpenter (1), farmer (1), nurse (1), one (1) was unemployed and one (1) was a student. This is shown in Table 5.



Table 4: Background Information of Patients' Relatives Interviewed

ID code	Sex	Age	Ethnicity	Occupation	Relationship to Patient	Interview Language
R1	F	25-28	Ga	Trader	Daughter (patient is the mother)	Akan
R2	F	31-35	Ga	Trader	Daughter (patient is the mother)	Akan
R3	F	31-35	Akan	Trader	Daughter (patient is the mother)	Akan
R4	F	31-35	Akan	Seamstress	Wife	Akan
R5	F	41-45	Akan	Hairdresser	Wife	Akan
R6	F	26-30	Ga	Nurse	Daughter (patient is the father)	English
R7	F	46-50	Ewe	Unemployed	Mother (patient is the son)	Ewe
R8	M	18-25	Ga	Student	Fiancé	English
R9	F	36-40	Akan	Trader	Wife	Akan
R10	F	26-30	Ga	Caterer	Wife	Akan
R11	F	Above 51	Akan	Farmer	Mother (patient is the daughter)	Akan
R12	M	41-45	Ewe	Carpenter	Husband	Ewe

Individual interviews involving health care professionals included day and night nurses, doctors, clinical pharmacist, anaesthetist and key informants to afford full understanding of emerging themes. Health professionals were interviewed after the fourth week of clinical observations. The initial observation provided information on POP management, the attitudes of health professionals, and the clinical realities of the study context. The delayed interviews with the health professionals also provided a means of follow-up of themes that emerged during clinical observations. Interviews involving patients and their relatives were done concurrently during period of clinical observation because of the individual nature of pain experience and high patient turn-over or discharge.

Table 5: Background of Health Professionals Interviewed

ID Code	AGE	Sex	ETHNICITY	PROFESSION	WORK EXPERIENCE	HISTORY OF SURGERY
SNI	Above 51	F	Ewe	Nurse	35 years	None
SN2	Above 51	F	Ga	Nurse	32 years	Hysterectomy
SN3	Above 51	F	Ga	Nurse	31 years	Myomectomy and C/S
DN1	26-30	F	Fante	Nurse	7 years	None
DN2	26 – 30	F	Ewe	Nurse	5 years	None
DN3	26-30	F	Akan	Nurse	4 years	None
DN4	31 – 35	F	Akan	Nurse	9 years	None
DN5	31-35	F	Ga	Nurse	8 years	None
NN1	18-25	F	Ga	Nurse	2 years	None
NN2	26 – 30	F	Fante	Nurse	8 years	None
NN3	18-25	F	Akan	Nurse	2 years	None
CS	36 – 40	F	Fante	Consultant Surgeon	11 years	Mini-laparotomy
DS	31 – 35	M	Akan	Resident Surgeon	6 years	None
CP	41 – 45	F	Akan	Consultant Clinical Pharmacist	21 years	None
DA	41 – 45	M	Fante	Consultant Anaesthetist	6 years	None
NA	31-35	M	Akan	Nurse Anaesthetists	6 years	None

Table 6: Background of Key informants

ID code	Sex	Profession/Specialty	Area of work
NL	F	Nurse/Administration	KBTH
NT	F	Nurse/In-service Trainer	KBTH
TP	F	Nurse/Pharmacology Tutor	Nursing and Midwifery Training School, Korle-Bu
TS	M	Nurse/Surgery Tutor	Nursing and Midwifery Training School, Korle-Bu
NE	F	Nurse/Nursing Tutor	University of Ghana
CNLR	F	Nurse/retired clinical nurse leader	Retired surgical nurse
RNE	F	Nurse/retired nurse educator	Retired nurse educator
RS	M	Surgeon/retired	Retired surgeon (Prof)
TM1 TM2 TM3	M	Traditional medicine specialists	Centre for scientific research into plant medicine, Mampong
DSN	F	Student nurse/Diploma student	Student

The place and time of each interview was at the convenience of the participant. The interviews carried out on the ward were done in a private room on the ward (demonstration room); and the door was always closed to avoid interference and provide privacy. All participants interviewed on the ward did not express any concern about the venue of the interview and they were comfortable to share their experiences freely. It was noted that the hospital environment as an interview venue could restrict participants from expressing their sincere perceptions; however, some interviews were conducted at the hospital because it was convenient for participants and on-site interviews are congruent with ethnographic principles (Hammersley & Atkinson, 2007; Spradley, 1979a). Interviews were conducted within November, 2011 and February, 2012. Some of the interviews were conducted in the participants' offices and homes; others were also conducted at a neutral place convenient for the participant. (Table 6 summarizes venue of interviews).

Table 7: Venue for interviews

Category	Place of Interviews
Key informants	Personal offices (9) and homes (3)
Multidisciplinary team	Offices in the hospital (4) office on the ward (1)
Nurses	Office on the ward (8), home (1), neutral location (2)
Patients	Office on the ward/allocated demonstration room (10) and home (3)
Patients' relatives	Office on the ward/allocated demonstration room (12)

3.9.3 Documentary review. Ethnographic researchers review documents and artefacts to gain a full contextual understanding of the phenomenon under study (Atkinson & Coffey, 2004; LeCompte & Schensul, 1999b; O'reilly, 2005; Patton, 2002). As such, artefacts in the surgical environment such as perfusers would indicate the use of such gadgets in the management of POP. However, there was no specific gadget/artefact for POP management on the ward observed. In this study, data from patients' charts/notes and documents/posters on the ward, documents from tutors, and in-service education unit provided further information on POP management for example analgesic type and prescription regime and how pain management issues are documented in the nurses' notes and on the medication chart. The biographic data of patients whose charts were reviewed was noted to enhance a better interpretation of the data gathered. The review of charts and notes also provided further information to describe and triangulate findings from observations and interviews; for example, analgesics administered and documented (evident from chart review) were used to triangulate nurses' verbal report of regularity of analgesic administration.

The clinical documents of 44 patients observed were reviewed to enable a better understanding of post-operative pain management practices. The nurses' notes,

medication/treatment chart, doctors' post-operative notes, anaesthetists' record sheet, and doctors' review notes were reviewed when the patient was discharged. The patients' documents were assessed for both day and night documentations on pain management (Appendix 7 shows Sample Summary Table of Review of Documents). The review included type of analgesic and dosage administered, the amount of pethidine supplied from the hospital pharmacy, and any particular nurses' or doctors' notes on pain management. Access to patients' documents was negotiated through the nurse-in-charge and the consultant in-charge of the ward. At the study setting, the patients on admission were not allowed access to their files or clinical documents. However, patients were informed that their clinical notes will be reviewed as part of the study and sought their consent to review clinical notes (specified in information sheet). The study also employed a systematic literature review to acquire data for the development of a clinical guideline.

3.9.4 Systematic literature review. The need to adopt an effective evidence-based approach for the management of post-operative pain cannot be over-emphasized. The review was to ensure that the clinical guideline developed would be effective and appropriate for the context of the study. The focus of the systematic review was derived from the contextual findings of the study with regards to the resource limitation of the local clinical environment and specific analgesics used. Previous background literature review in this thesis (see page 30) indicated that patient controlled analgesia (PCA) is the recommended method or gold standard of contemporary post-operative pain management. However, it was realized that PCA was not available within the context of this study. Also, previous studies in other countries were conducted with analgesics that were not available within the context of this study (Seers, Crichton, Carroll, Richards, & Saunders, 2004). Thus, the systematic review is aimed at establishing the appropriate evidence-based contemporary measures of post-

operative pain management within similar resource limited clinical context where PCA was unavailable.

Following a review of the relevant literature on the process of systematic reviews and an insight into the contextual factors of this study, the research question that guided the systematic review in this study was ‘what measures ensure effective post-operative pain management among adult surgical patients in a developing country/resource limited environment’. Hence, the inclusion criteria for the review were delineated as follows:

- a) Population: Adult post-operative patients who have undergone general surgery such as mastectomy, herniarrhaphy, appendicectomy, laparotomy, haemorrhoidectomy, incision and drainage, and amputation (these were the common surgeries within the context of the study).
- b) Intervention/post-operative treatment measures: Pharmacologic and non-pharmacologic measures. The specific analgesics included were Pethidine (Meperidine or Demerol), dactofenac, paracetamol, and tramadol (these were the common drugs used within the context of this study).
- c) Study design or method: Both quantitative and qualitative studies done in a developing country or resource limited environment. Intervention studies in post-operative pain management were searched.
- d) Outcome: Patients’ self-report of decreased pain intensity or improved pain control. Thus, the studies should report on the level of post-operative pain after a pharmacologic or non-pharmacologic intervention on the surgical ward.

The exclusion criteria were as follows:

- a) Studies involving children, and the elderly (above 70years)

- b) Studies that employed special gadgets such as PCA and epidural in the management of post-operative pain.
- c) Surgeries involving modern technology such as laparoscopic surgeries or video-assisted surgeries.
- d) Patients nursed at intensive care units or post-anaesthesia care units (PACU).
- e) Studies that involved analgesics that was not available within the context of the study.
- f) Studies that were not published in English

An experienced librarian assisted with the development of the search strategy at this phase of the study. It is relevant to note that the researcher attended a research seminar at the University of the Western Cape organized by the Post-graduate Enrolment Through-put Programme (PET) on systematic reviews to enhance skills in conducting a systematic review in this study since it was the researcher's first experience.

An extensive search for evidence was embarked upon which involved manual search both published and unpublished articles (refereed and non-refereed), reports, conference proceedings, grey literature, and books. Some of the manual journals searched at local libraries in Ghana included West African Journal of Nursing (WAJN), The Health Courier, Nursing Standard, Nursing Times, Africa Journal of Nursing and Midwifery, Ghana Health Digest, and Nurse Researcher; and books in the area of surgery and pain management.

An electronic search included the following data bases: Cumulative Index to Nursing and Allied Health Literature (CINAHL), Ebscohost web, Academic search complete/premier, Africa wide info, Health source, Nursing reference center, PschArticles, SOCINDEX, Biomed Central, Wiley online library, Swetswise, The African Journals Archive, Sage journals, Alt Health Watch, Clinical Evidence, Pubmed, Medline, Cochrane Library, Embase, Proquest Psy Journal, Psyc INFO, Science Direct, Ingentaconnect, and Cambridge journals,

Chicago Journals accessed through JSTOR. The search accessed these electronic databases available to the University of Ghana and University of the Western Cape. Electronic search also involved databases at the University of Alberta through collaboration with a colleague doctoral student.

The search terms used included post-operative pain, acute surgical pain, post-operative pain management, acute post-operative pain, pain management, pharmacologic intervention, non-pharmacologic intervention, clinical intervention, controlled trial, 'around the clock' analgesic, 'as necessary analgesic', intramuscular analgesic, suppository analgesic, analgesic dosing, nursing intervention, resource limited environment, developing country, Africa, Ghana, pethidine, dactofenac, paracetamol, and tramadol, pre-emptive analgesia, combination therapy, clinical management, adult, pain evaluation, effective pain management, analgesia. Various combinations of these search terms were used. Boolean terms 'AND' or 'OR' were applied during combination of terms (Appendix 8 gives sample of search strategies). The search did not place any restriction on years initially, but as the review progressed, focus was placed on studies from the year 2005 to 2012 due to the emphasis on 'contemporary evidence-based post-operative pain management strategies'. Specific limits of searches were adult, human, and acute pain. For example a Medline search strategy and articles generated was as follows:

1. Post-operative pain (55,938);
2. Pain management (56,941);
3. Combined 1 and 2 (8,420);
4. Adult (3,875,624);
5. Combined 3 and 4 (3,662);
6. Limited #4 by 2005 to 2011, English, review article, human, adult- 19 to 44 years (26,731);
7. Developing countries 402,
8. Combined 6 and 7 (402);
9. Limited #8 by criteria in #6 (81);
- and 10. Resource limited clinical environment (0).

From the example, it is shown that the search generated several articles and after the title scan, abstracts of articles found related to the study were further read against the inclusion criteria and no study was found relevant. However, further discussions with research supervisor and local and international experts in the field of pain informed a revision in the inclusion criteria to accommodate studies that involved interventions that did not specifically evaluate the effectiveness of post-operative pain management based on the use of interventions that cannot be applied within the context of the study.

Thus, the scope of the review de-emphasized the ‘developing country’ and the research question was modified to ‘what measures ensure effective post-operative pain management among adult surgical patients in a resource limited environment’. Therefore, applying the same search strategy, nine (9) studies were identified. The selection of articles was done with focus on the study and not the author, particular journal or the author affiliation. Also, primary supervisor replicated the process of selecting the relevant article independently to avoid selection bias. A critical independent review of the abstracts resulted in exclusion of eight (8) of the selected studies.

The findings of the systematic review and the contextual factors emanating from the ethnographic exploration served as sign-posts in drafting the clinical guideline for post-operative pain management in this study. Subsequently, a draft clinical guideline was developed with input from relevant stakeholders and experts. The input of participants and experts ensured that the clinical guideline for post-operative pain incorporated the current evidence of pain management and that it is contextually appropriate for Ghana (Hewitt-Taylor, 2004; Keeley, 2003; NICE, 2011; Rolls & Elliott, 2008; Rycroft-Malone, 2001; SIGN, 2004; AGREE Collaboration, 2004).

3.9.5 Participant/expert review. It is observed that the process for incorporating input from experts and participants should be clearly described by guideline developers (Rycroft-Malone, 2001). Thus, in this study, the researcher sought a review of the first draft clinical guideline from external experts and experts identified in the two hospitals involved in the study, as well as some participants interviewed. The draft guideline (Draft 1) was disseminated through e-mail and through personal delivery. The heads of surgery (nursing and medical) at each hospital helped to identify ‘experts’ (both nurses and doctors) to review the draft guideline. The reviewers were given a document comprising a summary of the contextual findings and literature review to help them relate the appropriateness of the guidelines. After a week to two weeks, feedback was received by e-mail, telephone, and face-to-face interaction. The participant/expert reviewers involved 10 nurses, 2 doctors, 2 anaesthetists, and 2 hospital leaders. Also, the draft guideline was reviewed by 4 patients’ relatives, 4 patients, 2 nurse educators, and 1 international reviewer (pain consultant). Purposive sampling was used to recruit reviewers as shown in Table 8.

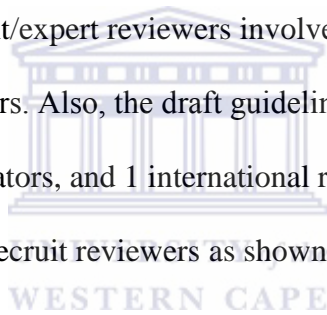


Table 8: Background of Participant/Expert Reviewers

ID Code	Category	Number	Status
ER1 to ER10	Nurses	10 (4 Ridge hospital; 6 KBTH)	4 PNO; 2 SNO; 2 NO; and 2 SN
ER11; ER12	Surgeons	2 (1Ridge hospital; 1 KBTH)	2 consultant surgeons
ER13; ER14	Anaesthetists	2 (1 Ridge hospital; 1 KBTH)	2 consultant anaesthetists
ER15; ER16	Hospital Leaders	2 (1 Ridge hospital; 1 KBTH)	1 medical director; 1 nursing director
ER17 to ER20	Patient Relatives	4 (2 Ridge hospital; 2 KBTH)	Literate patient relatives
ER21 to ER24	Patients	4 (2 Ridge hospital; 2 KBTH)	Literate patients
ER25; ER26	Nurse educators	2 (1School of Nursing, Legon; 1 KBTH)	1Nursing Lecturer; 1 in-service educator)
ER27	International reviewer	1 (USA)	Pain consultant



The reviewers at this stage reviewed the four key areas of the guideline (patient and family education, effective team work, input and monitoring by hospital/unit leadership, and evidence-based recommendations), the applicability to the local context and the inclusiveness or the scope of the guideline. The participants also reviewed the clarity of the guideline. A feedback form was developed to guide reviewers to provide feedback on the draft guideline. The form did not require names of reviewers to ensure anonymity; instead, codes were used (see Table 8). The feedback generated was synthesized and incorporated in a reviewed version (Draft 2).

The process of incorporating the input of participants and experts compensated for the deficit of the team requirement for the initial drafting of a clinical guideline. It was realized that clinical guideline development involves a team of stakeholders identified to make contributions in the development of the guideline. Therefore, in this study, the appropriate stakeholders were involved (NICE, 2011; Rolls & Elliott, 2008; SIGN, 2004; The AGREE Collaboration, 2004).

The review at this level synthesized changes in Draft 1 such as re-structuring of statements, modification of sentences, re-ordering of statements, correcting typographical and grammatical errors, modification of terminologies, modification of headings of key areas. The reviewed draft clinical guideline (Draft 2) was subjected to a consensus stakeholders' forum.

3.9.6 Consensus forum. The second process of clinical guideline development undertaken in the study involved a consensus forum to deliberate and take a decision on individual guideline statements. Formal consensus method involves a process of group decision making that ensures that decisions made are representative of the group's ideas or concerns. The process ensures that each member is given an opportunity to be heard before a

decision is taken (Rolls & Elliott, 2008). The emphasis on group decisions in a consensus process is seen to enhance effective implementation of the 'agreed' activities as there is a sense of ownership of whatever is decided. In this study, even though the implementation of the clinical guideline developed does not form part of the study, it is hoped that the guideline developed will be embraced and used in clinical practice in Ghana to enhance post-operative pain management. Hence, the essence of the consensus process in the development of the clinical guideline in this study. Therefore, drawing from the work of previous researchers (Armstrong, Tatford, Fry, & Armstrong, 1992; Barker & Burns, 2001; Berry, Davidson, Nicholson, Pasqualotto, & Rolls, 2011; Jackson, Hettinga, Mead, & Mercer, 2009; Nair, Aggarwal, & Khanna, 2011; Rolley et al., 2011; Rolls & Elliott, 2008; Rycroft-Malone, 2001), a formal consensus process suitable for the context of this study was adapted as follows:

1. The researcher liaised with the head of Institutional Care Division (ICD), Ghana Health Service (GHS) to identify all the relevant stakeholders for the consensus forum such as a representative each from the GHS, West African College of Nursing (WACN), Ghana Anaesthetists' Society, Ghana College of Physicians and Surgeons, Pharmacy Council, Commission for Human Rights and Administrative Justice (CHRAJ), and World Health Organization (WHO); tutors from Peri-operative Nursing School, Diploma General Nursing School, Graduate Nursing programme; nurses, surgeons, pharmacists, anaesthetists, hospital leaders, and patients. Twenty-nine (29) panel members participated in the forum as indicated earlier in this chapter. The panel was discussed with research supervisor to ensure that no stakeholder was missed. A few stakeholders could not attend the forum such as the Nurses' and

Midwives' Council for Ghana (NMC), the MOH, and patient relatives (see Appendix 9 for a list of panel members).

2. Letters of invitation signed by the Director General of the GHS were sent to identified stakeholders and it was emphasized that appropriate individuals who could make meaningful contributions on the guideline should be nominated. The collaboration with the GHS was necessary to ensure adequate participation. Also, the nomination of panel members by individual organizations helped to minimize selection bias of the researcher hand-picking participants. The attachments to the invitation letter were the reviewed guideline (Draft 2), a summary of the contextual findings, a summary literature review and a feedback form. These were dispatched to panel members at least two weeks before the day slated for the forum.
3. The date, time and venue of the forum were decided in consultation with the hospital authorities and the director, ICD and heads of surgical departments of the two hospitals. A conference room was identified at the Korle-Bu Teaching Hospital for the purpose to ensure proximity to most of the participants and enhance attendance. The consensus forum was scheduled for the 17th of May, 2012.
4. The researcher discussed the identified facilitator (a PhD holder in academia) for the forum with supervisor (one that understands the rigour of research and is not directly affiliated to any of the stakeholders involved in the study and hence more likely to give equal hearing to all participants). There was informal interaction with the facilitator and two research assistants prior to the day of the forum where the researcher explained and reviewed the formal consensus process adapted for the study, the role of the facilitator, and the research assistants. The draft programme for the consensus forum was discussed to ensure fair time allocations for all activities.

One research assistant doubled as a recorder and time-keeper and another research assistant was at the registration desk and did other errands for the forum.

5. After a brief opening ceremony, there was a presentation by the researcher on the overview of the study to date and a highlight of the contextual findings and findings from the systematic review that informed the clinical guideline developed. Also, a report of the first phase of review of the guideline (Draft 2) was given to further inform participants.
6. Participants were purposively assigned to four groups according to the four key areas of the guideline and the group discussed and reviewed statements as necessary. The group discussion afforded participants who could not read the guideline before the forum an opportunity to review the statements. The assignment to groups was done by the research team according to stakeholder background and the ability to contribute meaningfully to the key area of the guideline. Participants had access to guideline document at least two weeks before the meeting and were expected to reflect and comment on the guideline before the forum. The group discussion was done after the researchers' presentation to enhance better discussion of the findings that informed the guideline. The facilitator ensured groups were well coordinated and managed. The discussion lasted for about one hour.
7. After the group discussion, group leaders made presentations on statements. At the group level, some statements were maintained, and others were re-worded, collapsed, and repositioned. Other statements were separated thereby creating additional statements which related to the original statements and two new statements were added.
8. Further comments on statements were invited from the larger group and discussed. The wider group also made further modifications on the presentation or reviewed

statements. The wider group discussion ensured that areas of the guideline not addressed at the assigned group level were integrated. Also, individual comments on guideline statements were collated by the research team and discussed. The discussion at this stage was coordinated by the facilitator to ensure that all concerns about statement were addressed. The discussion of individual comments on submitted feedback forms also ensured that no comment or suggestion on a statement was missed as shy participants may with-hold their comments.

9. Subsequently, when there were no further comments on the reviewed guideline statements, the facilitator explained the decision process with an emphasis on independent individual decision making on statements. The panel decided that where 30% or more participants called for a statement to be deleted, it would be removed. The ultimate decision for inclusion or exclusion of a guideline statement was made by the panel to ensure that they have a sense of 'ownership' of the clinical guideline and it may enhance the level of commitment for its implementation.
10. Independent anonymous decisions were taken on individual guideline statements as follows: A = Agree (maintain statement); B = Modify statement; C = Abstain (will go by decision of others); D = Delete/remove statement. End-points of decisions such as 'Abstain' was included to allow flexibility in decisions so that non-technical participants such as patients and patients' relatives would not have a sense of intimidation or inadequacy. The decisions were decided based on its' applicability to the study and the heterogeneous nature of the stakeholders involved.
11. The end-point decisions adopted in this study were denoted A, B, C, and D to ensure ease of decision making. The decision process was employed such that where participants wrote A (Agree), and C (Abstain) no further decision was taken on the statements; statements that attracted a B (modify statement) and D (delete) was

further discussed and further decisions were taken. It was decided that after a third round of decisions, the ‘cut-off’ agreed by the panel was applied to either maintain or delete the statement (see Appendix 10 for sample decision forms).

12. After the first round of decisions, five statements were re-modified and a second decision was taken. The independent and anonymous individual decision making in this study ensured that participants made decisions without coercion or intimidation.

13. At the end of the process, the facilitator emphasized the consensus statements maintained by the group. The closing ceremony involved concluding remarks from the head of surgery from the two hospitals (the Korle-Bu Teaching Hospital and Ridge Hospital) (Appendix 11 indicates the programme for the forum).

At the end of the consensus forum, two statements were added and no statement was deleted. The final clinical guideline considered appropriate for post-operative pain management within the medico-socio-cultural context of the study is stated in the next chapter (see page 222). The processes involved in the development of the clinical guideline are shown pictorially in figure 2. Also, the background of individual panel members is shown in Table 9.

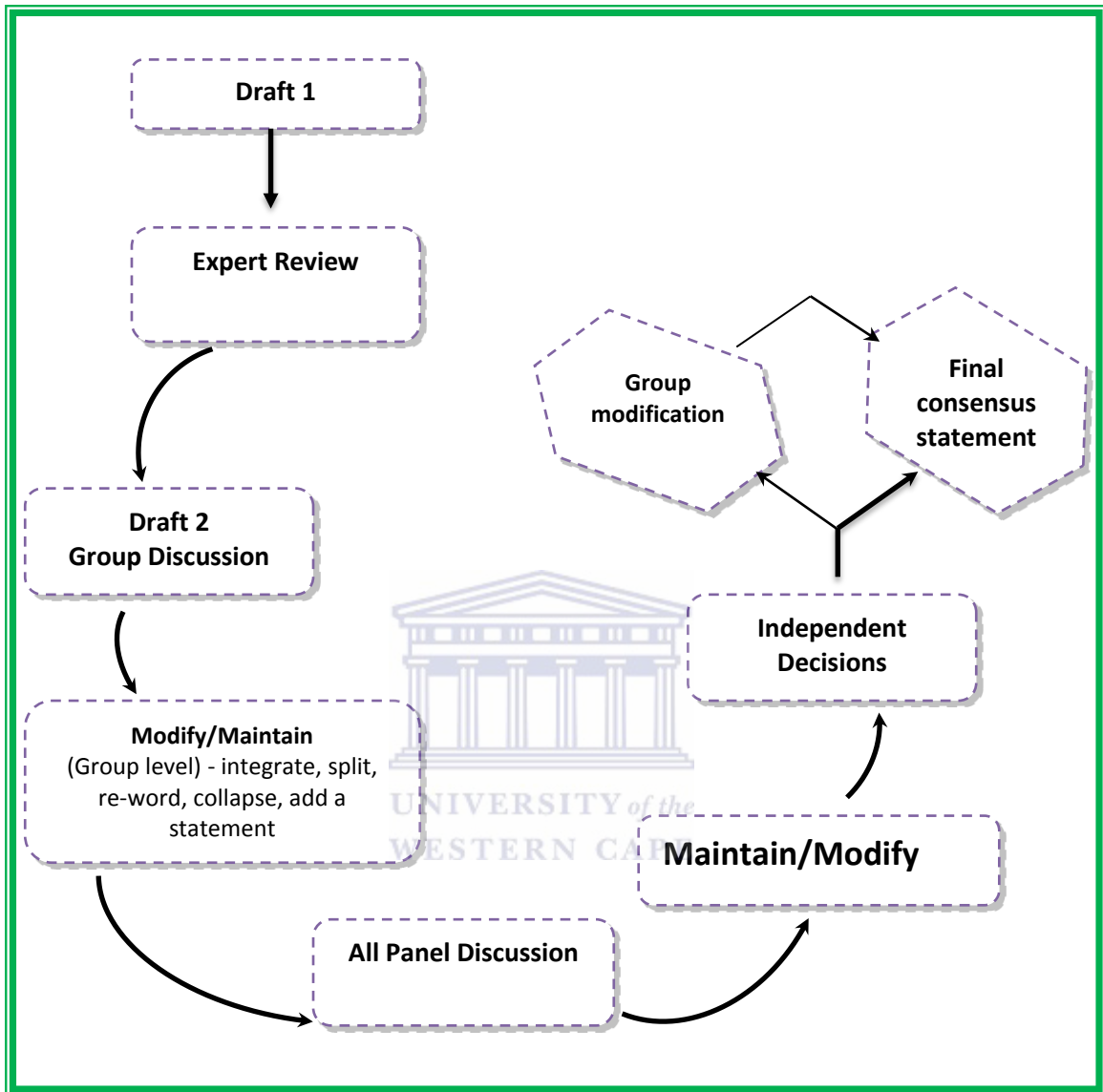


Figure 2: Consensus Forum Process for Development Clinical Guideline

Table 9: Background of Consensus Panel Members

ID Code	Institution	Profession/status
CP1	KBTH	Director of Nursing
CP2	Ridge Hospital	Staff Nurse
CP3	Ridge Hospital	PNO i/c, Surgical Unit
CP4	KBTH	PNO, surgical ward
CP5	KBTH	PNO, in-service
CP6	Ghana Health Service	Nurse Administrator; Institutional Care Division
CP7	KBTH	Consultant surgeon
CP8	Nursing and Midwifery Training School, Korle-Bu	Tutor; surgical nursing
CP9	West Africa College of Nursing, Ghana Chapter	Nurse; Tutor
CP10	KBTH	Physiotherapist
CP11	KBTH	Physiotherapist
CP12	KBTH	Specialist clinical pharmacist
CP13	School of Nursing (SON), Univ. of Ghana	Lecturer
CP14	CHRAJ	Lawyer
CP15	Ridge Hospital	Anaesthetist
CP16	KBTH	Patient
CP17	KBTH	PNO i/c in-service training unit
CP18	KBTH	DDNS i/c; dept. of surgery
CP19	SON	Lecturer
CP20	KBTH	Prof in Surgery; in-charge of Dept. of Surgery
CP21	Ghana College of Physicians and Surgeons	Consultant anaesthetist
CP22	KBTH	PNO surgical nurse
CP23	KBTH	Consultant Anaesthetist
CP24	KBTH	Pharmacist
CP25	WHO	Consultant Medical Doctor
CP26	Ridge Hospital	Consultant surgeon i/c of Dept of Surgery
CP27	KBTH	Patient
CP28	Peri-operative Nursing Sch	Tutor (Nurse)
CP29	GRNA	Nurse

3.10 Trustworthiness/Rigour

The validity and reliability of a qualitative study is ensured by applying the key principles of rigour/trustworthiness. Reliability denotes the '*stability of research results and their ability to be replicated*' and validity involves '*whether or not researchers have actually discovered what they claim to have found, and the extent to which what they have learned can be applied to other populations*' (Schensul, Schensul, & LeCompte, 1999) p 271). Thus, studies that fail to observe rigour result in several problems; as such, the results cannot be trusted and the understanding of the phenomenon becomes blurred (Cho & Trent, 2006). In quantitative studies, validity and reliability are ensured through widely accepted standards and they have distinct procedures and principles that are applied through statistical analysis. However, validity and reliability issues have been debated in the literature where discourses involve the use of different criteria to establish the validity and reliability of qualitative research. This assertion is based on the view that qualitative and quantitative studies operate from different worldviews; that the tenets of qualitative studies do not lend itself to the use of specified principles and procedures for evaluation; and that the same criteria should be used to judge the validity and reliability of quantitative and qualitative studies (Hammersley, 1992; LeCompte & Schensul, 1999b; Parahoo, 2006; Patton, 2002).

Perhaps, the debate in the maintenance of validity and reliability in qualitative and quantitative researchers emanate from the language or terminologies used by the two paradigms. For example, qualitative researchers use rigour or trustworthiness in contrast to validity and reliability in quantitative studies to denote why the findings of a particular study should be believed. Also, generalizability or external validity is used in quantitative research while transferability or fittingness is used in qualitative research to represent the applicability

of findings in another similar context. The criterion of transferability in qualitative research has been debated to a large extent and there seems to be a concession that qualitative studies involve individual perceptions and the perception of the same individual may change over time. Therefore, different individuals in similar context may have different perceptions. Thus, transferability as a measure of rigour continues to be debated among social researchers (Cho & Trent, 2006; Mackenzie, 1994; Patton, 2002; Polit & Hungler, 1999; Whitemore, Chase, & Mandle, 2001).

Ethnographers over the years have debated issues of validity and reliability because the principles and practice of ethnography as in data collection and analysis do not lend itself to the positivists' emphasis on control that is used to describe principles of validity and reliability. It is recognized that the subjective perspective of the researcher during ethnographic data collection and analysis and the naturalistic nature of data collection superimposes the 'control' in experimental studies. Therefore, the implementation of standard principles of validity and reliability becomes problematic in ethnographic studies (LeCompte & Schensul, 1999b; Parahoo, 2006; Patton, 1999). This study holds that all studies must ensure the necessary rigour rather than a researcher being preoccupied with terminologies used to describe rigorous processes. Researchers should endeavour to adopt the appropriate techniques based on the type of study to ensure that findings that emanate from the study can be appreciated within a particular paradigm. Thus, this study identifies with Patton, (1999) that credibility of qualitative research depends on rigorous techniques and methods during data collection and analysis, the credibility of the researcher based on training and experience, and the philosophical belief in the value of enquiry.

Strategies that are employed to achieve rigour of a particular study depend on the design of the study and the applicability of the strategy. Thus, researchers should be

circumspect in their choice of strategies to ensure rigour. The key principles of rigour in qualitative studies such as credibility (whether results can be believed), transferability (compare results to similar context), dependability (repeatable or obtain similar results), and confirmability (results confirmed or corroborated by others) (Talbot, 1995) were relevant to this study (As de Vos et al., 2011; Atkinson & Hammersley, 1994; Polit & Hungler, 1999). Therefore, the ethnographic explorative phase of this study employed the following strategies to ensure rigour:

3.10.1 Multiple data collection methods. Methodological triangulation involves employing several data collection methods such as interviews, participant observation, questionnaires, and documentary review to enable the researcher to answer the research question. The use of several data collection methods in a particular study is believed to provide a broader perspective than the use of a single method of data collection (LeCompte & Schensul, 1999b; Saks & Allsop, 2007). The researcher is however cautioned that the use of several data collection methods does not guarantee validity of findings; but, the researcher should ensure that all the data collection methods used maintain the required standards (Parahoo, 2006). In this study, three methods of data collection were employed - individual interviews, clinical observation, and documentary review to ensure that in-depth corroborated information was obtained from the participants. The use of multiple data collection methods is supported by ethnographic principles; and the use of clinical observation, interviews and review of charts provided a better, broader, and verified insight of POP management in the Ghanaian context. Hence, multiple data collection enhanced the credibility of the study (Atkinson & Hammersley, 1994; Creswell, 1998; Mason, 2005).

3.10.2 Pilot observation. Also, as a novice researcher regarding the use of observation for the first time, the researcher conducted a pilot clinical observation on one surgical ward which was not the study observation ward. The pilot observation was done after the review of the relevant literature on the rudiments of observation. The pilot observations (three sections) helped the researcher to develop skills in jotting down observations and writing field notes in this study. Thus, the pilot observations helped in the reporting of credible findings in this study. The study did not involve pilot interviews because of previous interviewing skills acquired by the researcher during previous research activities (LeCompte & Schensul, 1999b; Spradley, 1979a).

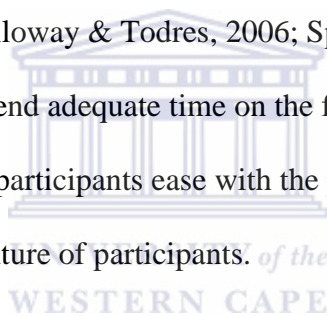
3.10.3 Member-checks. This is also known as participant validation; and involves going back to informants with transcripts and/or data analysis so that they can confirm, or repudiate the researcher's conclusions. Participant validation is seen to offer participants some form of involvement in the study and also provides the researcher an opportunity to reconsider the interpretation of the data based on a constructive discussion during member checking. The process of member checking ensures that the emic perspective is highlighted and represented 'truthfully'. Although member checking helps to ensure the rigour of qualitative studies, the process is time-consuming for both the researcher and participant; some participants may be embarrassed by findings and therefore refute or become defensive of their actions or comments; and they could also have different views at the time of validation if there is time lapse (Atkinson & Hammersley, 1998; Barbour, 2001; Holloway & Wheeler, 2002; Patton, 2002). The researcher may also disregard his/her etic perspectives and accept participants' accounts without subjecting such accounts to critical introspection. The insight gained from previous authors on participant validation gave me the confidence that the use of member checking in this study to ensure rigor is creditable. This is based on the

premise that this study involved several categories of participants and participant validation ensured that the ‘voice’ of each category of participant was accurately represented such as patients, nurses and patients’ relatives. Member checking is supported by ethnographic studies. Therefore, feedback discussions were held with selected participants to ensure validity. Member checking ensures confirmability of a study (Hammersley, 1992; Kirk & Miller, 1986; Mayan, 2001; O’reilly, 2005).

3.10.4 Audit trail. This is also known as the decision trail and it demands clear description of all decisions taken by the researcher such as philosophical, methodological, personal, and analytical decisions during the entire process of the study. The audit trail also involves provision of adequate contextual information to enhance the understanding of the study holistically. An audit trail ensures that other researchers could elucidate the research process, methods, and procedures and confirm the researchers’ findings. The audit or decision trail therefore helps to ensure transferability and dependability of a study. Although other researchers may not agree with a particular researcher’s decisions, the audit trail enables the reader to appreciate how the researcher arrived at his/her decisions (Creswell, 1998; Hammersley & Atkinson, 1995; Spradley, 1979a). The maintenance of detailed and comprehensive audit trail alone does not ensure rigour of a study; however, the study concedes that it plays a significant role in this ethnographic study where the researcher makes decisions based on several factors to develop a clinical guideline. For example, the emic perspectives, the wider literature, and researcher’s etic perspectives played a role during the study. Therefore, a detailed field notes was kept as part of all the data collection methods (described on page 105) (Morse & Field, 1996; Patton, 1990).

3.10.5 Prolonged fieldwork. In ethnographic studies the researcher spends adequate time on the field which ensures that the researcher goes native and understands the culture of

those studied. Prolonged fieldwork ensures that the researcher comprehends the native language and terminologies that help him/her to interpret findings appropriately. The understanding of the native terminologies helps the researcher to ask appropriate questions phrased with these unique terms that are understood by the participants. It is realized that when the researcher is completely new to the culture of participants, he/she would require a longer time to 'go native' and also understand the culture of the participants. Also, participants may be influenced by the presence of the researcher and behave atypically during observations and therefore data obtained by the researcher could be biased. Also, the initial participants recruited could give the researcher skewed information which may be different from their true perspectives. Thus, themes that emerge may not represent the actual emic perspectives (Creswell, 1998; Holloway & Todres, 2006; Spradley, 1979b). As such, it is critical for the ethnographer to spend adequate time on the field to enhance the collection of valid data which results from the participants ease with the presence of the researcher and complete understanding of the culture of participants.



Thus, prolonged fieldwork ensures credibility of findings because the researcher is able to explore a theme fully and completely. In this study, the researcher engaged in prolonged fieldwork (8 months – October, 2011 to June, 2012) to ensure that a full understanding of post-operative pain management issues are obtained as the researcher became a natural part of the ward and asked appropriate questions using the context specific terms. Prolonged fieldwork ensured that the data generated was unbiased and it helped in the corroboration of initial themes generated in this study. It was noted that prolonged fieldwork could influence the researcher's identity as a 'friend' and not a 'researcher'; which could affect information shared during the study. Therefore, the researcher ensured that the

participants were constantly reminded of her researcher role (Atkinson & Hammersley, 1994; Holloway & Todres, 2006; Spradley, 1979b).

3.10.6 Participant language. The use of participant language is also known as thick descriptions in qualitative research where the researcher uses verbatim quotations of the participants' words in the research report. The use of participant's culturally specific terms or words give the reader an insight into the participants' world. The contextual description and the researchers' interpretation of these verbatim quotes help in the transferability of ethnographic studies; whereby the reader is able to compare findings to similar context. Researchers are admonished to explain participants' languages that are unfamiliar terminologies to the reader. Also, native languages cited as verbatim quotes in the research report are to be translated to afford an understanding of the participants' comments and these principles were applied in this thesis (Atkinson & Hammersley, 1994; LeCompte & Schensul, 1999b; Patton, 2002).

3.10.7 Independent coder. This process of validation is sometimes called inter-rater reliability or peer review. The process requires an experienced qualitative researcher to independently code transcripts, review and compare themes generated by the researcher. This form of validation ensures that the researcher who is familiar with the data and participants is not biased in the interpretation of the data. It is acknowledged that an agreement between the researcher and the independent coder or analyst gives more credibility to the findings. However, where discordance exists, the researcher and the independent coder should have a dialogue that would stimulate the researcher to consider other dimensions of the data. The full documentation of the audit trail and contextual descriptions help the independent coder arrive at similar decisions of the researcher (LeCompte & Schensul, 1999b; Patton, 1999). In this study, transcripts, contextual descriptions, and codes were shared with research

supervisor and discussions were done on the emerging themes during our supervisory meetings which helped the researcher to reconsider initial decisions and interpretations made about the data. The researcher also shared some of data with a senior colleague who is grounded in qualitative analysis to allow comparison of themes during the analysis of data.

3.10.8 Rigour in clinical guideline development. During the process of clinical guideline development in this study, rigour was ensured according to standards recommended by The AGREE (2004), NICE (2011), and SIGN (2004). Thus, a systematic process in search of evidence and analysis of the data generated was ensured as described earlier in this chapter. Clear descriptions for search criteria and methods employed for formulating guideline statements were stated. The researcher ensured that all relevant participants or stakeholders contributed to the development of the guideline in this study. Expert reviewers also reviewed the draft clinical guideline in this study to ensure authenticity of the guideline. Plans for the clinical implementation of the guideline and procedure for the review of the guideline were stated as part of this study (see Chapter 5 page 269 and 271) (Hasenfeld & Shekelle, 2003; Hewitt-Taylor, 2004; Luboldt et al., 2004; NICE, 2011; Rolls & Elliott, 2008; SIGN, 2004; AGREE Collaboration, 2004).

3.11 Ethical Considerations

The researcher is obliged to maintain high ethical standards during a particular study. Thus, research proposals are reviewed by credible ethic/review boards and committees to ensure that the study is carried out within the appropriate ethical standards. The study concedes that even though the committee review is important, the researcher has the responsibility to ensure that the appropriate ethical standards are maintained during the study (LeCompte & Schensul, 1999b; Murphy & Dingwall, 2001). Therefore, this study was reviewed and approved by the Community and Health Sciences' Higher Degree Committee

and ethical clearance was granted by the Senate Research Committee of the University of the Western Cape (UWC) (see Appendix 12 for ethical clearance). Ethical clearance was also granted by the Ethical Review Committee of the Ghana Health Service because the Ridge Hospital operates under the authority of the Ghana Health Service. Thus, permission was sought from the Hospitals involved according to their gate-keeping policy. The researcher negotiated for access to the ward at any time and on any day to ensure full access to the study setting. After obtaining approval from the gate-keepers, consent was sought from the individual participants before they were enrolled in the study. Specific ethical principles employed are explained.

3.11.1 Informed consent. The researcher had discussions with the Principal Nurse Officers (PNO) in-charge of the observation ward after she was given a copy of approval letter for data collection (see Appendix 13 for approval letter and introductory letter) to know the day and time convenient to meet the health personnel on her ward to explain the information sheet and address any questions about the study. The information sheet was given to all the health personnel and the research process and processes of ensuring anonymity and confidentiality were explained. The right to withdraw from the study at any time was explained.

Further clarifications were given on data protection where it was stressed that the computer used for the study was password protected and that only those directly involved in the study would have access to data collected. The participants were told that findings of the study would be made available for review to discuss any concerns at the end of data collection. The researcher met the doctors after their morning ward rounds and met the nurses after a shift change (handing-over) in the afternoon in this study. All methods/processes of data collection were explained such as clinical observation, review of patients' charts/notes,

and individual interviews. Participants were informed about note-taking during observations and recording interviews with an audio recorder. The information sheet (see Appendix 2) was given to each of them; and the consent forms were given to them to complete and were collected the next day. This was necessary to give them adequate time to consider their decision to be part of the study. Hence, the researcher's contact details were provided so participants could ask for further clarifications when necessary. The information sheet and the consent forms were translated into Twi (see Appendix 3) which is the most popular language to enhance the understanding of participants who could read Twi. Therefore, participants chose between English and the Twi versions of the information sheet and consent form.

The nurses and doctors were assured that their employment status would not be affected by their participation in the study. These steps were taken to ensure that no participant was coerced to take part in the study (LeCompte & Schensul, 1999b). All the health personnel who were approached on the observation ward consented to be part of the study. However, 3 surgeons gave informal consent during clinical observations; they indicated orally that they were part of the study and this form of obtaining consent is consistent with ethnographic principles (Spradley, 1979b). Also, some information sheets were left on a table in the doctors' and nurses' offices as well as on the notice board so that individuals could have easy access to information about the study. The pharmacists, anaesthetists and other health professional informants such as the in-service educator and retired nurses and doctors were approached individually to obtain their individual informed consent during the study.

The process of obtaining informed consent from patients was an on-going process because most patients admitted for surgery were discharged within a week to make room for

new patients. The information sheet was explained areas addressed for health professionals were stressed such as data collection processes, confidentiality and right to withdraw without negative effect on care received. Informed consent was obtained both pre-operatively and post-operatively depending on the time of observation. Patients who were admitted as emergencies and those who were seriously ill were not included in the observation until they were stable and could understand the study. In this study, 6 patients gave informal consent during clinical observation. However, all patients interviewed gave formal consent. On-going consent was sought when new patients were admitted. Informed consents were obtained from all key informants and patient relatives interviewed in this study by applying similar processes described earlier. Stakeholders and experts involved in clinical guideline development gave consent in this study. Formal consent was obtained through participants signing or thumb-printing the consent form (Parker, 2007).

The processes undertaken to obtain informed consent indicated that the study was carried out with full awareness of 'actors' as much as possible. However, as the study progressed during participant observation on a busy ward, it was sometimes impractical for all those being observed to give written or verbal consent at the time of observation. Thus, there were partial covert observations during the study at some points; and this was acknowledged in the field notes (Hammersley & Atkinson, 2007; Marzano, 2007).

3.11.2 Anonymity and confidentiality. Anonymity was ensured in this study by assigning identification (ID) codes to all participants. Names mentioned or descriptions that could easily be identified in the report or thesis were omitted to ensure anonymity. The ID codes assigned participants are shown in Table 10 (see page 152). Information shared by participants in this study was kept confidential; and only those directly involved in this study such as a transcriber, research assistant, and research supervisor were privy to the raw data.

The pen drive with interview files was kept under lock and key. The pen-drive with voice files will be kept locked for three years in case of any queries about the study after which the pen drive and transcripts will be destroyed. The hard copies of transcripts were also kept locked in a separate cabinet from the signed or thumb-printed consent forms so that information cannot easily be linked to a particular participant. The transcripts were anonymized by the use of ID codes. Computers used during the research were password protected and files of raw data were password protected. Research assistant and transcriber involved in the study completed a confidentiality agreement form to ensure commitment to maintaining confidentiality (see Appendix 14 for confidentiality agreement form).

3.11.3 Protection from harm. All the participants were told that it is not expected that being in the study will be harmful to them in any way but they might feel stressful or anxious ‘being researched’ (Hammersley & Atkinson, 1995). The researcher ensured that participants and gatekeepers did not misconstrue the ‘researcher role or identity’ as an ‘expert or critic’ by explaining the study to them; and making a conscious effort to avoid any comment. The misconstrued identity of the researcher could make the participants feel stressed (Hammersley & Atkinson, 1995). It is also noted that during clinical observation, where there is an unethical life threatening incident, the patient’s safety would be important and the researcher’s intervention could affect his/her role or relationship with ‘actors’ on the ward especially the ‘actor’ involved with the unethical behaviour (Morse & Field, 1996) since he/she may feel that the researcher has reported him/her. However, in this study no life threatening incident was observed during clinical observation. Also, patients who were in pain or distressed were not recruited for interviews. However, where a patient exhibited a sign of distress during the interview, it was discontinued and rescheduled as necessary. Again, the service of clinical psychologist was made available at no cost to participants who

might require an intervention due to an emotional or traumatic surgical experience during the study. In this study, no participant required the services of a clinical psychologist during data collection.

3.11.4 Right to findings. During negotiation of access and informed consent, the participants were reassured that findings will be made available to them after the study. Therefore, anonymized findings of the ethnographic exploration and the clinical guideline developed were shared with the participants and the hospital authorities.

3.12 Data Analysis

The literature gives general guidelines and processes for the management of qualitative data that ensures rigour. Qualitative analysis requires investment of time and energy to make sense of the complex voluminous data generated. Ethnographic analysis is aimed at understanding the culture and relationships as construed by participants in a particular cultural group. The data generated in a particular qualitative study is initially fragmented into smaller units to enable the researcher to categorise and make linkages between these smaller units (Graneheim & Lundman, 2004; Hammersley & Atkinson, 1995; LeCompte & Schensul, 1999a; Miles & Huberman, 1994; Patton, 1990; Polit & Hungler, 1995; Roper & Shapira, 2000; Spradley, 1979a; Strauss & Corbin, 1998). The main aim of analysis of the ethnographic exploration phase of this study was to understand the issues of POP response and management in the medical, social, and cultural context of Ghana from the perspectives of patients and their relatives, health professionals, and key informants.

3.12.1 Data management. Interviews were recorded with a digital voice editor 3 which allowed for transfer of recorded voice files onto a personal computer and the software allows direct transcription from the computer. The voice files were saved on a password protected pen drive after transcription. Interviews were transcribed and transcripts and field

notes were identified with appropriate ID codes and grouped according to the category of the participant; for example interviews involving nurses were grouped in one folder.

The interviews conducted in Twi (the most common local dialect in the study setting) and Ewe were translated into English during transcription focusing on the meaning of the participant's contribution and those conducted in English were transcribed verbatim (Esposito, 2001). Verbatim transcription in Twi and Ewe was not done because the researcher, transcribe and research assistant did not write in these languages. However, the research team speak these languages fluently and understand Twi and Ewe perfectly. Therefore, it was necessary to omit the step of first transcribing in Twi and Ewe before translation. To compensate for this, transcripts were reviewed by participants (member-checks) and any vague or unclear comments were verified to ensure that participants' views were accurately represented. Transcripts for Twi and Ewe interviews were discussed with experts in these languages and confidentiality was ensured during this processes. Also, direct Twi and Ewe transcription and back translation was omitted due to budget constraints at the time of data collection. Also, communication on the ward was mainly Twi or Ga and transcripts from clinical observation were also written in English based on the meaning of comments made in Twi or Ga.

3.12.2 Analysis process. The transcripts were read several times along with personal reflections, notes from patients' clinical documents and other documents on the ward to understand data generated. Hence data analysis occurred concurrently during the data collection to enable a follow-up on themes that emerged in the data. Identification of themes was done by reading through field notes, transcripts, and personal reflections several times to immerse in the data and understand the actors' world (Krueger, 1998; Rabiee, 2004). Development of themes was done by seeking further explanations and dimensions of the

theme in the data generated through personal reflections. As this process continued, further data was collected from key informants to answer or explain components of the theme where there was inadequate data.

Data generated was analysed following the steps outlined by Burnard (1991) for thematic content analysis. However, all the steps outlined were not followed during the analysis process because data was managed with NVivo 9 and Burnard's steps were formulated for manual data management. Both descriptive and reflexive notes were separated during the reading of transcripts until a full understanding of the participant's perspectives were obtained. The notes included unique words, the context of the comment, the frequency of particular comments, whether comments were extensive, and how participants' comments were consistent or influenced by other participants (Krueger, 1998; Morse, 1994; Rabiee, 2004). This process was done manually because the NVivo software does not 'do the thinking for the researcher' but helps in the handling of data (LeCompte & Schensul, 1999a). Thus, meaning was derived from the data and themes were organized before exporting the data into NVivo.

The NVivo software was used to manage the data. Data was grouped according to participants' categories such as patients' interviews, nurses' interviews, and other health professionals' interviews and analysed separately at the initial stages of analysis. This grouping was to give a clear understanding of participants and afford systematic management of voluminous data generated. The findings from the different actors linked were linked to each other and such linkages were identified in presentation of findings.

In managing data from each group, codes were assigned to segments of the text and the initial codes were similar to terms used in the text and similar codes were grouped. However, some segments of the data were coded under two or more codes at the initial stages

of analysis because such segments appeared to fit different codes. During this process, there was sifting of data where data was separated into tree nodes and free nodes. The free nodes comprised data that was not directly related to the objectives of the study and the tree nodes comprised data related to the study. Similar patterns and variations among the groups were identified (Burnard, 1991; Morse & Field, 1996). As the analysis progressed, minor categories were grouped and later incorporated all these into major themes by re-grouping and collapsing similar minor themes (Burnard, 1991). The process of analysis was guided by the research questions, researcher reflections and discussions with research supervisor and expert. The initial descriptive terms assigned themes were changed to more abstract terms within the context of the relevant literature (Morse, 1994) to provide a link to the existing literature. After several shifting of data, the frameworks of main themes and sub-themes were developed and are described in the next chapter. A sample NVivo framework for the themes is presented in Appendix 15.

According to Morse and Field (1996) thematic content analysis involves four stages namely comprehending, synthesizing, theorizing, and recontextualizing and these principles were followed during data analysis in this study as described. Thus, when all the interviews and observations were completed, the researcher read through all transcripts again several times to ensure that the participants' world were truthfully represented.

In subsequent steps of clinical guideline development, data analysis involved standardized procedures described for example, analysis of systematic review involved standards recommended by accredited bodies such as Cochrane. The analysis of quantitative systematic reviews involves specialized statistical methods that involve pooling of data from individual studies to draw conclusions from the pooled data. However, the analysis of systematic reviews involving qualitative studies involves meta-synthesis of findings (Abou-

Setta et al., 2011; Arya, Abdollahi, Golalipour, Kazemnezhad, & Mohammadi, 2007; Coughlin et al., 2010; Garside et al., 2008). In this study, analysis of data generated through a systematic review was done by content appraisal as there was paucity of literature in the review undertaken.

Subsequently, analysis of comments of participants, experts, and consensus team were done. Comments on the first draft of clinical guideline were done through content analysis, aggregation of similar ideas, and integration or combination of individual comments to make a meaningful whole. The meaning derived from comments was synthesized and used to modify guideline statements in this study. The individual decisions taken during consensus meeting were examined, counted, and reported to participants. It was noted that where a participant indicated 'blocking', for a guideline statement, there would be withdrawal of the statement in the clinical guideline. In this study, no clinical guideline statement was blocked by the consensus group.

The rigour of a qualitative research such as this hinges on the researcher as a research instrument. The maintenance of ethical research also depends on the integrity of the researcher. The analysis of data is filtered through the researcher's lens.

3.13 Reflecting on the Nurse Researcher Role

In qualitative research and in ethnographic studies, the researcher is the primary research instrument. In this thesis, the researcher's background and interest in this study is provided. It is recognized that the researcher's personal, professional or disciplinary biases and perspectives affect the research question, data collection and analysis, and how the findings are interpreted (Schensul et al., 1999; Smith, 1996; Spradley, 1979b). It is therefore necessary to report the researcher's reflections on her role as a nurse researcher and its impact on the study.

The nurse researcher must be mindful that where the participants are patients and they are aware of his/her professional background, then there is the likelihood that the patient may give socially desirable answers and be untruthful about negative nursing care services received. Also, the patient may perceive a power inequality and partake in the study with the fear that his/her refusal to be part of the study or being honest would lead to denial of some nursing care services. The nurse researcher studying a phenomenon involving his/her colleagues (health professionals) who know the background of the researcher could also result in socially desirable answers because they believe that the researcher 'knows' the answer to the questions asked and they would give answers they think the researcher wants to hear (Atkinson & Hammersley, 1994; Polit & Hungler, 1995; Spradley, 1979a). In view of these major potential effects of my professional background as a nurse and an educator, a highlight of actions, activities, and utterances during this study are provided:

The researcher is not a clinical nurse employed by the hospitals involved in this study therefore, the patients did not know of my professional background as a nurse. On few occasions, the nurses referred to me as a nurse and she made sure that on such occasions, the student researcher role is explained. It was not perceived that the patients withheld information or were sceptical during interviews or informal interactions. For example, they reported both negative and positive nursing care experiences. The nurses were also open in sharing their thoughts when they were assured of confidentiality and anonymity.

The researcher's professional background as a nurse helped in obtaining access to the hospitals and the surgical wards without difficulty. Thus, some of the nurses and other health professionals involved in this study were aware that she was a nurse and therefore, some of the nurses' interview responses did not correlate with their activities on the ward. Thus, the use of multiple data collection methods was important to obtaining credible data in this study.

For example, the nurses commented during interviews that they '*administered analgesics on time*'; but during clinical observation and review of patients' charts, '*analgesics were not administered as prescribed*'. The need for corroboration of data and further explorations were realized and pursued in this study.

The professional background of the researcher as a nurse and a nurse educator also had some impact on participants who were health professionals. During individual interviews, some of the nurses would say '*you know nurses attitude*'; indicating that the researcher 'knew' what they were talking about because she was a Ghanaian nurse and was aware of the perceived negative attitude of some Ghanaian nurses. The researcher noted that the negative attitude of some Ghanaian nurses has been an issue of discussion in recent times in the media and among nursing groups in Ghana. In instances when such comments were made, the researcher maintained a neutral stance and asked for further clarification from the participant and these probing yielded further elaborations that gave further depth to the data.

Further, her nurse educator status could create a barrier for health professionals such as nurses when they felt that their views might not be technically correct regarding post-operative pain management. Thus, before each interview, it was stressed that there were no right or wrong answers to questions and no verbal or non-verbal signs were shown when the views of any category of participant was technically incorrect. With this reflexive insight, the researcher avoided leading and ambiguous questions that promoted free expression from participants. In addition, the researcher interviewed participants in the language they could best express themselves freely and those that opted to be interviewed in English were not corrected on their grammatical errors.

The researcher was also cautious that an interview session would not lead to participants seeking further clarifications from me as a nurse educator to answer their health

concerns (patients) or to gain knowledge (health professionals). In this study, the researcher stressed before the commencement of each interview session that she was ‘ignorant’ about the phenomenon under study and considered the participant as an ‘expert’. Thus, none of the participants asked me personal questions during the interviews. However, it was noted that during informal interactions with participants after an interview section, some of the nurses asked about the current trends in POP management. In these circumstances, the researcher shared some basic information and noted that there was the need to organize a training session for the nurses to up-date their knowledge. This reflection was integrated in the development of the clinical guideline for POP management in this study.

Subsequently, during the stage of expert review and consensus panel discussion of guideline statements, the researcher endeavoured to assume a neutral stance to ensure that guideline statements were reviewed without any ‘researcher influence’. The researcher was mindful that her status as a nurse working in close collaboration with the multidisciplinary team and health leaders created opportunity for her to raise the profile of nursing in Ghana as she demonstrated competence and in-sight in the rigour of guideline development. Also, the researcher observed covertly the non-verbal and verbal sign-posts from the multidisciplinary team such as doctors and anaesthetists within the context of the study that gives hope for future collaborative studies. For example, some of the team said *‘I am interested in your work’*; *‘we can have further discussions later’*. The researcher has the conviction that such future collaborative studies would create avenues for other nurses in Ghana to develop their research skills.

3.14 Conclusion

This chapter discussed the appropriateness of a qualitative approach and hence the application of the principles of ethnography for the study in contrast with other qualitative

methods. The chapter also described the design adopted for the study. The chapter described the context or location of the study, and the population and the rationale for the choice of the population. The sampling and recruitment strategies adopted in this study were also examined in detail. The methods of data collection employed in this study such as clinical observation, individual interviews, and documentary review were also examined with grounding for the significance of multiple data collection methods in this study. The issues of rigour in this study were also discussed in-depth and the data analysis strategies were described. The chapter ended with a highlight on the impact of the researcher's status as a nurse on the study.



CHAPTER FOUR

FINDINGS

4.0 Introduction

This chapter presents the findings of this study based on the data generated and analysed and it is divided into three main sections. The first section presents the initial contextual findings of the ethnographic exploration involving patients, nurses, the multidisciplinary team, key informants, and patients' relatives. It pulls out the critical areas of the findings that inform the appropriate clinical guideline for the management of post-operative pain within the medico-socio-cultural context of Ghana. The second section presents the findings of a systematic literature review on post-operative pain management highlighting the contemporary recommended measures of acute post-operative pain management. The section identifies the current evidence of post-operative pain management that can be applied to the context of this study and hence incorporated in the clinical guideline developed. The last section of the chapter states the clinical guideline developed in this study for the management of post-operative pain within the medico-socio-cultural context of Ghana.

4.1 Contextual Findings

This section comprises three sub-sections in relation to the areas investigated. The findings are presented in relation to the research questions. Thus, the findings related to how patients describe and respond to post-operative pain and the factors that influence their pain responses are presented. Then, the findings on how nurses perceive and respond to post-operative pain and the factors that influence their response and perceptions are presented next. The section concludes with the factors that influence the perceptions of the multidisciplinary team, patients' relatives and key informants. Although the findings are

structured according to the research questions, references were made to the other participant categories investigated where necessary to give full understanding of themes.

The contextual exploration involved individual interviews of fifty-three (53) interview participants, review of 44 clinical charts, 16 sections of clinical observations involving 42 patients and 15 health professionals as shown in Table 10.



Table 10: Participants involved in Ethnographic Explorative Phase

Category	Number	Identification (ID) Code
Patients	13	FP1 to FP7 (female patients) MP1 to MP6 (male patients)
Nurses	11	DN1 to DN5 (day-shift) NN1 to NN3 (night-shift) SN1 to SN3 (senior nurses)
Patient Relatives	12	R1 to R12
Multidisciplinary Team	5	DA (doctor anaesthetist) NA (nurse anaesthetist); CP (clinical pharmacist) DS (resident surgeon) CS (consultant surgeon)
Key Informants	12	NL (nurse leader) NT (in-service nurse trainer) TP (pharmacology tutor) TS (surgery tutor) NE (Nursing Tutor) CNLR (retired clinical nurse) RNE (retired nurse educator) RS (retired surgeon) TM1 to TM3 (Traditional Medicine Practitioner) DSN (Diploma student nurse)
Chart Review	44	F1 to F23 (female charts) M1 to M21 (male charts)
Clinical Observation	16	CO1 to CO16 (observation sections) T1 to T23 (female patients observed) M1 to M19 (male patients observed) N1 to N8 (observation ward nurses) S1 to S7 (observation ward doctors)

Table 10 shows that the participants involved thirteen (13) patients; eleven (11) nurses; twelve (12) patient relatives; five (5) multidisciplinary team; and twelve (12) key informants including an in-service educator, retired nurses and surgeon, nurse educators, traditional medicine practitioners, and nurse leaders.

Also, forty-four (44) patients' clinical charts were reviewed consisting of twenty three (23) female patients' charts and 21 male patients' charts and conducted sixteen sections of clinical observations to give full understanding to themes that emerged. The clinical observations involved twenty three (23) female patients, nineteen (19) male patients, 8 nurses, and seven (7) doctors.

Identity codes used in this thesis to ensure anonymity of all categories of participants were: FP1 to FP7 (female patients); MP1 to MP6 (male patients); DN1 to DN5 (day-shift nurses); NN1 to NN3 (night-shift nurses); SN1 to SN3 (senior nurses); R1 to R12 (patients' relatives); NL (nurse leader); NT (in-service nurse trainer); TP (pharmacology tutor); TS (surgery tutor); NE (Nursing Tutor); CNLR (retired clinical nurse); RNE (retired nurse educator); RS (retired surgeon); TM1 to TM3 (Traditional Medicine key informants); DA (doctor anaesthetist); NA (nurse anaesthetist); CP (clinical pharmacist); DS (resident surgeon); CS (consultant surgeon) and DSN (Diploma student nurse). Female charts were coded F1 to F23 and male charts were M1 to M21. CO1 to CO16 represented clinical observations conducted in this study and T1 to T23 (female patients observed), M1 to M19 (male patients observed), N1 to N8 (observation ward nurses), and S1 to S7 (observation ward doctors). Findings from the data generated are presented following the research questions of the study.

4.1.1 Patients' descriptions and responses to post-operative pain. The study sought to answer research question one - 'How do post-operative patients respond and describe their pain?'. In this regard, male and female Ghanaian post-operative patients aged

18 to 50 years with surgical procedures such as laparotomy, mastectomy, appendectomy, herniorrhaphy, haemorrhoidectomy, and removal of renal cyst shared their post-operative pain experience 2 to 8 days after surgery. Clinical observations and review of patients' charts provided further illumination in order to answer the research question. A major theme that emanated from the data generated was Subjectivism and this theme had sub-themes such as Pain Description and Pain Expression.

4.1.1.1 Subjectivism. Ghanaian post-operative patients' response and description of pain was strongly perceived to be individualistic and subjective. There was a clear indication that pain is a subjective phenomenon as all the participants in this study described their unique and personal pain experiences. The subjectivism of pain was succinctly described by MP3 '*as for pain, it depends on what is happening to you*'. Thus, it is only the experiencing person who can describe what he/she is feeling. This finding is congruent with the wider literature as pain is construed as a subjective concept (McCaffery & Pasero, 1999; Nielsen et al., 2008; Pasero, 2009). Hence, nurses, patients' relatives, and the multidisciplinary team involved in this study concurred that pain is an individual experience and post-operative patients respond and describe pain differently. Subsequently, post-operative patients also described the pain experienced.

4.1.1.1.1 Dimensions of pain. Post-operative patients described various dimensions of pain. The intensity of pain was described as 'severe', 'much', and 'terrible'. For example, FP3 said '*initially, the pain was severe*'. The patients also reiterated that the pain reduced when they were given analgesics and as the number of days after surgery increased. Thus FP4 recalled '*after the surgery, the severe pain I was experiencing had reduced... the pain was on and off*'. The indication of 'on and off' description of pain also buttresses the subjective nature of pain that relates to the definition of pain where the experiencing person is the one

who can attest to the presence or absence of pain (McCaffery & Beebe, 1989). The intensity of pain described by study participants was in a range of 'severe' to 'not much' pain; MP1 said 'the pain was not much'. The participants who reported that post-operative pain was not much had experienced severe pre-operative pain (FP1, FP3, FP4, MP1, MP3, MP4, MP5, and MP6). For example MP3 who underwent a laparotomy on account of intestinal obstruction recounted:

'I was in severe pain before the surgery and I even cried ... but after the surgery, the pain was around the wound and even that was not as severe as the one I experienced before the operation'.

Also, some participants (FP2, FP6, FP7, MP3, and MP5) described pain intensity as more severe in the night than during the day in this study. Nurses in this study corroborated the exhibition of pain behaviour that pre-supposed the presence of severe pain among surgical patients at night. Hence, MP5 said: *'I was really in pain and I suffered that night till the next day'*. Participants indicated that they 'suffered' when they were in severe pain. Previous studies also indicate that post-operative pain is inadequately managed at night (Closs et al., 1997; Closs, Gardiner, & Briggs, 1998). Severe pain at night perhaps contributed to the differences in pain expression during the day and the night.

The perception of *suffering* by patients in pain was also corroborated by patients' relatives in this study. Pain has been associated with suffering especially in patients with chronic pain (Yong, 2006). The description of pain intensity in this study is a significant finding because pain intensity is described as an important dimension in pain management. Also, the experiencing person is the key person that can report pain intensity as health professionals have been noted to underestimate patients' pain (Bell & Duffy, 2009; Manias et al., 2002; Middleton, 2004; Sophie, François, Paulette Le, Malika, & et al., 2005).

Nevertheless, participants also described the quality or nature of pain felt after surgery as *'burning'* and *'pulling'* (FP2 and MP5). The locations or sites of pain experienced were identified by participants such as abdomen, wound, and side of the wound. For example MP5 said *'the operated site was pulling me'*. The dimensions of quality and location are also important in the assessment and management of post-operative pain. For example the location of pain in a post-operative patient may herald the development of complications and an early detection could save the patients' life (Bonnet & Marret, 2007). Thus, it was inferred in this study that Ghanaian post-operative patients experienced a range of acute post-operative pain from severe to slight pain as participants described pain immediately after surgery as *'severe'* and *'slight'* pain as their condition improved. The invisible and personal nature of pain demanded that patients demonstrate its presence through both verbal and non-verbal behaviours. Thus, the sub-theme Pain Expression was described in this study.

4.1.1.1.2 Pain expression. Post-operative patients in this study responded to pain by the presence of verbal and non-verbal behaviours. It was realized that the pain behaviour exhibited related to the severity of pain experienced. The subjective reaction to severity of pain and an appropriate pain expression were re-echoed by a male relative as he shares a personal pain experience as follows:

'Oh, it depends on the level of the pain that I am going through; if it is serious, then the reaction will come by itself; but I usually just squeeze my face when it is severe' (R8).

Thus, the expression of pain was subjective as patients expressed pain differently. Pain behaviours expressed by patients in this study included *shouting, crying, grimacing, and groaning*. For example *'I was groaning but not too much'* (FP5 and FP6). MP3 also reported: *'I was groaning; I was breathless; I grimaced when I was in pain; I couldn't sleep'*.

FP4 reiterated:

'I was in severe pain and I shouted a lot before the operation. I didn't shout after the operation; I was just lying down'.

It was noted that crying was not common pain behaviour among post-operative patients in this study. A few participants both males and females reported that they cried when pain was very severe pre-operatively but they did not cry post-operatively. During clinical observation, post-operative patients did not cry; grimacing was common. For example a male patient MP4 said:

'I frowned my face when I was in pain after the operation, I frowned my face; but I didn't cry; ... the pain was not that severe for me to cry after the operation; but before I was brought to the hospital, I couldn't stand it, I couldn't do anything; I was in severe pain and I cried; I couldn't hide the pain'.

'T1 gripped her abdomen and tried to cough; she grimaced; and a few minutes later, she grimaced more severely and moaned on movement on the bed. T2 also groaned and grimaced severely on movement' (CO1 - female ward).

It can be inferred in this study that post-operative patients' preparedness to experience pain after surgery where patients expected pain from the surgical incision helped them to cope and not cry. Also, participants' assertion that the pain was not that severe to merit crying goes to buttress the subjective nature of pain and the importance of pain intensity. Health professionals corroborated that few post-operative patients cry. However, it was observed that patients with chronic pain sometimes cried when they were in pain rather than post-operative patients. The pain behaviours exhibited by patients in this study concur with that reported in the wider literature (Macintyre & Ready, 2001; McCaffery & Pasero, 1999) and variation of pain behaviour among individuals has been reported (Martin & Todd, 2002; Murray et al., 2008).

Pain behaviours were noted to vary during the day and the night and patients expressed pain more in the night. The patients reported that there were few nurses on night duty and they were not available on the ward when they were in pain so they had to shout to draw their

attention. The night nurses involved in this study attested to the fact that some patients shouted in the night when they were in pain. In the study setting, two nurses routinely run the night shift and this was considered by the nurses and patients as inadequate. For example, MP2 said: *'I felt severe pain in the night and I was calling for help but the nurses were somewhere asleep'*. The perception that the night nurses were *'asleep'* was corroborated by the night nurses that patients thought they were sleeping when they take a *'rest'* (NN1). MP1 also stated:

'Actually, it is in the night they shout because during the day, there are a lot of nurses around; ...you will hear someone shouting 'I can't sleep again; I am dying; nurse! nurse!'; and I think we have only two nurses around'.

The patients' report of severe pain during the night goes to support the previous finding that pain is inadequately managed at night (Closs et al., 1997). However, patients in this study shouted for help at night perhaps because there was no bell or buzzers to call the nurses. Also, in one study setting, the male ward was further from the nurses' station and it appeared that the male patients shouted more than the females at night. In this study, night shift clinical observation was not done because there was sufficient evidence and corroborations for higher pain expressions in the night. The patients' accounts were supported by nurses, doctors, and the patients' relatives in this study. Also, patients' chart review indicated that the only two documentations specific to pain management in this study were by night nurses. A female patient FP6 said:

'...it happened in the night; when the nurse came to the ward, she asked why I had squeezed my face and I told her I was in severe pain; so that was when she gave me the injection'.

In addition to exhibiting pain behaviours, patients also reported their pain to the health professionals such as nurses and doctors. The patients reported pain when the severity of pain was high both during the day and in the night. When patients reported their pain, some were

given analgesics which helped reduced the pain and some were able to sleep. FP2 said: *'I told the nurses; and they gave me some medicine; and after that the pain reduced'*. Others were also reassured when they reported pain to the nurses MP1 recalled: *"I called the nurses; actually when they came, the only thing they said to me is that 'it will go, it is a normal thing"*.

'T3 told N2 she was in pain but she did not show any behavioural signs of pain; and she added: 'the doctor told me I should buy some drug and that will help relieve the pain so my sister is going to buy it' (CO2 - female ward).

Self-report of pain is a key finding that pre-supposed that post-operative pain was inadequately managed in the context of this study. The finding also gives an impetus for the development of a clinical guideline that could enhance post-operative pain management as nurses took different actions when patients reported pain.

Although some of the patients openly expressed their pain or reported pain, some Ghanaian post-operative patients were stoic and did not show overt pain behaviours or report their pain to the health professionals. Patients in this study attributed their stoicism to personal inclinations and effect of socio-cultural background which are further described later in this chapter.

In addition to behavioural expressions of pain described, patients reported some effects of pain after surgery. Thus, post-operative patients in this study stated that when they were in pain, they could not *'sleep', 'walk', 'talk', 'turn in bed', 'walk straight' (posture), and 'stretch in bed'*. Majority of the patients reported that when they were in pain, they were not able to sleep especially in the night. Also, ambulation was a challenge for patients when they were in pain. For example FP2 said: *'I was walking slowly and slightly leaned forward'*. Some of the patients believed that ambulation helped their recovery and also helped in pain management. For example FP5 reiterated: *'I was feeling the pain but by the time you walk*

around, the pain is a little better'. Some of the health professionals also believed that early ambulation enhanced pain management. A nurse with a personal surgical experience agreed as follows:

'...another thing that I experienced was that when you manage pain well, the patient comes out of bed early, it also regulates your pain because you walk around early, coming out early is better because coming out of bed on the third day post-op is very painful' (SN3).

During clinical observation, it was realized that most post-operative patients ambulated early (1 to 2 days after surgery) with some identifiable signs of pain such as grimace and altered posture. Also, nurses encouraged patients to ambulate on the ward. However, there was no attention to pain assessment during the time of ambulation and patients did not request for pain medication when they ambulated with signs of pain. Early ambulation after surgery is necessary to promote recovery and it has been reported that inadequate pain management inhibit post-operative ambulation and it could result in complications (Izumi et al., 2010; McCaffery & Pasero, 1999). There were individual differences during ambulation where some patients walked the day after surgery. For example, FP1 said:

'I was able to get out of bed the next day by myself; I didn't have many problems with the pain'.

'T3 got out of bed gradually, splinted the site of surgery (abdomen), and walked slowly on the ward with a grimace. T4 asked her whether she was in pain and she said 'yes, but I will try to walk' During the walking, she saw N1 coming to the ward and she called her 'look at me' and N1 replied with a smile 'well done, well done, come and follow me' T3 was so excited and followed the matron N1 to her office' (CO1 – female ward).

The description and response to pain described by participants in this study substantiated the subjective nature of pain as emphasized by previous authors (Manias, Bucknall, & Botti, 2004; McCaffery & Pasero, 1999). Also, the pain description and expression described by

post-operative patients were corroborated by nurses and patients' relatives in this study. For example:

'She is still in pain; she said her sides are pulling her; ... Sometimes when it is pulling her, she shouts; if I am cleaning her, and I touch some parts of her body, she tells me she is in pain' (R11-mother).

'Usually immediately from theatre, the patient himself will either call you or you sometimes look at the facial expression of the patient, you will be able to tell if the patient is in pain; sometimes just the way they are lying down, they may be groaning or moaning softly and they cannot really call' (DN2).

Thus, even though pain is a subjective experience, the presence of pain can be authenticated by others. It presupposes that pain expression is an important dimension that helps others to appreciate the presence of the highly personal invisible phenomenon. The study further explored the factors that influenced patients in their response to post-operative pain within the context of the study.

4.1.2 Factors that influence post-operative pain responses among surgical patients. In the quest to answer research question two - 'what are the factors influencing post-operative pain responses among surgical patients within the medico-socio-cultural context?' the study identified factors that contributed to the pain responses described during the investigation of research question one. The main themes that emerged from the data were psycho-socio-cultural factors and health system factors.

4.1.2.1 Psycho-socio-cultural factors. This theme describes the factors that resulted from the patients' personal inclinations and socio-cultural effect on pain response after surgery.

4.1.2.1.1 Personal inclinations. Post-operative patients responded to pain based on decisions made prior to surgery and experiences they had on admission after surgery. It was realized that some patients were stoic and did not verbally report their pain to health

professionals due to the effect of their personal nature or inclination. For example MP1 stated:

'I just don't want people to know a lot about what is happening to me; so when I am feeling the pain I manage it myself, if there is any nurse around me then maybe I will inform her that this is what I am going through'

Sometimes such personal inclinations could result from previous experiences. It was realized that patients' previous experiences that influenced their pain response were related to previous pain experience and negative attitude of nurses regarding pain management. Thus, FP6 who had a previous surgical experience recounted:

'I had a previous caesarean section; so I knew how to handle myself; I know that if you call the nurses often, some of them become angry that you call too often; so when I am in pain, I try to endure it; ...I try to control myself; I brace myself; so if they don't come to me, I don't call anybody; unless they come to my bedside and I then tell them what is wrong with me'.

'I didn't want to bother them' (FP2).

This finding indicates that patients bear pain unnecessarily as a result of pre-conceived ideas and negative attitude of nurses. In a similar vein, a female relative concurred as follows:

'When I was in labour for the first time, I cried because I didn't have any idea about it; but subsequently, I didn't cry because I knew how it was; I didn't cry because I realize that no matter what I do, that is how it was going to be; so there was no need for me to cry; the crying will not solve the problem; so I had to control myself; something that you haven't seen before, surprises you for the first time; but if you have a previous experience, you know how it will go' (R4).

Similarly, other patients such as MP1 would rather keep quiet when in pain to prevent negative comments from nurses. He said:

'...somebody is shouting and the nurse will run to the person and say 'oh, because of this small thing that is why you are shouting?' then I better keep quiet because it means my pain is small if I am not shouting'.

Thus, inadequate pain report has been attributed to negative attitude of health professionals in previous studies and these consequently serve as a barrier to effective pain management (McCaffery & Pasero, 1999; Rejeh et al., 2009).

It is noteworthy to report that most patients in this study responded to post-operative pain with an expectation of pain because there has been a surgical incision. They were 'content' that the diseased body part has been removed and that they were not worried about the pain. Perhaps within the medico-socio-cultural context of Ghana, post-operative patients accept some level of pain after surgery as 'normal' and that gives a dimension of pain management demanding an appropriate guideline to effectively manage pain. The following participants' quotes indicated that patients would naturally not report or complain of post-operative pain if treatment options demand that analgesics are administered when patients complain of pain.

'...there was pain; but I felt that whatever was in my stomach that was giving me the problem was no more; so I was not worried about the pain after the operation' (FP4).

'though the pain could be that of the operation; but I am feeling ok; I feel that I am now free; the sickness is gone ...even though the pain will be there initially, after sometime it would go; I know that it would go, it is just a matter of time' (FP7).

'...because of the cut, there was pain; when you are even cut by a knife when cooking, see how painful it is; how much more an operation' (FP4).

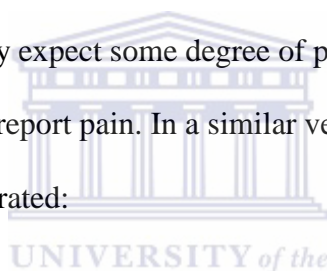
The inclinations of patients to experience pain after surgery have been identified by other authors (Goucke & Morriss, 2012; Jairath & Kowal, 1999). The inclination of patients to experience pain after surgery defeats the global drive of post-operative pain management that desires patients to be pain-free post-operatively (Berry & Dahl, 2000; WHO, 2007).

Therefore, it is necessary that post-operative patients within the socio-cultural context of Ghana are educated on the need for effective pain control after surgery. However, the inclination of patients could be said to be reinforced by patients' relatives and nurses as they interacted with post-operative patients as demonstrated:

'I told him that I have gone through an operation before and 'you will feel some pain where the wound is for some time and later, it will stop; so he shouldn't worry' (R9).

'...as for surgery, when they cut you, you will be in pain'; and we tell them that is why we are here; we are here to help you; to manage your pain; as for the pain, you will definitely experience the pain but we will take care of that' (DN3).

The quotes from patients' relatives and nurses make one wonder if there is a wider perception among Ghanaians that concludes that surgical patients should definitely experience pain. This study did not pursue this perception further because the study is aimed at developing an appropriate guideline that would be culturally appropriate for post-operative pain management. Therefore, it can be inferred that a culturally appropriate guideline should advocate a timely and regular analgesic administration rather than one that demands patients to request for an analgesic. This assertion is derived from the premise that patients within the socio-cultural context of this study expect some degree of pain after surgery and will not naturally request for analgesic or report pain. In a similar vein, a senior nurse who had a previous surgical experience reiterated:



'I suppress it; nobody can change anything about the pain so I have to bear it myself and take my drugs. 'You are a nurse and you are in pain what do you want someone to do for you?' You should know better' ... Because I know what pain is and I know what I have done and I know surgery is painful. When even you are cooking and you have a cut, it is painful how much more this long incision. Sometimes I tell the patients that as for the pain you will have it and even the pain reliever will never totally conquer the pain, it's a gradual process' (SN2).

The thought stated goes to buttress the need for the administration of regular analgesic which is a contemporary pain management recommendation. It also pre-supposes that post-operative patients may suffer unduly if pain perceptions are reinforced by health professionals such as nurses. The study further identified socio-cultural factors that influenced the pain response of patients.

4.1.2.1.2 Socio-cultural effect. Patients responded to pain as a result of the effect of social interactions and their cultural background. As patients interacted with each other and with

relatives, they responded to pain based on the effect of such interactions. For example, a patient (FP7) was advised by a relative not to *'talk'* as the talking would increase the pain. However, the patients also reassured each other on the ward and during clinical observations, it was realized that such interactions helped to reduce expression of pain. For example *'...the ward was calm and M6 and M7 were talking to each other – discussing religious issues'* (CO5 – male ward). Some patients smiled at each other and as they communicated, it was possible that the interactions could divert their minds from pain. In this light, FP3 shared her experience:

'There was a young lady next to my bed; she complained of pain a lot and when I was restless, she was also suffering; so in the morning I usually ask her how she felt; whether she was able to sleep; so even today I told her I will be going home so she should try and recover so that the hospital can have their bed back; ...so when I told her that, she started smiling; sometimes the patients closer to me interacted with each other and I contributed as necessary; so as we interacted and lay in our beds, we fell asleep'.

Some patients were stoic because of their socio-cultural background that oriented them to bear pain. Participants in this study believed that Ghanaians from the Northern part of Ghana are able to bear pain more than those from the South. This study was conducted at the Southern part of Ghana; however, a few of the participants were from the North and FP7, a female patient from the Northern part of Ghana corroborated the perception of participants as follows:

'...I was so quiet; I was quiet; maybe that was how we were taught at home, like our mothers will normally tell us that if we cry especially during childbearing; if someone is giving birth and she cries, they will tell you that you will remain like that in all your deliveries; so whenever you are going to give birth and if you cry, it means that you are spoilt or something, so normally when you are in pain you just hide it and it will go' (FP7).

The effect of socio-cultural background on pain expression has been confirmed in other studies (Fenwick & Stevens, 2004; Hastings, 1995; Lovering, 2006a; Wallin & Raak, 2007). However, further investigation is warranted to confirm the perceived differences in pain

response among Ghanaians from different cultural orientations which was not the focus of this current study. The evidence of socio-cultural influence of pain response is further corroborated by other participants in this study such as patients' relatives and nurses:

'If you are in pain and you are crying, you are regarded as somebody who is weak; you are not a strong person. Like we the Ga's will say 'ohie waa' (you are not stoic); we try to suppress it. I think it has affected me in a way' (DN5 – a nurse from the southern part of Ghana).

'Normally I don't show it; but if it is very severe, sometimes I squeeze my face; I believe that when you are in pain, you shouldn't frown or change your face for everybody to know that you are in pain; you have to hide small until you cannot cope' (R6 – a Ga relative).

'In my family we hide pain; for example, if my dad is in severe pain, he does not really shout but he will make some noise that will let you know that he is in severe pain; so we all don't show pain' (NN3– a nurse from the southern part of Ghana)

The quotes suggest the influence of socio-cultural background on pain response.

However, the study holds that the North-South influence on pain response demands further investigation since DN5 believes individuals from her southern tribe are also stoic. This study can only speculate the reasons for stoicism from some of the tribes in Ghana confirming the need for future studies in this area. Some participants alluded that they would seek health care when pain is severe and perhaps a relatives' observation could account for this:

'...we hide pain a lot; some of my people do not like attending hospital; it is like 'hospital phobia' so they know that if they express pain, they will tell them to go to the hospital so most of them will hide it for a while; ...they don't like the scenery; they don't like to be in the hospital at all, the environment just scares them; even when they are sick, they will hide it' (R6)

'As for me I do not like taking medicine so if I am in pain I will not seek treatment because I know I would be given medicine' (R2).

The comment by R2 further substantiates the individual subjective nature of pain and it would be inappropriate for this study to draw conclusions from the factors that influence pain response inferred from the data. Further, pain response was also influenced by the social

environment and up-bringing of the patient. It was reported that where there was strict or difficult up-bringing, the person grows up to be stoic and this perception was also held by some of the nurses in this study. In this regard, the MP1 whose father was a military personnel said:

'I was trained in the military field so even for you to see me crying, then you have to know that the thing is serious'

'...I cannot complain too much when in pain, hardly will I tell somebody that I am having pain though I feel within that I am having pain; but I cannot tell people around that I have pain because I never lived with my parents and there was nobody to complain to and nobody to comfort me' (DN1).

Another socio-cultural influence of pain response was spiritualism where patients and their relatives *'prayed'*. During clinical observation, it was realized that patients' relatives prayed with post-operative patients on the ward. For example, it was observed in CO8 – male ward that: *'M3 looked relaxed when the relations were giving him the assurance that they would pay his bills later and they prayed with him before leaving'*. Patients and their relatives prayed for successful surgery and speedy recovery than encompasses pain relief. In this regard, patients' relatives commented:

'...personally, when I am in pain, I don't shout or do anything; I just pray; if I shout it will not make any difference; the pain will not reduce; I just keep quiet and pray that it subsides; and sometimes it subsides when I pray' (R10).

'I had severe pain; ...I used a lot of local drugs and I also went to hospital but I didn't have any relief; so later, I gave myself to Christ ...with prayers and fasting the severe pain I was experiencing subsided ...' (R7).

The indication of the use of local drugs for pain management by R7 lead to further exploration of this finding from key informants in this study. The pain description and response within the medico-socio-cultural context of this study gives a foundation to challenge McCaffery's widely used nursing definition of pain which emphasizes the verbal report of pain by the experiencing person. It was realized in this study that patients within the medico-socio-cultural context are reluctant to report their pain and therefore a modification in

the definition of pain would be warranted in the context of this study. Thus, McCaffery's definition of pain could be modified as 'whatever the experiencing person *says* or shows it is and existing whenever the person *says* or shows it does'.

This finding suggests that health professionals should bear the personal nature of pain in mind when managing pain as patients respond to pain differently. It also gives credence to previous research that suggests that post-operative pain management should follow regular administration of analgesics rather than giving the drug when patient requests for it. In this study, it was evident that some patients would not request for analgesics on their own accord and suffer undue pain. Thus, the study supports the need for timely and regular administration of analgesics (Paice, Noskin, Vanagunas, & Shott, 2005). The factors that influenced post-operative pain response and management from the health system are described subsequently.

4.1.2.2 Health system factors. This theme describes the factors in the medical system of the study that have a bearing on the response to pain among post-operative patients. The theme describes factors such as health personnel attitude and health financing.

4.1.2.2.1 Personnel attitude. It was realized that post-operative pain response was influenced by the attitude of health professionals such as nurses and doctors. The positive and negative attitudes of health professionals affect patients' pain response where positive attitudes encourage pain report and expression. Also, negative attitudes hinder patients' pain report. It was realized in this study that patients referred mostly to the attitude of nurses rather than doctors as a factor influencing pain. A vivid experience was shared by a patients' relative who had a previous surgery:

'...I can say that if you have a good nurse, you won't feel it much; some of the nurses are really good; when they are coming to remove the stitches, they will say "it is painful, so try and cope; so that she can remove it for you"; so during the process, she will be saying "sorry, sorry, sorry"; as she removes the stitches; other nurses are very

different; when you shout in pain, she will just shout back on you and say “keep quiet, I am not the one responsible for the pain”; you see, the way the nurse will reassure you, if you are even in pain, you don’t feel it so much’ (R9).

In this study, there were individual differences in attitudes among health professionals towards pain. For example, during clinical observations, it was noted that some nurses and doctors did not acknowledge pain or reassure patients during painful procedures such as wound dressing and insertion of intra-venous line. However, other health professionals enquired about pain and reassured patients during painful procedures and when patients complained of post-operative pain. For example:

‘S5 took some blood samples from M10 and M3. During the procedure both M10 and M3 grimaced but they did not make any noise or report any pain. S5 concentrated on what he was doing and did not notice their facial expressions. He did not reassure the patients or say anything about pain. S5 was assisted by a student nurse and she also didn’t say anything to the patients’ (CO6 – male ward).

‘N8 cleaned M15’s wound and during the cleaning of the wound, he grimaced on and off and N8 asked him whether he was in pain but M15 replied that he was ok and she should continue with the dressing’ (CO15 – male ward).

Also, the patients reported both negative and positive attitudes of health professionals in this study. Most post-operative patients in this study were satisfied with the friendly communication or relationship with health professionals such as FP2, FP4, FP7, and MP3. The effect of such friendly relationship on post-operative pain experience was not evaluated in this study because it was realized that patients complained of pain even though some nurses were friendly to them. This may pre-suppose that acute post-operative pain demands more than just good interpersonal relationship for effective management as reported by previous authors (Pasero & McCaffery, 2011). The wider Ghanaian culture up-holds friendliness and politeness among individuals and these were echoed in this study (Nukunya, 2003). For example:

‘I had a good relationship with the doctors and nurses; some of them would come and ask me why I am lying down so quietly and if something was bothering me; most of

them would greet and ask me how I feel when they come to me; they were nice to me' (FP3).

'...yesterday, I felt pain and when I told the nurses, a doctor prescribed some drug for me and my relatives went and bought it; so when I was given the drug later, I felt better' (MP5).

Amidst friendliness and perceived 'good relationship' participants also experienced negative attitude of nurses that resulted in undue post-operative pain in this study. It was realized that nurses did not administer regular analgesics and patients reported severe pain before analgesics were administered. This finding again highlights the need for regular timely analgesic administration post-operatively. As indicated earlier in this chapter, severe post-operative pain was experienced in the night and the negative attitudes of nurses were related to nurses on night shift. For example:

'Last night I was in severe pain and as I was restless and couldn't sleep, the nurse came and asked what was wrong with me and I said I was in severe pain and I couldn't sleep; so she looked through my papers and drugs and realized I had one injection left so she said she would give it to me so that I could sleep; so after the injection, I felt relieved and I slept' (FP3).

'Three nights ago, I was supposed to be given an injection at 10pm but I wasn't given so when I felt the pain and reported at dawn the nurse said they were supposed to give me at 10pm but it wasn't given that is why I am feeling the pain so she gave the injection at dawn; that was the only time I reported pain to the nurses' (FP4).

'I felt severe pain in the night and I was calling for help but the nurses were somewhere asleep so I went to call them and one came to inject me; I walked to call them myself; I didn't have IV fluids on me so I walked ... Some of the other patients also shouted when they were in pain for help in the night; it took a long time for the nurses to come to their aid; some also strain themselves; if someone goes there to call them, they come early; but if you are just shouting, they don't come early' (MP2).

'Oh I did complain to the doctors when I was in pain; they came round and they reassured me that 'that is how it is so with time, the pain will go'; in the night, I shouted and shouted and the ward assistant came; ...I told her that I am vomiting and I am weak; then the nurse asked "she said what?" and the ward assistant told her what I said; and that was it; the nurse left; she never came again; she never came again till at dawn; so the next day I reported it to the matron and I think she talked to them' (FP5)

The uncaring attitude of health professionals such as nurses as reported by FP5 has been an issue of concern among the nursing profession and health care authorities in Ghana and

this has been discussed in different fora to find a lasting solution to the problem. Therefore, this study further investigated the factors that contributed to the commitment or otherwise of nurses to patient care.

Also, nurses in this study confirmed negative attitudes towards pain management and the administration of pethidine injection. For example:

'...there has been several incidences here that a patient will be screaming that "I am in pain" and maybe the nurses will not mind the patient until someone comes in before they will say "oh then let me go and give something to the patient" but I think it is bad; you shouldn't have to wait till the patient complains before giving the pain killers to them ... but that old mentality that "people will get addicted to pethidine" is still there' (DN1).

'...most of the time it's our attitude towards pethidine; some people don't like giving the pethidine much; in the afternoon you give the paracetamol suppository and then in the evening around 6pm, you give the pethidine and then in the night you repeat another suppository' (DN3).

Also, the negative attitudes of nurses were corroborated by key informants and the multi-disciplinary team as follows:

'The nurses don't believe what patients tell them about the pain and they associate their past experience with a patient that 'Oh maybe this patient came with this condition and we gave this drug or we gave all of you the same drug, and you alone are still complaining'; it is not good ...they always wait until a patient complains so they don't go to assess patients' (TS – Key informant: Nursing Tutor).

'Some years back, pain management was better and it was necessarily using medication. Even pillow; changing of position; even talking to the patient; even your presence in the room; but here, she is sitting at the nurses' table, watching television; a patient was calling and she says "oh wait, wait, wait, 'ma menhwe eyi nwie ansana maba' (let me finish watching this before I come)". How would you feel if you were in that bed?; as compared to the nurse that would be by you and say 'oh I am sorry'. Where is it? Is it hurting? If I touch, how do you feel? Turn yourself this way; put this small pillow here; and so on. That alone could ease off your pain if you are not even given any medication' (RNE – a retired nurse educator).

'...even when you write it, because nurses are afraid of what they think could potentially happen, they wouldn't give and that creates a bit of a problem; because sometimes you have a situation where they may not give and when you come and realize that the patient is in pain, that is when they are now going to give the medication; or they may not give but then they may chart that it has been given; so then you are not too sure whether the patient is in pain because the dosage isn't right for

that patient or is in pain because the drug hasn't been given; and that is always a problem; but if we did have protocols I think it will cut out a lot of these things' (DA – anaesthetist).

Also, it was indicated that post-operative pain response was influenced by the lack of knowledge of patients and their relatives. Health professionals failed in their duty to provide patients and family with adequate information on surgery and post-operative pain management. The health professionals however believed that patients were 'not interested' to know more about their conditions and that attitude of lack of interest reinforced the inadequate patient education in the context of this study. Also, the high work-load as a result of increased patient numbers prevented health professionals from giving adequate patient education. A subjective experience such as pain requires that patients are well informed about effective pain management strategies so that they cooperate with health professionals to achieve targets of pain control (Fredericks et al., 2010). Hence, an appropriate clinical guideline in this context would highlight patient and family education on effective pain management. It would be necessary in this study to develop a simple information sheet on post-operative management for patients and their relatives as part of the clinical guideline in this study (see page 227). The data substantiates this finding:

'I didn't call them; I was feeling the pain and even if I call them, I don't think they could do anything about it apart from the medication they had given me; so when I was in pain, I didn't call them because I didn't know if they could do anything about it' (MP3).

'...If I complained to the doctors about a problem, they would prescribe a drug for my relations to buy but they didn't tell me what kind of drug, its effect or side effect; I also don't know what drugs they give me; when they give me the drugs I take it; I didn't ask them because I think they know the best drugs to give me' (MP5).

'I don't know how the drugs would affect me; I don't know the side effects of the drugs; so the interval at which they gave me was ok; I don't want any drug effects or problems or drug abuse; so I want them to manage me' (MP2).

'...the paracetamol suppository helps to have a free bowel; after the operation, you have to pass stool and flatus after the operation; if they don't give you the suppository, you can't pass flatus; as you insert it, you are able to pass stool and flatus' (FP4).

Health professionals corroborated patients' lack of knowledge as follows:

'In the kind of society that we have, the patients think that it is because of drugs that they came to the hospital; so for most of them, whatever you give them, they will take it without any questions; but in a few cases some of them would ask you 'oh, this drug what does it do?' and we tell them and that will be all; but most of our patients don't ask anything; it is as if they are not interested; all they care is they are taking in drugs' (DN3).

'I guess we don't do too well in terms of telling the patient what the problems are; but that also comes partly from the fact that over the years, we realize that the patients don't seem to be interested in knowing what is wrong with them; so you attempt to tell them what is wrong with them and they are not even interested; it is as if 'you know best so you just give me the drug'; so somehow then you get into the habit of not really telling the patient; ...you can't entirely blame them because of their state of mind at the time; they may be apprehensive of the surgery; they may not retain too much of whatever you said; ...but when you have patients who are really interested and they ask you questions, we don't hide anything from them; we tell you whatever you want to know' (CS).

From the data, it can be inferred that when post-operative patients show interest in their pain management and they ask questions, health professionals would enlighten them on their pain management options. Subsequently, the financial issues influencing patients' pain response that emerged from the data is described.

4.1.2.2.2 Health financing. Another factor that influenced post-operative patients' pain response was health financing. The financial status of patients and their possession of the National Health Insurance Scheme (NHIS) were related to the availability of drugs such as analgesics. It was realized in this study that post-operative pain management was more effective if drugs prescribed were available.

Patients who were financially handicapped and did not have the NHIS were worried about how to pay their hospital bills on discharge and this could have diverted their attention from any post-operative pain. At the time of data collection, the NHIS covered some surgeries and some drugs. Patients who were not registered wished they had the NHIS to defray some of the cost of their hospitalization. However, patients with NHIS who were

admitted on weekends and holidays were not able to access the NHIS on the day of admission because the NHIS personnel did not work on those days. In this thesis, a brief overview of the NHIS in Ghana was given (see page 23). Also, patients who were not able to settle their bills on discharge were not allowed to go home at the time of data collection.

Financial problems, in this study were seen as a major concern for patients and their relatives. However, the study did not confirm the actual effect of socio-economic status of patients on pain response and pain management therefore eliciting the need for further research. The financial concern of patients is however a key finding since it could have an effect on the implementation of clinical guidelines developed in this study for post-operative pain management as the unavailability of drugs could defeat the timely administration of analgesics. It is imperative that an appropriate clinical guideline for post-operative pain management in the context of this study addresses the measures to ensure the availability of drugs such as analgesics to enhance POP management. The financial concerns of patients and their relations are demonstrated in the data as follows:

'...at the moment, I am very worried about how my bill will be paid on discharge; ...I am only hoping that God will help me out (FP3).

'...as at now, there is no money; but my 'master' said he would help me; when they brought me here, the following day he went to my parents to inform them about my condition and also see if they could raise some money to pay part of the bill; my parents haven't come; I am sure they are still not here because they have not been able to raise the money; so though the doctors have discharged me, because I haven't paid the bill, I am still here; my major worry is how to raise money to pay my bill' (MP6).

'I don't have the health insurance; now I have realized that it is important; when nothing happened to me, I didn't see the need for it' (MP3).

'I have health insurance but I don't know what is happening; they asked me to make a photocopy of the card and we did; but all the medications that were prescribed was bought by my relatives; we paid for all the labs that were expensive; the way a lot of things are not covered by the NHIS, I think it will be better if I didn't have the NHIS; ...we have spent so much money; they asked us to pay deposit when we came and they prescribed almost all the drugs for my relatives to buy (FP4).

Patients' relatives also corroborated the financial concern or burden reported by post-operative patients in this study. It was realized that financial handicap affected the ability to purchase drugs which could include analgesics. However, patients' relatives were committed to purchase drugs prescribed to ensure recovery of their patients. Also, relations who could afford drugs did not hesitate to purchase the drugs. It was the relatives who also collected drugs covered by the NHIS for post-operative patients.

'when they prescribe drugs for her, by the grace of God, I manage to buy some; if it is not expensive, I buy it; but if it is expensive, I try to buy the one I can afford so that later, I try to buy the rest; we don't have health insurance because she is not working; ...It is difficult; but God has been helping us; ...as at now all the money I had is finished; so when she is discharged, I have to look for a loan' (R12).

'...every day when they prescribe, I provide it; the ones that the insurance covers I collect it; the ones that I have to buy, I buy it (R6).

'As for money issues, it is only God; his friends have been of tremendous help to us; we have health insurance but because of the Christmas break, we couldn't use it; we spent a lot of money on drugs, drip, and the lab which the insurance could have covered; we paid for everything because the insurance personnel were on Christmas break – they were not working; I don't think the money will be refunded; so I am praying that God should give us a helper at this hospital so that the bill will not be too huge when he is discharged' (R9).

At the time of data collection, the pharmacy at the tertiary facility was not providing drugs with health insurance. The pharmacy at the regional level hospital provided drugs to patients with health insurance. Therefore, during emergencies, the tertiary level pharmacy provided drugs to patients on credit within the first 24 to 48 hours and when patients pay a deposit, the cost of drugs is deducted as explained by R8.

'Hmm, the money we had on us was not enough so the doctor had to write for us to go to the hospital pharmacy and collect the drugs on credit; the doctor wrote in the folder and we sent it there and we explained to the pharmacist and he said 'ok, no problem'; so he gave us the medicine and said the patient will be billed so we should come and pay the next day' (R8).

However, at the time of validating data before writing-up this thesis, the tertiary level hospital had started supplying drugs to patients on health insurance. Nurses also maintained that the

availability of drugs affected pain management and the NHIS helped in the management of patients' pain and where the drugs were not available, they either used left-over drugs on the ward or bought drugs for patients with their own money. For example:

It depends on the patients' financial status; because it is like most of them are buying their drugs; not that most of them; all of them; but with the NHIS, well most of the time, you find the drugs with the patients who have it; but those who don't have the NHIS, it depends on the financial status; you may find the drug or not; if they are well to do, they buy it without any difficulty; but those patients who don't have, you don't get the drugs to give them (DN3).

As for the pharmacy, they won't give; but there are times we try our best; personally, I can't bear to see a patient suffer; so when some of the patients leave their drugs on the ward and there is a spare drug, we administer; but it is not all the drugs that are available; sometimes, if we have money, we buy for them ourselves with our money (DN4).

Thus, from the findings presented so far, the study established that patients within the medico-socio-cultural context of Ghana are influenced by multifaceted factors such as their personal inclinations towards post-operative pain which developed from previous surgical experience, health personnel's attitude, and expectation of pain after surgery. Also, the study indicated that socio-cultural factors influenced patients' pain response through social interactions on the ward, the cultural background of the patients and the up-bringing or socialization of the patient. Other factors were related to the health system such as nurses' attitude which resulted in irregular administration of drugs and inadequate patient education. Also, the study identified that availability of drugs was influenced by the patients' financial status and his/her access to the NHIS. The findings presented were corroborated by other participants and thick descriptions of the data were provided. The study subsequently investigated the nurses' perception and responses to post-operative pain and the factors that influenced such perceptions and responses.

Thus, subsequent findings (4.1.3 and 4.1.4) were drawn from nurses on day and night shift including both junior and senior nurses. Also excerpts from clinical observations and review of charts were included to develop a full meaning of a theme. Interview participants were represented with DN1 to DN5 (day nurses), NN1 to NN3 (night nurses), and SN1 to SN3 (senior nurses). The nurses involved in the study were females and aged between 20 and above 51 years. They had nursing experience of between 2 and 35 years and they were all Christians. It is conceded that the perceptions of male nurses and nurses of other religious affiliations may differ and the findings were not generalized in this regard. Data from other multidisciplinary team and key informants were also used to give full meaning of findings in this thesis. Also, clinical charts reviewed were 44 made up of 23 female patients' charts (F1 to F23) and 21 male patients' charts (M1 to M21). References were made to findings from charts reviewed as appropriate.

4.1.3 Nurses' perceptions and responses to their patients' post-operative pain. The study further sought to answer research question three – 'How do nurses perceive and respond to their patients' post-operative pain?'. In this instance, nurses in this study described their perceptions of post-operative pain which indicated that pain was a subjective individual experience. Nurses also responded to their patients' post-operative pain by administering analgesics and offering psychological care and other non-pharmacologic interventions. Thus, the themes that emerged from the data were individual differences and pain management interventions. The perceptions of nurses that indicated that they perceived post-operative pain as an individual experience is described subsequently.

4.1.3.1 Individual differences. The study revealed that nurses within the medico-socio-cultural context of Ghana perceived post-operative pain as individual subjective phenomenon. Nurses realized that individual patients responded to pain differently. The

individual differences were manifested in patients' pain expressions and demand for analgesics post-operatively. The following quotes support this finding:

DN1: I have realized that we have patients who have low pain threshold and others who can bear pain; ...some are able to hold on if it is very painful; ...some are able to lay down quietly; ...some too it becomes a tag of war you have to hold the person, call more hands in position so that you will be able to pack a deep post-operative wound; so I think it depends and the way they express it too is very different. Someone maybe in pain and will not show anything and others too even the slightest pain, she will shout 'please come; I have this pain I am suffering here or there'.

NN1: '...some will be screaming; shouting 'Anti nurse I am in pain'; others will also not complain unless you approach them or when it is time for you to give them medication, then you give'

The perception of individual differences in pain expression and the identification of such pain behaviours were corroborated by the multidisciplinary team as reiterated by CS:

'...there are times you look at somebody who is supposed to be in pain and you can tell the person is in pain; at times the person will say he/she is in pain but when you look at them you really do not think they are in pain' (CS – consultant surgeon)

Nurses in this study associated particular behavioural expressions with pain after surgery and are able to identify the presence of pain. It was emphasized by participants that some patients in the context of the study do not report pain as previously corroborated in this chapter. Thus, nurses perceived that the presence of post-operative pain was not only associated with verbal pain report or verbal expression of pain as indicated by DN1 and SN3:

'...by looking at the position; the way a patient is lying in bed and the actions and other things may tell you that this patient needs care and some too maybe in pain but they will tell you I do not have pain because maybe they are afraid of the injection that you are coming to give to them; so I look at the appearance to tell me whether I have to give analgesic or not' (DN1).

'...so at times just getting into the ward, if you are a good observer you can see patient expressions and when you probe further, you get to know that it is really the pain' (SN3).

The study further realized that nurses' perceived post-operative pain was a cause of inability to mobilize or ambulate and sleep after surgery and hence they were conscious that effective

post-operative pain management enhanced ambulation, rest and sleep and subsequently prevented complications after surgery. The quotes substantiate this finding:

DN4: '*...we encourage them to ambulate since that also helps in the pain management because if they stay long in bed, they will only complain for a long time and maybe they will be on analgesics for a longer period; ... most of them don't understand; they think we are wicked or something; but some of them when you explain to them, they try their best to do it; ... you see, when pain is present and you encourage ambulation for instance, they won't cooperate; so the patient will be in bed and it will take a longer period for the patient to recover from the surgery*'.

NN3: '*...some of them do not sleep; they will be just laying down until you come to administer the analgesia and then they will all go to sleep*'.

The perceptions of nurses about their patients' post-operative pain influenced their responses to post-operative pain management in this study. Hence, the next theme described how nurses responded to their patients' pain.

4.1.3.2 Pain management interventions. It was realized that nurses within the context of the study responded to post-operative pain by employing measures to relieve their patients' pain using pharmacologic and non-pharmacologic measures. The decision to give a patient an analgesic when the nurse identified pain behaviour or a patient reported pain was determined by the nurses' personal discretion, availability of analgesics, and the nurses' conviction of the presence of pain.

4.1.3.2.1 Pharmacologic interventions. Within the context of this study, surgical nurses responded to their patients' post-operative pain by the administration of analgesics such as injection (pethidine), suppository (diclofenac or paracetamol), tablet (tramadol, paracetamol, and toradol), and capsule (naklofen duo). A review of patients' charts in this study also confirmed that these drugs were prescribed by doctors post-operatively. Out of the forty-four (44) charts reviewed for patients with various surgeries such as appendicectomy, laparotomy, herniorrhaphy, and mastectomy, only two (2) indicated 8 hourly pethidine

prescriptions while the rest (42) stated 6 hourly for 24 hours and two were prescribed to be given for 48 hours after surgery. It was noted that the analgesic prescription was not different for various surgical procedures within the context of this study. This finding suggests that an appropriate clinical guideline for the context of this study (general surgery) should be broad and flexible to accommodate different surgeries and also be acceptable and familiar to health professionals.

However, it was realized that nurses did not administer the full dosage of pethidine on the charts reviewed (see appendix 7 for a summary of document review). Some nurses stated 4 hourly and PRN pethidine prescriptions but these were not substantiated among post-operative patients during clinical observation or chart review in this study. The post-operative analgesics were given in the form of combination therapy where injection pethidine was administered together with suppositories as recommended in the literature (Jirattanaphochai & Jung, 2008). Thus, the study realized an inconsistency in the prescription of the drug as well as an irregularity in the administration of prescribed analgesics (both pethidine and suppositories) which could have contributed to the post-operative pain experience described by patients earlier in this chapter. This finding also substantiates the need for a clinical guideline that would ensure consistency in pain management prescriptions and administration of analgesics among post-operative patients. Also, the finding highlights the need for a systematic review of the literature to establish the recommended analgesic regime for post-operative pain management. The following statements support the finding:

DN1: *'Normally it is supposed to be strictly 6 hourly within the first 24 hours but because we give the suppository tds or 8 hourly, so sometimes the afternoon one that we are supposed to give, you go and the patient says "oh I am not in pain" and the interval to give the afternoon suppository is very short so normally, most of us do not go the 6 hours pethidine but ideally we should give'.*

NN1: *'...most of the time, they put the patient on both injection and the suppository; but the day of operation, when I am on duty, I give the pethidine and start the*

suppository the next day; that is what I do ... they don't complain; the day of operation, honestly I give the injection in the night and in the morning at 6am, I give both the injection and the suppository; that is what I do'.

The study further realized that some nurses responded to their patients' post-operative pain by informally assessing to be sure that the patient was in pain before they administered prescribed analgesic. Sometimes the patients were asked to wait for a while if the time of medication was not due. Also, some nurses doubted the presence of pain and would administer a placebo while others administered analgesics to prevent the patient from disturbing or making noise. At the time of data collection, there was no pain assessment tool on the ward for the assessment of post-operative pain. The subjective experience of pain that makes the experiencing person the 'owner' of the pain was challenged in this study as health professionals sometimes doubted patients' pain report. However, the emphasis on patients' self-report of pain is regarded as the gold standard in pain assessment and health professionals within the context of this study could be educated to respond appropriately to patients' post-operative pain (Abdallah, Majali, Stomberg, & Bergbom, 2011; Peters et al., 2007). Other nurses also believed the patients' self-report of pain and gave the appropriate analgesics in this study. The data demonstrates the authenticity of this finding in this study.

DN2: *'...we observe their facial expression and with some of them you will realize that they are screaming; but one thing I have realized is that those who scream are rather the liars; they are not in much pain; those who are rather silent and who tend to take on some awkward position trying to sit or lie down in a particular way to ease the pain; looking at them, you can sometimes judge that they are the ones really in pain; if they are screaming and because of the noise they are making, I normally will want to shut them up; sometimes if you give them placebo; immediately, they will sleep; I've tried it before; so I think it is more psychological'.*

SN1: *'I don't think we assess pain here; we just use the patient's complain and then when the drug is given and it is not effective'.*

'I mean you shouldn't discount what patients say; but you should also be able to judge whether what they are saying is right or not; because sometimes when you are deciding whether you should operate or not, there are times when you press somebody's tummy and everywhere you press the patient is jumping up and if you place your decision on that and you go and do a Laparotomy only to find that it is just an appendix that you

could have done a line incision for; so after a while of practice, you are able to tell those who are adding up' (CS – consultant surgeon).

It is important to note that the study was conducted among post-operative patients and during clinical observation there was no overt indication of health professionals doubting the presence of post-operative pain and no placebo administration was observed. It pre-supposes that the presence of post-operative pain may not be doubted by health professionals perhaps because of the association of surgical incision with pain especially within 24 to 28 hours after surgery as echoed by nurse DN1. Nurses within the context of this study also responded to their patients' pain by employing non-pharmacologic nursing activities.

4.1.3.2.2 Non-pharmacologic interventions. The study further realized that nurses who took care of post-operative patients ensured comfortable position and reassured patients when they reported pain after surgery. During clinical observation, nurses were sometimes seen to help post-operative patients assume comfortable positions and some reassured patients when they were in pain. It was not ascertained if position and reassurance helped in pain relieve in this study. It was previously reported that some patients were 'happy' with the interaction with health professionals and in this regard, the study can only speculate that nurses' assistance to assume a comfortable position and reassurance helped post-operative patients to 'feel better' as supported by previous studies (Hofer & Hofer, 1995). In the same vein, some nurses did not 'reassure' patients as they thought that the number of patients was too high. However, the study holds that reassurance and positioning should not replace timely administration of analgesics as some nurses within the medico-socio-cultural milieu perceived. Thus, the need for a clinical guideline for post-operative pain management is further highlighted. The supporting data for this finding is as follows:

NN3: 'sometimes you position the patient very well and reassure when patient complain of pain'.

DN2: *'...it can be just the positioning; so we need to assist the patient to have a comfortable position; and he may feel better*

DN5: *'Most of the time I tell them it will be OK; I reassure them then I administer the prescribed pain killer. So it is reassurance and the medication'*

'T5 still on NPO second day after surgery called N2 and said 'I am thirsty' N2 replied 'I will tell the doctor and we may give you ice-cubes'; she then helped her to be more comfortable on bed instructing her on how to move and encouraged her to turn to the side and exercise on bed' (CO2 – female ward).

The study noted that nurses within the medico-socio-cultural context were aware that timely administration of analgesics was necessary for effective pain management. However, some nurses did not administer analgesics as prescribed; thus the study further explored the factors that contributed to the identified pain responses described subsequently.

4.1.4 Factors that influence nurses' responses and perceptions of patients' pain.

The study further sought to answer research question four – 'What factors influence nurses in their response and perceptions of their client's pain within the medico-socio-cultural context?'. Here, data from interview, clinical observations, and chart reviews revealed factors that influenced nurses' pain perceptions and responses. The themes that emerged were individual factors and organizational factors. These are described subsequently with corroborations from the multidisciplinary team and other key informants.

4.1.4.1 Individual factors. The nurses in this study were influenced in their pain perceptions and responses by their commitment to care, use of discretion, and fear of addiction.

4.1.4.1.1 Commitment. Nurses who were committed to ensuring the comfort of their patients in pain responded positively to patients' report of pain and administered timely analgesic to the patient. However, in this study, the commitment of some nurses was considered inadequate as some nurses stated that their commitment to patient was negatively influenced by *organizational lack of incentives, frustrations regarding obtaining study leave,*

poor retirement packages, and lack of paid health care (DN2, DN3, NN1, NN2, SN1, and SN2). It was perceived that these factors affected all aspects of patient care including post-operative pain management. However, these concerns of nurses were not openly discussed on the ward and there was no agitation during the period of data collection regarding these concerns. Thus, the study did not authenticate the actual effect of nurses' concerns on pain management. In a follow-up interview with a key informant (nurse leader), it was reported that steps have been taken to initiate incentives in the form of awards for committed nurses. This finding is important because, it would be possible to 'reward' nurses who would be committed to the future implementation of the appropriate clinical guideline developed in this study. The following quotes give credence to this finding:

'The individual commitment is key; because if the individual is not committed, no matter the work load he will be making flimsy excuses for everything; ...National Health does not cover everything; yet the hospital does not have any policy for its' staff to cater for them when they are ill; then you expect that when I am sick, I should come and take care of the sick, why should I?' (DN2).

'Some of the nurses are really doing well; I gave some awards to motivate those doing well; I gave to best nurses; ...the awards that I gave didn't come from ward managers; it was through my own rounds; people I see working and they are documenting; I chose the people myself' (NL – Key Informant).

Further, some nurses were committed to pain relieve because they considered pain management as a priority among other nursing care activities. The assertion was based on the knowledge of potential complications of ineffective pain management. The ill-effects of post-operative pain have been widely reported by the literature (Cousins & Power, 2003; Strassels, McNicol, & Suleman, 2005a; Watt-Watson & Donovan, 1992). Some nurses also did not consider pain management as a priority nursing care activity but they administered pain medication nonetheless.

'I think pain is a priority; because pain in itself is a big issue; because if you don't tackle it, something else might be triggered; so even if you are alone on the ward with, let's say, more than twenty patients, you can still give analgesics' (DN3).

'...pain management is not the main priority; it is like when you are due, I will give it to you; but I don't monitor them for pain; when they are due, I give it to them' (NN1).

'...pain is not usually a priority; because if you give the medication as prescribed, they are usually quiet; so monitoring of their fluids; blood, sliding scales, and all those things are important' (NN2)

Other nurses were committed to pain management based on their previous pain experience. The previous pain experience contributed to the feeling of empathy for patients in pain and that influenced the nurses in their response to patients' pain. Nurses within the medico-socio-cultural context perceived that some individual nurses were more committed to adequate pain management than others and this finding could account for the perceived differences. Also, the study realized that some nurses were seen to be concerned about their patients' pain than others. Supporting data for this finding is stated as follows.

'...so as for me, when the patient says he is in pain, I feel for them a lot; I understand them because I never went through an operation but the way I felt chest pain with a chest infection; ...I try my possible best to give the prescribed drug or contact the doctors if necessary; mine wasn't surgery but I felt a lot of pain and it wasn't a good thing so I don't think people should go through pain' (DN4).

'I wish every nurse goes through surgery at least once and if you are at the surgical floor, you will understand; because first day after the surgery, it looks as if the whole body is on fire; after 3 days the whole body feels as if you have been hammered with hammer; so when you go through it, you nurse your patient well and I have never regretted being a surgical nurse; because I have had the experience myself' (SN3).

'When N8 finished M15's dressing during which he grimaced on and off, she checked the medication chart and realized that his paracetamol suppository was not given at 6am and the night nurse had written 'nil' so she asked the health care assistant (HCA) with her to check if there was one in the ward fridge and she administered it; she asked S5 to prescribe some paracetamol suppository for M15 so they can replace the borrowed suppository' (CO15 – male ward).

4.1.4.1.2 Discretion. Further, nurses responded to their patients' post-operative pain based on the individual nurses' discretion (DN2, DN3, NN2, SN1, SN2, SN3, and NN3). At the time of data collection, there was no protocol or guideline to guide nurses in their pain management decisions. As such, when patients reported pain, the response to administer analgesic or employ a non-pharmacologic measure was influenced by the nurses' discretion.

Also, it was realized that the nurses' discretion was closely linked with the clinical experience and competence of the nurse. Hence, some nurses may not use their discretion to avoid problems that may arise from such actions. Also, nurses within the context of the study were not permitted to prescribe analgesics for pain management and doctors may not always be available on the ward when patient is in pain. Thus, the study further grounds the need for a clinical guideline in this finding as personal discretions may not meet the standards of effective post-operative pain management. The quotes stated substantiate this finding:

'You can use your own discretion; it is not really accepted on the ward but some of the doctors don't mind if you use your own discretion to help manage the pain or to save a particular situation, they encourage it; but you can't make it open; how long has the person been experienced or working in that particular unit for her to be able to take such a bold decision; because if you make it open, then things may go wrong on the ward so we need to be careful when dealing with such issues; I for one, I am able to use my own discretion to do certain things; but some other nurses will always want to seek second opinion before they take any other step because at the end of the day, you are accountable or responsible for whatever step or action you've taken; so at least you should make sure it falls within the range and you should know what you are about; otherwise you will be held liable and nobody will be there for you because it is a risk you are taking' (DN2).

'Within 4 hours and if there is pain, I may give; there is no guideline for us to follow so we use our discretion most of the time; ...I inform the doctor; ...if there is protocol, it will help especially in cases where the doctor is not available especially in the afternoon and in the night' (DN3).

4.1.4.1.3 Fear of Addiction. In this study, it was realized that nurses' fear of addiction to pethidine influenced their pain perception and response. It has been mentioned earlier in this chapter that most nurses within the medico-socio-cultural context of this study did not administer the prescribed dosage of pethidine due to their perception that their patients would be addicted. The fear of addiction resulted from the nurses' misconceptions about pethidine and their observations of pethidine effect on patients with chronic pain. A review of patients' medication charts in this study verified this finding. Also, the multidisciplinary team perceived that nurses feared patients' addiction to pethidine and they corroborated the inadequate administration of pethidine. Hence, doctors prescribed pethidine 6 hourly for only

24 hours post-operative and they prescribe suppositories which nurses were comfortable to administer. The finding pre-supposes that the achievement of pain management targets heavily rest on the nurses' readiness to administer analgesics as has been highlighted in this study. Fear of addiction has been identified in other settings as a barrier to effective pain management (Drayer, Henderson, & Reidenberg, 1999; Lovering, 2006a). Therefore, a clinical guideline for post-operative pain management within the context of the study needs to emphasize the nurses' responsibilities and address their fears in the local context. The data demonstrates the issue of addiction within the context of this study.

'We've been talking about it but some of them still believe that the more you give the pethidine, the patient may become addicted; so they are reluctant to give; as for the 24 hours, they give it religiously but subsequent ones, that is where the problem is' (SN1).

'I know that if you take it for a long period then it can cause addiction; not the 24hrs or 48hrs; that is what we are giving' (DN2)

'Some patients also become addicted to it; in fact, I've observed that some patients become addicted to it; especially those who cannot cope with pain at all; they become attached to it; ...sometimes they even tell you that 'oh nurse, won't you give me the injection?' (DN3).

'I think the problem is the issue of addiction for pethidine because it is an opioid; so sometimes you realize that it is not given; what I think is 'it is like because the patient hasn't complained then the drug may not be given'; which is not good enough; because somebody may be in pain but may not complain; so once we've written 6 hourly, the drug should be given exactly the 6 hourly; and if it is 4 hourly, it should be given as such; but if you write 4 hourly especially they (nurses) think it is too much; but really pethidine is short acting so they can give the dose 4 hourly; so because of that we turn not to write the 4 hourly because we know it will not be given' (CS – consultant surgeon).

It was inferred from the findings that nurses' fear of addiction resulted from inadequate knowledge about analgesics for post-operative pain management. This inference and the need to enhance the knowledge of nurses on POP management are consonant with the literature (Abdalahim et al., 2009). Further to the individual factors influencing nurses' perceptions

and responses to pain, the study identified other organizational factors that contributed to such pain perceptions and responses.

4.1.4.2 Organizational factors. The study revealed organizational factors that influenced nurses' perception and response of post-operative pain such as organizational laxity and challenges of team work.

4.1.4.2.1 Organizational laxity. Some nurses within the context of this study responded to pain as a result of lack of accountability and effective supervision in clinical practice indicating organizational laxity. It was realized that some senior nurses did not get fully involved with patient care and were unable to supervise inexperienced junior nurses and students on the ward. This observation was also confirmed by a nurse leader and nurses believed that when ward in-charges took active part in patient care, it would help enhance care in general. However, from preceding findings it is inferred in this study that individual nurses of all categories need to be empowered with adequate knowledge, skills, and appropriate attitude to ensure effective post-operative pain management. For example, SN3 observed *'change itself is very difficult and when you try changing people, they only do the right thing when you are present; but the moment you move away, they will not continue'*. Individual nurse empowerment is relevant to the area of pain management as the nurse supervisor may not be on duty always and a patient may be in pain at any time of the day. However, the need for effective supervision in clinical practice especially for novice nurses and student nurses is not de-emphasized in this study (McCaffery & Beebe, 1989).

'...sometimes you see a young nurse doing better than the PNO (principal nursing officer). When you go to a ward, they fear to report the senior to you; so that is why I go on rounds myself; and if I notice such a situation, I would say – "PNO, any time I come here, you are in the office, and it is the senior staff nurse (SSN) who has taken over the ward, so if there is something, I will give to the SSN or SNO (senior nursing officer), you have to be involved in the work"; ...sometimes when I don't have the time

to go on rounds, I call one of the in-service coordinators assigned to the department and she goes on the rounds to supervise' (NL: Key informant: nurse leader).

'...if we get good unit heads, when I say good unit heads, I mean hard working nurses who would take charge of the ward and not be at the table; they should be involved to know what is going on, when we get good deputy directors who will not sit at one place but move and see what is going on and stop this seniority promotion but rather promote according to performance it will help the system' (SN3).

Another dimension of the organizational laxity identified in this study was inadequate accountability especially for pethidine. During the period of data collection, the surgical patients' folder was used to collect pethidine from the pharmacy and the drug was kept at the bedside of the patient. However, two of the wards collect all the pethidine, label them and keep them in special locked container or a DDA (dangerous drugs act) cupboard. The drug is sent to the theatre with the patient and it was revealed that sometimes the patient returns to the ward without a single vial or ampoule of pethidine and a follow-up could be *'we cannot find it'*. Sometimes all the vials of pethidine are used for the patient in the theatre/recovery ward and the ward nurses (where this study was focused) had to borrow from another patient or 'ward stock'/left over drugs. A key informant (clinical pharmacist) reiterated that nurses were not accountable for pethidine supplied to the ward as ward stock and therefore, the drugs were no more supplied to the ward.

Also, the drugs kept at the bed-side were also sometimes pilfered as security system on the wards left much to be desired at the time of the study. It was believed that there were health professionals who were pethidine addicts within the Ghanaian health system. However, none of the participants in this study was considered a pethidine addict. This insight about the safekeeping of analgesics such as pethidine and the lack of replacement of 'borrowed' analgesics could have an impact on the future implementation of clinical guideline developed in this study. It is therefore necessary to recommend appropriate measures to ensure that patients' drugs such as pethidine are safely kept. Supporting data is shown as follows:

'Sometimes they don't even have pethidine on the day of operation; they collect the drug before the surgery; but when they get to the recovery, they use it for them; they keep the drugs in their boxes but when they are coming back after surgery, it is not accompanied and when you go back to look for it, they will tell you they can't find it; some they find, some they don't find; so if you have enough postop patients then you can borrow from the others; but if they are not enough, then the patient goes on either paracetamol or diclofenac suppository; ... we go to the other wards to borrow; when you go to your colleague on another floor and they have, they will give it to you and ask you to replace it; but we don't replace it; because the next morning, you won't even find me to replace it, I will be gone' (NN2).

'We mostly borrow; most of the time the discharged patients sometimes would leave their infusions and drugs on the ward; ...so we use it as a ward stock and give it to such needy patients; some are able to replace it later; others are not able' (DN3).

The inadequate accountability on the wards was closely linked to poor documentation of nursing care activities rendered. Thus, patients' reports such as reports of post-operative pain were not adequately documented and reported. For example, patients' verbal pain reports were not documented and therefore there was no documented evidence of inadequate pain management as reported by patients in this study. Nurses felt that their inadequate documentation also stemmed from the doctors' lack of interest in reading nurses' notes. It was realized that nurses charted appropriately drugs administered. Hence, the use of different methods of data collection in this study corroborated and validated findings. The study hopes that an appropriate guideline would minimize pain experience and hence pain report. However, the need to stress the importance of pain documentation in the clinical guideline is highlighted by this finding. Previous studies also highlight the importance of documentation in pain management (Abdalahim et al., 2011). Out of the 44 clinical charts reviewed in this study, only 3 night nurses' notes stated patients' pain report as shown:

'Please to prescribe analgesics for patient' when pethidine and suppository paracetamol were indicated 'NIL' first night after surgery' (Chart F16 - Appendicectomy).

'Patient complained of pain; please inform doctor' (Chart M16 – haemorrhoidectomy).

'Patient complained of severe pain' (Chart M21 – Laparotomy).

'... when we notice something and we put it in writing, there is not much done so we always tell them; that is what we usually do on the ward; what the doctors want us to do, they usually write; sometimes they forget and we have to go and call them to write' (DN2).

4.1.4.2.2 Challenges of team work. The study further revealed an organizational dimension of challenges of team work. It was realized that nurses experienced some difficulties as they worked with fellow nurses and doctors to manage pain. It was perceived by most participants that post-operative pain management was not a team decision in the medico-socio-cultural context of this study. It was the doctors' and anaesthetists' legal responsibilities to prescribe analgesics for post-operative patients. In the context of the study, anaesthetists were responsible for pain management at the recovery ward and the surgeons took charge of patients on the ward. Nurses on the ward reported that they reported patients' pain complains to doctors as necessary for the appropriate intervention to be taken. Some nurses also did not call doctors especially on night duty if patient was in pain. In this regard, the nurses used their discretion and 'borrow' analgesics for the patient rather than call doctors. Doctors involved in this study corroborated that they did not routinely seek the opinion of nurses during post-operative pain prescriptions.

Thus, it was realized that some nurses did not take part in ward rounds as expected. A senior nurse attributed it to *'lateness'* (SN3); other nurses felt their *'opinions were not appreciated'* (DN4) when they were part of the rounds; others believed it was because of *'increased work-load'* (DN2); and that some nurses were just *'not interested'* (DN1). It was observed that doctors taught medical students during ward rounds and that delayed the rounds and some nurses believed that if they followed the rounds, their nursing care activities such as wound dressing would be unduly delayed. Also, it was realized that where nurses did not administer analgesics as prescribed, the doctors only 'make noise' and the culprit was not queried. Therefore, the clinical environment was not characterised by a feeling of obligation.

This was equally so because supervision and accountability were sometimes inadequate. Hence, the study reiterates the importance of empowerment and commitment of the individual health team member to appreciate the significance of team approach to post-operative pain management as lauded by previous researchers (McDonnell et al., 2003; Pasero & McCaffery, 2011; Vickers et al., 2009; Yüceer, 2011). This finding is demonstrated in the quotes:

'It is supposed to be a team decision to manage pain effectively; because usually if we notice any abnormality, we inform them; not specifically on ward rounds, I can call or when the doctor comes around, I can tell him and suggest what I think can help; ... once the doctors also realize that you are not competent, your opinion does not matter to them, whatever you say they take it with a pinch of salt; I know the doctors and most of them have a little funny mindset about nurses ...sometimes you see the doctors doing their own things and the nurses also doing their own things; a doctor will come around and will not even listen to what we have to say; they don't even ask you; not to even think about telling them; some also seek your opinion; ...sometimes if you want to volunteer an answer, the way they receive it is not appreciated; so I just keep quiet' (DN2).

'Pain management is supposed to be a team work, we all need to come together and agree on how we are going to do it to achieve our goal; that is making patient pain free; and the ward rounds what really happens is that our nurses are not coming to work on time' (SN3).

'The nurses don't make too much of an input; but in cases where they give the drug and the patient reacts and they will tell us; maybe they will say 'when I gave this drug, this and this happened so they will draw our attention to it'; in terms of what drug to give to somebody, 'no'; they don't usually do that; or maybe the drugs have finished and they tell us; or when they gave the drug, the patient still complained of pain; so that is usually what they turn to do but not really to make an input as to what we should give' (CS – consultant surgeon).

The study further revealed challenges of team work involving nurses who were ineffective in their work or avoided work and these nurses were not sanctioned resulting in perpetuation of ineffectiveness in clinical practice. Some nurses were therefore concerned that their work load was increased because of nurses who loafed. In the local context, nurses who do not work effectively were tagged 'smart-free' and the nurses also believed that some doctors also did not work diligently. On the observation ward in this study, no nurse was tagged 'smart-

free' during the period of data collection. The study concedes that such smart-free nurses would not be dedicated to effective post-operative pain management and their response to patients' pain would be negative. It was reassuring in this study that senior nurses were aware of these nurses and took measures to ensure that they worked as the perpetuation of such negative behaviour would negatively affect the effective usage of an appropriate clinical guideline for post-operative pain management. This finding is substantiated as follows:

'...we have the smart-free ones here; as it is said that in every house there is a bad nut; but we try to assign them, we get closer to them, we help them. We have nurses who come to work and if you do not assign her, she will not stay at post, we have some who when she sees you coming to the east, she moves to west, if you have such a nurse, you keep that nurse on her toes; you see the ward is busy and you cannot find someone idling; but by the time you go looking around, she will be hiding at the nurse's room or the kitchen' (SN3).

'...we call them 'smart-free'; you see them going up and down and at the end of the day, nothing; that is why we have the assignment book; so I assign them to something to let them know what they are doing; at the end of the day, you the in-charge or the one working with her should see to it that she has done it' (SN2).

The study so far has established that post-operative pain management is influenced by multiple interlaced factors involving patients, nurses, patients' relatives, and the multidisciplinary team. The factors that influence pain response and perceptions among nurses and patients have been shown to be interlaced and dependent on each other. This study has established and described the individual and organizational factors that influenced nurses in their post-operative pain perceptions and responses within the medico-socio-cultural context of Ghana. Further, the factors that influence pain perceptions of the multidisciplinary team, key informants, and patients' relatives are described.

4.1.5 Factors that influence the perceptions of the multidisciplinary team, key informants, and patients' relatives on post-operative pain management. The study also sought to answer research question five – 'What factors influence the perceptions of the multidisciplinary team, key-informants, and patients' relatives on post-operative pain

management within the medico-socio-cultural context?'. Thus, findings from patients' relatives were described separately from those from the multidisciplinary team and key informants as the themes were different. Findings from the multidisciplinary team, key informants, and patients' relatives further illuminated and corroborated previous findings described in this section and also provided other dimensions that gave this study depth and richness.

4.1.5.1 Factors that influence the perceptions of patients' relatives. Patients' relatives of post-operative patients represented by R1 to R12 were made up of two mothers, four daughters, four wives, one husband, and one fiancée (male). The purposive recruitment of mothers, daughters, wives, and a husband ensured the data was not skewed to a particular class of relatives such as daughters. Patients' relatives were involved in patient care within the clinical setting of the study such as physical care of patients and purchasing of drugs and other errands needed for patient care. The analysis of data generated through individual interviews revealed factors such as empathy, commitment, and faith.

4.1.5.1.1 Empathy. Patients' relatives within the medico-socio-cultural context of this study were driven by empathy for their post-operative patients and the feeling of empathy was perceived to influence their actions to ensure pain relief. It was realized that the patients' relatives reacted emotionally when their patients' experienced post-operative pain. Some relatives felt '*uncomfortable*', '*worried*', and '*anxious*'. Hence, the relatives reassured the patients in pain and treated them gently. This finding gives further need for adequate post-operative management to minimize such emotional reactions of patients' relatives. It is hoped that the development of an appropriate clinical guideline in this study would help in adequate post-operative pain management within the context of this study and subsequently, patients' relatives would not be worried about post-operative pain. Emotional reaction of patients'

relatives to hospitalization has been explored in other cultures (Fabiane & Corrêa, 2007). The following quotes support this finding.

'When she is in pain, I also feel uncomfortable; I am worried; I wish she is not in pain; Sometimes when it is pulling her, she shouts; if I am cleaning her, and I touch some parts of her body, she tells me she is in pain I will say 'oh, I am being very gentle'; then I take my time and clean and massage her more gently' (R11 – a mother).

Usually, I support him emotionally; I reassure him (R6 – a daughter).

'...the first day after surgery, she complained of severe pain but I consoled her that all will be well since it was just the first day' (R3 – daughter).

'when I meet him that restless, I feel it a lot; I have gone through a lot of anxiety; some days were very bad for him; he suffered a lot; ...when someone is in pain, we pamper the person; the person is suffering so you have to reassure the person and tell the person something that will make him/her relax; if you shout on the person, he can have more pains and will not be happy and can even die; so when my husband was in pain and was restless, I had patience for him and reassured him; sometimes when I ask him to lift himself up or turn himself, he becomes angry with me and even shout at me; sometimes when I see someone suffering, I become scared; so I was really worried when my husband was suffering' (R5 - wife).

4.1.5.1.2 *Faith.* Further, the study realized that faith in God influenced patients' relatives' perceptions of post-operative pain. Relatives believed that with the help of God, pain will be relieved so they were not unduly worried. The reliance on faith was much pronounced at the pre-operative phase where majority of patients' relatives were afraid of death during surgery. Therefore, when patients' had successful surgery, relatives were much relieved and they also believed that post-operative pain would be relieved 'by the grace of God'. In this study, all the relatives recruited were Christians and it is conceded that one should be careful in the interpretation of this finding as relatives of different religious affiliations may perceive post-operative pain differently. It was observed that both patients and their relatives had faith that pain will subside with time after surgery. This finding makes it imperative that post-operative analgesics should be given in a timely manner because the faith in God could prevent patients' relatives from reporting patients' post-operative pain. Therefore, it is reiterated that an appropriate clinical guideline within the medico-socio-cultural context of this study should

recommend regular timely post-operative analgesics. Supporting data of this finding are quoted:

'I was praying that God should help her so that she returns safely; I was very scared because I have never seen one before; so I couldn't sleep in the night; so I came early at dawn and I met her on the ward; I was afraid she would die; because where I come from, some people went for an operation and never returned; so I was very scared; so when I came and she was able to talk to me, I was relieved; when she was able to look at me, I was relieved' (R11 - daughter).

'I was scared because if you are not favoured by God, you will go and not return; some people have lost their lives in the theatre so I was afraid; some people return safely; and none of my relatives has gone through an operation; ...I have not seen any operated patient in the family, so I was scared; but he came back successfully by the grace of God' (R7 - mother).

'I was very happy; I was very happy; I don't know, I was relieved; so far as she is alive, she can talk; she can smile, I realized that she was ok and I thank God' (R8 - fiancée).

'I reassured her by telling her that she should take it as one of her labour pains and she will be fine. She should trust in God' (R3 - daughter)

4.1.5.1.3 Commitment. The study further found that patients' relatives perceived post-operative pain as pain that could be relieved by drugs and they were therefore committed to buy prescribed drugs that would relieve their patients' pain. In this regard, patients' relatives made sure that they bought the drugs prescribed or waited to collect the drugs covered by the NHIS. In their commitment to ensure that prescribed drugs were purchased, some relatives who were financially handicapped slept in the hospital premises to save the money for a hostel cost on drugs. A relative (R6) who was a nurse indicated that apart from the prescribed drugs she bought, she bought extra paracetamol suppository for her father to use himself when he was in pain post-operatively. This implies patients' relatives were aware of inadequate post-operative pain management and took measures to ensure adequate pain relieve of patients. Thus, patients' relatives within the medico-socio-cultural context were perceived to ensure the comfort of their patients. Therefore, this study pre-supposes that patients' relatives would be committed to provide recommended analgesics post-operatively

in accordance to the specifications of the appropriate clinical guideline developed in this study.

'When she was in pain; I didn't do anything about it; I just make sure I buy the drugs prescribed so that she can have some relieve' (R12).

'Hmm, when I come and he is in pain, I ask him if they have given him his usual medication which I know contain pain killer; and I will sit by him and I will reassure him; according to him, if I am not around and he is in pain, he draws the attention of the nurses; sometimes I give him suppository; I even buy the suppository and put it in one of his drawer so that when he is in pain, sometimes he inserts it himself; the relatives should observe their patient well; and when they see that they are in pain, they should alert the nurses; the nurses should monitor the patient more and they can notice pain in patients' (R6).

'...so I sleep outside at a veranda near the Accident Centre; I sleep there with other relatives; fortunately, since we came, there has been no rain; in the morning we bath at the mothers' hostel; we use the mosquito repellent; we are a lot sleeping outside; when you go to the hostel available for renting, they charge 3 Cedis a day and I couldn't afford it; if I calculate, it is a lot and that may affect our ability to buy drugs; I have also made up my mind that whatever medicine they prescribe, I would endeavour to buy it so I didn't want to waste the money in renting a hostel' (R5).

Another dimension to the commitment of relatives was related to ensuring the comfort of patients post-operatively. Thus, relatives provided personal care ensuring that they were gentle and during the provision of care, they were confident that the patient could tell them about any problem than if it were a nurse. The relatives within the context of this study believed that patients feel depressed and sorrowful if nurses maintained their personal care and this feeling of depression could heighten any sensation of pain. The commitment to care and ensuring patients' comfort post-operatively was also seen to be related to organizational laxity where nurses were not performing self-care tasks as expected.

'I am happy to clean him myself; you see that he will be more comfortable with me than another person; when I do it for him, he is very comfortable' (R10).

'When she was operated, one morning, she asked me to clean her, which I did; it was the first time and I couldn't refuse; because there was nobody so I had to do it; but later, she has been doing it herself' (R12 – a husband).

'I came in sometimes to clean her up; there are times that I help the nurse since the patients are many and the time is short; so it's not a bad idea to help; so I come to

clean her. Another issue is that some patients feel depressed and sorrowful; and if nurses bath them, they feel they are dying; so if we the relatives come to clean our patients, I think it is ok. Even though it is the work of the nurse, some do not do it; so if I want to do that, I think I should be allowed' (R3).

A key informant (retired nurse educator –RNE) corroborated this finding in a follow-up interview.

'The Africans had their own system of caring for the sick which was predominantly women affair; decision about care is taken by the family and then people are kept at home and cared for by women. Then when the Europeans came with their institutional kind of nursing; whereby relatives were out of the system, nurses took full responsibility to give the succour that relatives give to the sick. It was done in such a way that the nurse as a carer in the hospital really provided that type of comfort that a patient needed from his family. Therefore, with time, they got adjusted to the nurse taking the place of a family member because in our tradition, it is the family member who cares for the sick. But, because the Europeans adjusted themselves to our cultural ethos, caring with all altruism – as we call it; nursing those days, it was the patient first before the nurse. So that commitment was there and the people saw it. So they could easily trust their patients to the nurses on the ward to care for them whilst they went home and then came during the visiting hours. But these days caring is not the same. Nurses in the system have decided to do - is it task sharing or job sharing? Some of the basic things that nurses should do they are looking up to the patient's family to come and do it. So the nursing now is not the same as what they did in the past if you care to know – there is a vast difference' (RNE).

The insight on commitment of patients' relatives in this study can be pursued in future studies to fully understand other factors that contributed to commitment of patients' relatives. In this study, commitment was influenced by ensuring comfort and nurses' inability to provide adequate patient care. This finding further demonstrates the multi-faceted factors that influence post-operative pain perception, response, and management within the medico-socio-cultural context of Ghana.

4.1.5.2 Factors that influence the perceptions of the multidisciplinary team and key informants. The study identified factors that influenced the perceptions of the multidisciplinary team and key informants. The multidisciplinary team included surgeons, anaesthetist, and pharmacist and key informants included traditional medicine specialists, nursing tutors, a nurse leader, retired nurses and a retired surgeon, and a student nurse. In this

study, key informants and the multidisciplinary team were interviewed to provide further insight into initial themes that were generated during the process of data analysis. Thus, the factors that were identified to influence their perceptions of post-operative pain management were experience and knowledge.

4.1.5.2.1 Experience. The multidisciplinary team and key informants within the context of this study perceived post-operative pain management based on the rich experience in their respective field of practice regarding managing patients with post-operative pain. The depth of experience gained by the multidisciplinary team and key informants culminated in perceptions that post-operative administration of pethidine would not lead to addiction. Also, it was realized that the multidisciplinary team perceived that Ghanaian post-operative patients generally did not request for analgesics as confirmed by this study. It is therefore important to seek the in-put of the multidisciplinary team and key informants on the clinical guideline developed in this study to ensure that their views and concerns are incorporated. The quotes stated demonstrate the depth of experience by some multidisciplinary team and key informants.

'Most patients assume that an analgesic is one of their medications that is supposed to be given to them; so they don't want to be seen as requesting for it; if the doctors ask how they feel, and they say 'I am fine'; ...I think it is our culture; we are always happy the way we are; ... 'oh, before I came to the hospital, I was in this condition and now that the surgery has been done, I think that my condition has been relieved a bit'; so that patient sees himself as being better off than when he came to hospital; or the pain was worse off but now it is much better; ...most of the time the drugs are given in the morning before the ward rounds and maybe the patient will not be in pain at that time; and they may feel the pain later in the day when nothing has been given' (CP – Consultant Clinical Pharmacist).

'...inadequate pethidine administration is because we have a lot of misconceptions about these opioid drugs; people are afraid that if we give, the patient will become addicted; and not breath well; but the truth is that if you work within the normal dose for that particular patient; you calculate the amount you need to give correctly, and you give it at the right frequencies, and you are monitoring, you shouldn't really have any problem; there are a few patients who may be extra sensitive to the opioid and may have some adverse reactions but that shouldn't be a cause for you to withhold the pain

medication from the patient; because pain causes a lot of complications and it doesn't help the patient to heal well after surgery, the patient is always lying in bed because he is afraid of movement triggering pain; so all of that can cause complications of blood clotting in the legs; and then having a thrombus thrown up into the lungs can be fatal; and it cost the hospital even more because the patient spends more time on the ward and that patient hijacks a bed which could have been free for somebody else to come for admission' (DA – Specialist Anaesthetist).

'...we tell the student nurses that nurses should consider every patient as a different social entity and because of that we emphasised on Individuality of Man; that they shouldn't compare that this 'Oh! 'Another patient had this condition and this is how we managed and you have the same condition and you are complaining of pain'; no; because everybody has his or her pain threshold; apart from that they need to understand that surgical pain is pain that you can't deny a patient or doubt; ...if you doubt what patient tells you, then you will mismanage patient's pain; but that does not also mean that you don't take precautions' (TS – Key Informant: Surgical Nursing Tutor).

4.1.5.2.2 Knowledge. In addition to experience, it was realized that the multidisciplinary team and key informants' perception about post-operative pain were influenced by the wealth of knowledge in their fields of practice. Thus, the participants reiterated the need for timely analgesia and discounted nurses' fear of addiction to pethidine among post-operative patients. Again, the need for incorporating the views of the multidisciplinary team and key informants was emphasized as interviews with the participants revealed that they had insight into post-operative pain management. It was again emphasized that an appropriate clinical guideline should have input from the multidisciplinary team and key informants within the medico-socio-cultural context of the study. However, it was realized that a key informant (student nurse) did not display the knowledge supposed to be impacted in class as shown by TS and DSN's quotation. The need for a future study on student nurses' knowledge on post-operative pain management is highlighted by this study to establish the knowledge gap of student nurses in this area. This study did not pursue this area further because the clinical guideline developed in this study is targeted at professional nurses.

'...we review the medication charts of patients to see whether they have been given the right doses, the right frequency, whether it is the right drug for the right patient; because if you are giving analgesia to a particular patient, you have to determine whether that particular drug is suitable for the patient; so we look at all of that; we look at the choice of medication for patients; we also consider the kinds of medication we have in the pharmacy and also recommend those drugs for the patients' (CP – Clinical Pharmacist).

'...we are involved in pain management from the intra-operative phase to the immediate post-operative period during the patients' stay at the recovery ward; after that most of the time, it is taken over by the surgeons; ...typically, what we do is we give parenteral opioids for most of the major surgical operations; we give it intramuscularly; a few patients depending on the type of surgery they've had and what we envisage to be the post-operative pain they will have; we may give perfusers of morphine set up on them post-operatively; some may also get epidural analgesia given to them if they can afford and we are able to see them pre-operatively plan for them (DA – Specialist Anaesthetist).

'...so what we tell students is 'you are not supposed to allow your patient to go through pain' and one way of assessing pain depends on where you find yourself; At the recovery room, they normally need to nurse a patient until the patient is recovered from anaesthesia before you start assessing for pain; ...can start to chat with him, find out the severity of pain and if the pain is severe and the vital signs are good, you use analgesics as prescribed which could be pethidine or morphine. But we normally tell them to pay particular attention to the patient pulse rate and then the respiration. For instance if the patient condition is not stable, but the patient is complaining of pain and the pulse rate is about 60 then you have to be very conscious and give half dose of what is requested. But even if you give this half dose and you continue to monitor the patient and maybe after 2 or 3 hours the patient still complain of pain you have to double the dosage'. (TS – Surgery Tutor: Diploma in Nursing).

'As a nurse you are not supposed to give the drug directly but to manage the patient with nursing care activities. So, if your nursing care fails, that is where you give medication; which is the last thing you do as a nurse or if the doctor is on the ward, then he can ask you to administer a drug' (DSN – Diploma in Nursing student).

Again, key informants indicated that deficits in budgetary allocation prevented in-service trainers to organize workshops for nurses to up-date their nursing skills such as up-dates on post-operative pain management. In view of these, the study identified the need for financial commitment by hospital management to organize regular up-date workshops for nurses to demonstrate the required knowledge and skills in post-operative pain management. It is hoped that the enhanced knowledge and skills of nurses would improve post-operative pain

management within the medic-socio-cultural context of this study. A key informant elaborated this finding:

'...the problem is that every year we have activities planned for the whole year but most of the time because workshops have to go with money, when our budgets are sent to management they are not approved early; and they approved only three workshops for the year. So after, we have to apply and see if they will get us money to run any other workshop we had planned; our activities normally start from the beginning of the year but because of late approval of our budgets we don't start early. Then we do not have the funds to operate on our own so we only do certain things that can be done without money; like students' orientation since we don't use any logistics for them as such' (NT – In-service Nurse Educator).

Also, some participants (R8 and R10) indicated that they took herbal or traditional medicine when they were in pain; and this led to the recruitment of key informants who were specialist in traditional medicine for further insight on this finding. It was revealed that there were herbal preparations for chronic pain; but there was no herbal medicine for post-operative pain. It was necessary to follow-up on this because an appropriate clinical guideline within the cultural setting of the study could incorporate both orthodox and non-orthodox analgesics if appropriate. More so, according to a key informant (TM1), the government of Ghana is in the process of incorporating traditional medicine into the main health care system to give patients avenues to choose their preferred form of treatment within the medical system in Ghana. The study therefore would omit traditional medicine from the systematic review and subsequent clinical guideline developed in this study. However, the study identifies the need for future collaborative studies on the use of herbal preparations for pain management. The quote supporting this finding from a doctor specialized in traditional medicine (TM2) gives more insight on this finding:

'Basically, we have a product for pain management which we mix decoctions from different plants or from a particular plant; even though for every plant, we use for a decoction for pain management, there is some research to show that this particular plant has components that are anti-inflammatory; so one major product that we use here is called Asena - it is a decoction comprising about 3 or 4 plants. But we use that product mostly for bony pain management; and there is another one mostly for soft

*tissue pain like menstrual pain, stomach pain; from a plant called Acacia Species that we have codified the name as NPK (Natural Pain Killer); ...So for now, that is the major 2 pain killers we have; we also use some of the products for other reasons because we know that the research behind them even though we know they are labelled for one particular thing, they can get secondary benefits and one of such products is Nibima from a plant, the scientific name is *Cryptolepis sanguinolenta*; *Cryptolepis* which is the scientific compound in this plant is a very good anti malaria chemical but we realized that there are other compounds in the same plants that have pain killing properties; so even when people are having severe headaches, we prescribe Nibima. We have another product we call Kampa tea from a plant which is very good for menstrual pain or dysmenorrhea; **but we don't have any product specifically for post-operative pain**; ... people come and they take herbal preparations; but depending on what they want we give them such as enema or oral; so we are flexible; because if we are so rigid, our patients will not be happy' (TM2 – Traditional Medicine Specialist).*

The contextual findings of this study have demonstrated that patients within the context of this study expressed pain both verbally and non-verbally and they exhibited individual differences in pain responses and effects. The patients' findings were consistent with the wider literature to a large extent. However, socio-cultural specific findings were the unlikelihood for patients to readily report pain and the patients' inadequate questioning about their care which resulted in lack of knowledge on post-operative pain management. Also, patients' previous surgical experience or encounter with a negative nurses' attitude influenced patients' response where some patients did not self-report pain to avoid the wrath of nurses. It was discovered that severity of pain is more heightened in the night rather than during the day in this study.

The study further established that nurses within the medico-socio-cultural context of this study perceived their patients' post-operative pain as an individual phenomenon. Thus, nurses within the context of this study responded to post-operative pain by the use of pharmacologic and non-pharmacologic measures. Analgesic such as pethidine was found to be inadequately administered as a result of fear of addiction, unavailability of the drug, and difficulty in contacting team doctors for prescription or to review patients in pain. Hence, some nurses were found to be committed to effective pain management and they 'borrowed' analgesics for

the patient or they used their discretion for an appropriate intervention. Also, nurses' response to pain was found to be influenced by organizational laxity where there was ineffective supervision, some nurses exhibited uncaring behaviour, and others loafed. The health professionals who did not work as expected were not held accountable for their behaviour. In addition, ward rounds were observed to be less inclusive and the nurses were usually not involved in pain management decisions. Pharmacists and anaesthetists were also not routinely involved in the management of post-operative pain on the surgical ward.

The study further established that patients' relatives were influenced by empathy, faith, and commitment to ensure that their patients had safe surgery and were relieved of post-operative pain. Also, the multidisciplinary team and key informants in this study demonstrated experience and knowledge in their respective fields of practice that showed insight in post-operative pain management. The findings were corroborated and validated within the confines of the study to ensure trustworthiness of findings.

Subsequently, the establishment of contemporary recommended post-operative pain management applicable to the context of the study would be obtained following a systematic review of the relevant literature in this study. The findings from the systematic literature review and the contextual findings are necessary to answer research question six – 'What clinical guidelines would be appropriate for post-operative pain management in the Ghanaian medico-socio-cultural context?'

4.2 Findings of Systematic Literature Review

This section presents the findings of the systematic review undertaken in this study. As indicated in the previous chapter, the research question of the review modified after an initial search did not yield any articles. The modified research question was 'what measures ensure effective post-operative pain management among adult surgical patients in a resource

limited environment'. The context of the study influenced the modification of the questions to a large extent because the study aims to develop an appropriate clinical guideline.

4.2.1 Excluded studies. As indicated earlier in chapter three, nine (9) studies were identified out of which eight (8) were excluded following a critical independent review of the abstracts. The studies excluded at this stage and the reasons for their exclusion are indicated in table 11.



Table 11: Studies excluded at the stage of abstract review

Author/year	Aim and method	Conclusion	Reason for exclusion
Good et al, (1999)	Determined the effect of jaw relaxation, music, and combination of relaxation and music on post-operative (postop) pain after major abdominal surgery during ambulation and rest on post-operative days one (1) and two (2). Method: randomized controlled trial (RCT) with intervention taught during the pre-operative (preop) period.	A decrease in mastery of intervention from pre to postop ambulation suggests the need for reminders to focus on intervention during ambulation. Music and relaxation should be used as adjuvants to medication for post-operative pain (POP).	Music and relaxation techniques are not routine practices for pain management in the Ghanaian clinical setting
Closs, Briggs, & Everitt, (1999)	Introduced and evaluated a research-based intervention to improve night-time pain management among orthopaedic patients. Method: Intervention study; involving provision of patient information and the introduction of structured night-time assessment by a local opinion leader.	Intervention was associated with statistically significant reduction in both average and worst overnight pain scores. The intervention required an investment in educational support but no additional resources were needed for the successful reduction in pain scores	Setting of study was among orthopaedic patients which could have different pain profile from that of general surgery as in this study.

Author/year	Aim and method	Conclusion	Reason for exclusion
Good et al., (2001)	Investigated the effect of relaxation, music, and the combination of relaxation and music on POP across and between two (2) days and two (2) activities (ambulation and rest) and across ambulation each day. Method: repeated measures design involving preop teaching of intervention.	Nurses can recommend relaxation and music for POP during both ambulation and at rest because these interventions were found effective for pain relief across ambulation and rest for each day	Music and relaxation teaching are not practiced in the clinical setting of this study
Bardiau, Taviaux, Albert, Boogaerts, & Stadler, (2003)	Evaluated the results of a continuous quality improvement programme by defining quality indicators and using quality tools. Method: Intervention study by implementing a nurse-based anaesthesiologist supervised acute pain service (APS)	A major improvement was observed after the inception of the APS	There is no APS within the context of this study.
Roykulcharoen & Good, (2004)	Examined the effects of a systematic method of relaxing the body on the sensory and affective components of POP anxiety and opioid intake after initial ambulation Method: RCT involving fifteen (15) minutes systematic relaxation and control group	Substantial reductions in the sensation and distress of pain were found when postop patients in Thailand used systematic relaxation	Systematic relaxation is not practiced in the Ghanaian clinical context for the management of POP.

Author/year	Aim and method	Conclusion	Reason for exclusion
Seers, Crichton, Carroll, Richards, & Saunders, (2004)	Assessed the effects of implementing an evidence-based approach to POP. Method: RCT; intervention involved implementation of an oral analgesic algorithm derived from systematic reviews.	No effects were found on pain with the intervention implemented.	Some of the analgesics specified in the study are not available in the clinical setting of this study such as Rofecoxib, Ketorolac and Piroxicam.
Arya, Abdollahi, Golalipour, Kazemnezhad, & Mohammadi, (2007)	Compared analgesic effects of intramuscular (IM) pethidine to diclofenac sodium (Na), and indomethacin suppositories. Method: semi-experimental clinical trial among patients with unilateral inguinal hernioplasty.	Indomethacin and diclofenac Na suppositories are good substitutes of IM pethidine to relief post-operative pain during the first post-operative day.	Indomethacin is not used for post-operative pain management within the context of the study. Also, assessing pain first two hours after surgery in the study could mean the patient is still at the recovery ward or intensive care unit (ICU) which does not apply to this study.
Wong, Chan, & Chair, (2010)	Examined the effectiveness of an educational intervention in improving outcomes pain barrier score, pain level, and analgesic use among Chinese patients with limb fracture who had undergone surgery. Method: quasi experimental design	Cognitive behavioural approach educational intervention (CBEI) may play substantial role in better pain control; there was reduction in pain the first seven (7) days after orthopaedic surgery.	The CBEI is not practiced in the Ghanaian clinical setting and also took 30 minutes to teach which could be a hindrance. Application of the CBEI among non-orthopaedic patients such as in this study may yield a different result.

4.2.2 Included study. The one (1) article that was selected to progress to the next stage of the review was read thoroughly and data was systematically extracted drawing from the work of previous researchers (Rolls & Elliott, 2008). The independent data extracted was compared to that of research supervisor and any discrepancy was resolved through dialogue. The data extracted is presented in table 12:



Table 12: Data extracted from selected study

Author and year	Objective (s) of study	Design and sampling	Participants (no./age)	Setting	Interventions	Findings	Conclusions
Mac Lellan, (2004a)	To introduce a nurse-led intervention to improve pain management after surgery and evaluate its effectiveness by measuring patients' pain scores.	Experimental (pretest-post-test); conducted in three (3) phases Sampling: Convenient sampling	800 male and female patients – 200 pre-intervention and 200 post-intervention in each hospital. Patients had different surgeries such as urological, gynaecologic, orthopaedic, and general surgery.	Two (2) teaching hospitals in Ireland; the 2 hospitals were studied prospectively	Education for nurses in the form of short pain courses. Introduction of regular pain assessment Profiling of pain at hospital level	Pain score reduction in the order of 0.73cm (7.3%) on a visual analog scale (VAS) 0 to 10cm, was statistically significant for day of surgery and 2 days postop ($p = 0.05$) in the intervention hospital. A reduction was not seen in the control hospital.	Introduction of nurse-led intervention reduced patients' pain scores

4.2.2.1 Appraisal of the included study. The study was designed to include a control group or hospital which helped to show that the nurse-led intervention resulted in a significant reduction of pain scores after surgery. It was also reported that pain scores were not compared between the two hospitals. Also, pain scores within one hospital did not show any differences in relation to type of operation, age and gender of the patient. Thus, the different hospital, type of surgery, age, and gender of the patients were not considered confounding variables.

Also, the study involved patients with diverse surgical procedures such as general surgery, urology, orthopaedics, and gynaecology as these surgical procedures apply to the context of the current study. Although pain experience among patients with these procedures may differ, the author showed that there was no significant difference among patients. In the Ghanaian clinical context of this study, patients on the same ward had different surgeries and the contextual findings established earlier in this chapter that pain is an individual experience. Therefore, the diverse surgical procedures in the selected study were not seen as a limitation.

Pain assessment was done every three (3) hours and there was no indication of what informed the three hourly assessments. Also, the researcher and assistant assessed pain and it was not clear how inter-rater validity was ensured. Again, it was not indicated if pain was assessed by one researcher/research assistant in each hospital. Therefore, assessment of pain could be biased. Also, it was realized that education could be given to patients and perhaps it could have improved pain management further.

The education of nurses involved pharmacology and patient controlled analgesia (PCA); however, there was no indication of what analgesics were used in the two hospitals and whether the hospitals employed PCAs in POP management. Mac Lellan, (2004a) was selected for further review because it was not clear if the hospitals involved in the study used

drugs that were not available in Ghana or PCA was used for the management of patients post-operatively. An attempt to get clarification from the author proved futile as an email sent to the author could not be delivered. Hence, the specific nurse-led intervention reported focusing on Education for nurses in the form of short pain courses; Introduction of regular pain assessment; and Profiling of pain at hospital level informed the inclusion of the study in the systematic review in this study.

The appraisal of the study was discussed with research supervisor to ensure that interpretations of the included study were fair and exhaustive. Following the appraisal of the study, it was realized the included study may not satisfy the context specific findings of this study. As a result, an appropriate clinical guideline for the Ghanaian context could not be developed from the findings of Mac Lellan, (2004a). Therefore, through further focused review of the literature and subsequent discussions with an expert and supervisor, a decision was taken to draw from other relevant systematic reviews (SR), randomised controlled trials (RCTs) and studies that can be applied in the local clinical environment. The reference to this decision was that systematic reviews are considered the highest level of evidence in health research followed by RCTs. The levels of evidence for various research designs are delineated in chapter two. Also, it is necessary to draw on scientific evidence in the development of a clinical guideline (NICE, 2011).

4.2.3 Focused review. Further, in a previous literature review in this thesis (chapter two), it was realized that contemporary POP management employs pre-emptive analgesia, combination or multimodal analgesia, and administering regular doses of analgesia around the clock. These measures could be applied in the local setting of this study even though contemporary gadgets used in managing post-operative pain such as PCA and epidural catheter are unavailable. Also, the importance of education for health professionals and

patients has also been confirmed to enhance POP management. Hence, table 13 shows some of the studies that investigated contemporary measures of post-operative pain management which informed the development of the clinical guideline in this study. The key studies identified were further appraised to assure their quality and rigour. The appraisal of the studies also helped to give further scientific grounding to the clinical guideline developed in this study.



Table 13: Key studies informing context appropriate POP management guideline development

Author (s)/year	Aim	Findings/conclusion	Contemporary measure recommended	Other Authors Advocating approach
Joshi, Rawal, Kehlet & The PROSPECT collaboration, (2011)	Systematic review (SR) to evaluate the available literature on the management of pain after open hernia surgery	Field block with or without wound infiltration, either as a sole anaesthetic/analgesic technique or as adjunct to general anaesthesia is recommended to reduce post-operative pain (POP).	Pre-emptive analgesia reduces POP	(Coughlin et al., 2010; Hasani, Maluku, Sallahu, Gashi, & Ozgen, 2011; McCance, McKenna, & Boore, 1999)
Fredericks, Guruge, Sidani, & Wan, (2010)	SR to examine who would most benefit from postop education, type or approach, and dose of education.	Delivery of postop patient education through the individualization of content, use of combined media for delivery, provision of education on a one-on-one basis, and in multiple sessions is associated with improvement in educational or health outcomes	Patient education improves health/education outcomes such as better POP management	(Chen, Ma, Chan, & Oh, 1998; Entwistle & Watt, 2006; McCaffery & Pasero, 1999; Pasero & McCaffery, 2011).

Author (s)/year	Aim	Findings/conclusion	Contemporary measure recommended	Other Authors Advocating approach
Cummings et al., (2010)	SR to examine the relationships between various styles of leadership outcomes for the nursing workforce and their work environment	Leadership styles that focused on people and relationships (transformational, resonant, supportive, and consideration) were associated with nurse job satisfaction and leadership styles focused on task (dissonant, instrumental, and management by exception) were associated with lower nurse job satisfaction.	Emphasizes effective leadership improves workforce	(Den Hartog, House, Hanges, Ruiz-Quintanilla, & Dorfman, 1999; Simosi & Xenikou, 2010)
Jirarattanaphochai & Jung, (2008)	SR to assess the efficacy and safety of non-steroidal anti-inflammatory drugs (NSAIDS) in addition to analgesics on POP management in lumber surgery	Meta-analysis provides evidence that the addition of NSAIDS to opioid analgesic in lumber surgery provided better pain control than opioid analgesics alone	Combination or multimodal analgesic is better than single analgesic therapy	(Bardiau et al., 2003; Costantini, Affaitati, Fabrizio, & Giamberardino, 2011; Daniels, Goulder, Aspley, & Reader, 2011; Knottenbelt, van der Westhuizen, & Griffith, 2007)

Author (s)/year	Aim	Findings/conclusion	Contemporary measure recommended	Other Authors Advocating approach
Paice, Noskin, Vanagunas, & Shott, (2005)	Quality improvement study to determine the efficacy and safety of scheduled dosing of opioid analgesics among patients on the medical unit.	Scheduled dosing was associated with decreased pain intensity ratings; there is no difference in adverse events between the scheduled and the PRN groups. Thus, scheduled dosing of opioids provides improved analgesia with no increased risk of adverse events among inpatient medical patients.	Scheduled dosing of opioids provides more stable plasma levels of the opioid administered rather than a PRN administration.	(Flory, Fankhauser, & McShane, 2001; McCaffery & Pasero, 1999; Pasero & McCaffery, 2011; Pillai Riddell & Craig, 2003)
Meterko, Mohr, & Young, (2004)	Quantitative study to investigate the relationship between team work culture of hospitals and patients' satisfaction with care received	Team work culture for hospitals is positively associated with patients' satisfaction. Thus, health care organizations should develop a culture that emphasizes team work and limit aspects of bureaucracy that do not assure efficiency and quality care.	Highlights the relevance of team work in health care.	(Hartog, Rothaug, Goettermann, Zimmer, & Meissner, 2010; McCaffery & Pasero, 1999; Pasero & McCaffery, 2011; Andrew Vickers, 2010)

4.2.3.1 Appraisal of key studies that informed POP management clinical guideline.

Although systematic reviews are considered the highest level of evidence, it is realized that a poorly conducted systematic review does not give grounding for an evidence-based care. Thus, a review of standards for the assessment of the quality of studies revealed that validated measures exist for assessment of systematic reviews such as Quality of reporting of meta-analysis (QUORUM) recommendations (Moher et al., 1999) and the Preferred reporting items for systematic reviews and meta-analysis (PRISMA) guidelines (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009). Also, there is an assessment criterion for clinical trials – Consolidated standards of reporting trials (CONSORT) statement recently updated in 2010 (Schulz, Altman, & Moher, 2010).

The key systematic reviews delineated that involved RCTs were evaluated against the standards and were found to be credible according to QUORUM and PRISMA guidelines. However, specific signposts of the key studies are highlighted as a basis for using the findings to guide the development of clinical guideline for post-operative pain management in this study.

Joshi, Rawal, Kehlet & The PROSPECT collaboration, (2011): The systematic review involved the Procedure-specific post-operative pain management (PROSPECT) working group. The group is a collaboration of surgeons/surgical scientist and anaesthetists who aim at formulating pain management recommendations for specific surgical procedures. The review searched only EMBASE and MEDLINE limited to studies in English and among humans. The search for articles in this review is considered inadequate even though 79 articles were included. However, the PRISMA guidelines were followed and there was in-depth analysis of findings. The review focused on pain scores and additional analgesic requirement after only open hernia surgery. The review substantiated the use of anaesthetic

techniques such as field block or wound infiltration to reduce post-operative pain. It is recognized that intra-operative pre-emptive analgesic intervention through effective collaboration between the anaesthetists and the surgeon in the local clinical environment could result in effective post-operative pain management.

Fredericks, Guruge, Sidani, & Wan, (2010): The review showed evidence of extensive search and 58 articles were included. Primary studies were RCTs, experimental or quasi-experimental where there was an intervention group and a control group. The patients were adult post-operative patients 18 years and older. The review did not focus only on post-operative pain education but findings have relevance for post-operative pain management education. Also, the review did not specify independent selection of studies and data extraction which is seen as a source of bias (O'Mathúna, 2010). Lack of knowledge among post-operative patients in the local context inadvertently calls for patient education. The confirmation that patient education leads to improved health outcomes which would include effective post-operative pain management makes the review an important evidence for patient care.

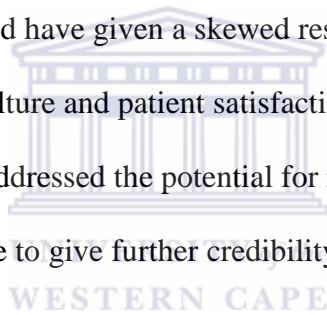
Cummings et al., (2010): The systematic review searched ten electronic databases and included published articles in English that were quantitative and measured one or more outcomes of nursing leadership. The review generated 34, 664 articles and only 53 were included. The included studies were reviewed twice to confirm their suitability and avoid selection bias. The individual studies included in the review employed correlational, non-experimental, or cross-sectional designs and there was no study that adopted a RCT. The lack of RCT implied that there was minimal control of extraneous variables. The review also did not include qualitative studies and perhaps the depth of participants' feelings to various types of leadership styles could present a different finding. However, the review involved majority

of studies (46) that used theory to guide the research process. The theory-guided approach to the individual studies strengthened the rigour and methodology of the studies.

Jirattanaphochai & Jung, (2008): The systematic review showed evidence of extensive search and there was no language restriction during the search. The RCTs included were restricted to that of humans and were double-blinded. The review adhered to the QUOROM recommendations and authors of primary studies were contacted for further information as necessary. The review generated only 17 RCTs and pooled data resulted in some heterogeneity and this was considered a weakness of the study. However, the review was compared with other systematic reviews and RCTs and was found to be congruent with the previous studies that addition of NSAIDS to opioid analgesic provides better post-operative pain control among patients with lumbar surgery. It was observed in the local setting of this study that surgeons prescribed both opioid and NSAIDS analgesics among patients with general surgery. The key systematic review gives scientific bases for this mode of analgesic prescription.

Paice, Noskin, Vanagunas, & Shott, (2005): The quality improvement study designed with an intervention group and a control group among medical patients. On the intervention ward, analgesics were prescribed to be given at regular intervals around the clock, nurses and doctors were educated and there were reminders on the ward which were easily visible to the healthcare professionals. Nurses and doctors at the control ward did not receive any education or reminders. Bias was minimized by ensuring that research assistants who collected data were not involved in the care of patients on the two wards. However, the number of patients involved in the study was considered inadequate (50 patients for intervention and 55 patients in the control group) to draw meaningful conclusions.

Meterko, Mohr, & Young, (2004): The hospitals (Veterans Health Administration – VHA) involved in the study had similar administrative and financial management and took care of eligible US veterans. Participants from similar VHA hospitals minimized inter hospital bias in the study. Survey questionnaires were mailed to respondents and response rate was considered adequate for group comparisons. Four cultural dimensions investigated among health professionals in the study were teamwork, entrepreneurial, bureaucratic, and rational. Also, patient satisfaction was investigated by the use of data from VHA national database and questionnaire was mailed to participants. Psychiatric patients were not included in the study to avoid bias. The study identified a limitation of generalizing the findings to hospitals that are privately managed. Also, respondents (patients and health professionals) who participated in the study could have given a skewed response that supported positive association between teamwork culture and patient satisfaction. However, the independent data source utilized in the study addressed the potential for response bias. Also, standard rigorous analysis of data was done to give further credibility to the findings of the study.



4.2.4 Summary of scientific evidence and contextual findings. There is paucity of research in Africa and resource limited clinical setting that employed designs that investigated POP management measures that are effective such as experimental or quasi-experimental designs. In view of this, the study drew from other relevant studies that could be applied within the local clinical context following a focused review. The contemporary measures of POP management that can be applied within the local context to enhance pain management include provision of relevant information and education for patients and health professionals such as nurses. Also, effective teamwork among health professionals promotes POP management. The use of two or more analgesics for the management of POP is deemed effective and minimizes the side-effects of single analgesics such as opioid analgesics. It is

also beneficial to administer analgesics at regular intervals within the 24-hour period rather than wait for patients to report pain before administering analgesics. Thus, pre-emptive analgesia is recommended in contemporary POP management where analgesics are administered before or during surgery to prevent patients from experiencing severe POP. Further, the application of the appropriate leadership style that focuses on people and relationships enhances the achievement of care objectives which may include effective POP management. Thus, the single study identified in the systematic review employed effective leadership and education for nurses to enhance POP management. Also, non-pharmacologic measures are used as adjuncts to POP management. The key studies identified and that of the systematic review gave an appropriate scientific basis for the development of a clinical guideline in this study.

The contextual findings of this study demonstrated that patients within the context of this study expressed pain both verbally and non-verbally and they exhibited individual differences in pain responses and effects. The patients' findings were consistent with the wider literature to a large extent. However, socio-cultural specific findings were the unlikelihood for patients to readily report pain and the patients' inadequate questioning about their care which resulted in lack of knowledge on post-operative pain management. Also, patients' previous surgical experience or encounter with a negative nurses' attitude influenced patients' response where some patients did not self-report pain to avoid the wrath of nurses. It was discovered that severity of pain is more heightened in the night rather than during the day in this study.

The study further established that nurses within the medico-socio-cultural context of this study perceived their patients' post-operative pain as an individual phenomenon. Thus, nurses within the context of this study responded to post-operative pain by the use of

pharmacologic and non-pharmacologic measures. Analgesic such as pethidine was found to be inadequately administered as a result of fear of addiction, unavailability of the drug, and difficulty in contacting team doctors for prescription or to review patients in pain. Hence, some nurses were found to be committed to effective pain management and they ‘borrowed’ analgesics for the patient or they used their discretion for an appropriate intervention. Also, nurses’ responses to pain were found to be influenced by organizational laxity where there was ineffective supervision, some nurses exhibited uncaring behaviour, and others loafed. The health care professionals who did not demonstrate caring attitude as expected were not held accountable for their behaviour. In addition, ward rounds were observed to be less inclusive and the nurses were usually not involved in pain management decisions. Pharmacists and anaesthetists were also not routinely involved in the management of post-operative pain on the surgical ward. Pain was managed primarily by pharmacologic (opioid and non-opioid) and non-pharmacologic (positioning and reassurance) measures.

The study further established that patients’ relatives were influenced by empathy, faith, and commitment to ensure that their loved ones had safe surgery and were relieved of post-operative pain. Also, the multidisciplinary team and key informants in this study demonstrated experience and knowledge in their respective fields of practice that showed insight in post-operative pain management. These findings were corroborated and validated within the confines of the study to ensure trustworthiness of findings.

4.3 Clinical Guideline for Acute Post-Operative Pain Management

This section entails the outcome of a clinical guideline development process adopted in this study. The section highlights the framework for the clinical guideline and states the clinical guideline developed.

4.3.1 Introduction. The findings of the systematic review, drawing from other studies, and the contextual factors emanating from the ethnographic exploration served as sign-posts in drafting the clinical guideline for post-operative pain management in this study. Subsequently, the draft clinical guideline was reviewed by study participants, technical expert team from the hospitals involved in the study, an external expert (pain consultant), and a panel of all relevant stakeholders. The input reviewers ensured that the clinical guideline for post-operative pain incorporated the current evidence of pain management and that it is contextually appropriate for Ghana (Hewitt-Taylor, 2004; Keeley, 2003; NICE, 2011; Rolls & Elliott, 2008; Rycroft-Malone, 2001; SIGN, 2004; AGREE Collaboration, 2004). Also, the guideline drew from existing clinical guidelines on acute pain management in other countries such as USA, Australia and New Zealand, UK, and Canada, (American Society of Anaesthesiologists (ASA), 2012; Australian and New Zealand College of Anaesthetists (ANZCA), 2010; European Association of Urology, 2010; The British Pain Society 2007).

The guideline was developed following a review of existing format and content of previous clinical guidelines (NICE, 2011; Pasero & McCaffery, 2011). The aim of the study was not to re-invent the wheel but develop an appropriate guideline that can fit the medico-socio-cultural context of Ghana as recommended by WHO, (2007). Hence, the appropriate guideline is made up of four (4) main statements or dimensions:

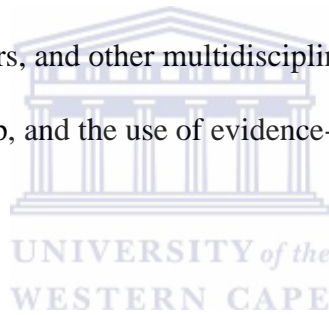
1. Patient and family require adequate information and education on post-operative pain management
2. Effective team work is required between nurses, doctors and other health team members regarding post-operative pain management
3. Input and monitoring from hospital management and departmental leadership is required to achieve effective pain management

4. Evidence-based contemporary recommendations for post-operative pain management should be employed

4.3.2 The framework within which to describe the guideline and the content

statements. The framework for the effective management of post-operative pain is made of four equally important anchors and these form the basis of pain management. The framework holds that the inability to effectively integrate one anchor during post-operative pain management would result in an instability and hence ineffective pain management. Therefore, it is paramount that all the four anchors of the clinical guideline are fully integrated to achieve the desired pain management outcomes.

Thus, the framework integrates the need for patient and family education, effective team work between nurses, doctors, and other multidisciplinary team, input and monitoring by the hospital and unit leadership, and the use of evidence-based contemporary measures of post-operative pain management.



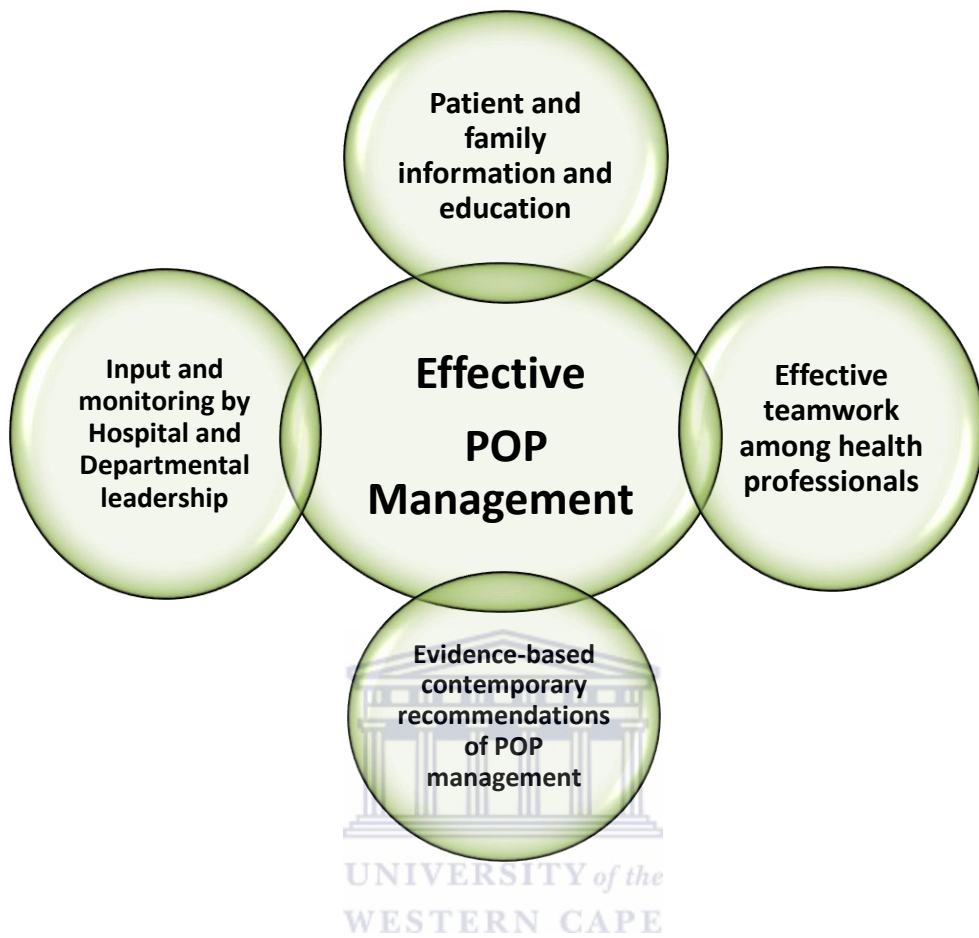


Figure 3: Framework for clinical guideline for post-operative pain management

The framework for the context specific clinical guideline shows the inter-relationship of all four anchors of the POP management; hence, the inter-sections in figure 3. The effective POP management within the local context requires that all the four dimensions of the guideline are involved. The diagram for the framework was adopted from designs of Microsoft Office 2010 called Radial Venn. The central concept of the Radial Venn is congruent with the concept of inter-relationship of the four areas of the clinical guideline developed in this study. The Radial Venn is used for both overlapping relationships and their relationship to a central idea in a cycle. Hence, the diagram is appropriate for the framework of a post-operative pain management guideline in this study. It is emphasized that the four dimensions of the guideline inter-relate with each other to achieve effective pain management. Context specific consensus statements that substantiate the four dimensions of the guideline are delineated in Boxes 1, 2, 3, and 4.

4.3.3 Key guideline statements and component statements. The complete clinical guideline document is described in Appendix 16. The four main statements that support the framework with their context specific statements are presented as follows:

1. PATIENT AND FAMILY REQUIRE ADEQUATE INFORMATION AND EDUCATION ON POST-OPERATIVE PAIN MANAGEMENT

This section is targeted at patients who undergo general surgery and their families within the context of this study. POP management information or education should be provided pre-operatively and reinforced post-operatively in the appropriate language to patients and family for scheduled surgeries and as soon as patient's condition permits after undergoing emergency surgery. The appropriate version (Twi or English – see Appendix 17 for Twi version) of the written patient and family education form should be given to the patient and family at the time of explanation or as soon as possible so that they can refer to it as

necessary. During the education, the health care provider should use the desired or appropriate words within the socio-cultural context such as ‘please’ and ‘thank you’ to enhance effective communication between the health care provider and the patient/family.

Box 1: Consensus guideline statements on patient and family information and education

1. Pain is a personal and individual experience, and it is important to tell the nurses or doctors about the severity and duration of your pain to ensure the best treatment is given.
2. Your nurses and doctors are committed to providing you with the safest and most effective post-operative pain management available. Do not think that reporting your pain is a bother to the nurses and doctors.
3. Talk about your pain management with the nurses or doctors so that whatever concerns or questions you have about pain will be answered. Always report before your pain is severe, because severe pain can delay recovery and affect other aspects of your health.
4. Ask the nurses or doctors what kind of pain medicine you will be given and how often you can take each of them so that you can help keep your pain under control by asking for the pain medicine on time. Also ask about the possible side-effects of your pain medicines.
5. Remember that it is important to ask everything you can about your pain medicine because taking the right pain medicine in the right amount and in regular doses will help you feel more comfortable so that you can heal and recover faster.
6. You may not be able to eat or drink right after surgery, so you may be given pain medicine in the form of an injection (needle) or inserted in the anus; but as your

condition improves, your pain medicines may be given by mouth (swallowed).

7. It is important to take your pain medicine so that you can be comfortable enough to deep breathe, turn, and walk. Tell the nurses or doctors if you have a problem with pain medicine that is provided so that an alternative may be given.
8. Ensure that if prescriptions for pain-medicines are given to you, the drugs are made available so that the nurses can give you at the right time. Pain after an operation is best treated with pain medicines.
9. Family members who notice relations are in pain should report to the nurses or doctors and to do so before pain becomes severe.
10. Do not allow anyone other than the nurses and doctors to give you any medicines while you are in the hospital.

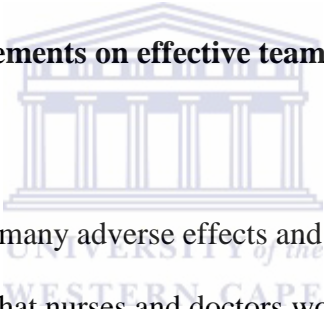
If you require more information about post-operative pain management contact your nurses and doctors.



2. EFFECTIVE TEAM WORK IS REQUIRED BETWEEN NURSES, DOCTORS AND OTHER HEALTH TEAM MEMBERS REGARDING POST-OPERATIVE PAIN MANAGEMENT

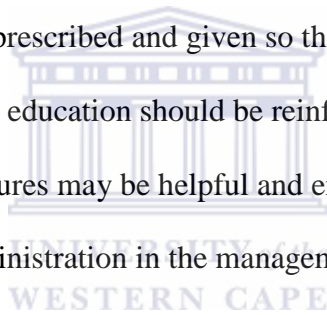
The statements are targeted at nurses, doctors and other health team members on the surgical ward within the context of this study where the post-operative patient is mostly brought to the ward awake and in a stable condition. A copy of this document should be available on the ward to ensure that new health care personnel have easy access to the information. Its' availability on the ward will also serve as reminders for nurses and doctors. The statements were developed from contextual findings in this study and they are not meant to over-ride the professionals' clinical judgement in the management of individual patients.

Box 2: Consensus guideline statements on effective team work

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1. Unrelieved pain produces many adverse effects and can negatively impact patient outcomes. It is important that nurses and doctors work together to ensure that patients' pain management needs are met so that patients can deep breathe, cough, turn, and walk safely after surgery.
 2. Pain is a subjective and individual experience, and the patient is the best judge of his or her own pain. Nurses and doctors should encourage patients to promptly report pain so that appropriate or individualized actions can be taken to relieve it.
 3. The doctor and other health personnel (as allowed by the institution) are responsible for prescribing appropriate analgesics in the patients' folder, on the treatment chart, prescription form, or the National Health Insurance (NHI) medication form as necessary.

4. Doctors and nurses share the responsibility for providing the patient and family with adequate information about how post-operative pain will be managed and to involve them in pain management decisions to enhance their co-operation
5. Doctors, clinical pharmacists and ward in-charges should follow-up on prescribed analgesics and ensure that the patient receives the prescribed dosage of analgesics. Deficits (missed-dose or under-dose) should be promptly investigated and corrected
6. Anaesthetist and clinical pharmacist should be actively involved in the management of patients' pain.
7. Although the patient's report of pain is the gold standard of pain assessment, there may be non-verbal cues of pain (e.g., grimacing, bracing, moaning, and change in activity) that nurses and doctors may observe. These non-verbal pain cues should be looked out for and investigated and addressed
8. Opioid analgesics should never be withheld because of fear of addiction. The risk of addiction when opioids are taken for post-operative pain relief is extremely rare. If pain persists beyond expected duration and severity depending on the type of surgery, then it should be investigated.
9. It is important to keep pain at the level that will allow patients to participate in recovery activities with relative ease. Waiting for patients to report severe pain is strongly discouraged; severe pain can be avoided by ensuring that all post-operative patients are given the right analgesic at the right time.
10. Pain is often worse at night. A doctor should be available or easily accessible during the night to enhance effective pain management during this time. Nurses should ensure at all times that patients are given all their prescribed analgesics and patients are monitored for pain and the safety of the prescribed analgesics.

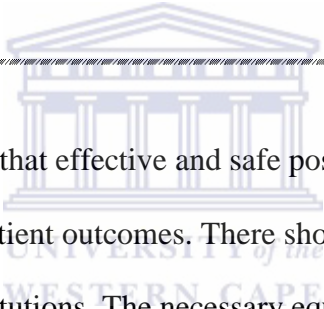
11. Nurses should effectively document and inform the other team members about their patients' pain reports and other pain management concerns raised by patients and their families to afford continuity of care.
12. Nurses and other team members should regularly up-date their knowledge on pain management (e.g., pain assessment and analgesics) so that they will be more confident in their pain management activities. The team should also regularly evaluate their patient care objectives or goals.
13. Uncontrolled pain requires immediate attention. Pain management protocol should be established to enhance patients' pain management.
14. If a patient refuses an analgesic by a particular route, an alternative route of administration should be prescribed and given so that the patient will not suffer unduly. Pain management education should be reinforced in such cases.
15. Non-pharmacologic measures may be helpful and encouraged to supplement but not replace analgesic administration in the management of post-operative pain



3. INPUT AND MONITORING FROM HOSPITAL MANAGEMENT AND DEPARTMENTAL LEADERSHIP IS REQUIRED TO ACHIEVE EFFECTIVE PAIN MANAGEMENT

This section of the guideline is targeted at the leadership of the hospital both at the departmental level and at the hospital level to ensure effective post-operative pain management on the ward.

Box 3: Consensus guideline statements on leadership input and monitoring

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1. Leadership should recognize that effective and safe post-operative pain management will improve patient outcomes. There should be pain management policies in all healthcare institutions. The necessary equipment should also be provided to enhance the management of post-operative pain.
 2. Leadership should be responsible for providing pain management education for the team (i.e. Doctors, nurses, pharmacists, physiotherapists etc.) This is accomplished through organization of initial and regular up-dates.
 3. Leadership should ensure that all policies are strictly adhered to and all violations sanctioned appropriately
 4. Leadership should ensure regular audit/evaluation of pain management and dissemination of results to all concerned.
 5. Leadership should ensure regular departmental clinical meetings on pain

management

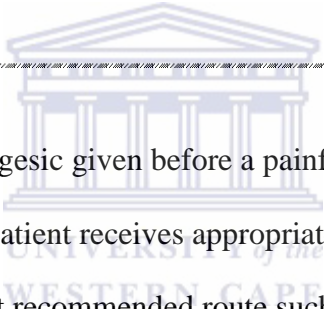
6. Leadership should institute award schemes to deserving health teams/individuals in pain management
7. Leadership should ensure the proper storage and documentation of use of narcotic drugs in all units/departments
8. There should be hospital based research committees to facilitate research at the hospitals. Findings from research should be implemented into practice, e.g., the use of a validated and reliable self-report pain assessment tool.
9. Leadership should establish a complaints system and information/education units in all Units/departments to encourage feedback from clients on pain management



D. EVIDENCE-BASED CONTEMPORARY RECOMMENDATIONS FOR POST-OPERATIVE PAIN MANAGEMENT SHOULD BE EMPLOYED

At the time of developing this clinical guideline, the recommended post-operative management strategies that can be used within the context of this study identified through extensive literature review were: Pre-emptive analgesia, multimodal analgesia, and time-scheduled analgesic administration. Hence, the following statements are grounded in these well researched concepts of post-operative pain management.

Box 4: Consensus guideline statements on evidence-based recommendations

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1. Pre-emptive analgesia (analgesic given before a painful stimulus) – the anaesthetist should ensure patient receives appropriate analgesic whiles in the operating theatre by the best recommended route such as rectal, intrathecal, or intravenous and should suggest the surgeon infiltrate the surgical site with appropriate analgesic or local anaesthetic.
 2. Multi-modal analgesia (using two or more forms of analgesic concurrently, e.g., nonopioid + opioid + local anaesthetic) is the recommended approach to the management of post-operative pain. Surgeons should ensure that different forms of analgesics are prescribed to enhance their synergistic effect. Pharmacists should supply the correctly prescribed medication and nurses should administer all of the analgesics as prescribed.
 3. Time-scheduled analgesic administration (giving the analgesics according to the

time prescribed regularly) is recommended. Surgeons should prescribe the regular administration of analgesics, clinical pharmacists should ensure the availability of prescribed analgesics, and nurses should administer analgesic at regular intervals around-the-clock as prescribed.

4. Non pharmacological methods of relieving pain such as early mobilization, passive mobilization, positioning, and other appropriate measures should be used as adjuncts to analgesic administration for post-operative pain management.

The foot-prints of the study that culminated in the appropriate clinical guideline is shown in figure 4.



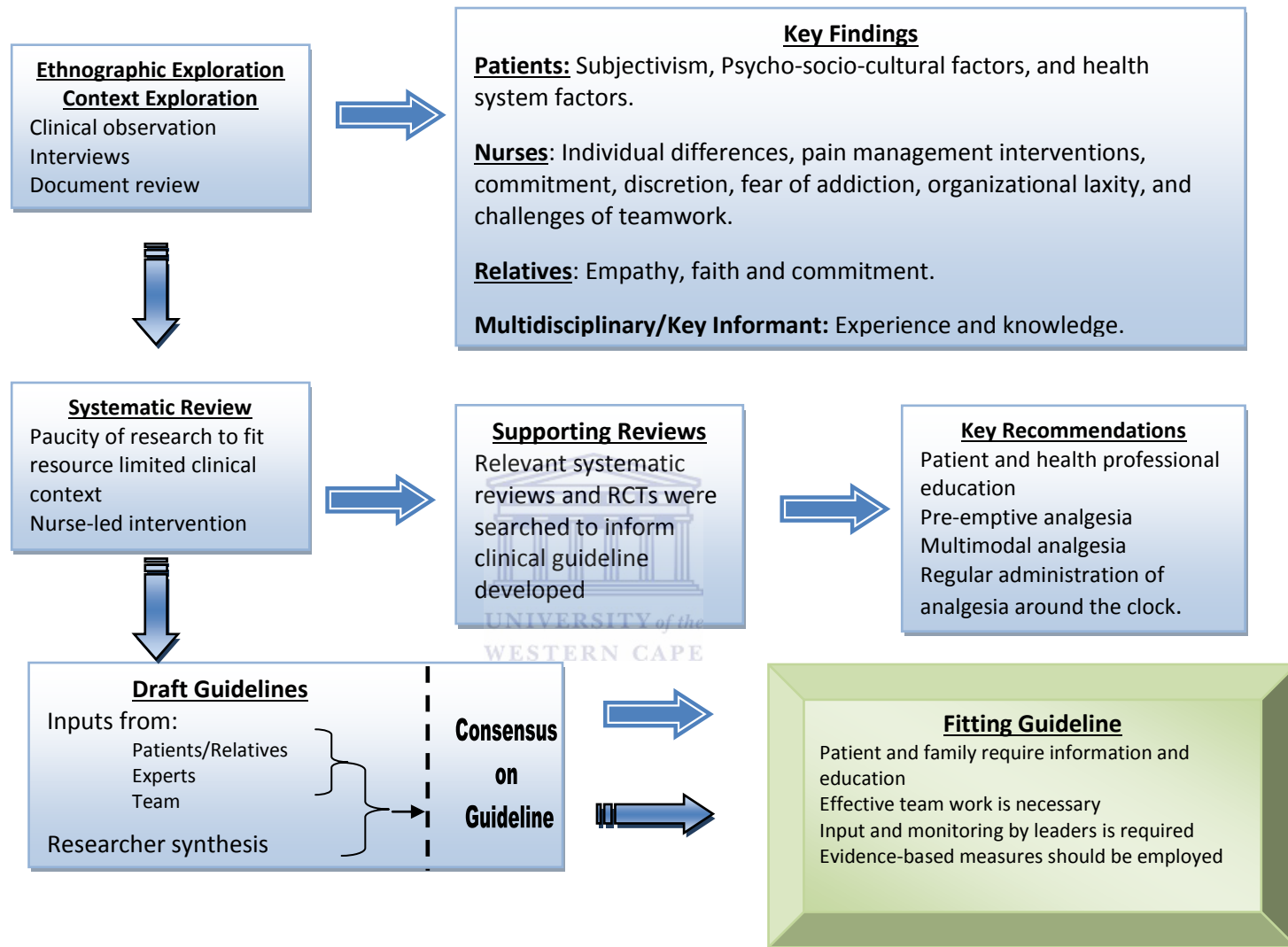


Figure 4: Footprints of processes and outcomes of clinical guideline development for POP management in Ghana

4.4 Conclusion

This chapter presented detailed findings of the three processes of the study including findings from the ethnographic exploration, systematic review, and clinical guideline developed for the Ghanaian context. The study illuminated the clinical dynamics of POP management within the context of general surgery. It was revealed that post-operative patients experienced pain as a subjective phenomenon and described varying intensities of pain ranging from slight, moderate, and severe. Patients responded to pain by showing non-verbal pain behaviours or sometimes reported pain to health professionals. It was realized that patients' pain response was influenced by their personal inclinations, pre-conceived ideas, attitude of health professionals, and the financing of health care. The influence of socio-cultural background on pain expression was highlighted and further investigation is warranted to confirm the perceived socio-cultural influences.

The study further found that nurses responded to patients' POP by either employing pharmacologic or non-pharmacologic measures in order to relieve pain. Nurses in this study acknowledged pain as an individual phenomenon and employed personal discretion during pain management. Also, pain management actions were influenced by individual commitment, fear of addiction to opioid, organizational laxity, and challenges of team work. It was perceived that some nurses in the study did not have adequate knowledge on POP management. However, the multidisciplinary team and some key informants exhibited expert knowledge and experience on issues related to POP management. Also, the study established that patients' relatives responded to their patients' POP as a result of the commitment, faith, and a feeling of empathy.

Further, following an extensive systematic literature review, the study revealed a paucity of research in resource limited clinical environment that investigated measures that ensured effective POP management. In view of this, a further focused literature review

enabled the identification of key studies that highlighted findings that could be applied within the local clinical context. The key studies were appraised to ensure their reliability and validity to enhance the confidence of applying findings within the context of this study. In this regard, contemporary POP management measures involve patient and family education, effective teamwork and leadership, multimodal analgesia, pre-emptive analgesia, and regular administration of analgesia. The chapter subsequently delineated the context appropriate clinical guideline that was developed in this study.



CHAPTER FIVE

DISCUSSION

5.0 INTRODUCTION

This chapter involves an integrated discussion of the key findings and highlights the linkages of the findings to the four dimensions of the clinical guideline developed for post-operative pain (POP) management. The chapter is divided into three sections. The first section discusses the key findings of the study and the discussions are focused on themes such as: pain as a subjective experience; psycho-socio-cultural influence on pain; pain management interventions; team work within the surgical context; and leadership dynamics and pain management. The second section presents a contextual discussion of the new clinical guideline developed in this study. The chapter ends with a delineation of plans for the review of the current guideline and the dissemination and implementation of the guideline in clinical practice.

5.1 Discussion of Key Findings

This section presents an integrated discussion of key themes that emanated from this study. The comprehensive, collaborative, and holistic nature of this study gave a broader perspective to findings described in the previous chapter. Thus, some themes described for a participant group was collaborated with other participant groups. For example findings from patients were corroborated by nurses and doctors. Also, the multiple methods of data collection employed gave further collaborations and illuminations of themes. Thus, the discussions in this section sought to explore the linkages in the key findings and relationships with the wider literature. Thus, a holistic discussion is given regarding five areas considered

the key themes in this study. The findings of the study showed aspects consistent with the wider literature and there were findings that are unique to the Ghanaian context. The key finding of pain as a subjective individual experience is discussed.

5.1.1 Pain as a subjective experience. The study demonstrated to a greater extent that post-operative pain was an individual phenomenon as all participants attested to this view. This perception of pain is congruent with existing literature where the individual nature of pain is emphasized (McCaffery & Pasero, 1999; Nielsen et al., 2008; Pasero, 2009). The abstract phenomenon of pain has been ascribed several dimensions and identifying characteristics by previous authors and this has enhanced the discourse of the concept (Botti, Bucknall, & Manias, 2004; Breivik & Stubhaug, 2008). Therefore, the sensory-discriminative dimensions of intensity and quality described by post-operative patients in this study are akin to existing literature. Other dimensions of pain such as duration, location, and effects of pain are relevant in the area of POP to inform the effectiveness of pain management among individual patients. Thus, participants alluded to the duration, location, and effects of pain in this study which is also supported by previous descriptions of pain (McCaffery & Pasero, 1999). The descriptions of pain rest on the identified dimensions and enable patients and health professionals to communicate issues regarding pain. The intensity, location, duration, and effect of pain are significant in acute post-operative pain and these aspects of pain give direction for further treatment as may be necessary. Thus, the ill-effects of post-operative pain could be detrimental to the health and recovery of post-operative patients and pose life-threatening complications to the patient (Macintyre & Ready, 2001; Nett, 2010; Strassels, McNicol, & Suleman, 2005b). It is noted that other types of pain such as chronic malignant pain may raise different issues due to the chronic nature of the pain and the different goal of

pain control (Burkey & Kanetsky, 2009; Chen, Miaskowski, Dodd, & Pantilat, 2008; Mehta & Chan, 2008).

Although pain is a universal phenomenon defined variously, the nursing definition of pain emphasizes subjectivism where the focus is on the experiencing person. Hence, According to McCaffery, pain is ‘whatever the experiencing person says it is and exists whenever the person says it does’ (cited in Lewis, Heitkemper, & Dirksen, 2004 p. 132). The unlikelihood of patients to self-report pain within the context of this study pinpoint to a potential challenge to McCaffery’s widely used nursing definition of pain which emphasizes the verbal report of pain by the experiencing person. It was realized that some Ghanaian post-operative patients were reluctant to report their pain due to personal and cultural influences and therefore a modification of the nursing definition of pain may be considered within a socio-cultural context. Thus, McCaffery’s definition of pain could be modified as ‘whatever the experiencing person says or shows it is and existing whenever the person says or shows it does’. The modification of ‘shows’ emanated from the various pain behaviours exhibited by patients in this study and also reported by other authors (Kenneth, 2009; Prkachin, Mass, & Mercer, 2004; Wolf et al., 2005). It is conceded that known pain behaviours may indicate other physiological processes therefore, health professionals are cautioned to be circumspect in issues regarding pain when there is no verbal self-report.

Also, it is noted that POP is considered an unpleasant individual sensation as a result of actual or potential tissue damage. Hence, the International Association for the Study of Pain (IASP) defined pain as ‘an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage’ (Carter, 1998 p. 86). The use of emotional and sensory experience in this definition gives an idea of the multidimensionality of the pain experience and a discussion of all the dimension of pain is

beyond the scope of this thesis. The IASP definition also makes reference to the unpleasantness of pain which sets the context for effective pain relief. However, the definition by IASP in 1986 fails to bring to bear the largely subjective nature of pain. Also, it has been documented that pain is accompanied by nociception (sensation of pain) but it can also arise without any physiological stimuli (Macintyre & Ready, 2001) creating a potential challenge for the IASP definition of pain. The pain experienced among surgical patients can be related to this definition because of the '*actual tissue damage*' that resulted from surgical incision (Brown et al., 2004). However, various surgical procedures are accompanied by varying degrees of invasiveness and surgical incisions.

Thus, pain behaviours exhibited by patients varied; and the behaviours concurred with the wider literature such as grimacing, moaning, and crying (Macintyre & Ready, 2001; McCaffery & Pasero, 1999). However, there was an individual variation of pain behaviour which is also supported by existing literature for example; some patients were stoic whereas other post-operative patients expressed pain (Hastings, 1995; Martin & Todd, 2002; Murray et al., 2008). Individual differences in pain behaviour were corroborated by all study participants and it further buttresses the concept of subjectivism of the pain phenomenon. The literature investigates variations of pain behaviour in relation to the gender (Alabas et al., 2011; Campbell, Edwards, Hastie, & Fillingim, 2005; Chesterton, Barlas, Foster, Baxter, & Wright, 2003; Finnström & Söderhamn, 2006), type of surgery (Qu et al., 2008; Roth et al., 2005), and these reports may influence health professionals to associate some degree of pain to particular surgical procedures and gender. Thus, health professionals may develop stereotypical perceptions that may lead to unbelief of patients' pain. However, health professionals within the context of the study perceived surgical procedures such as haemorrhoidectomy to be more painful than other surgeries such as appendicectomy. This

could indicate that a pain report from a patient with haemorrhoidectomy would be better believed than other surgical procedures. Perhaps, the inability of health professionals to accept the individual differences of pain and realize that the experiencing person is the '*best judge*' of his/her pain contributes to the persistent report of inadequate post-operative pain management over the years in many countries including Ghana (Clegg-Lamprey & Hodasi, 2005; Nett, 2010; Watt-Watson, Stevens, Garfinkel, Streiner, & Gallop, 2001).

Also, patients described the dimensions of quality and location and these are important in the assessment and management of POP. For example the location of pain in a post-operative patient may herald the development of complications and an early detection could save the patients' life. The individual may also experience problems such as hypertension, deep vein thrombosis (DVT), infection, chronic pain, due to inadequate POP management (Mac Lellan, 2006; Macintyre & Ready, 2001). Some of the effects of inadequate pain management for example DVT can have fatal consequences and this informs effective POP management as a priority care activity. In this study, it was realized that health professionals had some knowledge on the ill-effects of inadequate pain management but they were oblivious to its incidence and POP management was not considered as a priority nursing care activity. In this vein, the clinical guideline developed in this study sought to emphasize the need for effective POP management through provision of context specific information and effective monitoring by leadership.

Further, the quality and location of pain are subjective and these demand an input from the experiencing person who explains the feeling of pain and where pain is located. The health professional may be unable to assume the location and quality of pain due to its' unseen nature and it further substantiates the largely subjective nature of pain. For example, the presence of a lesion may be associated with pain; but the individual may not be in pain as

suspected. In addition, studies have reported that nurses and doctors assess pain intensity lower than that of patients ratings and there could also be differences between pain ratings of doctors and nurses (Sills, Genton, Walsh, & Wehbe, 2009; Sloman, Rosen, Rom, & Shir, 2005). Therefore, this study identifies with the literature that patients' self-report of pain is an important component of pain assessment. It is therefore important to empower the patient to appreciate the unique subjective nature of pain and make a conscious effort to contribute to ones' personal pain management. Thus, one anchor of the clinical guideline developed with an emphasis on patient and family education goes to buttress this emphasis of the study (*Box 1*). Although there is no pain assessment tool for formal POP assessment within the context of the study, it is hoped that patients' active involvement in care would enhance pain management. Invariably, post-operative pain experience was influenced by psycho-socio-cultural factors such personal inclinations and socio-cultural background.

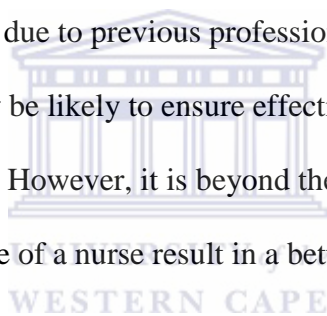
5.1.2 Psycho-socio-cultural influence on pain response. The study revealed that individual personal inclinations influenced post-operative pain response. This theme is in congruence with the subjectivism of pain discussed. However, in this context, different patients had varying inclinations that affected their pain response and attitude towards pain management. In this study it was shown that personal inclinations of pain stemmed from a number of reasons. Some Ghanaian post-operative patients were inclined or had an expectation to experience pain after surgery and they therefore bore undue pain as a result of the phenomenon of 'expectation of pain'. This finding is similar to previous studies (Jairath & Kowal, 1999). It is observed that the psychological state of the individual (an expectation of pain) could either result in an increased or a decreased pain sensation. The patient may ignore POP and focus on other life events or direct the attention towards the surgery and perhaps its associated pain. Indeed, acute POP is an unavoidable consequence of surgery and

although a patient may divert the attention from the pain, this study emphasizes the importance for patients to re-condition the mind that pain could be managed to a comfortable level rather than bear severe POP pain. Therefore, the clinical guideline developed in this study highlights patients' education (*Box 1*) which is congruent with existing literature (Fredericks et al., 2010).

Further, post-operative patients in this study also had pre-conceived ideas that '*nurses be angry with them when they complained of pain*' and '*nurses could not offer any further help when they were in pain apart from the medication they would administer*' (see page 162 and 172). Such preconceived ideas served as barriers to effective pain management where patients within the medico-socio-cultural context of the study were reluctant to report POP. In Ghana, some patients perceive nurses as unfriendly and the attitude of some nurses leave much to be desired as reported in other countries (Edwards et al., 2001; Ene, Nordberg, Bergh, Johansson, & Sjoström, 2008; Goucke & Morriss, 2012). Hence, it is imperative that surgical nurses take the initiative and make extra effort to ensure that patients' pre-surgery misconceptions about nurses' attitudes are disabused. Therefore, patients' education about POP management and the exhibition of positive attitude could afford an opportunity for patients to report pain after surgery. Also, in situations where the nurse could not offer patients any help, it is emphasized that nurses need to up-grade their knowledge on POP management and this would enable them provide better pain management interventions. Hence, the clinical guideline developed in this study emphasised the need for enhanced knowledge for health professionals within the context of this study (*Box 2 Statement 12*).

Again, some patients within the context of this study adopted a state of mind resulting from previous surgical experiences such as caesarean section and herniorrhaphy. The previous 'painful surgery' experiences were corroborated by health professionals and

patients' relatives in this study and they reassured or encouraged POP patients to bear pain. In contemporary pain management recommendations, POP patients are assisted to experience a comfortable level of POP and indeed when this is achieved; it would assist future post-operative patients to take active roles in ensuring effective pain management. Again, the need for POP management education for patients, patients' relatives and health professionals is highlighted and addressed in the context appropriate clinical guideline developed (Box 1 and Box 2). It was revealed that some nurses felt that a surgical nurse would empathize with patients and be committed to effective pain management if the nurse experiences surgery and goes through POP. Perhaps, a surgical experience for a nurse may not be a change agent for commitment to effective pain management because the nurse could take personal steps or initiative to relieve pain effectively due to previous professional knowledge on analgesics. Also, surgical nurses on duty may be likely to ensure effective pain management of their colleague (nurse) surgical patient. However, it is beyond the scope of this study to establish that a previous surgical experience of a nurse result in a better surgical nurse.



Also, it was realized that personal perceptions or inclinations about POP were closely related to information gap. Thus, inadequate information on POP management during previous surgical experiences compounded the mind-set of patients in this study. This finding was also corroborated by health professionals and is also congruent with the literature (Jairath & Kowal, 1999). It is realized that an individual's state of mind may be influenced by the information gained on the phenomenon. Thus, it was realized that post-operative patients within the medico-socio-cultural context of the study did not ask questions about their POP management options and they assumed that the doctors and nurses '*knew best*' what treatment to give them. Again, the few who had thought they had some knowledge on POP management were inappropriately informed about the effect of analgesics such as

suppository. They thought that the suppository was to help them *'move their bowel and pass flatus'*. In this same regard, some patients would not report undue pain because they wanted to avoid side-effects or over-dose of analgesics (see page 171 and 172). However, the patients did not know the specific analgesics they were given and hence they feared an over-dose or side-effect. This finding has also been reported in other countries (Green & Tait, 2002a). Therefore, these inclinations of patients towards pain after surgery could defeat the global drive of POP management that desires patients to be pain-free post-operatively WHO, (2007). Again, health professionals were cognizant of the inadequate provision of information on POP management. Hence, the emphasis on patient education is further buttressed as an important component of the clinical guideline developed in this study.

Further, it was realized that POP response and management was influenced by socio-cultural background of the patient. The socialization or up-bringing of individuals as they respond to pain during childhood influences their pain behaviour during adulthood and subsequently post-operative pain response. It was perceived that individuals who experienced hardships during their childhood and those whose parents or care givers did not allow them to express pain became stoic during adulthood. The literature has examined the effect of culture on pain in other countries but the specific socio-economic influence on pain expression remains undecided (Calvillo & Flaskerud, 1991; Finnström & Söderhamn, 2006; Lovering, 2006a). However, further investigation is warranted to explore this perception within the Ghanaian context as pain expression and the right for pain relief is considered a human-right issue among all age groups (Berry & Dahl, 2000; Cousins, Brennan, & Carr, 2004; Czarnecki et al., 2011).

It was also realized that the social interactions between patients on admission; between patients and their relatives; and between patients and health professionals also

influenced post-operative pain response to some extent in this study. It was realized that some patients encouraged and reassured each other and such interactions might have diverted their attention from pain. Also, patients' pain behaviour could be influenced by the presence of the family. During clinical observation in this study, it was realized that some patients exhibited increased pain behaviours when their relatives were present and others did not show any change in pain expression. Similarly, the discourse about the influence of patients' family on pain experience has been documented especially in the area of chronic pain (Rowat, 1992).

It was noted that patients' relatives did not report POP to health professionals in this study. Thus, the pain behaviour exhibited by patients instead could have triggered some reassurance from their loved ones and perhaps it contributed to the commitment shown by relatives to purchase prescribed medications. Although some relatives offered an inappropriate 'reassurance' such as *'that all will be well since it is just the first day'* (see page 195) rather than probing further about the level of pain and reporting to the nurses, it is possible that such 'reassurances' could have helped the patients cope with pain. Ghanaians value family systems and networks as well as offer each other support in all spheres of life such as birth, marriage, illness, education, death and so forth (Assimeng, 1989; Nukunya, 2003). In this study, participants stated that they received financial, emotional and physical support from their families. However, it was realized that the nuclear family showed more concern and support to post-operative patients in this study and this observation has been made by nurses. The factors within the Ghanaian system that have contributed to the shift from the focus on the extended family to that of the nuclear have been discussed by sociologists in Ghana and it is beyond this study to attempt such a discourse (Nukunya, 2003).

Also, during clinical observation, some relatives prayed (Christian prayer) with their patients post-operatively and perhaps such prayers and faith in God could have influenced the POP response within the context of this study. Ghanaians have been found to believe in religio-cultural dimensions of illness and the quest for healing is an integral part of African traditional and western religions (Sackey, 2002). Thus, some participants believed that 'prayer' helped to control pain and the effect of prayer on pain can be related to the psychological domain such as diversion from the pain stimulus. It has been reported that individuals in pain find relief through prayer (Mao, Farrar, Xie, Bowman, & Armstrong, 2007; Shi, Langer, Cohen, & Cleeland, 2007). It is again emphasized that the consequences of acute post-operative pain demand effective management and such diversional therapies could be employed as adjuvant management options. Thus, patients and relatives should appreciate the role of analgesics in pain management hence the need for effective education highlighted by the context specific clinical guideline developed in this study. Perhaps future studies could explore more in-depth the influence of the family and prayer on pain response in Ghana.

Further, interactions between patients and health professionals had both positive and negative influences on POP response and management in this study. It was realized that some health professionals encouraged patients to cope with pain when they reported whilst others took measures to relieve the pain such as positioning. Interactions were prominent during ambulation of post-operative patients and nurses congratulated and encouraged patients as they walked on the ward. Some patients believed that ambulation helped control their post-operative pain. Ambulation has been recognized as an adjuvant to post-operative pain control (Izumi et al., 2010; McCaffery & Pasero, 1999). Conversely, some patients reported negative attitude of nurses that prevented them from reporting pain such as responding to patients'

self-report of pain with '*shouting or indifference*'. Such negative comments caused other patients to recoil and suffer undue pain in this study. The negative attitude of health professionals as a barrier to pain management has been reported in other studies (Manias et al., 2002; Pasero & McCaffery, 2011). It is therefore necessary for health professionals to be cautious and avoid comments that would prevent patients' from expression of post-operative pain. Hence, the clinical guideline developed in this study had one anchor directed at health professionals with an anticipated attitudinal change (Box 2).

It was also realized that the cultural or ethnic background of participants influenced their POP response. The effect of patients' cultural background on POP experience was closely linked to the up-bringing or socialization regarding pain expression. It was perceived that patients from the northern part of Ghana demonstrated more stoicism than those from the southern part of Ghana. Thus, the few participants from the Northern part of Ghana in this study confirmed this perception. Also, some participants believed that some southern ethnic groups are also stoic and these perceptions calls for continual conscious effort to consider pain as an individual phenomenon. The labelling of specific cultural groups with pain behaviours may result in stereotypical attitudes towards pain management and subsequently result in ineffective pain management. Previous studies have confirmed cultural influence on pain response and management in other countries (Fenwick & Stevens, 2004; Finnström & Söderhamn, 2006; Lovering, 2006a).

Also, in order for the health team to communicate effectively with patients from different cultural background, the health team should adopt cognitive and behavioural strategies that allow respect for the patient's culture. Therefore, the need for the health team to appreciate cultural diversity and be accommodative of cultural differences is highlighted as supported by other studies (Coiffi, 2003; Gharaibeh & Abu- Saad, 2002). Effective

communication could be a challenge for health professional during pain assessment due to the cultural diversity and patients who are unable to speak or understand English. At the time of writing this thesis, there was no pain assessment tool in clinical practice within the context of the study. The terminologies used to express pain vary among different ethnic groups in Ghana. Thus, it is recognized that effective pain assessment or evaluation hinges on culturally appropriate pain tools and it is anticipated that the illumination gained in this study would inform the health team to adopt or develop a culturally specific tool or method of pain assessment to inform or evaluate pain management strategies. Thus, the need for future studies focusing on culturally appropriate pain assessment tool development or adoption is identified. The study further explored issues emanating from pain management interventions.

5.1.3 Pain management interventions. The study explored post-operative pain management strategies utilized within the context of the study and realized that pharmacologic and non-pharmacologic measures were employed. It was realized that prescriptions for POP management were within standard contemporary recommendations such as the use of two or more analgesics for POP management. Thus, opioid analgesic and non-steroidal anti-inflammatory drugs (NSAIDS) were prescribed such as pethidine and diclofenac. It is believed that the use of combination analgesic therapy is preferred because it reduces the side-effect of just one drug given at a higher dose or at more frequent interval such as drowsiness associated with opioid administration (Pasero & McCaffery, 2011; Strassels et al., 2005b). Previous systematic reviews reported in the previous chapter reiterate the effectiveness of multi-modal analgesics for post-operative pain management (Costantini et al., 2011; Jirarattanaphochai & Jung, 2008). The synergistic effect of the analgesics used accounts for their effectiveness for POP management. Also, the differences in the half-life or duration of action of the analgesics administered enable continued pain relief because one

analgesic (e.g. paracetamol) could have longer duration than another (e.g. pethidine) (Koo, 2003; McCaffery & Pasero, 1999). It was realized that a few nurses did not appreciate the concept of multi-modal analgesia and were not committed to administering combined analgesics as prescribed. Thus, the need for continued education for health professionals such as nurses is re-emphasized.

Again, the study realized that different routes of administration of analgesics were employed such as injection, suppository, and oral analgesics. Post-operative pain was managed largely with injection pethidine and paracetamol suppository during the immediate (24 to 48 hours) post-operative period as oral intake was restricted. The context of this study (general surgery) had gastro-intestinal surgeries dominating the surgical procedures especially at the tertiary facility. Some patients expressed concerns about the injection and suppository and it is necessary to educate patients about analgesics administered post-operatively. Hence, the clinical guideline developed in this study specified information on analgesics (Box 1 Statement 4 to 8). The finding on concerns about the route of analgesic administration calls for a concerted effort to involve patients in POP management so that the preferred drug and route can be administered as necessary. Perhaps such patient education and collaborative planning of care can commence pre-operatively to ensure effectiveness. Nurses collaborated that some patients refused the injection and suppository during medication and these patients were not offered alternative analgesics. It was possible that such patients could suffer undue POP as a result of inappropriate route of analgesic offered.

Further, it was realized that the concept of pre-emptive analgesia was not appreciated and practiced effectively by nurses within the context of the study. Some nurses did not administer analgesics on schedule as prescribed and others did not administer analgesics promptly even when patients reported pain. The *'focused literature review'* in the previous

chapter showed that administering analgesics before patients experienced pain is preferred for contemporary POP management (Hasani et al., 2011; Joshi et al., 2011). Medication chart reviewed in this study showed gaps in the administration of analgesics especially that of pethidine. It was reported that nurses feared their post-operative patients would be addicted to opioid analgesic prescribed; hence, the inadequate administration of prescribed opioids. However, the literature suggests that addiction to opioid among post-operative patients is rare (Pasero & McCaffery, 2011). Also, the perception that patients may develop respiratory depression with pethidine administration also hindered the regular administration of the opioid. The proper titration of opioid analgesic and regular monitoring of patients on opioids could pre-empt any adverse effect of opioid administration (Strassels et al., 2005b). Few nurses within the context of the study appreciated the concept of pre-emptive analgesia and administered analgesics as prescribed. Again, it was imperative to focus nurses' attention on the desirable implementation of regular administration of prescribed analgesia and not wait until patients complained of pain. Therefore, the clinical guideline developed in this study highlighted a section on the contemporary evidence of post-operative pain management that highlighted multi-modal or combination analgesic, pre-emptive analgesia, and regular administration of prescribed analgesia (*Box 3, Statement 1 to 3*).

In addition to fear of addiction and respiratory depression hindering the timely administration of opioid analgesic, the ethnographic exploration revealed that analgesics were sometimes unavailable. The unavailability was attributed to inadequate supply from the pharmacy and patients' inability to purchase analgesics on time. Sometimes, there was inadequate prescription where doctors were not available on the ward to prescribe. Within the context of the study, nurses were not officially or legally required to prescribe drugs; thus, they had to wait for doctors to prescribe all types of analgesics for patients in pain.

Pharmacists within the local context believed that nurses did not account adequately for opioids given to patients; thus, their reluctance to supply all opioid analgesics prescribed. Therefore, the clinical guideline developed in this study emphasized that patients and their family should ensure that analgesics prescribed are provided early (*Box 1, Statement 8*) and pharmacists should be actively involved in POP management (*Box 2, Statement 6*). The active involvement of the clinical pharmacist in POP management would ensure that they appreciate the patients' need for opioid analgesic and hence supply the required amount of analgesics.

Also, there were no modern gadgets within the context of the study for POP management such as patient controlled analgesia or epidural analgesia. Therefore, the systematic review conducted in this study focused on studies that could be applied in local clinical context. It was realized that there was paucity of research that established effective POP management in a resource limited clinical context. Therefore, the study drew from related systematic reviews and rigorous studies to inform the clinical guideline developed in this study as shown in the previous chapter. It is observed that effective POP management is not only dependent on the use of modern gadgets. This premise is drawn from the continual report of ineffective POP management even with the use of PCA and epidural catheter. This gives the phenomenon of pain a complex whole and this study sought to address the dilemma of POP management from a more comprehensive perspective. An extensive review of the literature in this study shows that perhaps this study is the first of its' kind to investigate POP management comprehensively and hence develop a unique clinical guideline which has a more broader and holistic focus. It is hoped that the effective implementation of the guideline statements would promote effective POP management.

Further, nurses in this study employed non-pharmacologic measures to relieve patients of their pain. The measures included positioning, exercise or ambulation and reassurance. It was realized that although some nurses utilized non-pharmacologic measures, patients did report moderate to severe post-operative pain. This implied that the emphasis on non-pharmacologic measures as adjuvant to analgesic therapy is supported in this study (Roykulcharoen & Good, 2004). In view of this, it was emphasized in the clinical guideline that (Box 3, Statement 4) the use of non-pharmacologic measures should not superimpose analgesic administration. During the systematic review in this study, it was realized that other non-pharmacologic measures such as music and systematic relaxation enhances pain management (Good et al., 2001). However, these measures were not employed within the local clinical context. It is reiterated that although non-pharmacologic measures cannot usurp analgesic therapy, the culture of Ghanaians up-holds friendliness; therefore, care providers should endeavour to combine adequate analgesic therapy with non-pharmacologic measures.

Also, the study revealed that pain management interventions were influenced by the discretion of the nurse. At the time of study, there were no guidelines or protocols to guide nurses in their pain management decisions especially when doctors were not available on the ward. It is noted that the application of a guideline does not over-rule the use of the health professionals' critical judgement (discretion) (Grol, 1992; Hewitt-Taylor, 2004; Rolley et al., 2011). However, this study realized that nurses' use of discretion for POP management did not always result in effective pain management. It was reported that some nurses used their discretion to withhold analgesics and others administered analgesics as necessary. The inconsistency in the use of '*discretion*' among nurses during pain management decisions further informs the need for the development of context specific guidelines to guide health professionals and ensure uniformity in decision making. It is anticipated that with the

implementation of the clinical guideline, future discretionary decisions would aim at measures that would relieve patients' of pain. This finding was peculiar to the local context and perhaps could have accounted for the inadequate administration of prescribed analgesics due to use of inappropriate discretion. Therefore, the clinical guideline developed in this study emphasized the need to ensure that patients are relieved of pain after surgery (*Box 2*).

Again, the use of discretion was linked to the nurses' clinical experience and competence. It was reported that nurses who were considered experienced or competent applied the desired discretion in the care of post-operative patients and ensured adequate pain relief. However, '*experience and competence*' among nurses for post-operative pain management were considered inadequate within the context of the study as clinical chart review demonstrated inadequate analgesic administration and patients also reported moderate to severe POP. Also, the indicators for clinical competence and experience were not specified by participants and this finding further highlight the need for a uniform clinical guideline so that novice and '*experienced and competent*' nurses could offer an appropriate pain management. Similarly, previous studies confirm that clinical judgement and patient care activities differ among novice nurses and nurses with adequate experience (Hoffman, Aitken, & Duffield, 2009; Orland-Barak & Wilhelem, 2005). However, during clinical observation, nurses did not openly refer to a colleague as experienced or competent. However, there were individual differences among nurses' approach to pain management and these were generally considered inadequate in this study.

Further, pain management interventions were influenced by the nurses' commitment to offer effective care. The lack of commitment among some nurses could have contributed to inadequate analgesic administration in this study. Factors that contributed to the lack of commitment are discussed later in this chapter (organizational dynamics). It is emphasized

that nurses ought to be committed and consider POP relief a priority within the context of this study to realize any improvements in pain management outcomes. It was therefore paramount to include statements on commitment in the clinical guideline developed in this study.

Previous studies have identified barriers to effective pain management attributed to lack of commitment by nurses (Al-Hassan, Alkhalil, & Al Ma'Aitah, 1999). Perhaps the lack of prioritization and commitment to POP management among night nurses contributed to the report of severe post-operative pain at night. Increased pain experience at night is supported by previous findings (Closs et al., 1997; Closs et al., 1998).

Thus, it is reiterated in this study that effective POP management means the patient's pain is relieved over the 24-hour period. Therefore, pain management interventions should be planned and effectively implemented both day and night. Previous investigations observed that during the night, nurses find it more difficult to pick up non-verbal pain cues. Also, patients do not inform the nurses when they are in pain because they feel too tired and they do not want to disturb the busy nurses. Thus, patients rather preferred to wait until the nurses' offer analgesics (Carr, 1990; Closs et al., 1997). In this study, night nurses were considered inadequate and the increased workload hindered effective pain management. Also, there were no buzzers or bells on the surgical wards to alert the nurse when the patient was in pain or distress at night. Hence, regular monitoring of the patient is necessary to improve pain management both day and night as emphasized in the clinical guideline developed in this study (*Box 2, Statement 10*).

5.1.4 Team work within the surgical context. The background literature in chapter two examined the multidisciplinary post-operative team in relation to post-operative pain management (page 31) and it was shown that effective POP management hinges on collaboration between the multidisciplinary team. Therefore, the findings in relation to team work within the surgical context are discussed.

It was realized in this study that doctors did not involve nurses or patients routinely in pain management decisions. However, doctors confirmed that they took into consideration the analgesic regimen nurses were comfortable to administer. It pre-supposed that doctors were aware of nurses' reluctance to administer analgesics as prescribed. In the quest to ensure effective pain relief, some doctors followed-up on gaps in analgesic administration; but did not ensure that individual nurses were sanctioned. Hence, according to the nurses, the doctors only '*made noise*' and nothing was done. Indeed, the ineffectiveness of some nurses did not serve as a motivation for other committed nurses. Therefore, the clinical guideline developed in this study emphasized the need for effective team work (*Box 2*). Also, the literature confirms that post-operative pain management depends on effective team work where the patient is considered a significant member of the team. It was recognized in the focused review that upholding team work culture enhances patients' satisfaction (Meterko et al., 2004) such as satisfaction with pain management.

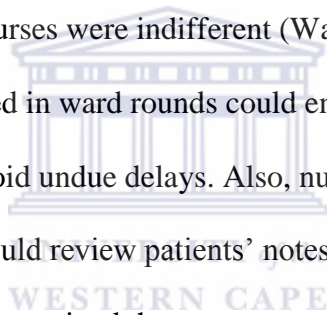
Further, within the post-operative milieu, the multidisciplinary team of POP management includes the pharmacist and the anaesthetist. However, it was realized in this study that the anaesthetist oversaw POP management at the recovery ward or intensive care unit and the doctors were in-charge of pain management on the ward. The pharmacist did not contribute directly to POP management on the ward at the time of data collection. It pre-supposes that the multidisciplinary concept of POP management is a mirage in the Ghanaian

clinical context. However, contemporary pain management recommendations emphasize the effective collaboration of the multidisciplinary team (Hojat et al., 2003; Middleton, 2004; Taylor & Stanbury, 2009b). It was realized that the multidisciplinary team such as the anaesthetist and the pharmacist were knowledgeable in POP management issues and their effective involvement would be an enhancer for pain management. Therefore, the multidisciplinary team was fully involved in the clinical guideline development in this study and recommendation statements were made to ensure their active involvement in POP management (*Box 2, Statement 6*).

It was realized in this study that as individuals worked together in a team, there were some challenges that directly and indirectly influenced POP management. It was realized that nurses sometimes had difficulty to obtain the input of doctors when patients were in pain; and some doctors did not prescribe analgesics on all the required form as necessary and these delayed POP management. At the time of writing this thesis, prescriptions were written in the patients' folder, and a prescription form for drugs not covered under the National Health Insurance Scheme (NHIS) and for patients who do not have NHIS or written on the NHI medication form. Sometimes doctors were in a hurry to leave the ward and may forget to prescribe the drug on these forms. However, nurses within the context of the study were not allowed to prescribe analgesics and the patients could suffer undue pain in such circumstances. Hence, the clinical guideline developed sought to remind and commit doctors and other licensed prescribers such as the anaesthetist to prescribe analgesics on all forms as necessary (*Box 2, Statement 3*).

It was also realized that nurses did not participate effectively in ward rounds and some nurses were of the view that clinical rounds delayed unduly because the doctors also taught medical students during the rounds. Such delays affected their nursing care activities such as

wound dressing. Also, other nurses were of the view that their inputs or views were not solicited or appreciated during ward rounds so they rather *'kept quiet'*. The ineffective involvement of nurses in patient care decisions which were mostly taken during ward rounds could affect effective POP management since the nurse could be privy to some vital information about a particular patient's pain. Thus, the clinical guideline developed in this study highlighted effective documentation and information sharing to ensure continuity of care (*Box 2, Statement 11*). It was conceded that the workload of nurses within the context of the study may not permit all nurses to always be part of the ward rounds. Also, it is possible that teaching rounds could be separated from ward rounds so undue delays would be avoided. This finding was similar to previous studies where even though doctors wanted nurses to be around during ward rounds, the nurses were indifferent (Walden, Elliott, & Gregurich, 2009). Also, health professionals involved in ward rounds could endeavour to adhere to an agreed time to commence rounds and avoid undue delays. Also, nurses who are not able to participate in the ward rounds should review patients' notes to keep abreast with changes in the patients' management. It was perceived that some nurses did not read the changes made in their patients' management. Perhaps this was due to the nursing management adopted within the context of this study where nurses did not have their assigned patients. It is anticipated that when primary nursing is introduced in the health system in Ghana, such indifference to be fully involved in patient management decisions would change. However, nurses and doctors exhibited cordiality on the ward and there were no indications of conflict. Also, there were some leadership inadequacies that influenced POP management and are discussed.



5.1.5 Leadership dynamics and pain management. The study also identified ineffective supervision of post-operative pain management activities. Supervision was considered a key leadership role of nurse leaders and hospital management. It was believed that effective supervision would enhance patient care including POP management. Supervisors who got involved in the management of patients or got involved in ward activities achieved better patient care outcomes. Therefore, an anchor of the clinical guideline developed in this study was devoted to leadership/management roles and responsibilities that could enhance POP management (*Box 3*). Within the context of this study, some ward managers were considered ineffective and they did not follow-up on missed doses of analgesics contributing to undue POP experience among patients. However, other ward managers were effective in their supervisory role to some extent because patients on their ward still complained of pain. In this context, it was perceived that effective supervision should include vigilance to ensure that prescribed analgesics are administered to enhance POP management.

Further, it was perceived that leaders were not able to sanction health professionals who did not perform their expected roles because they feared other colleagues would blame them if such un-performing health professionals perhaps lose their jobs. The wider Ghanaian culture was perceived to be unfriendly to strict leaders or leaders who sanctioned subordinates. In view of this fear or hesitation, it is recommended that all leaders become effective in their roles and individuals would not be '*blamed*'. The literature identifies types of leaders such as the autocratic, democratic, and laissez-faire leaders (Marquis & Huston, 1992). An examination of the types of leadership is beyond the scope of this thesis. However, the findings in this study presupposes that in an environment where nurses would not perform their responsibilities as expected, some degree of autocracy in a leader could drive those nurses to carry-out their expected roles. However, it is hoped that as health professionals

conduct themselves within expected limits such as recommendation statements in Box 2, leaders could assume a democratic style of leadership to realize POP management outcomes. The literature recommends variation in leadership styles depending on the characteristics of the individuals being led and the importance of desired outcomes (Cummings et al., 2010).

Also, it was realized that some nurses were not committed to patient care such as post-operative pain management because of unmet needs. Nurses expected the hospital leadership to provide some form of incentives or motivation such as paid health care, adequate retirement packages, and some refreshment while at work especially those on night duty. Health professionals also desired enhanced security in and around the hospital as there were some attacks on health professionals at the time of study. The study sought to highlight these concerns of health professionals because it is observed that uncommitted health personnel would not ensure that POP management outcomes are met. Researchers such as ethnographers are sometimes seen as advocates for their participants and dilating on the concerns of health professionals in this study is congruent with ethnographic principles (Roper & Shapira, 2000; Spradley, 1979a). Therefore, during feedback sessions with hospital management, concerns of health professionals were reported and it is hoped that steps will be taken to address the concerns. Previous authors also highlight the need for workers to be motivated to realize organizational goals (Marquis & Huston, 1992). Thus, the clinical guideline developed in this study stated the need for leadership to establish award schemes (*Box 3, Statement 6*).

Again, there was lack of modern gadgets for patient care and pain management such as patient controlled analgesia. The literature reiterates that the use of such gadgets as epidural catheter and patient controlled analgesia enhances POP management (Bilgin, Bozlu, Atici, Cayan, & Tasdelen, 2011; Green & Tait, 2002b). However, the use of gadgets do not

completely guarantee effective pain relieve; therefore, provision of gadgets should not be seen as the ultimate in POP management as countries that employ gadgets in POP management continue to report inadequate pain management. Also, the cost of employing modern gadgets for POP management could be unaffordable for the ordinary Ghanaian and such gadgets may not be covered by the NHIS. It was realized that some patients in this study had difficulties paying for the cost of their treatment and some did not have health insurance. In this light, the context specific clinical guideline developed in this study was silent on the use of contemporary gadgets for POP management. However, Box 3, Statement 1 highlights the need for leadership to provide the required equipment to enhance POP management. The phenomenon of patients paying for their health care cost has been reported (Agyepong & Nagai, 2011). It is recognized that health professionals may require further training to effectively use contemporary gadgets for pain management and that may imply increase cost for post-operative pain management. Therefore, within a resource limited environment peculiar to this study, it is anticipated that the effective implementation of the clinical guideline that focuses on effective education, team work, leadership, and integration of relevant evidence-based recommendations of POP management would culminate in effective pain management.

Further, it is emphasized that at the time of study, there were no policies or protocols to guide POP management. The ethnographic exploration in this study realized the need for institution/unit specific policies or protocols to guide patient care activities such as pain management. It was realized that the personnel and patient mix at the two hospitals involved in this study varied. Thus, there was the need for institutional policies on pain management to enhance effective leadership and guide health professionals as most health professionals used their discretion at the time of study (Box 3, Statement 1). Previous authors also highlight the

need for institutional policies that served as a framework within which workers operate (Beck & Aocn, 1999; McCaffery & Pasero, 1999). Thus, it is anticipated that the policies will have appropriate sanctions that would guide the decisions of leaders when policies are violated.

Also, there were no institution specific research committees at the time of study at the two hospitals. Well-designed rigorous research is necessary to inform leadership on a number of issues so that they could take pragmatic actions to enhance the achievement of organizational goals. The in-depth illumination derived in this study was an eye-opener to hospital leaders and health professionals during feedback sessions. The need for research committees was identified as vital so that the hospital could initiate some research in the future and also evaluate research proposals to be conducted at their institutions. Thus, guideline statement Box 3, Statement 8 demonstrates the commitment to establish research committees within the hospitals studied. Similarly, previous authors have also affirmed the importance of health institutions to have vibrant research committees to enhance and inform patient management outcomes and the overall organizational growth. The effective implementation of the clinical guideline developed in this study hopes to improve POP management outcomes. Therefore, a succinct discussion is provided in this thesis drawing on the processes involved in the development of the innovative clinical guideline.

5.2 Contextual Appraisal of the Novel Clinical Guideline

The discussion so far shows the linkages of the findings to the clinical guideline developed in this study. The new clinical guideline developed is the first of its kind that integrates patient and family education, team work, leadership, and applicable evidence in a framework of a Radial Venn. The framework depicts the inter-relationship between the four anchors of the clinical guideline. The inter-relationship pre-supposes that the four areas of the guideline are equally important to effective POP management in a resource limited

environment. It also implies that if one section of the framework does not play its' role, the management of POP would be impaired. Thus, there is the need for commitment from all concerned to ensure that the desired post-operative pain outcomes are realized.

Also, the clinical guideline developed in this study appears to be the first developed for a resource limited clinical environment for post-operative pain management. It is realized that most African countries are deficient in terms of contemporary gadgets for post-operative pain management such as PCA. An extensive review in this study identified the use of PCA in South Africa (Shipton, Beeton, & Minkowitz, 1993; Upton, Beeton, Minkowitz, & Shipton, 1992). It could pre-suppose that some pilot modern gadgets are being used in other countries but studies have not reported their use for POP management. Although, this study is a qualitative study which did not aim at generalization, it is possible to apply the clinical guideline developed in clinical areas with similar characteristics. Indeed, a systematic review conducted in this study confirmed paucity of evaluative research in post-operative pain management in resource limited environment. Thus, most of the studies were explorative and reported the persistence of moderate to severe POP among surgical patients (Clegg-Lampthey & Hodasi, 2005; Finnström & Söderhamn, 2006; Klopper et al., 2006; Ohene -Yeboah, 2006). Therefore, it would be necessary for resource limited clinical settings to apply the clinical guidelines developed in this study or adopt applicable sections to enhance post-operative pain management.

Further, the clinical guideline developed in this study had a strong grounding following what was designated '*a focused review*'. The paucity of studies after an extensive and detailed systematic review informed a focused review that sought to identify studies that could be applied in a resource limited environment. In this context, the in-depth illumination derived from the ethnographic exploration directed the identification of applicable studies

during the focused review. It is affirmed that the limits drawn from the extensive exploration gave the focused review the direction and areas to include. The previous chapter summarized the studies that formed the basis for the clinical guideline in this study.

Also, the studies that formed the foundation of the clinical guideline in this study were assessed for quality as presented in the previous chapter. The appraisal of the quality of studies followed laid down measures of research quality assessment described by previous authors (Abou-Setta et al., 2011; Crowe et al., 2008; Fredericks et al., 2010). Thus, different types of studies have varying means of assessing for quality; for example, a systematic review has a different assessment criterion than a randomized controlled trial. Therefore the quality assessment of studies identified was done based on the type of study or the methodology employed. Hence, it was realized that the studies that informed this new guideline were conducted rigorously and were credible. Therefore, it can be inferred that guideline statements that emanated from such credible studies could also have a credible connotation.

Further, the specific guideline statements were developed systematically following standard processes of guideline development by recognized bodies as described in chapter 3. Thus, there was incorporation of an international pain consultant and all relevant local stakeholders including patients and patient relatives. Also, the consensus panel was well represented and decision making at the consensus panel was done independently in a non-intimidated fashion. Independent decision making was preferred in this study due to the highly heterogeneous nature of the consensus panel and this process gave further strength to the clinical guideline developed. It can therefore be affirmed that guideline statements were not skewed in favour of a dominant group or individuals at the consensus forum. Indeed, this

study employed the services of an experienced researcher as a facilitator and he ensured that all panel members were given equal opportunities to be heard without any criticisms.

Again, the approach to the development of the guideline ensured that the Ghana Health Service (GHS) and the Hospitals '*owned*' the clinical guideline. The researcher worked in close collaboration with the GHS and an assigned team from the two hospitals at the draft stage of the guideline and this ensured that statements that were not context appropriate were revised or deleted as necessary. Thus, it can be inferred that the statements of the new guideline are appropriate and relevant for a resource limited clinical environment. Also, the statements were reviewed to ensure that target population for a section of the guideline understand the statements. Processes for a review and plans for dissemination of the guideline are delineated.

5.3 Plans for Guideline Review, Dissemination, and Implementation

This section delineates processes and plans for reviewing the new clinical guideline developed in this study. The plans for dissemination and implementation of the clinical guideline are clearly stated in this section. Guideline developers are entreated to delineate the review process and provide plans for dissemination and implementation (National Institute for Health and Clinical Excellence (NICE), 2011; Scottish Intercollegiate Guideline Network (SIGN), 2004; The Appraisal of Guidelines Research and Evaluation in Europe (AGREE) Collaboration, 2004). These are vital for effective impact of the guideline developed. In this study, the process of review and plans for dissemination and implementation were drawn in collaboration with the leadership of the Ghana Health Service and the leadership of the two hospitals involved in the study. The collaboration for the development of the plan was considered paramount to enhance commitment and successful implementation of the clinical guideline developed in this study.

5.3.2 Plan for guideline dissemination. The new guideline developed in this study would be co-published with the Ghana Health Service to enhance its' usage by health professionals, hospital management, patients and patients' relatives in Ghana. The format and design would be in formats that would enhance usage by the targeted population. Thus, although the guideline is a whole, each dimension could be packaged separately to make it accessible to the target group and enhance usage. For example laminated copies of guideline statements of leadership or team work could be placed on the notice board or wall in offices or the ward respectively for easy access and also serve as reminders. The researcher together with the health education team of the GHS and the in-service education unit of the hospitals will be involved in dissemination of the new clinical guideline. The dissemination will be done in the appropriate language such as English and Twi to ensure understanding by a target group. The plans for formal dissemination of the guideline will be as follows:

1. Interactive presentations for patient groups at the out-patient department, on the ward and other fora for the public since anybody could be a potential surgical patient.
2. Interactive presentations on new guidelines at specially organized fora for all health professionals – the presentation could be for different professionals such as doctors or nurses as convenient to ensure maximum participation.
3. Interactive presentations at seminars or workshops for professional bodies such as the nurses association or the West African College of Nursing.
4. Distribution of guideline booklets or information sheets to all hospitals and surgical units concerned.
5. Publication of new guideline in peer-reviewed journal with online distribution to enhance accessibility to other resource limited facilities.
6. Presentation at research conferences (local and international).

7. Participating in health talk shows (television and radio) to discuss the new clinical guideline.
8. Email dissemination of guidelines will be done as appropriate to widen the scope of coverage.

5.3.3 Plan for guideline implementation. It is realized that observing a rigorous and standardized process in the development of clinical guidelines helps in effective implementation as the guideline is relevant and context appropriate. Also, an efficient dissemination culminates in a successful implementation of a clinical guideline (Grol, 1992). During the interactive dissemination, the dissemination team would collect data on possible factors in the environment that would hinder or enhance the implementation of the guideline. Thus, the enhancers would be used as primary implementation entry-points and steps would be taken to address the barriers of guideline implementation. The new guideline would be implemented on a pilot basis at the two hospitals involved in the study to assess its' effect on POP management. The introduction of a clinical guideline anticipates a change in behaviour and attitudes towards POP management. Previous authors have examined the change process and processes of maintaining effective adoption of the guideline (Moulding, Silagy, & Weller, 1999). Drawing from the insight gleaned from the literature, the implementation plan will be as follows:

1. The in-service education in collaboration with the hospital leadership will organize a POP management workshop or in-service training for the health professionals that emphasizes the contemporary recommendations of POP management and misconceptions about pain management especially opioid administration.
2. There will be establishment of patient education routines on all the surgical wards for both pre-operative and post-operative patients and evidence of education documented

in patients' notes and duly signed by the nurse who educated. Ward-leaders will verify patient education and countersign. Follow-up education will be given if ward-leader is not satisfied with patients' feedback on education given or if patient has any questions. Copies of the patient/family education sheet will be given to the patient.

3. Surgeon in-charge will verify regularly the analgesic prescription of the team to ensure that the recommended regimen is followed and where lapses are found, reminders are given on the appropriate prescription. The surgeon in-charge will have regular discussion with the nurse-in-charge to verify if there are any prescription lapses so that corrective measures are taken.
4. The surgeon and the nurse in-charges will have weekly meetings to evaluate the team's successes and challenges with the implementation of the guideline and the team will discuss and take steps to correct their deficiencies.
5. The departmental heads will demand a monthly report on POP management and issues emanating from the implementation of the clinical guideline. Periodic patients' chart reviews will be done to verify reports on pain management.
6. Pharmacists and anaesthetists will be part of general ward rounds to make input on any POP management concerns and also verify the amount of opioid administered against the one supplied by the pharmacy. Any anomalies will be investigated and corrected.
7. Patient survey or interviews will be conducted on discharge from the hospital to identify any improvements or concerns about POP management so that further actions are taken to curb the barriers identified.
8. The principal researcher will hold periodic meetings with the ward-leaders to be updated on issues arising from the implementation of the clinical guideline to inform future review of the guideline and subsequent guideline development.

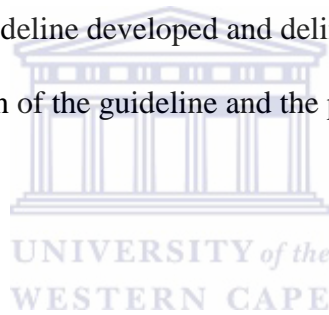
The guideline developed has been embraced by the GHS as the executive summary of the guideline has been signed by the director general of the GHS. The researcher anticipates it would be validated within different geographical and ethnic groups in Ghana before it is implemented. It was observed that the strong collaboration with the GHS and other stakeholders in the development of the clinical guideline could have contributed to the recognition and acceptance of the guideline by the GHS. Also, the GHS ‘ownership’ of the guideline could influence a more effective implementation by all target users since the GHS and MOH direct healthcare reforms in Ghana.

5.3.1 Processes of guideline review. The proposed process of the review of the new guideline for post-operative pain management will be as follows:

1. Identification of the review team comprising clinical experts and researchers with at least one researcher with prior experience in guideline development.
2. An exploration of the context of use to identify any changes in the clinical environment such as the introduction of pain assessment tool or gadgets for POP management.
3. A systematic literature review to identify the current evidence-based recommendations for POP management.
4. Summarizing the evidence and the contextual findings to inform revisions in the guideline.
5. Involving local and international stakeholders and experts for input on revised statements.
6. Organize a consensus forum with all relevant stakeholders to discuss and take decisions on the up-dated or revised guideline.
7. Publish and disseminate the revised up-dated or revised guideline.

5.4 Conclusion

This chapter provided a discussion of the key findings in relation to the wider literature and linked it to the clinical guideline developed in this study. It was emphasized that pain is a subjective phenomenon and the experiencing person is the best judge of his/her pain. The repercussions of post-operative pain can be fatal; hence, the need for effective POP management. It was stressed that patient education was necessary for effective POP management as patients' cooperate better when they are educated. The chapter also highlighted the psycho-socio-cultural influences on pain response and management and emphasized the need to understand a patient's background to inform effective management. Effective team work and leadership were also stressed. The chapter concluded with a brief discussion on the new clinical guideline developed and delineated the plan for the dissemination and implementation of the guideline and the process to review the guideline.



CHAPTER SIX

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

6.0 Introduction

This thesis has been presented in six chapters and this chapter forms the concluding chapter. Chapter one was the introductory chapter that gave background to the study, the motivations, significance, and aims and objectives of the study. In chapter two, the background literature was reviewed examining the concept of pain; pain management; the multidisciplinary pain team, socio-cultural effects on pain, systematic reviews, clinical guideline development, and the conceptual issues in the study. Chapter three discussed the methodology of the study extensively and chapter four presented an elaborate findings generated in this study. Chapter five presented the discussion of findings providing linkages to the clinical guideline developed. It also stated the processes to follow for a review of the guideline and plans for dissemination and implementation of the guideline.

Chapter six provides a summary of the research processes and outcomes and explains the implications of findings for clinical practice, education, and policy. The chapter also delineates the limitations of the study and avenues for further research. Also, conclusions drawn from the study are provided and specific recommendations are outlined.

6.1 Summary of the Research Processes

The primary aim of the study was to develop a context appropriate clinical guideline to guide the management of post-operative pain within the medico-socio-cultural context of Ghana. In this regard, a multi-step focused ethnographic design was adopted after a review of the relevant literature to ensure that the methodology was appropriate to achieve the aim of the study. It was also ensured that the design accommodated standard guideline development procedures specified by recognized guideline developed bodies (NICE, 2011; SIGN, 2004;

AGREE Collaboration, 2004). Hence, the first step of the study sought to understand post-operative pain response and management by applying ethnographic principles. The ethnographic methodology holds that knowledge is derived from the local culture and is viewed from the perspectives of the inhabitants (emic perspectives) and the researcher's reflections (etic perspectives are also reported (Hammersley & Atkinson, 2007). This epistemological orientation informed the choice of the methodology and it was congruent with the WHO's assertion that specific cultural groups require context specific clinical guidelines that would be appropriate and relevant for the context identified (WHO, 2007).

Further, the ontological underpinning of this study stems the human being (participants) as a bio-psycho-social being and is able to feel for example pain, develop and share relationships and gain expertise in the area of practice. These beliefs informed the recruitment of participants such as post-operative patients and health professionals. Also, the value-enquiry (axiology) informed steps undertaken in this study to ensure a rigorous research process and maintain ethical standards. Thus, there were a number of measures employed to ensure rigour of this study such as member checking and prolonged field work and ethical measures ensured included confidentiality and anonymity.

Subsequently, the first step of the study involved in-depth comprehensive exploration of post-operative pain response and management by employing multiple data collection methods such as individual interviews, clinical observation, and patients' chart review. The participants included post-operative patients, patients' relatives, nurses, the multidisciplinary team, and key informants. Data was analysed concurrently following the principles of thematic content analysis and NVivo 9 was used to manage data. The in-depth exploration ensured full understanding of contextual issues influencing POP response and management.

Hence, the illumination informed the research question that guided the systematic review and also gave a clear demarcation to the clinical guideline developed.

Thus, the second step involved an expansive systematic review aimed at answering the research question ‘what measures ensure effective post-operative pain management among adult surgical patients in a developing country/resource limited environment?’ Inclusion and exclusion criteria were specified and followed and at the end, no study was identified. Subsequently, the research question specified ‘resource limited environment’ rather than a developing country and one study was identified and assessed for quality. Further discussions with researcher supervisor and review of related literature informed what this study referred to as a focused review. This review aimed at identifying studies that could be applicable to the local context based on the illumination gained during the ethnographic exploration. It was realized that one study identified during the systematic review did not form adequate grounding for the development of guideline statements. Thus, the focused review generated adequate key studies that were appraised for quality and also gave the clinical guideline adequate evidence backing.

Following the systematic and focussed reviews, existing clinical guidelines for other developed countries were also reviewed and drawing from the existing literature and the contextual illumination, the first draft (draft 1) of the clinical guideline was developed by the researcher. An international expert, multidisciplinary team, patients, and patients’ relative’s representatives reviewed and revised the guideline statements and this became draft 2. During this stage presentations of the findings of the ethnographic exploration were made in the two hospitals to sensitize health professionals and also serve as a form of validation of findings.

Then, with collaboration with the Ghana Health Service, a consensus forum was organized that brought together all relevant stakeholders such as representatives from the

WHO, patients, nurses, and doctors. The heterogeneous panel discussed and took independent decisions on the guideline statements and where there was the need for further revisions, it was done. A neutral facilitator with doctoral level preparation moderated the forum and ensured all participants were given equal hearing and there was no intimidation of participants. The guideline statements emerging from the consensus forum became the final clinical guidelines developed in this study.

Subsequently, formatting was done and further discussions with Ghana Health Service informed the packaging and design of the guideline for use by the health facilities in Ghana. The thesis also delineated plans for dissemination and implementation of the guideline and the process for future review. A summary of findings of the study is provided subsequently.

6.2 Summary of Findings/Outcomes

The study generated some findings that were congruent with the wider literature and other findings were also specific to the local context. The analysis of data and presentation of findings in Chapter four were guided by the research questions and the themes were integrated and linked to the clinical guideline developed in the discussion chapter. Thus, the summary of findings presented in this chapter highlights the key themes that emanated from the study and its' relationship to the research questions. The research questions that guided this study were as follows:

1. How do post-operative patients respond and describe their pain?
2. What are the factors influencing post-operative pain responses among surgical patients within the medico-socio-cultural context?
3. How do nurses perceive and respond to their patients' post-operative pain?

4. What factors influence nurses in their response and perceptions of their client's pain within the medico-socio-cultural context?
5. What factors influence the perceptions of the multidisciplinary team, key-informants, and patients' relatives on post-operative pain management within the medico-socio-cultural context?
6. What clinical guidelines would be appropriate for post-operative pain management in the Ghanaian medico-socio-cultural context?

The ethnographic exploration sought to answer research questions 1 to 5 and findings informed guideline development for research question 6. The findings presented in chapter four clearly demonstrated that the study answered all the research questions specified. In this section, a summary of the findings is provided.

The study revealed that post-operative patients exhibited individual differences in the expression and communication of pain that was akin to the wider literature. Patients described the intensity, location and quality of pain. They responded to pain based on the severity of pain and the effect of factors identified such as psycho-socio-cultural factors and health system factors. It was realized that some patients were not willing to report their pain to the health professionals owing to their personal inclinations, previous pain experience, and socio-cultural background. Others were also afraid that pain report will lead to administration of extra doses of analgesics that could result in an over-dose. Hence, they experienced undue pain after surgery. Also, personnel attitude and financial difficulties also affected patients' pain response within the medico-socio-cultural context of Ghana. Although, these findings are similar to what has been reported in the literature from other countries, this study has provided an illumination of the Ghanaian post-operative pain experience which hitherto was unknown. The finding that some patients would not report pain because they did not want

others to know what was wrong with them and would rather keep quiet and bear pain adds to the discourse of POP management. Hence, the need for patient education that encourages patients to report pain and prevent complications that may arise.

The study further revealed nurses' response to post-operative pain and the factors that influenced their responses. It was realized that nurses responded to their patients' post-operative pain by administering analgesics or employing non-pharmacologic measures. However, it was realized that nurses did not administer analgesics as prescribed because of a number of reasons including fear of addiction to opioids, unavailability of analgesics, lack of commitment, and ineffective supervision. The findings in this context such as fear of addiction appears to be common in the literature as nurses in other countries have been reported to exhibit fear of addiction to opioids for managing various types of pain (Barton, Don, & Foureur, 2004; Lovering, 2006a; Moulin, 2007). This study adds dimensions of unavailability of analgesics and issues of commitment to the literature. These factors were strongly linked to organizational factors where nurses were not committed because of lack of incentives and paid health care. The study identified ineffective supervision as a barrier to ineffective pain management. It was emphasized that ward leaders should be actively involved in patient care and follow-up on POP management lapses. Thus, the study identified organizational laxity as a factor that hindered POP management. Again, this finding adds to the existing literature on POP management.

Further, the study realized that although doctors prescribed analgesics according to contemporary evidence-based recommendations for POP management such as combination or multi-modal therapy (Costantini et al., 2011; Jirattanaphochai & Jung, 2008). Yet, some nurses did not understand and appreciate the need to administer different analgesics together as prescribed. This finding points to the need for POP management education for nurses so

that they would be abreast with contemporary measures of POP management measures. This insight adds to the discourse on POP management that the correct prescription does not guarantee correct administration of analgesic and the need for all team members to appreciate and understand a treatment regimen is emphasized in this study.

In the quest to answer research question five, the study identified that the multidisciplinary team such as anaesthetists, pharmacists, and key informants had a plethora of knowledge and experience in their respective fields. However, it was realized that the recipient of care did not demonstrate the benefit of the knowledge and experience of the multidisciplinary team. Thus, post-operative patients in this study reported moderate to severe pain as reported in the literature (Qu et al., 2008; Watt-Watson et al., 2001). Also, it was revealed that the anaesthetist and the pharmacist were not actively involved in post-operative pain management. This was in contrast with the literature that reported the active participation of the anaesthetist and pharmacist in POP management (Carfagno & Schechter, 2002; Nagi, 2004). Therefore, the study recommended that the multidisciplinary team actively participates in POP management.

The ethnographic exploration also revealed the factors that influenced patients' relatives towards post-operative pain management as part of research question five. In this context, patients' relatives were influenced by the feeling of empathy, faith, and commitment. It was realized that relatives were anxious and feared that their patients might die in the theatre. Thus, during the post-operative period, they were content that the patient was alive and they reassured and encouraged the patient to bear pain. Therefore, they believed that the patient will be better with time and were committed to purchase medication prescribed. The orientation they had that with time, the patient will be better perhaps contributed to their attitude towards POP. In this study, patients' relatives recognized the presence of pain; but,

they did not report pain to health professionals. This finding also adds to the literature on POP management highlighting the need for an appropriate education for patients' relatives to adopt the right attitude towards POP management.

Subsequently, in order to answer research question six, a systematic review was undertaken which revealed scarcity of evaluative studies on POP in resource limited clinical environment. Hence, this study undertook a *'focused review'* aimed at identifying quality studies with recommendations that could be applied to the local context. Thus, the findings indicated that administering analgesics at regular intervals around-the-clock, administering analgesics before a patient experiences pain (pre-emptive), giving two or more analgesics at the same time (multi-modal), and employing non-pharmacologic measures as adjuvants to POP managements are recommended evidence-based measures that could be applicable to the context of this study. These were recommended because there were no modern gadgets for POP management such as PCA or epidural catheter on the surgical wards for routine POP management. The innovative literature review also gave evidence-based grounding to the clinical guideline developed in this study. The *'focused review'* was guided by the findings from the ethnographic exploration and future researchers are cautioned that an in-depth contextual illumination is required to determine the 'focus' of what literature to review and studies identified should be assessed for quality; hence the name *'focused review'*. In this thesis, studies identified through 'focused review' were labelled 'key studies'. At the time of writing this thesis, the researcher was not aware of any study that reported a *'focused review'* in a research process.

Therefore, the main aim of the study 'to develop a context appropriate clinical guideline for the medico-socio-cultural context of Ghana' was realized and the clinical guideline developed was described in a framework of a Radial Venn (Microsoft Office, 2010) that

shows the inter-relationship between the four anchors or dimensions of the guideline and their contribution to the central theme (Effective POP Management). The context appropriate clinical guideline for POP management was made up of four main statements as follows:

1. Patient and family require adequate information and education on post-operative pain management
2. Effective team work is required between nurses, doctors and other health team members regarding post-operative pain management
3. Input and monitoring from hospital management and departmental leadership is required to achieve effective pain management
4. Evidence-based contemporary recommendations for post-operative pain management should be employed

The main statements had their respective consensus statements clearly delineated in Boxes 1, 2, 3, and 4 in this thesis. The simplified presentation of the guideline was decided in collaboration with the Ghana Health Service to make it user-friendly. A review of previous clinical guidelines indicate that individual statements could have the level of evidence indicated (Rolley et al., 2011). Thus, the key studies that served as backing for the statements were assessed for quality and the highest form of evidence (systematic reviews) were targeted. The primary goal of this study was to develop a guideline that was appropriate and would be used to enhance POP management. Indeed the primary motivation of the study – to contribute to effective pain management and enhance arm exercises among women with mastectomy would be mirage if the guideline developed in this study ends-up on the shelf. It was realized that the active involvement of future users of the guideline in the development process informs the confidence that the context appropriate clinical guideline developed in this study would be implemented in clinical practice in Ghana. Indeed, the dissemination and

implementation plan developed in this thesis had input from the future users. At the time of writing this thesis, this study appears to be the first study in the area of POP management that explored POP management comprehensively and the clinical guideline with a Radial Venn as a framework is a significant contribution to knowledge on POP management especially for resource-limited clinical context. Implications of the findings are discussed next.

6.3 Implications of Research Findings/Outcomes

This section provides the implications of the findings of the study for education, practice, and policy. The comprehensive in-depth nature of this study alluded to a number of implications some of which were integrated in the clinical guideline developed in this study.

The implications of the study for education demand a curriculum review and the development of a curriculum for pain management. This focused ethnographic study highlighted inadequate knowledge and misconceptions about pain management. Therefore, there is the need for a curriculum review to ensure that contemporary evidence-based pain management recommendations are taught at both pre-registration and post-registration levels. Also, nurses such as community health nurses could have a specially designed training and accompanying simple education materials for public education on pain management so that future post-operative patients would have the right attitude and knowledge about pain management. There should also be regular up-date workshops for all health professionals on POP management and such workshops should highlight the current evidence of POP management. Also, the clinical guideline developed in this study should be part of pain management education at all levels to enhance its clinical implementation.

Again, the implications of the study for practice include the need for change of attitude of nurses and patients. Change of attitude is warranted in the area of commitment to administer all prescribed analgesics and effective documentation. Patients and their relatives

need to be empowered to actively cooperate in pain management decisions through the practice of regular patient and family education. In this instance, the consensus statement of the clinical guideline would be useful in practice. There is also the need for effective team work among health professionals involved in POP management; and again, the context specific consensus statements would address this deficit in practice when effectively implemented. There is the need to institute pain assessment modalities to evaluate the effectiveness of POP management modalities employed in clinical practice.

Also, policy implications imply an urgent need to develop unit specific protocols and policies to guide health professionals in their care of patients including pain management. The study indicated that health professionals used their discretion as necessary to manage pain. Thus, some health professionals who were not experienced did not apply the appropriate discretion. Hence, there is the need for protocols to guide health professionals. Also, health professionals who did not work as expected were not sanctioned as there were no policies at the time of study. Such protocols and policies would enhance the implementation of the clinical guideline developed because health professionals may be committed to administer prescribed analgesics to avoid violation of policies and its' sanctions.

6.4 Limitations of Study

This study although comprehensive and detailed had a number of limitations that hinders generalization. The focus of a qualitative study is not to generalize (Burnard & Naiyapatana, 2004; Parahoo, 2006; Patton, 2002); however, a number of qualitative studies have identified the inability to generalize findings as a limitation such as Wallin and Raak, (2007). Thus, the study conducted in two hospitals in Accra cannot be said to be representation of the Ghanaian medico-socio-cultural system.

Also, other types of pain such as chronic malignant pain were not considered in this study. Thus, the clinical guideline developed is only for acute post-operative pain. It is possible that the experience of chronic pain among Ghanaians would elicit different themes and inform the development of an entirely different clinical guideline.

The subjectivism of qualitative research also serves as a limitation. In this study, the researcher served as a research instrument and it is recognized that data is sieved through the researcher's lens and the researcher may omit some aspect of data generated (Patton, 2002). Thus, steps were taken to minimize subjectivism in the research process, analysis, and report of findings as much as possible.

Nurses interviewed in this study were all females and majority of the participants were Christians. Thus, the application of the findings to populations with different characteristics should be done with caution. It is noted that populations with different characteristics may exhibit unique features or experiences that may serve as a barrier to the expected outcome of the clinical guideline developed in this study. Nonetheless, this study was conducted rigorously and has contributed immensely to the discourse on POP management by illuminating the Ghanaian POP responses and factors influencing such responses and also developing a unique clinical guideline for resource limited clinical environment.

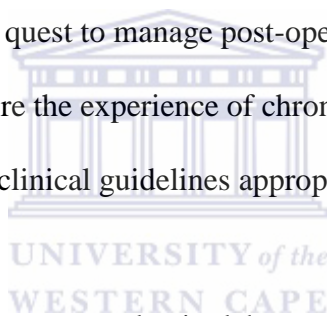
6.5 Avenues for Further Research

The limitations identified inform further research in this area. The areas for future research identified are as follows:

1. There is the urgent need for a culturally appropriate pain assessment tool. Thus, appropriate existing simple pain assessment tools may be validated or new scale may

be developed and validated. The introduction of pain assessment tools in clinical practice will go a long way to enhance future pain research. For example, it would be possible to carry-out an evaluative or experimental research that would assess the effectiveness of a particular pain management measure or clinical intervention programme (s). These types of studies would address the paucity of evaluative studies in resource-limited environment.

2. Further studies could investigate pain experience among patients with specific surgical procedures and compare the findings. It was perceived in this study that some surgical procedures were more painful than others. For example, haemorrhoidectomy was perceived a painful surgery. The procedure specific illumination could guide health professionals in the quest to manage post-operative pain.
3. Future studies could explore the experience of chronic pain and chronic pain management and develop clinical guidelines appropriate for the management of chronic pain.
4. Other types of pain such as menstrual pain, labour pain, sickle-cell pain, low-back pain could be explored among Ghanaian patients. The illumination derived would also inform appropriate pain management such patients groups.
5. Pain management could also be investigated at the peri-anaesthesia care unit or the recovery ward. This study focused on the surgical ward where pain management dynamics could present different issues that would inform specific management strategies.
6. Future studies could also compare pain experience among different ethnic groups in Ghana to confirm perceived differences in pain behaviour among different ethnic groups in Ghana. For example, the hypothesis that patients from the northern part of Ghana bear more pain than those from the southern part can be tested through and



experimental research. The results of the study can be helpful in designing intervention for each group.

6.6 Recommendations

The specific recommendations emanating from this study are:

1. The Ministry of Health and Ghana Health Service should make funds available for the printing of clinical guidelines developed in this study and disseminate it appropriately for use in the health facilities concerned. This funding would help in the implementation and the evaluation of the effectiveness of the clinical guideline developed.
2. The health education unit of the Ghana Health Service should be supported adequately by the in-service educators within the various hospitals during the dissemination of the guideline.
3. The Hospitals involved in the study should establish research committees and be supported to evaluate impact of guidelines on patient care outcomes and also assist in future review of the clinical guidelines.
4. Nurses should be encouraged and funded by the research unit of the GHS to be part of research activities to contribute to nursing knowledge and also enhance nursing care of patients.

6.7 Conclusion

The study holds that the development of a clinical guideline would enhance effective post-operative pain management which is currently recognized inadequate globally and in Ghana. Clinical guideline developed with a core process of involving the cultural context within which it will be used is recognized as beneficial to the achievement of desired targets (Huang et al., 2001). Thus, the World Health Organization (WHO) recommends that clinical

guidelines should be developed for specific populations within which it would be used which goes to buttress the relevance of this study (WHO, 2007). It is in this light that the study adopts a qualitative inductive process in the development of a clinical guideline for the management of post-operative pain in Ghana. At the time of this study, the researcher was not aware of any clinical guideline that guided post-operative pain management in Ghana and this study has accomplished the task of bridging the gap identified in the literature. Also, the holistic innovative approach to the study provided a full understanding of issues influencing post-operative pain management within the medico-socio-cultural context of Ghana. The study realized the need for validation of a pain assessment scale and its adoption in clinical practice to enhance future pain research. The study also reiterated the need for training of health professionals on contemporary recommendations of post-operative pain management. The enhanced knowledge could culminate in the successful implementation of the clinical guideline developed in this study.



References

- Abdalahim, M. S., Majali, S. A., & Bergbom, I. (2008). Documentation of post-operative pain by nurses in surgical wards. *Acute Pain, 10*(2), 73-81.
- Abdalahim, M. S., Majali, S. A., & Bergbom, I. (2009). Jordanian surgical nurses' experiences in caring for patients with post-operative pain. *Applied Nursing Research, Article in Press*.
- Abdalahim, M. S., Majali, S. A., Stomberg, M. W., & Bergbom, I. (2011). The effect of post-operative pain management program on improving nurses' knowledge and attitudes toward pain. *Nurse Education in Practice, 11*(4), 250-255.
- Abdullah, F., Choo, S., Hesse, A. A. J., Abantanga, F., Sory, E., Osen, H., et al. (2010). Assessment of surgical and obstetrical care at 10 district hospitals in Ghana using on-site interviews. *Journal of Surgical Research, 171*(2), 461-466.
- Abou-Setta, A. M., Beaupre, L. A., Rashid, S., Dryden, D. M., Hamm, M. P., Sadowski, C. A., et al. (2011). Comparative effectiveness of pain management interventions for hip fracture: a systematic review. *Annals of Internal Medicine, 155*(4), 234-245.
- Abraham, N. S., Young, J. M., & Solomon, M. J. (2004). Meta-analysis of short-term outcomes after laparoscopic resection for colorectal cancer surgery. *British Journal of Surgery, 91*(9), 1111-1124.
- Abu- Saad, H. H., Pool, H., & Tulkens, B. (1994). Further validity testing of the Abu- Saad Paediatric Pain Assessment Tool. *Journal of Advanced Nursing, 19*, 1063 - 1071.
- Abu-Saad, H. H. (1984). Assessing children's response to pain. *Pain, 19*, 162-171.
- Adams, J. (Ed.). (1990). *A methodological study of pain assessment in Anglo and Hispanic children with cancer*. (Vol. 15). New York: Raven Press.

- Agyepong, I. A., & Nagai, R. A. (2011). "We charge them; otherwise we cannot run the hospital" • front line workers, clients and health financing policy implementation gaps in Ghana. *Health Policy*, 99(3), 226-233.
- Al-Hassan, M., Alkhalil, M. S., & Al Ma'Aitah, R. (1999). Jordanian nurses' roles in the management of post-operative pain in the postanesthesia care unit. *Journal of PeriAnesthesia Nursing*, 14(6), 384-389.
- Alabas, O. A., Tashani, O. A., & Johnson, M. I. (2011). Gender role expectations of pain mediate sex differences in cold pain responses in healthy Libyans. *European Journal of Pain* (0).
- Allan, H. T. (2006). Using participant observation to immerse oneself in the field. *Journal of Research in Nursing*, 11(5), 397-407.
- American Society of Anaesthesiologists (ASA). (2012). Practice guidelines for acute pain management in the perioperative setting: an updated report by the American Society of Anesthesiologists Task Force on acute pain management. *Anesthesiology*, 116(2 P 248-73).
- Andrews, M. M., & Herberg, P. (1999). Transcultural nursing care. In M. M. Andrews & J. S. Boyle (Eds.), *Transcultural Concepts in Nursing Care* (3rd ed ed., pp. 23-77). Philadelphia: Lippincott.
- Arber, A. (2007). "Pain talk" in hospice and palliative care team meetings: An ethnography. *International Journal of Nursing Studies*, 44(6), 916-926.
- Armstrong, D., Tatford, P., Fry, J., & Armstrong, P. (1992). Development of clinical guidelines in a health district: an attempt to find consensus *Quality in Health Care*, 1, 241-244.
- Arya, B., Abdollahi, A.-A., Golalipour, M.-J., Kazemnezhad, K., & Mohammadi, M. R. (2007). Evaluation of post-operative analgesic efficacy of intramuscular pethidine,

compared to indometacin and diclofenac Na Suppositories in unilateral inguinal hernioplasty patients. *Journal of Medical Sciences*, 7(2), 311-314.

As de Vos, Strydom, H., Fouché, C. B., & Delport, C. S. L. (2011). *Research at Grass Roots: For the Social Sciences and Human Service Professions* (4th ed.). Pretoria: Van Schaik Publishers.

Assimeng, M. (1989). Religion and social change in West Africa: an introduction to the sociology of religion. *Accra, Ghana Universities Press*.

Atkinson, L., Kluger, M. T., Lloyd, D., & Schug, S. A. (1999). Acute pain services - effecting change in nursing attitudes towards post-operative analgesia. *Acute Pain*, 2(1), 7-16.

Atkinson, P. (1992). The ethnography of a medical setting: Reading, writing, and rhetoric. *Qual Health Res*, 2(4), 451-474.

Atkinson, P., & Coffey, A. (2004). Analysing documentary realities. In D. Silverman (Ed.), *Qualitative Research : Theory, Method and Practice* (2nd ed., pp. 56-75). London: Sage.

Atkinson, P., & Hammersley, M. (1994). Ethnography and participant observation. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 248-261). Thousand Oaks, CA: Sage.

Atkinson, P., & Hammersley, M. (1998). Ethnography and participant observation. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of Qualitative Inquiry* (pp. 110-136). London: Sage.

Atkinson, P., & Pugsley, L. (2005). Making sense of ethnography and medical education. *Medical Education*, 39(2), 228-234.

Aubrun, F., & Marmion, F. (2007). The elderly patient and post-operative pain treatment. *Best Practice & Research Clinical Anaesthesiology*, 21(1), 109-127.

- Australian and New Zealand College of Anaesthetists (ANZCA). (2010). *Acute Pain Management: Scientific Evidence*. Retrieved March 22, 2012, from <http://www.anzca.edu.au/resources/college-publications/pdfs/Acute%20Pain%20Management/books-and-publications/acutepain.pdf>
- Bååth, C., Wilde-Larsson, B., Idvall, E., & Hall-Lord, M. L. (2009). Registered nurses and enrolled nurses assessments of post-operative pain and risk for malnutrition and pressure ulcers in patients with hip fracture. *Journal of Orthopaedic Nursing, In Press, Corrected Proof*.
- Badoe, E. A. (2009). A brief history of surgery. In E. A. Badoe, E. Q. Archampong & J. T. da Rocha-Afodu (Eds.), *Principles and practice of surgery including pathology in the tropics* (pp. 1-11). Tema: Ghana Publishing Corp.
- Barber-Parker, E. D. (2002). Integrating patient teaching into bedside patient care: A participant-observation study of hospital nurses. *Patient Education and Counselling*, 48(2), 107-113.
- Barbour, R. S. (2001). Checklist for improving rigour in qualitative research: a case of the tail wagging dog? *British Medical Journal*, 322, 1115-1117.
- Bardiau, F. M., Taviaux, N. F., Albert, A., Boogaerts, J. G., & Stadler, M. (2003). An intervention study to enhance post-operative pain management. *Anesthesia And Analgesia*, 96(1), 179.
- Barker, K., & Burns, M. (2001). Using consensus techniques to produce clinical guidelines for patients treated with the Ilizarov Fixator. *Physiotherapy*, 87(6), 289-300.
- Barton, J., Don, M., & Foureur, M. (2004). Nurses and midwives pain knowledge improves under the influence of an acute pain service. *Acute Pain*, 6(2), 47-51.

- Barton, T. D. (2008). Understanding practitioner ethnography. *Nurse Researcher*, 15(2), 7-18.
- Bates, M. S. (1987). Ethnicity and pain: A bio-cultural model. *Social Science & Medicine*, 24(1), 47-50.
- Beck, S. L., & Aocn. (1999). Health policy, health services, and cancer pain management in the New South Africa. *Journal of Pain and Symptom Management*, 17(1), 16-26.
- Bédard, D., Purden, M. A., Sauvé-Larose, N., Certosini, C., & Schein, C. (2006). The pain experience of post-surgical patients following the implementation of an evidence-based approach. *Pain Management Nursing*, 7(3), 80-92.
- Bell, F. (2000). A review of the literature on the attitudes of nurses to acute pain management. *Journal of Orthopaedic Nursing*, 4, 64 - 70
- Bell, L., & Duffy, A. (2009). Pain assessment and management in surgical nursing: a literature review. *British Journal of Nursing (BJN)*, 18(3), 153-156.
- Bennett, P., & St Marie, B. (2002). *The epidemiology of pain. In core curriculum for pain Management Nursing*. Philadelphia: Saunders.
- Berry, A. M., Davidson, P. M., Nicholson, L., Pasqualotto, C., & Rolls, K. (2011). Consensus based clinical guideline for oral hygiene in the critically ill. *Intensive and Critical Care Nursing*, 27(4), 180-185.
- Berry, P. H., & Dahl, J. L. (2000). The new JCAHO pain standards: Implications for pain management nurses. *Pain Management Nursing*, 1(1), 3-12.
- Beyer, J., & Knott, C. (1998). Construct validity estimation for the African-American and Hispanic versions of the Oucher Scale. *Journal of Pediatric Nursing*, 13, 20-31.
- Beyer, J. E., McGrath, P. J., & Berde, C. B. (1990). Discordance between self-report and behavioral pain measures in children aged 3-7 years after surgery. *Journal of Pain and Symptom Management*, 5(6), 350-356.

- Bilgin, T. E., Bozlu, M., Atici, S., Cayan, S., & Tasdelen, B. (2011). Wound infiltration with bupivacaine and intramuscular diclofenac reduces post-operative tramadol consumption in patients undergoing radical retro-pubic prostatectomy: A prospective, double-blind, placebo-controlled, randomized study. *Urology*, *78*(6), 1281-1285.
- Bjoro, K., & Herr, K. (2008). Assessment of pain in the nonverbal or cognitively impaired older adult. *Clinics in Geriatric Medicine*, *24*(2), 237-262.
- Blenkharn, A., Faughnan, S., & Morgan, A. (2002). Developing a pain assessment tool for use by nurses in an adult intensive care unit. *Intensive & Critical Care Nursing*, *18*(6), 332-341.
- Boni, F. (2009). Pain management after major surgery. In A. Kopf & N. B. Patel (Eds.), *Guide to pain management in low resource settings* (pp. 84-95): International Association for the Study of pain (IASP).
- Bonnet, F., & Marret, E. (2007). Post-operative pain management and outcome after surgery. *Best Practice & Research. Clinical Anaesthesiology*, *21*(1), 99-107.
- Botti, M., Bucknall, T., & Manias, E. (2004). The problem of post-operative pain: Issues for future research. *International Journal of Nursing Practice*, *10*(6), 257-263.
- Boyle, J. S. (1994). Styles of Ethnography. In J. M. Morse (Ed.), *Critical issues in qualitative research methods* (pp. 159-185). London: Sage.
- Breivik, H., & Stubhaug, A. (2008). Management of acute post-operative pain: Still a long way to go! *PAIN*, *137*(2), 233-234.
- Briggs, M., & Closs, J. S. (1999). A descriptive study of the use of visual analog scales and verbal rating scales for the assessment of post-operative pain in orthopaedic patients. *Journal of Pain and Symptom Management*, *18*(6), 438-446.
- Briggs, M., & Dean, K. L. (1998). A qualitative analysis of the nursing documentation of post-operative pain management. *Journal of Clinical Nursing*, *7*(2), 155-163.

- Brink, P. J., & Edgecombe, N. (2003). What is becoming of ethnography? *Qualitative Health Research, 13*(7), 1028-1030.
- Brockopp, D. Y., Brockopp, G., Warden, S., Wilson, J., Carpenter, J. S., & Vendeveer, B. (1998). Barriers to change: a pain management project. *International Journal of Nursing Studies, 35*(4), 226-232.
- Bromley, L. M. (2000). The treatment of post-operative pain: Old drugs, new possibilities? *Acute Pain, 3*(2), 24-28.
- Brown, A. K., Christo, P. J., & Wu, C. L. (2004). Strategies for post-operative pain management. *Best Practice & Research Clinical Anaesthesiology, 18*(4), 703-717.
- Brown, C. A., & Richardson, C. (2006). Nurses' in the multi-professional pain team: A study of attitudes, beliefs and treatment endorsements. *European Journal of Pain, 10*, 13-22.
- Brown, D. N. (2008). Pain assessment in the recovery room. *Journal of Perioperative Practice, 18*(11), 480-489.
- Brunier, G., Carson, G., & Harrison, D. E. (1995). What do nurses know and believe about patients with pain? Results of a hospital survey. *Journal of Pain and Symptom Management, 10*(6), 436-445.
- Bryant, H. (2007). Pain: A multifaceted phenomenon. *Emergency Nurse, 14*(10), 6-10.
- Buller, S., & Butterworth, T. (2001). Skilled nursing practice: a qualitative study of the elements of nursing. *International Journal of Nursing Studies, 38*(4), 405-417.
- Burkey, A. R., & Kanetsky, P. A. (2009). Development of a novel location-based assessment of sensory symptoms in cancer patients: Preliminary reliability and validity assessment. *Journal of Pain and Symptom Management, 37*(5), 848-862.
- Burnard, P. (1991). A method of analysing interview transcripts in qualitative research. *Nurse Education Today, 11*, 461-466.

- Burnard, P., & Naiyapatana, W. (2004). Culture and communication in Thai nursing: a report of an ethnographic study. *International Journal of Nursing Studies*, 41(7), 755-765.
- Buvanendran, A., Reuben, S. S., & Kroin, J. S. (2007). Recent advances in non-opioid analgesics for acute pain management. *Techniques in Regional Anaesthesia and Pain Management*, 11(1), 19-26.
- Callen, J. L., Braithwaite, J., & Westbrook, J. I. (2007). Cultures in hospitals and their influence on attitudes to, and satisfaction with, the use of clinical information systems. *Social Science & Medicine*, 65(3), 635-639.
- Callister, L. C. (2003). Cultural influences on pain perceptions and behaviours. *Home Health Care Management & Practice*, 15(3), 207-211.
- Calvillo, E. R., & Flaskerud, J. H. (1991). Review of literature on culture and pain of adults with focus on Mexican-Americans. *Journal of Transcultural Nursing*, 2(2), 16-23.
- Campbell, C., Edwards, R., Hastie, B., & Fillingim, R. (2005). Age and sex differences in pain perception: The role of gender role stereotypes. *The Journal of Pain*, 6(3, Supplement 1), S60-S60.
- Campbell, P., Dennie, M., Dougherty, K., Iwaskiw, O., & Rollo, K. (2004). Implementation of an ED protocol for pain management at triage at a busy level I trauma centre. *Journal of Emergency Surgery*, 30(5), 431 - 438.
- Carfagno, M. L., & Schechter, L. N. (2002). Regional anaesthesia and acute pain management: A pharmacist's perspective. *Techniques in Regional Anaesthesia and Pain Management*, 6(2), 77-86.
- Carmichael, M., Henig, S., Ephron, D., & Scelfo, J. (2007). The changing science of pain. *149(23)*, 40 - 43, 45 - 47.
- Carr, D. B. (2001). The development of national guidelines for pain control: synopsis and commentary. *European Journal of Pain*, 5(Supplement 1), 91-98.

- Carr, E. C. J. (1990). Post-operative pain: patients' expectations and experiences. *Journal of Advanced Nursing*, 15, 89-100.
- Carr, E. C. J. (2002). Refusing analgesics: Using continuous improvement to improve pain management on a surgical ward. *Journal of Clinical Nursing*, 11, 743 - 752.
- Carr, E. C. J., Nicky Thomas, V., & Wilson-Barnet, J. (2005). Patient experiences of anxiety, depression and acute pain after surgery: A longitudinal perspective. *International Journal of Nursing Studies*, 42(5), 521-530.
- Carter, B. (Ed.). (1998). *Perspectives on Pain: Mapping the Territory*. New York: Clare Parker.
- Chen, L., Miaskowski, C., Dodd, M., & Pantilat, S. (2008). Concepts within the Chinese culture that influence the cancer pain experience. *Cancer Nursing*, 31(2), 103-108.
- Chen, P. P., Ma, M., Chan, S., & Oh, T. E. (1998). Incident reporting in acute pain management. *Anaesthesia*, 53(8), 730-735.
- Chesterton, L. S., Barlas, P., Foster, N. E., Baxter, G. D., & Wright, C. C. (2003). Gender differences in pressure pain threshold in healthy humans. *Pain*, 101(3), 259-266.
- Chibnall, J. T., & Tait, R. C. (2001). Pain assessment in cognitively impaired and unimpaired older adults: a comparison of four scales. *Pain*, 92(1-2), 173-186.
- Cho, J., & Trent, A. (2006). Validity in qualitative research revisited. *Qualitative Research*, 6, 319-340.
- Christensen, P. J., & Kenney, J. W. (Eds.). (1995). *Nursing process: Application of Conceptual Models* (4th ed.). St. Louis: Mosby.
- Clabo, L. M. L. (2008). An ethnography of pain assessment and the role of social context on two post-operative units. *Journal of Advanced Nursing*, 61(5), 531-539.

- Clegg-Lampthey, J. N. A., & Hodasi, W. M. (2005). An audit of aspects of informed consent and pain relief in general surgical units of Korle-Bu Teaching Hospital. *Ghana Medical Journal*, 39(2), 63-67.
- Closs, J. S., Briggs, M., & Everitt, V. (1997). Night-time pain, sleep and anxiety in post-operative orthopaedic patients. *Journal of Orthopaedic Nursing*, 1, 59-66.
- Closs, J. S., Gardiner, E., & Briggs, M. (1998). Outcomes of a nursing intervention to improve post-operative pain control at night. *Acute Pain*, 1(4), 22-31.
- Closs, S. J., Briggs, M., & Everitt, V. E. (1999). Implementation of research findings to reduce post-operative pain at night. *International Journal of Nursing Studies*, 36(1), 21-31.
- Closs, S. J., Gardiner, E., & Briggs, M. (1998). Outcomes of a nursing intervention to improve post-operative pain control at night. *Acute Pain*, 1(4), 22-31.
- Coiffi, J. R. N. (2003). Communicating with culturally and linguistically diverse patients in an acute care setting: nurses' experiences. *International Journal of Nursing Studies*, 40, 299-306.
- Coker, E., Papaioannou, A., Kaasalainen, S., Dolovich, L., Turpie, I., & Taniguchi, A. (2010). Nurses' perceived barriers to optimal pain management in older adults on acute medical units. *Applied Nursing Research*, 23(3), 139-146.
- Coll, A. M., Ameen, J. R. M., & Mead, D. (2004). Post-operative pain assessment tools in day surgery: Literature review. *Journal of Advanced Nursing*, 46(2), 124 - 133.
- Coll, A. M., Ameen, J. R. M., & Moseley, L. G. (2004). Reported pain after day surgery: A critical literature review. *Journal of Advanced Nursing*, 46(1), 53 - 65.
- Collins, A. S., Gullette, D., & Schnepf, M. (2004). Break through language barriers: Is your pain assessment lost in translation? *Nursing Management*, 35(8), 34.

- Cook, D. J., Mulrow, C. D., & Haynes, R. B. (1997). Systematic reviews: Synthesis of best evidence for clinical decisions. *Annals of Internal Medicine*, 126(5), 376-380.
- Costantini, R., Affaitati, G., Fabrizio, A., & Giamberardino, M. A. (2011). Controlling pain in the post-operative setting. *International Journal of Clinical Pharmacology And Therapeutics*, 49(2), 116-127.
- Coughlin, S. M., Karanicolas, P. J., Emmerton-Coughlin, H. M. A., Kanbur, B., Kanbur, S., & Colquhoun, P. H. D. (2010). Better late than never? Impact of local analgesia timing on post-operative pain in laparoscopic surgery: a systematic review and metaanalysis. *Surgical Endoscopy and Other Interventional Techniques*, 24(12).
- Coulling, S. (2005). Nurses' and doctors' knowledge of pain after surgery. *Nursing Standard* 19(34), 41 - 49.
- Cousins, M., & Power, I. (2003). Acute and post-operative pain. In R. Melzack & D. P. Wall (Eds.), *Handbook of pain management: A clinical companion to Wall and Melzack's textbook of pain*. London: Churchill Livingstone.
- Cousins, M. J., Brennan, F., & Carr, D. B. (2004). Pain relief: a universal human right. *Pain*, 112(1-2), 1-4.
- Creswell, J. M. (1998). *Qualitative and Quantitative Inquiry and Research Design: Choosing Among Five Traditions*. London: Sage.
- Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. London: Sage Publications.
- Cricco-Lizza, R. (2007). Ethnography and the generation of trust in breastfeeding disparities research. *Applied Nursing Research*, 20(4), 200-204.
- Crowe, L., Chang, A., Fraser, J. A., Gaskill, D., Nash, R., & Wallace, K. (2008). Systematic review of the effectiveness of nursing interventions in reducing or relieving post-operative pain. *International Journal of Evidence-Based Healthcare*, 6(4), 396-430.

- Cummings, G. G., MacGregor, T., Davey, M., Lee, H., Wong, C. A., Lo, E., et al. (2010). Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. *International Journal of Nursing Studies*, 47(3), 363-385.
- Czarnecki, M. L., Turner, H. N., Collins, P. M., Doellman, D., Wrona, S., & Reynolds, J. (2011). Procedural pain management: A position statement with clinical practice recommendations. *Pain Management Nursing*, 12(2), 95-111.
- Dahl, J. L., Gordon, D., Ward, S., Skemp, M., Wochos, S., & Schurr, M. (2003). Institutionalizing pain management: the post-operative pain management quality improvement project. *The Journal of Pain*, 4(7), 361-371.
- Dahm, P., Yeung, L. L., Gallucci, M., Simone, G., & Schünemann, H. J. (2009). How to use a clinical practice guideline. *The Journal of Urology*, 181(2), 472-479.
- Daly Quinlan-Colwell, A. (2009). Understanding the paradox of patient pain and patient satisfaction. *Journal of Holistic Nursing*, 27(3), 177-182.
- Daniels, S. E., Goulder, M. A., Aspley, S., & Reader, S. (2011). A randomised, five-parallel-group, placebo-controlled trial comparing the efficacy and tolerability of analgesic combinations including a novel single-tablet combination of ibuprofen/paracetamol for post-operative dental pain. *PAIN*, 152(3), 632-642.
- Darwin, C. (1872). *The expression of the emotions in man and animals*. London: John Murray.
- Davis, B. D. (1998). Cultural dimensions of pain. In B. Carter (Ed.), *Perspectives on pain* (pp. 66-83). USA: Oxford University Press Inc.
- De Rond, M., de Wit, R., & van Dam, F. (2001). The implementation of a pain monitoring programme for nurses in daily clinical practice: results of a follow-up study in five hospitals. *Journal of Advanced Nursing*, 35(4), 590-598.

- Decker, S. A. (2009). Behavioural indicators of post-operative pain in older adults with delirium. *Clinical Nursing Research, 18*(4), 336-347.
- Decruynaere, C., Thonnard, J.-L., & Plaghki, L. (2009). How many response levels do children distinguish on faces scales for pain assessment? *European Journal of Pain, 13*(6), 641-648.
- Den Hartog, D. N., House, R. J., Hanges, P. J., Ruiz-Quintanilla, S. A., & Dorfman, P. W. (1999). Culture specific and cross-culturally generalizable implicit leadership theories: Are attributes of charismatic/transformational leadership universally endorsed? *The Leadership Quarterly, 10*(2), 219-256.
- Denzin, N. K., & Lincoln, Y. S. (1998). Entering the field of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of Qualitative Inquiry* (pp. 1-34). London Sage.
- Devi, B. C., & Tang, T. S. (2008). Documenting pain as the fifth vital sign: a feasibility study in an oncology ward in Sarawak, Malaysia. *Oncology, 74 Suppl 1*, 35-39.
- DeWaters, T., Faut-Callahan, M., McCann, J. J., Paice, J. A., Fogg, L., Hollinger-Smith, L., et al. (2008). Comparison of self-reported pain and the PAINAD Scale in hospitalized cognitively impaired and intact older adults after hip fracture surgery. *Orthopaedic Nursing, 27*(1), 21-28.
- Dihle, A., Bjolseth, G., & Helseth, S. (2006). The gap between saying and doing in post-operative pain management. *Journal of Clinical Nursing, 15*(4), 469-479.
- Doenges, M. E., Moorhouse, M. F., & Murr, A. C. (2006). *Nursing care plans: guidelines for individualizing client care across the life span* (7th ed.). Philadelphia: F.A. Davies Company.
- Donovan, M., Dillon, P., & McGuire, L. (1987). Incidence and characteristics of pain in a sample of medical-surgical inpatients. *Pain, 30*, 69-78.

- Drayer, R. A., Henderson, J., & Reidenberg, M. (1999). Barriers to better pain control in hospitalized patients. *Journal of Pain and Symptom Management*, 17(6), 434-440.
- Dykes, F. (2005). A critical ethnographic study of encounters between midwives and breast-feeding women in postnatal wards in England. *Midwifery*, 21(3), 241-252.
- Edwards, H. E., Nash, R. E., Najman, J. M., Yates, P. M., Fentiman, B. J., Dewar, A., et al. (2001). Determinants of nurses' intention to administer opioids for pain relief. *Nursing & Health Sciences*, 3(3), 149-159.
- Edwards, S. D. (2001). *Philosophy of nursing: An introduction*. Wales: Creative Print and Design.
- Eid, T., & Bucknall, T. (2008). Documentation and implementing evidence-based post-operative pain management in older patients with hip fractures. *Journal of Orthopaedic Nursing* 12, 90 - 98.
- El-Nemer, A., Downe, S., & Small, N. (2006). 'She would help me from the heart': An ethnography of Egyptian women in labour. *Social Science & Medicine*, 62(1), 81-92.
- Emerson, R. M., Fretz, R. I., & Shaw, L. L. (2001). Participant observation and field notes. In P. Atkinson, A. Coffey, S. Delamont, J. Lofland & L. Lofland (Eds.), *Handbook of ethnography* (pp. 352-368). London: Sage Publications.
- Ene, K. W. m., Nordberg, G., Bergh, I., Johansson, F. G., & Sjoström, B. (2008). Post-operative pain management - "the influence of surgical ward nurses". *Journal of Clinical Nursing*, 17(15).
- Entwistle, V. A., & Watt, I. S. (2006). Patient involvement in treatment decision-making: The case for a broader conceptual framework. *Patient Education and Counselling*, 63(3), 268-278.
- Esposito, N. (2001). From meaning to meaning: The influence of translation techniques on non-English focus group research. *Qualitative Health Research*, 11(4), 568-579.

- European Association of Urology. (2010). *Guidelines on pain management*. Retrieved May 10, 2012, from http://www.uroweb.org/gls/pdf/21_Pain_Management%202010.pdf
- Fabiane, U., & Corrêa, A. K. (2007). Relatives' experience of intensive care: the other side of hospitalization. *Revista Latino-Americana De Enfermagem*, 15(4), 598-604.
- Fenwick, C., & Stevens, J. (2004). Post-operative pain experiences of Central Australian Aboriginal women. What do we understand? *Aust. J. Rural Health*, 12, 22 - 27.
- Fillingim, R. B. (2000). The influence of menstrual cycle and sex hormones on pain responses in humans. In R. B. Fillingim (Ed.), *Sex, gender, and pain: progress in pain research and management* (Vol. 17, pp. 191-208). Seattle: IASP Press.
- Fillingim, R. B., King, C. D., Ribeiro-Dasilva, M. C., Rahim-Williams, B., & Riley Iii, J. L. (2009). Sex, gender, and pain: A review of recent clinical and experimental findings. *The Journal of Pain*, 10(5), 447-485.
- Findlay, J. N. (1970). *Axiological ethics*. New York: MacMillan.
- Finnström, B., & Söderhamn, O. (2006). Conceptions of pain among Somali women. *Journal of Advanced Nursing*, 54(4), 418-425.
- Fischer, H. B., & Simanski, C. J. (2005). A procedure-specific systematic review and consensus recommendations for analgesia after total hip replacement. *Anaesthesia*, 60(12), 1189-1202.
- Flory, D. A., Fankhauser, R. A., & McShane, M. A. (2001). Post-operative pain control in total joint arthroplasty: A prospective, randomized study of a fixed-dose, around-the-clock, oral regimen. *Orthopaedics*, 24(3), 243-246.
- Foley, B. J., Kee, C. C., Minick, P., Harvey, S. S., & Jennings, B. M. (2002). Characteristics of nurses and hospital work environment that foster satisfaction and clinical expertise. *Journal of Nursing Administration*, 32(5), 273-282.

- Fredericks, S., Guruge, S., Sidani, S., & Wan, T. (2010). Post-operative patient education: A systematic review. *Clinical Nursing Research, 19*(2), 144-164.
- Garside, R., Britten, N., & Stein, K. (2008). The experience of heavy menstrual bleeding: a systematic review and meta-ethnography of qualitative studies. *Journal of Advanced Nursing, 63*(6), 550-562.
- Ghana Health Service. (2004). *National health insurance: a handbook for service providers*.
- Ghana Statistical Service. (2005). *Ghana 2000 population and housing census: Greater Accra Region - analysis of district data and implications for planning*.
- GhanaWeb. (2012). *General information*. Retrieved May 02, 2012, from <http://www.ghanaweb.com/>
- Gharaibeh, M., & Abu- Saad, H. (2002). Cultural validation of paediatric pain assessment tools: Jordanian perspective. *Journal of Transcultural Nursing, 13*(1), 12 -18.
- Good, M., Stanton-Hicks, M., Grass, J. A., Anderson, G. C., Lai, H.L., Roykulcharoen, V., et al. (2001). Relaxation and music to reduce postsurgical pain. *Journal of Advanced Nursing, 33*(2), 208-215.
- Good, M., Stanton-Hicks, M., Grass, J. A., Cranston Anderson, G., Choi, C., Schoolmeesters, L. J., et al. (1999). Relief of post-operative pain with jaw relaxation, music and their combination. *Pain, 81*(1-2), 163-172.
- Goucke, R., & Morriss, W. (2012). Pain management in Low and Middle Income Countries (LMIC) just put up with it? *Egyptian Journal of Anaesthesia, 28*(1), 1-2.
- Gould, T. H., Crosby, D. L., Harmer, M., Lloyd, S. M., Lunn, J. N., Rees, G. A. D., et al. (1992). Policy for controlling pain after surgery: effect of sequential changes in management. *305*, 1187-1193.

- Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*, 24(2), 105-112.
- Green, C. R., & Tait, A. R. (2002a). Attitudes of healthcare professionals regarding different modalities used to manage acute post-operative pain. *Acute Pain*, 4, 15 - 21.
- Green, C. R., & Tait, A. R. (2002b). Attitudes of healthcare professionals regarding different modalities used to manage acute post-operative pain. *Acute Pain*, 4(1), 15-21.
- Grol, R. (1992). Implementing guidelines in general practice care. *Quality in Health Care*, 1, 184-191.
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The landscape of qualitative research: Theories and issues* (pp. 105-117). Thousand Oaks, CA: Sage.
- Guo, P., East, L., & Arthur, A. (2012). A preoperative education intervention to reduce anxiety and improve recovery among Chinese cardiac patients: A randomized controlled trial. *International Journal of Nursing Studies*, 49(2), 129-137.
- Hadley, M. B., Blum, L. S., Mujaddid, S., Parveen, S., Nuremowla, S., Haque, M. E., et al. (2007). Why Bangladeshi nurses avoid 'nursing': Social and structural factors on hospital wards in Bangladesh. *Social Science & Medicine*, 64, 1166-1177.
- Haljamäe, H., & Stomberg, M. W. (2003). Post-operative pain management - practice guidelines. *Current Anaesthesia & Critical Care*, 14, 203 - 206.
- Hall-Lord, M. L., & Larsson, B. W. (2006). Registered nurses' and student nurses' assessment of pain and distress related to specific patient and nurse characteristics. *Nurse Education Today*, 26(5), 377-387.
- Hammersley, M. (1992). *What's wrong with ethnography: Methodological explorations*. London: Routledge.

- Hammersley, M., & Atkinson, P. (1995). *Ethnography: Principles in practice* (2nd ed.). London: Routledge.
- Hammersley, M., & Atkinson, P. (2007). *Ethnography: Principles in practice* (3rd ed.). London: Routledge.
- Hartog, C. S., Rothaug, J., Goettermann, A., Zimmer, A., & Meissner, W. (2010). Room for improvement: nurses' and physicians' views of a post-operative pain management program. *Acta Anaesthesiologica Scandinavica*, 54(3), 277-283.
- Hasani, A., Maloku, H., Sallahu, F., Gashi, V., & Ozgen, S. U. (2011). Pre-emptive analgesia with midazolam and diclofenac for hernia repair pain. *Hernia*, 15(3).
- Hasenfeld, R., & Shekelle, P. G. (2003). Is the methodological quality of guidelines declining in the US? Comparison of the quality of the US Agency for Health Care Policy and Research (AHCPR) guidelines with those published subsequently. *Quality safe Health Care*, 12, 428-434.
- Hastings, F. (1995). Introduction of the use of structured pain assessment for post-operative patients in Kenya: Implementing change using a research-based co-operative approach. *Journal of Clinical Nursing*, 4(3), 169-176.
- Hawthorn, J., & Redmond, K. (1998). *Pain: causes and management*. UK: Biddles Ltd.
- Hellström, O., Lindqvist, P., & Mattsson, B. (1998). A phenomenological analysis of doctor-patient interaction: a case study. *Patient Education and Counselling*, 33(1), 83-89.
- Helman, C. G. (2001). *Culture, Health and Illness* (4ed ed.). New York: Oxford University Press.
- Hewitt-Taylor, J. (2004). Clinical guidelines and care protocols. *Intensive and Critical Care Nursing*, 20(1), 45-52.
- Hidalgo, M. P., Auzani, J. A., Rumpel, L. C., Moreira, J. N. L., Cursino, A. W., & Caumo, W. (2005). The clinical effect of small oral clonidine doses on perioperative outcomes

- in patients undergoing abdominal hysterectomy. *Anesthesia & Analgesia*, 100(3), 795-802.
- Hofer, S., & H, H. (1995). The role of the nurse in post-operative pain therapy. *Baillière's Clinical Anaesthesiology*, 9(3), 461-467.
- Hoffman, K. A., Aitken, L. M., & Duffield, C. (2009). A comparison of novice and expert nurses' cue collection during clinical decision-making: Verbal protocol analysis. *International Journal of Nursing Studies*, 46(10), 1335-1344.
- Hojat, M., Gonnella, J. S., Nasca, T. J., Fields, S. K., Cicchetti, A., Lo Scalzo, A., et al. (2003). Comparison of American, Israeli, Italian and Mexican physicians and nurses on the total and factor scores of the Jefferson scale of attitudes toward physician-nurse collaborative relationships. *International Journal of Nursing Studies*, 40, 427-435.
- Holloway, I., & Todres, I. (2006). Ethnography. In K. Gerrish & A. Lacey (Eds.), *The Research Process in Nursing* (5th ed., pp. 208-222). Oxford: Blackwell Publishing.
- Holloway, I., & Wheeler, S. (2002). *Qualitative research in nursing* (2nd ed.). Oxford, UK: Blackwell Science Ltd.
- Holman, T. G., Ellison, K. J., S. Maghsoodloo, P. E., & Thomas, R. E. (2010). Nurses' perceptions of how job environment and culture influence patient handling. *Journal of Orthopaedic Nursing* 14(1), 18-29.
- Honeyman, P., & Jacobs, E. (1996). Effects of culture on back pain in Australian Aborigines. *Spine*, 21, 841-843.
- Huang, N., Cunningham, F., Laurito, C. E., & Chen, C. (2001). Can we do better with post-operative pain management? *The American Journal of Surgery*, 182(5), 440-448.
- Hunter, C. L., Spence, K., & Scheinberg, A. (2008). 'Untangling the web of critical incidents': ethnography in a paediatric setting. *Anthropology & Medicine*, 15(2), 91-103.

- Hurwitz, B. (1994). Clinical guidelines: proliferation and medico-legal significance. *Quality in Health Care*, 3, 37-44.
- Hutchison, R. W. (2007). Challenges in acute post-operative pain management. *American Journal of Health-System Pharmacy*, 64, S2.
- Idvall, E., & Berg, A. (2008). Patient assessment of post-operative pain management: Orthopaedic patients compared to other surgical patients. *Journal of Orthopaedic Nursing*, 12(1), 35-40.
- Izumi, Y., Amaya, F., Hosokawa, K., Ueno, H., Hosokawa, T., Hashimoto, S., et al. (2010). Five-day pain management regimen using patient-controlled analgesia facilitates early ambulation after cardiac surgery. *Journal of Anaesthesia - Japan Society of Anaesthesiology*, 24(2).
- Jackson, A., Hettinga, D. M., Mead, J., & Mercer, C. (2009). Using consensus methods in developing clinical guidelines for exercise in managing persistent low back pain. *Physiotherapy*, 95(4), 302-311.
- Jairath, N., & Kowal, N. (1999). Patient expectations and anticipated responses to postsurgical pain. *Journal of Holistic Nursing*, 17(2), 184-196.
- Jewkes, R., Abrahams, N., & Mvo, Z. (1998). Why do nurses abuse patients? Reflections from South African obstetric services. *Social Science & Medicine*, 47(11), 1781-1795.
- Jirarattanaphochai, K., & Jung, S. (2008). Nonsteroidal anti-inflammatory drugs for post-operative pain management after lumbar spine surgery: a meta-analysis of randomized controlled trials. *Journal of Neurosurgery: Spine*, 9, 22-31.
- Joshi, G. P., Rawal, N., Kehlet, H., & The PROSPECT collaboration. (2011). Evidence-based management of post-operative pain in adults undergoing open inguinal hernia surgery. *British Journal of Surgery*, 99(2), 168-185.

- Kaba, R., & Sooriakumaran, P. (2007). The evolution of the doctor-patient relationship. *International Journal of Surgery*, 5(1), 57-65.
- Kaplan, C. P., Sison, C., & Platt, S. L. (2008). Does a pain scale improve pain assessment in the paediatric emergency department? *Paediatric Emergency Care*, 24(9), 605-608.
- Kappesser, J., & Williams, A. C. d. C. (2002). Pain and negative emotions in the face: judgements by health care professionals. *Pain*, 99(1-2), 197-206.
- Keeley, P. W. (2003). Clinical guidelines. *Palliative Medicine*, 17, 368-374.
- Kenneth, M. P. (2009). Assessing pain by facial expression: Facial expression as nexus. *Pain Research & Management: The Journal of the Canadian Pain Society*, 14(1), 53.
- Kirk, J., & Miller, D. (1986). *Reliability and validity in qualitative research*. London: Sage.
- Klopper, H., Andersson, H., Minkinen, M., Ohlsson, C., & Sjöström, B. (2006). Strategies in assessing post-operative pain - A South African study. *Intensive and Critical Care Nursing*, 22, 12 - 21.
- Knottenbelt, G., van der Westhuizen, J., & Griffith, N. (2007). Post-operative analgesia and discharge criteria for day surgery. *Anaesthesia & Intensive Care Medicine*, 8(3), 122-125.
- Koo, P. J. S. (2003). Acute pain management. *Journal of Pharmacy Practice*, 16(4), 231-248.
- Kposowa, A. J., & Tsunokai, G. T. (2002). Searching for relief: Racial differences in treatment of patients with back pain. *Race and Society*, 5(2), 193-223.
- Krueger, R. (1998). *Analysing & reporting focus group results: Focus group kit 6*. London: Sage.
- Kunz, M., Mylius, V., Scharmann, S., Schepelman, K., & Lautenbacher, S. (2009). Influence of dementia on multiple components of pain. *European Journal of Pain*, 13(3), 317-325.

- Lanigan, C., & Luffingham, N. (1998). Post-operative pain control - the impact of an acute pain team. *Acute Pain, 1*(3), 7-13.
- Larsson, S. (1996). Post-operative nausea and vomiting. *Baillière's Clinical Anaesthesiology, 10*(4), 677-686.
- Lauzon Clabo, L. M. (2007). An ethnography of pain assessment and the role of social context on two post-operative units. *Journal of Advanced Nursing, 61*(5), 531-539.
- LeCompte, M. D., & Schensul, J. J. (1999a). *Analysing and interpreting ethnographic data: ethnographer's toolkit 5*. London: Altamira Press: A Division of Sage Publications Inc.
- LeCompte, M. D., & Schensul, J. J. (1999b). *Designing and conducting ethnographic research: Ethnographer's toolkit 1*. London: Altamira Press: A Division of Sage Publications Inc.
- Leegaard, M., & Fagermoen, M. (2008). Women's descriptions of post-operative pain and pain management after discharge from cardiac surgery. *Journal of Clinical Nursing, 17*(15).
- Leininger, M. (1985). Ethnography and ethno-nursing: Models and modes of qualitative data analysis. In M. M. Leininger (Ed.), *Qualitative research methods in nursing* (pp. 33-71). New York: Grune and Stratton Inc.
- Leininger, M. (1997). Transcultural nursing research to transform nursing education and practice: 40 Years. *Journal of Nursing Scholarship, 29*(4), 341-348.
- Lewis, S. M., Heitkemper, M. M., & Dirksen, S. R. (2004). *Medical-surgical nursing: Assessment and management of clinical problems* (6th ed.). St. Louis: Mosby.
- Li, L., Herr, K., & Pingyan, C. (2009). Post-operative pain assessment with three intensity scales in Chinese elders. *Journal of Nursing Scholarship, 41*(3), 241-249.

- Lindenfeld, J., & Kelly, P. A. (2010). Developing a cardiology-oncology clinical practice guideline. *Progress in Cardiovascular Diseases*, 53(2), 173-179.
- Liu, J. Y. W., Chung, J. W. Y., & Wong, T. K. S. (2003). The psychometric properties of Chinese pain intensity verbal rating scale. *Acta Anaesthesiol Scandinavica* 47, 1013 - 1019.
- Logan, D. E., & Rose, J. B. (2004). Gender differences in post-operative pain and patient controlled analgesia use among adolescent surgical patients. *Pain*, 109(3), 481-487.
- Long, D., & Hunter, C. L. (2008). When the field is a ward or a clinic: Hospital ethnography. *Anthropology & Medicine*, 15(2), 71-78.
- Lovering, S. (2006a). Cultural attitudes and beliefs about pain. *Journal of Transcultural Nursing*, 17(4), 389- 395.
- Luboldt, H. J., Fornara, P., Weißbach, L., Wirth, M., Lorenz, W., & Rübber, H. (2004). Systematic development of a guideline for early detection of prostate cancer: The German way in the evidence gap. *European Urology*, 46(6), 725-730.
- Mac Lellan, K. (2004a). Post-operative pain: strategy for improving patient experiences. *Journal of Advanced Nursing*, 46(2), 179-185.
- Mac Lellan, K. (2004b). Post-operative pain: strategy for improving patient experiences. *Journal of Advanced Nursing*, 46(2), 179 - 185.
- Mac Lellan, K. (2006). *Management of pain*. UK: Nelson Thornes Ltd.
- Machin, D., & Scamell, M. (1997). The experience of labour: Using ethnography to explore the irresistible nature of the bio-medical metaphor during labour. *Midwifery*, 13(2), 78-84.
- Macintyre, P. E., & Ready, L. B. (2001). *Acute pain management: A practical guide*. London: W.B. Saunders.

- Mackenzie, A. E. (1994). Evaluating ethnography: Considerations for analysis. *Journal of Advanced Nursing*, 19(4), 774-781.
- Mackintosh, C. (2007). Protecting the self: A descriptive qualitative exploration of how registered nurses cope with working in surgical areas. *International Journal of Nursing Studies*, 44, 982-990.
- Malinowski, B. (1922). *Argonauts of the western science*. London: Routledge.
- Manias, E. (2003). Pain and anxiety management in the post-operative gastro-surgical setting. *Journal of Advanced Nursing*, 41(6), 585 -594.
- Manias, E., Botti, M., & Bucknall, T. (2002). Observation of pain assessment and management - the complexities of clinical practice. *Journal of Clinical Nursing*, 11(6), 724 - 733.
- Manias, E., Bucknall, T., & Botti, M. (2004). Assessment of patient pain in the post-operative context. *Western Journal of Nursing Research*, 26(7), 751-769.
- Manimala, R. (2006). Acute post-operative pain. *Indian Journal of Anaesthesia*, 50(5), 340-344.
- Mao, J. J., Farrar, J. T., Xie, S. X., Bowman, M. A., & Armstrong, K. (2007). Use of complementary and alternative medicine and prayer among a national sample of cancer survivors compared to other populations without cancer. *Complementary Therapies in Medicine*, 15(1), 21-29.
- Marquis, B. L., & Huston, C. J. (1992). *Leadership roles and management functions in nursing: Theory and application*. Philadelphia: J.B. Lippincott Company.
- Martin, V., & Todd, K. S. (2002). An evolutionary theory of pain must consider sex differences. *Behavioural and Brain Sciences*, 25(4), 474.
- Marzano, M. (2007). Informed consent, deception, and research freedom in qualitative research. *Qualitative Inquiry*, 13(3), 417-436.

- Mason, J. (2005). *Qualitative researching* (2nd ed.). London: Sage.
- Masson, M. (1985). *A pictorial history of nursing*. London: Hamlyn Publishing.
- Mayan, M. J. (2001). *An introduction to qualitative methods: training modulation for students and professionals*: University of Alberta, Edmonton, Alberta, Canada.
- International institute *manual for nursing practice* for qualitative methodology.
- Maynard, D. (1989). On the ethnography and analysis of discourse in institutional settings. *Perspectives on Social Problems, 1*, 127-146.
- McCaffery, M. (1972). Pain in the context of nursing care. In *Nursing management of the patient with pain*. Toronto: J.B. Lippincott Company.
- McCaffery, M., & Beebe, A. (1994). *Pain: Clinical manual for nursing practice* (UK edition ed.). London: Mosby.
- McCaffery, M., & Pasero, C. (1999). *Pain: Clinical manual*. London: Mosby Inc.
- McCance, T. V., McKenna, H. P., & Boore, J. R. P. (1999). Caring: Theoretical perspectives of relevance to nursing. *Journal of Advanced Nursing, 30*(6), 1388-1395.
- McDonnell, A., Nicholl, J., & Read, S. (2003). Acute pain teams in England: Current provision and their role in post-operative pain management *Journal of Clinical Nursing, 12*, 387-393.
- Mehta, A., & Chan, L. S. (2008). Understanding of the concept of "Total pain": A prerequisite for pain control. *Journal of Hospice & Palliative Nursing, 10*(1), 26-34.
- Meleis, A. I., & Hassan, H. S. (1980). Oil rich, nurse poor: the nursing crisis in the Persian gulf. *Nursing Outlook, 28*, 238-243.
- Mellish, J. M. (1984). *A basic history of nursing*. Pretoria: Sigma Press Ltd.
- Menigaux, C., Adam, F., Guignard, B., Sessler, D. I., & Chauvin, M. (2005). Preoperative gabapentin decreases anxiety and improves early functional recovery from knee surgery. *Anaesthesia & Analgesia, 100*(5), 1394-1399.

- Meterko, M., Mohr, D. C., & Young, G. J. (2004). Teamwork culture and patient satisfaction in hospitals. *Medical Care*, 42(5), 492-498.
- Miaskowski, C. (2005). Patient-controlled modalities for acute post-operative pain management. *Journal of Peri-Anaesthesia Nursing*, 20(4), 255-267.
- Middleton, C. (2004). Barriers to the provision of effective pain management. *Nursing Times*, 100(3), 42-45.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded source book* (2nd ed ed.). Newberg Park, CA: Sage.
- Miller, M., & Kearney, N. (2004). Guidelines for clinical practice: Development, dissemination and implementation. *International Journal of Nursing Studies*, 41(7), 813-821.
- Ministry of Health. (2007). *Ministry of health, republic of Ghana human resource policies & strategies for the health sector 2007-2011*.
- Moher, D., Cook, D. J., Eastwood, S., Olkin, I., Rennie, D., Stroup, D. F., et al. (1999). Improving the quality of reports of meta-analyses of randomised controlled trials: the QUOROM statement. *The Lancet*, 354, 1896-1900.
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & The PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine*, 6(7).
- Molony, S. L., Kobayashi, M., Holleran, E. A., & Mezey, M. (2005). Assessing pain as a fifth vital sign in long-term care facilities: recommendations from the field. *Journal of Gerontological Nursing*, 31(3), 16-24.
- Morello, R., Jean, A., Alix, M., Sellin-Peres, D., & Fermanian, J. (2007). A scale to measure pain in non-verbally communicating older patients: The EPCA-2: Study of its psychometric properties. *Pain*, 133(1-3), 87-98.

- Morgan, D. (1998). *Planning focus groups: Focus group kit 2*. London: Sage.
- Morse, J. M. (1994). "Emerging from the data': The cognitive processes of analysis in qualitative inquiry. In J. M. Morse (Ed.), *Critical issues in qualitative research methods* (pp. 23-43). London: Sage.
- Morse, J. M., & Field, P. (1996). *Nursing research: The application of qualitative approaches*. (2nd ed.). London: Chapman and Hall.
- Moss, E., Taverner, T., Norton, P., Lesser, P., & Cole, P. (2005). A survey of post-operative pain management in fourteen hospitals in the UK. *Acute Pain*, 7, 13-20.
- Moulding, N. T., Silagy, C. A., & Weller, D. P. (1999). A framework for effective management of change in clinical practice: dissemination and implementation of clinical practice guidelines. *Quality in Health Care*, 8, 177-183.
- Moulin, D. E. (2007). Opioid analgesics in the management of neuropathic pain. *European Journal of Pain Supplements*, 1(1), 57-60.
- Muecke, M. A. (1994). On the evaluation of ethnographies. In J. M. Morse (Ed.), *Critical issues in qualitative research methods* (pp. 187-209). London: Sage.
- Mulhall, A. (2003). Methodological issues in nursing research: In the field: notes on observation in qualitative research. *Journal of Advanced Nursing*, 41(3), 306–313.
- Murphy, E., & Dingwall, R. (2001). The ethics of ethnography. In P. Atkinson, A. Coffey, S. Delamont, J. Lofland & L. Lofland (Eds.), *Handbook of ethnography* (pp. 339-351). London: Sage Publications.
- Murray, G., Judd, F., Jackson, H., Fraser, C., Komiti, A., Pattison, P., et al. (2008). Big boys don't cry: An investigation of stoicism and its mental health outcomes. *Personality and Individual Differences*, 44(6), 1369-1381.
- Nagi, H. (2004). Acute pain services in the United Kingdom. *Acute Pain*, 5(3-4), 89-107.

- Nair, R., Aggarwal, R., & Khanna, D. (2011). Methods of formal consensus in classification/diagnostic criteria and guideline development. *Seminars in Arthritis and Rheumatism*, 41(2), 95-105.
- National Institute for Health and Clinical Excellence (NICE) (2011). Developing NICE clinical guidelines. *Journal*. Retrieved July 20, 2011, from <http://www.nice.org.uk/>
- Neal, J., Brown, T., & Rojjanasrirat, W. (1999). Implementation of a case coordinator role: A focused ethnographic study. *Journal of Professional Nursing*, 15(6), 349-355.
- Nelson, C., Treichler, P., & Grossberg, L. (1992). Cultural studies. In L. Grossberg, C. Nelson & P. Treichler (Eds.), *Cultural studies* (pp. 1-16). New York: Routledge.
- Nelson, J. W., & Venhaus, R. (2005). Improving retention through nurse/physician communication. *Nurse Leader*, 3(1), 54-56.
- Nett, M. P. (2010). Post-operative pain management. *Orthopaedics*, 33(9 Suppl), 23-26.
- Nguyen, M., Ugarte, C., Fuller, I., Haas, G., & Portenoy, R. K. (2005). Access to care for chronic pain: Racial and ethnic differences. *The Journal of Pain*, 6(5), 301-314.
- Nielsen, C. S., Stubhaug, A., Price, D. D., Vassend, O., Czajkowski, N., & Harris, J. R. (2008). Individual differences in pain sensitivity: Genetic and environmental contributions. *Pain*, 136(1-2), 21-29.
- Nukunya, G. K. (2003). *Tradition and change: An introduction to sociology* (2nd ed.). Accra: Ghana Universities Press.
- O'Loughlin, A. (1999). Nursing practice and the culture of pain. *Acute Pain*, 2(1), 5-6.
- O'reilly, K. (2005). *Ethnographic methods*. London: Routledge Taylor & Francis Group.
- O'Mathúna, D. P. (2010). Tips and tricks: Critical appraisal of systematic reviews. *International Journal of Nursing Practice*, 16: 414-418.
- Ogala-Echejoh, S., & Schofield, P. (2010). Systematic review on the literature on culture and pain. *Journal of Pain Management*, 3(4), 347-354.

- Ohene -Yeboah, M. (2006). Acute surgical admissions for abdominal pain in adults in Kumasi, Ghana. *ANZ Journal of Surgery*, 76(10).
- Oliffe, J. (2005). Demystifying nursing research. Why not ethnography? *Urologic Nursing*, 25(5), 395-399.
- Ong, L. M. L., de Haes, J. C. J. M., Hoos, A. M., & Lammes, F. B. (1995). Doctor-patient communication: A review of the literature. *Social Science & Medicine*, 40(7), 903-918.
- Orland-Barak, L., & Wilhelem, D. (2005). Novices in clinical practice settings: Student nurses stories of learning the practice of nursing. *Nurse Education Today*, 25(6), 455-464.
- Oware-Gyekye, F. (1997). The image of the Ghanaian nurse. *The Ghanaian Nurse, The House Journal of the Ghana Registered Nurses Association* 2 (2)10-11.
- Ozolins, L.-L., & Hjelm, K. (2003). Nurses' experiences of problematic situations with migrants in emergency care in Sweden. *Clinical effectiveness in nursing*, 7(2), 84-93.
- Paice, J. A., Noskin, G. A., Vanagunas, A., & Shott, S. (2005). Efficacy and safety of scheduled dosing of opioid analgesics: A quality improvement study. *The Journal of Pain*, 6(10), 639-643.
- Parahoo, K. (1997). *Nursing research: Principles, process and Issues*. Wales, Ebbw Vale: MacMillan Press Ltd.
- Parahoo, K. (2006). *Nursing research: Principles, process and issues* (2nd ed.). Basingstoke: Palgrave Macmillan.
- Parker, M. (2007). Ethnography/ethics. *Social Science & Medicine*, 65(11), 2248-2259.
- Pasero, C. (2009). Challenges in pain assessment. *Journal of Peri-Anaesthesia Nursing*, 24(1), 50-54.

- Pasero, C., & McCaffery, M. (2011). *Pain assessment and pharmacologic management*. St. Louis: Mosby/Elsevier.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.
- Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research, 34*(5), 1189-1208.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods*. London: Sage Publications Inc.
- Peters, M. L., Patijn, J., & Lamé, I. (2007). Pain assessment in younger and older pain patients: psychometric properties and patient preference of five commonly used measures of pain intensity. *Pain Medicine, 8*(7), 601 - 610.
- Pillai Riddell, R. R., & Craig, K. D. (2003). Time-contingent schedules for post-operative analgesia: A review of the literature. *The Journal of Pain, 4*(4), 169-175.
- Plesh, O., Crawford, P. B., & Gansky, S. A. (2002). Chronic pain in a biracial population of young women. *Pain, 99*(3), 515-523.
- Polit, D. F., & Hungler, B. P. (1995). *Nursing research: Principles and methods* (5th ed.). Philadelphia: J.B. Lippincott Company.
- Polit, D. F., & Hungler, B. P. (1999). *Nursing research: principles and methods* (3rd ed.). Philadelphia: P,A, JB Lippincott.
- Polomano, R. C., Dunwoody, C. J., Krenzischek, D. A., & Rathmell, J. P. (2008). Perspective on pain management in the 21st century. *Journal of Peri-Anaesthesia Nursing, 23*(1A), S4 - S14.
- Pope, C. (2005). Conducting ethnography in medical settings. *Medical Education, 39*(12), 1180-1187.

- Prichard, J. S., & Stanton, N. A. (1999). Testing Belbin's team role theory of effective groups. *Journal of Management Development*, 18(8), 652-665.
- Prkachin, K. M., Mass, H., & Mercer, S. R. (2004). Effects of exposure on perception of pain expression. *Pain*, 111(1-2), 8-12.
- Qu, S., Sherwood, G. D., McNeill, J. A., & Zheng, L. (2008). Post-operative pain management outcome in Chinese inpatients. *Western Journal of Nursing Research*, 30(8), 975-990.
- Rabiee, F. (2004). Focus-group interview and data analysis. *Proceedings of the Nutrition Society*, 63, 655-660.
- Ramer, L., Richardson, J. L., Cohen, M. Z., Bedney, C., Danley, K. L., & Judge, E. A. (1999). Multi-measure pain assessment in an ethnically diverse group of patients with cancer. *Journal of Transcultural Nursing*, 10(2), 94-101.
- Randal, C. C., Ihab, I., Ahmad, E., Sarosh, S., Frank, Z., & Lori, A. (2004). A comparison of the verbal rating scale and the visual analog scale for pain assessment. *The Internet Journal of Anaesthesiology*, 8(1).
- Rawal, N. (1997). European approaches to post-operative pain management. *Techniques in Regional Anaesthesia and Pain Management*, 1(2), 93-100.
- Rawal, N., & Berggren, L. (1994). Organization of acute pain services: A low-cost model. *Pain*, 57, 117-123.
- Rejeh, N., Ahmadi, F., Mohammadi, E., Kazemnejad, A., & Anoosheh, M. (2009). Nurses' experiences and perceptions of influencing barriers to post-operative pain management. *Scandinavian Journal of Caring Sciences*, 23(2).
- Roberts, T. (2009). Understanding ethnography. *British Journal of Midwifery*, 17(5), 291-294.

- Rolley, J. X., Salamonson, Y., Dennison, C. R., & Davidson, P. M. (2010). Development of clinical practice guidelines for the nursing care of people undergoing percutaneous coronary interventions: An Australian & New Zealand collaboration. *Australian Critical Care*, 23(4), 177-187.
- Rolley, J. X., Salamonson, Y., Wensley, C., Dennison, C. R., & Davidson, P. M. (2011). Nursing clinical practice guidelines to improve care for people undergoing percutaneous coronary interventions. *Australian Critical Care*, 24(1), 18-38.
- Rolls, K. D., & Elliott, D. (2008). Using consensus methods to develop clinical practice guidelines for intensive care: The Intensive Care Collaborative project. *Australian Critical Care*, 21(4), 200-215.
- Roper, J. M., & Shapira, J. (2000). *Ethnography in Nursing Research*. U.S.A.: Sage Publications, Inc.
- Rotbøll Nielsen, P., Rudin, A., & Werner, M. U. (2007). Prediction of post-operative pain. *Current Anaesthesia and Critical Care*, 18, 157-165.
- Roth, W., Kling, J., Gockel, I., Rümelin, A., Hessmann, M. H., Meurer, A., et al. (2005). Dissatisfaction with post-operative pain management: A prospective analysis of 1071 patients. *Acute Pain*, 7(2), 75-83.
- Rowat, K. M. (1992). Living with chronic pain: A family perspective. In L. Duncan (Ed.), *Pain Management: Nursing Perspective* (pp. 79-92). St. Louis: Mosby.
- Roykulcharoen, V., & Good, M. (2004). Systematic relaxation to relieve post-operative pain. *Journal of Advanced Nursing*, 48(2), 140-148.
- Rycroft-Malone, J. (2001). Formal consensus: The development of a national clinical guideline. *Quality in Health Care*, 10, 238-244.
- Sabiston, D. C., & Lysterly, K. H. (1997). *Textbook of Surgery: Pocket Companion*. Philadelphia: W.B. Saunders Company.

- Sackey, B. M. (2002). Faith healing and women's reproductive health: Institute of African Studies. Sociocultural dimension of reproductive health and human development. *Research Review New series: Univ. of Ghana*, 18(1).
- Saks, M., & Allsop, J. (2007). *Researching health: Qualitative, quantitative and mixed methods*. London: Sage.
- Schensul, S. L., Schensul, J. J., & LeCompte, M. D. (1999). *Essential ethnographic methods: observations, interviews, and questionnaires - Ethnographer's toolkit 2*. London: Altamira Press: A Division of Sage Publications Inc.
- Schulz, K. F., Altman, D. G., & Moher, D. (2010). CONSORT 2010 Statement: Updated guidelines for reporting parallel group randomized trials. *Annals of Internal Medicine*, 152(11), 1-8.
- Schwandt, T. A. (1997). *Qualitative inquiry: A dictionary of terms*. London: Sage.
- Scott, D. L. (1997). Clinical guidelines for management. *Baillière's Clinical Rheumatology*, 11(1), 157-179.
- Scottish Intercollegiate Guideline Network (SIGN) (2004). A guideline for developers handbook. *Journal*. Retrieved July 20, 2011, from <http://sign.ac.uk/guidelines>
- Seers, K., Crichton, N., Carroll, D., Richards, S., & Saunders, T. (2004). Evidence-based post-operative pain management in nursing: is a randomized-controlled trial the most appropriate design? *Journal of Nursing Management*, 12(3), 183-193.
- Shaw, A., Ibrahim, S., Reid, F., Ussher, M., & Rowlands, G. (2009). Patients' perspectives of the doctor-patient relationship and information giving across a range of literacy levels. *Patient Education and Counselling*, 75(1), 114-120.
- Shi, Q., Langer, G., Cohen, J., & Cleeland, C. S. (2007). People in pain: how do they seek relief? *The Journal of Pain*, 8(8), 624-636.

- Shipton, E. A., Beeton, A. G., & Minkowitz, H. S. (1993). Introducing a patient-controlled analgesia-based acute pain relief service into southern Africa--the first 10 months. *South African Medical Journal - Suid-Afrikaanse Tydskrif Vir Geneeskunde*, 83(7), 501-505.
- Sills, E. S., Genton, M. G., Walsh, A. P. H., & Wehbe, S. A. (2009). Who's asking? Patients may under-report post-operative pain scores to nurses (or over-report to surgeons) following surgery of the female reproductive tract. *Archives of Gynaecology and Obstetrics*, 279(5), 771-774.
- Silverman, D. (2000). *Doing qualitative research*. London: Sage.
- Silverman, D. (2001). *Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction* (2nd ed.). London: Sage.
- Silverman, D. (Ed.). (2004). *Qualitative research: Theory, method and practice* (2nd ed.). London: Sage.
- Simosi, M., & Xenikou, A. (2010). The role of organizational culture in the relationship between leadership and organizational commitment: An empirical study in a Greek organization. *International Journal of Human Resource Management*, 21(10), 1598-1616.
- Sjöström, B., Dahlgren, L. O., & Haljamäe, H. (2000). Strategies used in post-operative pain assessment and their clinical accuracy. *Journal of Clinical Nursing* 9(1), 111 - 118.
- Sloman, R., Rosen, G., Rom, M., & Shir, Y. (2005). Nurses' assessment of pain in surgical patients. *Journal of Advanced Nursing*, 52(2), 125 - 132.
- Sloman, R., Wruble, A. W., Rosen, G., & Rom, M. (2006). Determination of clinically meaningful levels of pain reduction in patients experiencing acute post-operative pain. *Pain Management Nursing*, 7(4), 153-158.

- Smith, S. (1996). Ethnographic inquiry in physiotherapy research: The role of self in qualitative research. *Physiotherapy*, 82(6), 349-352.
- Smith, T., & Hillner, B. (2001). Ensuring quality cancer care by the use of clinical practice guidelines and critical pathways. *Journal of Clinical Oncology*, 19(11), 2886-2897.
- Sophie, P., François, H., Paulette Le, L., Malika, F., & et al. (2005). Feasibility and reliability of four pain self-assessment scales and correlation with an observational rating scale in hospitalized elderly demented patients. *The Journals of Gerontology*, 60(4), 524.
- Soyannwo, O. A. (2009). Obstacles to pain management in low resource settings. In A. Kopf & N. B. Patel (Eds.), *Guide to pain management in a low resource setting* (pp. 12-14): International Association for the Study of Pain (IASP).
- Spanswick, C. C., & Parker, H. (2000). Clinical content of interdisciplinary pain management programmes. In C. J. Main & C. C. Spanswick (Eds.), *Pain Management: An interdisciplinary approach*. London: Churchill Livingstone.
- Spradley, J. P. (1979a). *The ethnographic interview*. U.S.A: Holt, Rinehart and Winston.
- Spradley, J. P. (1979b). *Participant observation*. New York: Holt, Rinehart and Winston.
- Stotts, N. A., Puntillo, K., Stanik-Hutt, J., Thompson, C. L., White, C., & Rietman Wild, L. (2007). Does age make a difference in procedural pain perceptions and responses in hospitalized adults? *Acute Pain*, 9(3), 125-134.
- Strassels, S. A., McNicol, E., & Suleman, R. (2005a). Post-operative pain management: A practical review, part 1. *American Journal of Health-System Pharmacy*, 62(18), 1904-1917.
- Strassels, S. A., McNicol, E., & Suleman, R. (2005b). Post-operative pain management: A practical review, part 2. *American Journal of Health-System Pharmacy*, 62(19).

- Strassels, S. A., McNicol, E., & Suleman, R. (2005c). Post-operative pain management: A practical review, part 2. *American Journal of Health-System Pharmacy*, 62(19), 2019-2026.
- Strauss, A., & Corbin, J. (1998). Grounded theory methodology: An overview. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry* (pp. 158-183). London: Sage.
- Sukhani, R., & Frey, K. (1997). Multimodal analgesia approach to post-operative pain management in ambulatory surgery. *Techniques in Regional Anaesthesia and Pain Management*, 1(2), 79-87.
- Svensson, I., Sjöström, B., & Haljamäe, H. (2000). Assessment of pain experiences after elective surgery. *Journal of Pain and Symptom Management*, 20(3), 193-201.
- Svensson, I., Sjöström, B., & Haljamäe, H. (2000). Assessment of pain experiences after elective surgery. *Journal of Pain and Symptom Management*, 20(3), 193-201.
- Talbot, L. A. (1995). *Principles and practice of nursing research*. New York: Mosby.
- Taylor, A., & Stanbury, L. (2009a). A review of post-operative pain management and the challenges. *Current Anaesthesia and Critical Care*, 20, 188-194.
- Taylor, A., & Stanbury, L. (2009b). A review of post-operative pain management and the challenges. *Current Anaesthesia & Critical Care*, 20(4), 188-194.
- Taylor, N., Hall, G. M., & Salmon, P. (1996). Is patient-controlled analgesia controlled by the patient? *Social Science & Medicine*, 43(7), 1137-1143.
- The Appraisal of Guidelines Research and Evaluation in Europe (AGREE) Collaboration (2004). Electronic library for guideline developers. *Journal*. Retrieved July 18, 2011, from <http://www.agreecollaboration.org>
- The British Pain Society (2007). *Recommended guidelines for Pain Management Programmes for adults: A consensus statement prepared on behalf of the British Pain*

Society. Retrieved March 02, 2012, from

http://www.britishpainsociety.org/book_pmp_main.pdf

The Cochrane Collaboration. (2011). Cochrane handbook for systematic reviews of interventions (Publication from The Cochrane Collaboration) Retrieved July 02, 2011 from <http://www.cochrane-handbook.org/>

Thomson, D. (2011). Ethnography: A suitable approach for providing an inside perspective on the everyday lives of health professionals. *International Journal of Therapy & Rehabilitation, 18*(1), 10-17.

Thomson, R., Lavendar, M., & Madhok, R. (1995). How to ensure that guidelines are effective. *British Medical Journal, 311*, 237-241.

Turk, D., & Melzack, R. (2001). The measurement of pain and the assessment of people experiencing pain. In D. C. Turk & R. Melzack (Eds.), *Handbook of pain assessment* (2nd ed., pp. 3-11). London: The Guildford Press.

Turk, D., Wack, J. T., & Kerns, R. D. O. (1985). An empirical examination of the 'pain-behaviour' construct. *Journal of Behavioural Medicine, 8*, 119-130.

Turk, D. C., & Okifuji, A. (1998). Efficacy of multidisciplinary pain centres: an antidote to anecdotes. *Baillière's Clinical Anaesthesiology, 12*(1), 103-119.

Ulin, P., R., Robinson, E., T., & Tolley, E., E. (2005). *Qualitative methods in public health: a field guide for applied research* (1st ed.). San Francisco, USA: Jossey-Bass.

UNICEF. (2012). *At a glance, Ghana*. Retrieved May 03, 2012, from

http://www.unicef.org/infobycountry/ghana_statistics.html

Upton, P. M., Beeton, A. G., Minkowitz, H. S., & Shipton, E. A. (1992). Patient-controlled analgesia. Its South African debut in a provincial hospital. *South African Medical Journal - Suid-Afrikaanse Tydskrif Vir Geneeskunde, 81*(2), 74-76.

- van der Geest, S., & Finkler, K. (2004). Hospital ethnography: introduction. *Social Science & Medicine*, 59(10), 1995-2001.
- van Dulmen, A. M. (2002). Different perspectives of doctor and patient in communication. *International Congress Series*, 1241, 243-248.
- Vick, S., & Scott, A. (1998). Agency in health care. Examining patients' preferences for attributes of the doctor-patient relationship. *Journal of Health Economics*, 17, 587-605.
- Vickers, A. (2010). The management of acute pain. *Surgery (Oxford)*, 28(4), 175-180.
- Vickers, A., Bali, S., Baxter, A., Bruce, G., England, J., Heafield, R., et al. (2009). Consensus statement on the anticipation and prevention of acute post-operative pain: multidisciplinary RADAR approach. *Current Medical Research & Opinion*, 25(10), 2557-2569.
- Walden, M., Elliott, E. C., & Gregurich, M. A. (2009). Delphi survey of barriers and organizational factors influencing nurses' participation in patient care rounds. *Newborn and Infant Nursing Reviews*, 9(3), 169-174.
- Wallin, M., & Raak, R. (2007). Non-Scandinavian and Scandinavian women's expectations and experiences of acute pain. *Acute Pain*, 9(1), 1-6.
- Warfield, C. A., & Kahn, C. H. (1995). Acute pain management programmes in US hospitals and experiences and attitudes among US adults. *Anaesthesiology*, 83, 1090-1094.
- Watt-Watson, J., Stevens, B., Garfinkel, P., Streiner, D., & Gallop, R. (2001). Relationship between nurses' pain knowledge and pain management outcomes for their post-operative cardiac patients. *Journal of Advanced Nursing*, 36(4), 535-545.
- Watt-Watson, J. H., & Donovan, M. I. (1992). *Pain Management: Nursing Perspective*. St. Louis, USA: Mosby-Year Book, Inc.

- Wetzel, C. M., Kneebone, R. L., Woloshynowych, M., Nestel, D., Moorthy, K., Kidd, J., et al. (2006). The effects of stress on surgical performance. *The American Journal of Surgery, 191*, 5-10.
- Whittemore, R., Chase, S. K., & Mandle, C. L. (2001). Validity in qualitative research. *Qualitative Health Research, 11*, 522-537.
- Witte, W., & Stein, C. (2009). History, definitions and contemporary viewpoints. In A. Kopf & N. B. Patel (Eds.), *Guide to pain management in low resource settings* (pp. 7-11): International Association for the Study of pain (IASP).
- Wolf, K., Raedler, T., Henke, K., Kiefer, F., Mass, R., Quante, M., et al. (2005). The face of pain - A pilot study to validate the measurement of facial pain expression with an improved electromyogram method. *Pain Research & Management: The Journal of the Canadian Pain Society, 10*(1), 15.
- Wong, E. M. L., Chan, S. W.-C., & Chair, S.-Y. (2010). The effect of educational intervention on pain beliefs and post-operative pain relief among Chinese patients with fractured limbs. *Journal of Clinical Nursing, 19*(17/18), 2652-2655.
- Wood, S. (2008). Anatomy and physiology of pain. *Nursing times.net*. Retrieved July 12, 2010, from <http://www.nursingtimes.net/nursing-practice/clinical-zones/pain-management/anatomy-and-physiology-of-pain/1860931.article>
- World Health Organization (WHO). (2007). *WHO normative guidelines on pain management: Report of a Delphi study to determine the need for guidelines and to identify the number and topics of guidelines that should be developed by WHO*. Geneva: WHO. Retrieved July 12, 2011, from http://www.who.int/medicines/areas/quality_safety/delphi_study_pain_guidelines.pdf
- Wulf, H., Neugebauer, E., & Maier, C. (1997). Practice guidelines for the management of acute pain. *Acute Pain, 1*(1), 41-45.

- Yang, L., & Fox, K. (1999). Ethnography in health research and practice... including commentary by Roberts H. *Ambulatory Child Health*, 5(4), 339-349.
- Yong, H.-H. (2006). Can attitudes of stoicism and cautiousness explain observed age-related variation in levels of self-rated pain, mood disturbance and functional interference in chronic pain patients? *European Journal of Pain*, 10(5), 399-407.
- Yüceer, S. (2011). Nursing approaches in the post-operative pain management. *Journal of Clinical and Experimental Investigations* 2(4), 474-478.
- Zaman, S. (2008). Native among the natives: Physician anthropologist doing hospital ethnography at home. *Journal of Contemporary Ethnography*, 37(2), 135-154.



Appendix 1 - Map of Ghana



GhanaWeb, 2012

Appendix 2 – Participant Information Sheet and Consent Form



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: 00233-244719686

E-mail: 3179857@uwc.ac.za

INFORMATION SHEET

Project Title: Development of Clinical Guidelines for the Management of Post-operative Pain within the Medico-socio-cultural Context of Ghana

What is this study about?

This research is being conducted by Lydia Aziato of the University of the Western Cape. You are being invited to take part in the study because (tick appropriate category):

1. You are a health care worker who takes care of surgical patients or
2. You have recently had an operation or
3. Your relative has recently had an operation or
4. You have some experiences to share on post-operative pain

The purpose of the study is to explore your experiences and perceptions about post-operative pain response and management. The study would also develop guidelines to guide the post-operative pain management and your input would be solicited during the development of the guideline. Data collection will last for about 8 to 10 months.

What will I be asked to do if I agree to participate?

I will seek your permission to observe you on the ward. I may have an individual interview with you which may last for 40 to 90 minutes and would be conducted at a place and time convenient to you. During the interview, there is no right or wrong answer and you are free to express yourself as much as you can. Your consent will be sought to audio-tape the interview. Later in this study, your views will be sought on draft clinical guidelines that may help in the post-operative pain management you provide or receive. I will also ask your permission to go through your clinical notes on the ward.

Would my participation in this study be kept confidential?

Your participation in this study will be kept confidential as much as possible. Your name will not be associated with any experience you share during the study. False names will be used to report findings of the study. Only the researcher will have access to your name when you sign the consent form and this will be kept under lock and key. Also, any information related to you such as the interview transcript will be kept in the form of codes to protect your identity. All data generated in this study will be password protected so that only those involved in this study will have access to it. The computer used for this study will also be password protected.

In case of any report or article from this study, your identity will be protected to the maximum extent possible.

What are the risks of this research?

There are no known risks associated with participating in this study. However, if you feel emotional while sharing your post-operative care experiences, you will have the services of a counsellor without any cost to you. If you also feel any pain or discomfort during the interview, the process will stop immediately and rescheduled as appropriate.

What are the benefits of this research?

You may not derive any immediate personal benefits in this study but the results may help the researcher fully understand issues influencing post-operative pain response and management. It is hoped that in the future, other patients could have improved care from the knowledge gained. Future health care providers would also benefit from clinical guidelines developed in this study in the management of post-operative pain.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized, it will not affect the care you receive, the care of your relative, or your employment status as a health care provider.

Is any assistance available if I am negatively affected by participating in this study?

You can request for counselling and I will ensure that you receive appropriate counselling at no cost to you.

What if I have questions?

This research is being conducted by Ms Lydia Aziato and is supervised by Prof. Adejumo Oluyinka from the School of Nursing at the University of the Western Cape. If you have any questions about the study, please contact Ms Lydia Aziato at: cell: 0244719686; address: P.O. Box LG43, School of Nursing, Legon; or email: aziatol@yahoo.com

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please you can contact my local supervisor or my School authorities as below:

**Local contact: Dr Patrick Seshie,
Wisconsin University
P. O. Box LG751
Accra
0268466803**

School Authorities: Head of the School of Nursing: Prof T Khanyile
Dean of the Faculty of Community and Health Sciences: Prof R Mpofo
University of the Western Cape
Private Bag X17

Bellville 7535

This research has been approved by the University of the Western Cape's Senate Research Committee and Ethics Committee.



UNIVERSITY OF THE WESTERN CAPE

INFORMED CONSENT FORM

Title of Research Project: Development of Clinical Guidelines for the Management of Post-operative Pain within the Medico-socio-cultural Context of Ghana

Investigator: Lydia Aziato, Research Student, University of the Western Cape; 0244719686

Please tick your answers as appropriate:

Do you understand that you have been asked to be in a research study? Yes/No

Have you read and received a copy of the information sheet? Yes/No

Have you had the opportunity to ask questions and discuss this study? Yes/No

Do you understand that you are free to refuse to participate or withdraw from the study at any time? You do not have to give a reason Yes/No

Has the issue of confidentiality/anonymity been explained to you? Do you understand who will have access to your information? Yes/No

Do you know the information can be used for future research, publication, or for educational purposes? Yes/No

*Do you consent to the interview being audio taped or recorded? Yes/No

*Do you consent to being observed when managing surgical pain? Yes/No

*Do you consent to being observed on the ward when your pain is being managed? Yes/No

*Do you consent for me to review your nursing charts? Yes/No

*Do you consent to give an in-pat on a clinical guideline on post-operative pain? Yes/No

This study was explained to me by -----

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any question I have asked have been answered to my satisfaction. I consent voluntarily to participate as a subject in this study and understand that I have the right to withdraw from the study at any time without in any way it affecting my further medical care.

Signature/Thumbprint of research participant Date Witness

Printed Name Printed Name

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Signature of investigator Date

Participants' ID Code -----



Appendix 3 – Twi version of information sheet and consent form

UNIVERSITY OF THE WESTERN CAPE

Private Bag x17 Bellville 7535, South Africa

Tel: 00233-244719686

E-mail : 3179857@uwc.ac.za

NSEM A EFA NHWEHWEMU YI HO

Dwumadie no ti: Sɛ yɛhyɛhyɛ ɔkwan a yɛbɛfaso asɔ apɛrɛhyan akyi yaw ano wɔ yɛn Ghana apɔmuden ne amammɛ kwan so.

Saa nhwehwɛmu yi fa deɛn ho?

Awuraa Lydia Aziato a ɔwɔ “Western Cape” Suapɔn mu na ɔreyɛ saa nhwehwɛmu yi. Ɔto nsa frɛ wo sɛ, bɛka ne ho na ɔnni saa dwuma yi.

Nipakuo ahodoɔ nan yi na ɔhia wɔn wɔ ne dwumadie no mu.

- 1) Apɔmuden dwuma yɛfoɔ a wɔ hwɛ wɔn a wɔyɛ wɔn apɛrɛhyan so.
- 2) Obi a, wayɛ apɛrɛhyan nansa yi ara.
- 3) Obi a, ne busuani a, ɔbɛn no paa ayɔ apɛrɛhyan no bi da.
- 4) Nea etwa toɔ, onipa a ɔwɔ apɛrɛhyan akyi yaw nimdeɛ.

Nhwehwɛmufɔɔ yi hia saa nkurɔfoɔ yi na wɔne wɔn adi nkɔmmɔ afa ɔyaw a wɔfaa mu ne nea ɔyɛɛ de dwodwoo ɔyaw no ano. Yei bɛboa nkyirimma a wɔbɛyɛ apɛrɛhyan no bi daakye a wɔn deɛ, wɔremfa saa ɔyaw pii no mu. Nhwehwɛmu yi bɛdi bɛyɛ sɛ abosome nwɔtwe de rekɔ abosome du.

Ɛdeɛn na nhwehwɛmufɔɔ yi bɛhia afiri onipa a wapene so sɛ, ɔbɛboa dwumadie yi?

Obi a wayɛ apɛrɛhyan a wapene so sɛ ɔbɛboa dwumadie no, nhwehwɛmufɔɔ no bɛba wo nkyɛn wɔ ayaresabea ho. Wɔba a, wɔne wo bɛtwetwe nkɔmmɔ. Saa nkɔmmɔdie no bɛkɔ so wɔ baabiara a, wɔbɛpene so sɛ mobetena. Afei wo na wɔbɛkyɛrɛ nhwehwɛmufɔɔ no bɛrɛ a ɔmra ho mmene wo nni nkɔmmɔ no. Sɛ eba sɛ, ɔba a, ɔne wo bɛdi nkɔmmɔ afiri simma aduanan so de akɔsi simma aduɔkron so. Nkɔmmɔdie no nso ɔbɛbisa wo ho kwan, na sɛ wopene so a, watumi atwe agu ahoma so. Nkɔmmɔ twetwee no mu no, deɛ wɔbɛka biara nso, yɛgye tomu. Yɛrenka sɛ, yei yɛ na wei deɛ ɛnyɛ. Yɛgye ne nyinaa to mu. Wogyɛ to mu a, wonsem a wɔbɛka no bi nso, nhwehwɛmufɔɔ yi bɛtintim no krataa so. Na mpo sɛ woma wɔn kwan a wɔbɛ hwɛhwɛ wapɔmuden krataa no a yɛfrɛ no (folder) no mu nso.

Aso, nsem a maka akyerɛ nhwehwɛmuɔ yi ɛbɛda me wɔn nko ara ntam?

Aane , wɔde nsem no nyinaa besie fee. Wɔmfɛ nto dwa mma obiara nhunu deɛ asie. Mmom nhwehwɛmufoɔ yi nkoara na wɔwɔ ho kwan sɛ, wɔhunu wo ho nsem no.

Mpo sɛ wɔretwerɛ biribi de aboa apɔmuden adwuma no a, wɔremmɔ wo din sɛ osemasi, mmom wɔde edin-hunu bi na ɛɛbata ho.

Akwansidɛɛ bi wɔ saa nhwehwɛmu yi mu?

Dabi, yɛnya nhunu biribi saa. Na mmom sɛ ɛkɔba sɛ, nkɔmmɔ twetwee no mu no, wokae ɔyaw a, wokɔɔ mu na wontumi nto so bio a, yɛbɛma wo agyae na akyire yi moatoa so. Sɛ ɛhia nso sɛ, yɛfrɛ obi a ɛsɛ sɛ ɔkasa kyerɛ wo a, anaa ɔtu wo fo a, wɔbɛhwɛwe obi saa ama wo a, wɔrentua kapreba mpo.

Mfasoɔ bɛn na ɛwɔ saa nhwehwɛmu yi yɛ mu?

Seisei ara deɛ, wɔrenhunu ho mfasoɔ. Saa nhwehwɛmu yi bɛboa nkyirimma a wɔbɛyɛ wɔn apɛrɛhyan. Wɔn deɛ ɔrenkɔ yaw pii mu sɛdeɛ ɛnnɛ te yi na mmom wɔbɛnya akwannya bi a, ɛbɛboa wɔn adwodwo wɔn yaw ano.

Sɛ mede me ho bɛdɔm nhwehwɛmu yi na akyire yi mɛpɛ sɛ megyae a, mɛyɛ dɛn?

Dwumadie no yɛ atuwohoakye adwuma. Yei enti bɛrɛ biara a wɔpɛ sɛ wɔgyae no, ɔkwan da ho. ɛnye hu, obiara renkyere wo. Sɛ woyɛ adwuma a, ɔrenka sɛ ɛno nti wɔrentua wo ka. Wɔbɛtua wo ka pɛpɛpɛ a, ɔhaw biara nni mu. Sɛ woyɛ apɛrɛhyanni a woda ayaresabea a, wɔ nsa bɛka wo nnuro ne mmɔa biara a, adɔkotafoɔ ne anɛɛsefoɔ de ma wo no nyinaa, wɔrengyae. Asotwe biara nni nhwehwɛmu yi mu.

Mmoa bi wɔ hɔ ma me a mereboa dwumadie no, sɛ nsusuansoɔ bɔne bi ba me so a?

Aane, ɛba no saa a, yɛbɛpɛ obi a ɔtu fo ama ɔne wo akasa a wɔrentua hwee.

Sɛ nsem bi kyere m'adwene a, memmisa hwan?

Saa nhwehwɛmu yi, Awuraa Lydia Aziato na ɔreyɛ. Sɛ wohia nkyerekyerɛmu biara a bisa no. Ne samufoɔ ne ɔkunini Adejumo Oluyinka. Wɔn nyinaa wɔ anɛɛsefoɔ sukuu a ɛwɔ “Western Cape” Suapɔn mu.

Awuraa Lydia Aziato n'akyiriakwan nie:

Frɛ Ms. Lydia Aziato wɔ: ahomaterofoɔ yi so 0244719686

Twɛrɛ no krataa wɔ: P. O. Box LG 43 School of Nursing, Legon; E-mail :

aziatol@yahoo.com

Yei akyi sɛ wowɔ asemmisa a, ɛfa dwumadie yi ho anaa wowɔ biribi de ka ho a hunu awuranom yi.

Head of the School of Nursing: Prof. T. Khanyile
Dean of the Faculty of community and Health Sciences : Prof. R. Mpoafu
University of the Western Cape
Private Bag X17
Bellville 7535

Saa nhwehwemu yi, “Senate” nhwehwemu kuo ne ekuo a ehwe Amannee so a won nyinaa wo “Western Cape” Suapon mu na wagye ato mu.

PENE KRATAA A EDI NKYEREKYEREMU NO AKYI

Edin a eɗa nhwehwemu yi so:

Se yehyehye okwan a yebefaso aso aperehyan akyi yaw ano wo yen Ghana apomuden ne amammerɛ kwan so.

Nhwehwemufo: Lydia aziato a wo ‘Western Cape’ Suapon mu. Fre no: 0244719686.

Kyere wadwen wo nsemmisa yi ho. Wo beyi ano “Aane anaa Daabi”.
Eno na edidi so yi:

- Wonim se woka nhwehwemu dwumadie yi ho? (Aane / Daabi)
- Na wo nsa aka nhwehwemu krataa yi bi ama wakenkan mu nsem? (Aane / Daabi)
- Wanya akwannya abisabisa eho nsem? (Aane / Daabi)
- Wonim se dwumadie yi, bere biara a wope se wogyae no, ekwan da ho? enhia se wobeka sei nti a woregyae. (Aane / Daabi)
- Wakyerekyere asem a yefre no “Asumasem” no mu akyere wo? enee wonim won a wobehunu wasumasem efa nhwehwemu no mu? (Aane / Daabi)
- Wonim se wo nkommɔ twetwee no beboa daakye nhwehwemu, adesuafoɔ ne oman mu no nyinaa daakye? (Aane / Daabi)
- Wopene so se wo nsem a wokaeɛ no wobɛtwe agu ahoma so na watie? (Aane / Daabi)
- Wopene so se bere a, woreye wadwuma wo ayaresabea no, nhwehwemufoɔ yi beba wo nkyen abehwe wo? (Aane / Daabi)
- Wobɛpene ama nhwehwemufoɔ yi abehwe wo bere a apomuden dwuma yefoɔ redwodwo wo yea ano ama wo? (Aane / Daabi)
- Se merebhewe wapomuden krataa no mu a, wobɛpene? (Aane / Daabi)
- Aperehyan akyi yaw nhyehyee a woye ato ho no wode bi befoa so? (Aane / Daabi)

Saa dwumadie na okyerekyereɛ me mu.

Makenkan nsem a ewo krataa yi so; anaa obi akenkan nsem a ewo nhwehwemu krataa yi so akyere me. Mabisabisa nsem a na ekwere madwene nyinaa. Mmuaeɛ a, wode maa me no nso

ετο asomu. Enti metu me ho si ho se meboa dwumadie yi. Eduru mpempeso bi na mempe se metoa so bio a, metumi gyae a suro biara nni mu.

.....
..... Fa wo kokromoti tim so/ twere wahyenso din Deeti
Odanseni

.....
..... Twere wo din
Twere wo din

Me gyedi se, onipa a watintim ne din wo nwoma yi so no, nim dwumadie potee a, ofiri ne pe mu bedi yi.



.....
Nhwehwemufo no ahyensodee UNIVE Deeti TY of the
WESTERN CAPE

wo a woreboa dwumadie no wahyensodee (ID)
.....

Appendix 4: Summary of Clinical Observations

Observation Code	Location	Time	Duration
CO1	Female ward	8.30am to 10.30am	2 hours
CO2	Female ward	10am to 12.30am	2 and ½ hours
CO3	Female ward	12pm to 2.30pm	2 and ½ hours
CO4	Female ward	1.30pm to 5.00pm	3 and ½ hours
CO5	Male ward	8am to 10.30am	2 and ½ hours
CO6	Male ward	10am to 12.30pm	2 and ½ hours
CO7	Male ward	12pm to 2.30pm	2 and ½ hours
CO8	Male Ward	1.30pm to 5pm	3 and ½ hours
CO9	Female ward	8.30am to 10.30am	2 hours
CO10	Female Ward	9.00am to 11.30am	1 and ½ hours
CO11	Female Ward	9.30am to 1.00pm	3 and ½ hours
CO12	Female ward	2.00pm to 5pm	3 hours
CO13	Male ward	8.30am to 10.30am	2 hours
CO14	Male ward	9.00am to 11.30am	2 and ½ hours
CO15	Male ward	9.30am to 1.00pm	3 and ½ hours
CO16	Male ward	2.00pm to 5.00pm	3 hours

Appendix 5 – Sample Field Notes/Observation Notes

Field Notes

Retired Nurse 1 – interview at the hospital premises (lounge of surgery department) had one leg bandaged; she said she fell at her building site; did not talk loudly throughout the interview; environment for interview was sometimes noisy; she believed that analgesics should be given in a timely manner; she admonished ward in-charges to be vigilant and nurses should be committed and dedicated; she saw professional commitment as emanating from a calling; she was worried about inexperienced teachers who are not able to link theory to practice in class for a better understanding for the students. She believed that adequate training or education on pain management could enhance the management of postoperative pain. She thought the DDA policy should be re-instituted.

Even though she thought the young one are money conscious, she was being ejected from the hospital accommodation and she was bitter about it; she said the hospital management did not organize a send-off party for them or give them any incentive to appreciate their work all these years. She said these during informal interactions after the interview; she also recounted the stress she went through to acquire a land and the inexperience and dishonesty of the mason who started the house.

R. I felt touched when she shared an experience of having to change a patient who had soiled himself all alone because the nurses on duty with her, refused to help her – that I thought showed her ‘calling’ as she called it

In-Service 1 – Interview conducted in the office and was interrupted from time to time; the in-service unit had problem of finances affecting the number or regularity of in-service programs organized; the unit had no specific plans for training on pain management; however, she had observed that nurses did not administer drugs as prescribed (regarding time interval); when nurses see her on the ward, they try to quickly carryout procedures correctly if they were doing the wrong thing; however, she believed that her name will be on the line if she reports that nurse; so she informally corrects the nurse and that ends it; such an

observation does not appear in the report of the unit. She has also observed that the nurses do not practice what they were taught at the in-service education unit.

R. The non-report of unprofessional nursing activities for fear that ‘my name will be on the line’ shows the typical Ghanaian culture where individuals are not able to show assertiveness and authority.

Surgery Tutor 1 - Interview at the office; interrupted a few times; spoke clearly; he thought that the students are taught the right thing but when they go to the ward, they are not allowed to practice what they have been taught. He emphasizes observation in class and believes that nurses should use their discretion to either increase or decrease the dosage of analgesics administered. He facilitated a training for surgical nurses which included pain management in 2008 and realized subsequently that nurses were not implementing the knowledge acquired in clinical practice except one nurse; he believed that pain assessment especially intensity level assessment was difficult for students if there was a language barrier; that it was quite easier if the patient was asked the pain level in percentage

R. The emphasis on assessment of pain and employing nursing measures though important, acute postoperative pain responds to regular analgesics

Pharmacology Tutor – Interview in the office; interrupted a few times; she attended a workshop organized by the department of anaesthesia 2 to 3 years ago on pain management. She thought that the one semester teaching of pharmacology is woefully inadequate since the drugs to be covered are a lot; she hasn’t observed a student administering pethidine on the ward; she cautions the use of pethidine in clinical practice ensuring that students observe the DDA when it comes to the pethidine and other opioids.

Clinical Observation One (CO1)

Ward Observation One: 8.30am to 10.30am

I greeted the nurses, doctors, and patients on the ward and positioned myself for the observation that day. There were several students – nursing, medical, and HCAs. There were two house officers and one resident female doctor on the ward. The nurses read their report and took up the ward.

- After the handover, there were seven students (four medical, two first year nursing students, and one HCA student) on the main female wing without a qualified nurse initially (9.10am). S2 came to the ward briefly and approached T1 with a smile ‘are you in pain?’ T1 – ‘yes, but not much’; S2 – ‘have you been injected?’; T1 – ‘yes’; S2 – ‘pain will improve gradually so don’t worry’; she again smiled at the patient and left. After a few minutes, four doctors – S3, S4, S5, and S6 started the ward rounds without a nurse and S3 was the leader of the team. The house officers wrote the changes in the patients’ treatment on the nurses’ notes for all the patients reviewed on the ward.
- The doctors asked N6 to provide them with items needed as the rounds proceeded. N6 later brought a trolley with gloves, normal saline, syringes, and also brought stationery such as lab forms, prescription forms, continuation sheets, etc. She also shared the patients’ folder 45 minutes after the rounds had started. Thus, the doctors looked for the patients’ folder themselves when the rounds started. The doctors communicated among themselves in English using their medical jargons and communicated with the patients in Ga, and Twi as appropriate – there was no communication barrier observed. S3 removed dressing on wounds for inspection without providing privacy and when T10’s dressing was being removed; she *screamed* and *groaned* but no reassurance was given by any of the doctors. T10 had a very deep extensive wound on the calf – she had incision and drainage with debridement done.
- S6 took T8’s blood sample and during the insertion of the needle, T8 *grimaced* and she continued to grimace until the procedure was finished; however, S6 did not give any reassurance. T8’s sister came to the ward a few minutes after the blood sample was taken and T8 upon seeing the sister grimaced and she reassured her ‘don’t worry, you will be fine’. T8 sent her to collect some drugs prescribed during the rounds and when she left the ward, T8 assumed a normal facial expression

- After the rounds, I remained on the ward at the same spot where I could see all the ten patients on the ward. T1 gripped her abdomen and tried to cough; she grimaced; later she grimaced more severely and moaned on movement on the bed. T3 at 10.05am got out of bed gradually, splinted the site of surgery (abdomen), and walked slowly on the ward with a grimace. T4 asked her whether she was in pain and she said ‘yes, but I will try to walk’ During the walking, she saw N1 coming to the ward and she called her ‘matron, matron, look at me’ and N1 replied with a smile ‘Well done, well done, come and follow me’ T3 was so excited and followed the matron N1 to her office which was located towards the west or male wing of the ward. T8 also walked on the ward briefly with grimacing and returned to her bed. T2 also groaned and grimaced severely on movement at 10.10am. None of the patients complained or called the nurses when they were in pain or exhibited these signs; and the nurses were not on the ward to pick up any of these cues
- T4 dressed in outdoor clothes so that she could go for her drugs which were covered by the NHIS at a pharmacy outside the hospital. When she asked N2 permission to leave the ward, she refused and the reason she gave was that T4 just had surgery and if she goes to the pharmacy, it would take her a long time to get the drugs so she should wait and if her relations visit, they can go for the drugs. T11’s relative was going for drugs on the NHIS, so T4 asked her to collect her drugs for her and she did. The inefficiency of the NHIS was lamented by T3 and T4.
- T1 and T9 were Ewes and N1 and N2 communicated with them in Ewe though T9 also spoke Ga. The common medium of communication on the ward was Ga and Akan. The health personnel therefore spoke the language the patient could understand – there was no communication barrier observed. T3 and T4 in a conversation described S3 as ‘good’.
- There wasn’t much noise on the ward but the ward was warm and T9 and T11 were fanning themselves. T4’s phone rang three times and her ring signal was loud. One student HCA also received one call on the ward and her ring signal was also loud; nobody complained of noise and no patient commented on pain expression of other patients.
- The patients’ wounds were not dressed at the time I left the ward and the wounds exposed (T7, T9, and T10) were covered with a layer of gauze; no screen was used and patients did not complain.

Appendix 6 - Data Collection Instruments

Title: Development of Clinical Guidelines for the Management of Post-operative Pain within the Medico-socio-cultural Context of Ghana

Clinical observation will take into account ‘**what is going on here?**’ with a focus on the following areas:

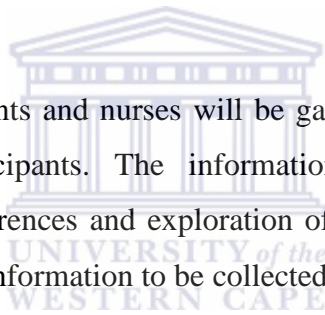
- Contextual information – number of nurses on duty per shift, number of patients on admission; number ambulant and dependent; time reporting to work/departure; routines of the ward; management of the ward; information on notice board/wall; facilities/equipment available
- Nurses’ patient care activities on the ward (priority or focus) during a shift; type of nursing care (task oriented, team nursing; primary nursing); are there individual differences? Why?
- Nurses’ attitude to patients’ pain reports (verbal and non-verbal response; prompt or delay response – why); do they stereotype patients? Do they respond early to patients who are loud in their pain report; what about the silent patients? What do they say during painful procedures – wound dressing, IV or IM injection?
- Nurses’ administration of drugs (timing, dosage, availability of drug, any verbalization of preference of drug or route of administration)
- Nurses’ education of patients preoperative, postoperative, and discharge regarding pain management; analgesic effect; early ambulation; pain report; do they encourage patients to ask questions?
- Nurses’ work relationships with other health team members; access to doctors; relationship with patients and their family; What about their communication with the other professionals and patients? Individual differences? Why?

- Patients’ pain behaviour (verbal and non-verbal); how do they elicit the nurses’ attention when in pain? Patients’ pain behaviour during post-surgery ambulation individual differences? Why?
- Patients’ reaction to medication – Request? Refuse? Preference of route of administration? Why?
- Patients’ peer communication/relationship (information sharing); family involvement in care, and communication/relationship with nurses?

Note: The researcher will be guided by these areas during observation (she will review these areas before starting observation sections as a reminder) but will not have this guide with her during clinical observation.

Background Information

Background information of patients and nurses will be gathered after informed consent has been obtained from the participants. The information obtained will enable further understanding of individual differences and exploration of variations and similarities in the data generated. The background information to be collected will be as follows:



Background Information form – Patients

ID number-----

Age: 18 – 25 26 – 30 31 -35 36 – 40 41 – 45 46 – 50 Above 51

Gender -----

Nationality-----

Ethnicity -----

Marital status-----

Occupation -----

Religion -----

How many operation(s) have you had? -----

Background Information form – Nurses

ID number-----

Ward -----

Age: 18 – 25 26 – 30 31 -35 36 – 40 41 – 45 46 – 50 Above 51

Gender -----

Nationality-----

Ethnicity -----

Rank/Position -----

Religion -----

How long have you been working with surgical patients? -----



Individual Interview (Nurses)

Please tell me how you know your patients are in pain? **Explain further**

Probe: assessment, behaviour

What do you do when your patients’ complain of pain?

Probe: assessment, self initiative, consultation

What are your beliefs about pain? **Please explain further**

Probe: culture, tribe, socialization

What do other health professionals do in postoperative pain management?

Probe: doctors, anaesthetists, pharmacists; how do you work together?

What expectation(s) do you have as a surgical nurse regarding pain management? **Why?**

Individual Interview (Patients)

Please tell me about your recent operation

Probe: pain management; drugs, pain report; education

How do you react when you are in pain? **Please explain further**

Probe: Culture, tribe, socialization

What do you do when you are in pain to reduce the pain? **Please explain further**

Probe: Previous experiences; non-analgesic measures

What can you say about your experience on the surgical ward? **Please explain further**

Probe: relationship with health professionals? Other patients?

- nurse-nurse relationship;
- nurse-doctor relationship;
- nurse-other professionals relationship
- what can you say about the way the health personnel work together?

What expectation(s) do you have about pain management? **Explain further**

Individual Interview (Family)

Please tell me about the role you played in your relation's recent operation. **Please explain further**

What can you say about your relation's postoperative pain? **Please explain further**

Probe: Pain management; drug availability; personnel attitude

What are your beliefs about pain? **Please explain further**

Probe: culture, tribe, socialization

What do you do when you are in pain to reduce the pain? **Please explain further**

Probe: Previous experiences; non-analgesic measures

What can you say about your experience during the admission of your relative on the surgical ward? **Please explain further**

Probe: relationship with health professionals? Other patients?

What expectation(s) do you have about pain management after operation? **Explain further**

Note: Key informants were interviewed based on emerging themes such as use of herbal medicine for pain management, history of surgery in Ghana, and factors affecting inadequate knowledge of nurses on post-operative pain management.



Patient's Chart Review Guide

ID Code:

Age and Gender:

Ethnicity:

Ward/Type of Surgery:

Name of Analgesic (s)/ Route (s) of Administration/Dosage (s):

.....
.....
.....
.....

Pain Documentation (specify whether documentation was done during the day or night) such as:

- Refusal of Analgesic; Analgesic (s) unavailability; Side effect of analgesic (s); Omissions of analgesic (s) administration (incomplete dosage; Extra dosage (s) or analgesic (s) administered; Reduced dosage (s) administered etc.

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ID Code

Feedback Form – Clinical Guideline on Post-operative Pain Management for the Ghana

Please provide your opinion on the clinical guideline for post-operative pain management within the medico-socio-cultural context of Ghana – your comment will be kept anonymous and confidential. To guide your objective review, a synoptic summary of contextual findings and the literature review are also attached. Thank you for your time and input.

	Comment (s)	Recommendation (s)
Patient and family education		
Effective team work		
Input and monitoring by hospital administrators		
Evidence-based recommendations		
Applicability to the local context	 UNIVERSITY of the WESTERN CAPE	
Inclusiveness		
Format/Design		
Clarity		

Other specific comments/recommendations:

.....

.....

.....

.....

.....

.....

CONSENSUS FORUM REGISTRATION FORM

Date:

Name

Profession

Institution

Telephone number

Email address

Signature



I consent that I could be identified (by name) as a consensus panel member

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Yes

No

Appendix 7: Sample Summary Table of Review of Documents

ID code	Sex	Age	Ethnicity	Type of Surgery/Diagnosis	Analgesic: type/dosage prescribed	Dosage administered	Notes on analgesic documentation
F1	F	46-50	Ewe	Cholecystectomy	IM pethidine 100mg 6hrly x 24hrs; Suppository paracetamol 1g tds x 5/7	3 doses of 100mg pethidine and supp. P'mol was given tds for 3 days	The medication chart indicated 'NIL' for pethidine but 4 vials were supplied from the pharmacy
F2	F	46-50	Ga	Mastectomy	IM pethidine 100mg 6hrly x 24hrs; Suppository paracetamol 1g tds x 5/7	2 doses of 100mg pethidine and supp. P'mol was given tds for 3 days	4 vials of pethidine were supplied from the pharmacy but treatment chart indicated 'nil'
F3	F	41-45	Akan	Laparotomy/ureterocystostomy	IM pethidine 100mg 6hrly x 24hrs; Suppository paracetamol 1g tds x 5/7	3 doses of 100mg pethidine and supp. P'mol was given b.d for 3 days	Pethidine was given at 10pm, 6am, and 10pm
F4	F	36-40	Akan	Laparotomy	IM pethidine 100mg 6hrly x 24hrs; Suppository diclofenac 100mg tds x 5/7	3 doses of 100mg pethidine and supp. P'mol was given b.d for 3 days	Pethidine was given at 10pm, 6am, and 6pm; 4 vials were supplied and one was used in the theatre
F5	F	18-25	Ga	Laparotomy	IM pethidine 100mg 6hrly x 24hrs; Suppository paracetamol 1g qid x 5/7	Two doses of pethidine was given on the ward and supp p'mol was given tds (6am, 2pm, and 10pm) instead of qid for 4 days	4 vials of pethidine were supplied from the hospital pharmacy but the medication chart indicated 'nil' for pethidine

Appendix 8 – Sample Search Strategy

Science direct:

3,026 articles found for: ((acute postoperative pain management)) and ((controlled clinical trial))[All Sources(Nursing and Health Professions)]

25 articles found for: pub-date > 2004 and (acute postoperative pain management) and (clinical trial) AND LIMIT-TO(cid, "272610,271050,273440,271126", "Journal of Vascular Surgery,PAIN®,Gastroenterology,The Annals of Thoracic Surgery") AND LIMIT-TO(topics, "post operative,patient,pain management") AND LIMIT-TO(pubyr, "2012,2011,2010,2009,2008")

467 articles found for: ALL((postoperative pain management) and analgesic) AND LIMIT-TO(contenttype, "1,2,5", "Journal,Reference Work") AND LIMIT-TO(cid, "271050,271242,272320,272550,271296,271910,272520,272979,272714,273560,271074,276939,272463,273363,272448", "PAIN®,Journal of Pain and Symptom Management,Regional Anesthesia and Pain Medicine,European Journal of Pain,Journal of Clinical Anesthesia,The American Journal of Surgery,The Journal of Pain,Techniques in Regional Anesthesia and Pain Mana...,Acute Pain,AORN Journal,The Lancet,European Journal of Pain Supplements,Journal of PeriAnesthesia Nursing,Anesthesiology Clinics of North America,International Journal of Obstetric Anesthesia") AND LIMIT-TO(topics, "post operative,pain management,patient,pain,pain relief,nsaids") AND LIMIT-TO(pubyr, "2012,2011,2010,2009,2008,2007,2006,2005")

163 articles found for: ALL((postoperative pain) and (effective management)) AND LIMIT-TO(contenttype, "1,2", "Journal") AND LIMIT-TO(cid, "271910,273440,272610,271050,273560,271242,271074,272871,271296,273318", "The American Journal of Surgery,Gastroenterology,Journal of Vascular Surgery,PAIN®,AORN Journal,Journal of Pain and Symptom Management,The Lancet,Current Problems in Surgery,Journal of Clinical Anesthesia,Surgical Clinics") AND LIMIT-TO(topics, "post operative,patient,pain management,pain,operative pain") AND LIMIT-TO(pubyr, "2012,2011,2010,2009,2008,2007,2006,2005")

26 articles found for: ALL((postoperative pain) and (developing country)) AND LIMIT-TO(contenttype, "1,2", "Journal") AND LIMIT-TO(cid,

"271910,271074,273560,272871,273440,273569,271148,271242,271050", "The American Journal of Surgery, The Lancet, AORN Journal, Current Problems in Surgery, Gastroenterology, Side Effects of Drugs Annual, Journal of the American College of Surgeons, Journal of Pain and Symptom Management, PAIN®") AND LIMIT-TO(topics, "patient, post operative, gastro intestinal, pain management, health care, pain") AND LIMIT-TO(pubyr, "2012,2011,2010,2009,2008,2007,2006,2005")

45 articles found for: ALL((postoperative pain) and (quantitative research)) AND LIMIT-TO(contenttype, "1,2", "Journal") AND LIMIT-TO(cid, "271050,271027,272437,272871,271074,271910,272550,273440,271416", "PAIN®, Journal of the American College of Cardiology, Journal of Oral and Maxillofacial Surgery, Current Problems in Surgery, The Lancet, The American Journal of Surgery, European Journal of Pain, Gastroenterology, The American Journal of Medicine") AND LIMIT-TO(topics, "post operative, patient") AND LIMIT-TO(pubyr, "2012,2011,2010,2009,2008,2007,2006,2005")

79 articles found for: ALL((postoperative pain) and (qualitative research)) AND LIMIT-TO(contenttype, "1,2,5", "Journal, Reference Work") AND LIMIT-TO(cid, "271050,273560,271910,271253,271242,272871,272476,271821,272520,271074,272463,272302", "PAIN®, AORN Journal, The American Journal of Surgery, International Journal of Nursing Studies, Journal of Pain and Symptom Management, Current Problems in Surgery, Pain Management Nursing, Social Science & Medicine, The Journal of Pain, The Lancet, Journal of PeriAnesthesia Nursing, Best Practice & Research Clinical Anaesthesiology...") AND LIMIT-TO(topics, "post operative, patient, pain management, pain, operative pain, health care") AND LIMIT-TO(pubyr, "2012,2011,2010,2009,2008,2007,2006,2005")

396 articles found for: pub-date > 2004 and ((acute postoperative pain)) and ((pharmacologic intervention))[All Sources(Nursing and Health Professions)]

340 articles found for: pub-date > 2004 and ((acute postoperative pain)) and ((pharmacologic intervention)) AND EXCLUDE(cid, "273146,272439", "Seminars in Oncology Nursing, Journal of Pediatric Nursing") AND EXCLUDE(topics, "chronic pain, neuropathic pain")

348 articles found for: ((postoperative pain)) and ((around the clock))[All Sources(Nursing and Health Professions)]

Pubmed

("pain, postoperative"[MeSH Terms] OR ("pain"[All Fields] AND "postoperative"[All Fields]) OR "postoperative pain"[All Fields] OR ("postoperative"[All Fields] AND "pain"[All Fields])) AND (("health resources"[MeSH Terms] OR ("health"[All Fields] AND "resources"[All Fields]) OR "health resources"[All Fields] OR "resource"[All Fields]) AND limited[All Fields] AND ("environment"[MeSH Terms] OR "environment"[All Fields]))

("pain, postoperative"[MeSH Terms] OR ("pain"[All Fields] AND "postoperative"[All Fields]) OR "postoperative pain"[All Fields] OR ("postoperative"[All Fields] AND "pain"[All Fields])) AND ("africa"[MeSH Terms] OR "africa"[All Fields])

acute[All Fields] AND ("pain, postoperative"[MeSH Terms] OR ("pain"[All Fields] AND "postoperative"[All Fields]) OR "postoperative pain"[All Fields] OR ("post"[All Fields] AND "operative"[All Fields] AND "pain"[All Fields]) OR "post operative pain"[All Fields]) AND interventions[All Fields]

((("pain, postoperative"[MeSH Terms] OR ("pain"[All Fields] AND "postoperative"[All Fields]) OR "postoperative pain"[All Fields] OR ("postoperative"[All Fields] AND "pain"[All Fields])) AND ("organization and administration"[MeSH Terms] OR ("organization"[All Fields] AND "administration"[All Fields]) OR "organization and administration"[All Fields] OR "management"[All Fields] OR "disease management"[MeSH Terms] OR ("disease"[All Fields] AND "management"[All Fields]) OR "disease management"[All Fields])) AND ("developing countries"[MeSH Terms] OR ("developing"[All Fields] AND "countries"[All Fields]) OR "developing countries"[All Fields] OR ("developing"[All Fields] AND "country"[All Fields]) OR "developing country"[All Fields])

((("pain, postoperative"[MeSH Terms] OR ("pain"[All Fields] AND "postoperative"[All Fields]) OR "postoperative pain"[All Fields] OR ("postoperative"[All Fields] AND "pain"[All Fields])) AND ("organization and administration"[MeSH Terms] OR ("organization"[All Fields] AND "administration"[All Fields]) OR "organization and administration"[All Fields] OR "management"[All Fields] OR "disease management"[MeSH

Terms] OR ("disease"[All Fields] AND "management"[All Fields]) OR "disease management"[All Fields])) AND ("developing countries"[MeSH Terms] OR ("developing"[All Fields] AND "countries"[All Fields]) OR "developing countries"[All Fields] OR ("developing"[All Fields] AND "country"[All Fields]) OR "developing country"[All Fields]) (acute[All Fields] AND ("pain, postoperative"[MeSH Terms] OR ("pain"[All Fields] AND "postoperative"[All Fields]) OR "postoperative pain"[All Fields] OR ("postoperative"[All Fields] AND "pain"[All Fields]))) AND (clinical[All Fields] AND ("organization and administration"[MeSH Terms] OR ("organization"[All Fields] AND "administration"[All Fields]) OR "organization and administration"[All Fields] OR "management"[All Fields] OR "disease management"[MeSH Terms] OR ("disease"[All Fields] AND "management"[All Fields]) OR "disease management"[All Fields]))

Limits Activated: only items with links to full text, only items with links to free full text, only items with abstracts, Humans, Clinical Trial, Meta-Analysis, Practice Guideline, Randomized Controlled Trial, Review, Clinical Trial, Phase I, Clinical Trial, Phase II, Clinical Trial, Phase III, Clinical Trial, Phase IV, Consensus Development Conference, Consensus Development Conference, NIH, Controlled Clinical Trial, Electronic Supplementary Materials, English Abstract, Government Publications, Guideline, Journal Article, English, Core clinical journals, MEDLINE, Nursing journals, Systematic Reviews, Middle Aged: 45-64 years, published in the last 10 years

("pain, postoperative"[MeSH Terms] OR ("pain"[All Fields] AND "postoperative"[All Fields]) OR "postoperative pain"[All Fields] OR ("postoperative"[All Fields] AND "pain"[All Fields])) AND (quantitative[All Fields] AND ("research"[MeSH Terms] OR "research"[All Fields])) AND ("loattrfull text"[sb] AND "loattrfree full text"[sb] AND hasabstract[text] AND "humans"[MeSH Terms] AND (Clinical Trial[ptyp] OR Meta-Analysis[ptyp] OR Practice Guideline[ptyp] OR Randomized Controlled Trial[ptyp] OR Review[ptyp] OR Clinical Trial, Phase I[ptyp] OR Clinical Trial, Phase II[ptyp] OR Clinical Trial, Phase III[ptyp] OR Clinical Trial, Phase IV[ptyp] OR Consensus Development Conference[ptyp] OR Consensus Development Conference, NIH[ptyp] OR Controlled Clinical Trial[ptyp] OR Electronic Supplementary Materials[ptyp] OR English Abstract[ptyp] OR Government Publications[ptyp] OR Guideline[ptyp] OR Journal Article[ptyp])) AND

English[lang] AND (jsubsetaim[text] OR medline[sb] OR jsubsetn[text] OR systematic[sb])
AND "middle aged"[MeSH Terms] AND "2002/03/20"[PDat] : "2012/03/16"[PDat])

("pain, postoperative"[MeSH Terms] OR ("pain"[All Fields] AND "postoperative"[All
Fields]) OR "postoperative pain"[All Fields] OR ("postoperative"[All Fields] AND
"pain"[All Fields])) AND ("qualitative research"[MeSH Terms] OR ("qualitative"[All Fields]
AND "research"[All Fields]) OR "qualitative research"[All Fields]) AND ("loattrfull
text"[sb] AND "loattrfree full text"[sb] AND hasabstract[text] AND "humans"[MeSH Terms]
AND (Clinical Trial[ptyp] OR Meta-Analysis[ptyp] OR Practice Guideline[ptyp] OR
Randomized Controlled Trial[ptyp] OR Review[ptyp] OR Clinical Trial, Phase I[ptyp] OR
Clinical Trial, Phase II[ptyp] OR Clinical Trial, Phase III[ptyp] OR Clinical Trial, Phase
IV[ptyp] OR Consensus Development Conference[ptyp] OR Consensus Development
Conference, NIH[ptyp] OR Controlled Clinical Trial[ptyp] OR Electronic Supplementary
Materials[ptyp] OR English Abstract[ptyp] OR Government Publications[ptyp] OR
Guideline[ptyp] OR Journal Article[ptyp])) AND English[lang] AND (jsubsetaim[text] OR
medline[sb] OR jsubsetn[text] OR systematic[sb]) AND "middle aged"[MeSH Terms] AND
"2002/03/20"[PDat] : "2012/03/16"[PDat])

("pain, postoperative"[MeSH Terms] OR ("pain"[All Fields] AND "postoperative"[All
Fields]) OR "postoperative pain"[All Fields] OR ("postoperative"[All Fields] AND
"pain"[All Fields])) AND ("organization and administration"[MeSH Terms] OR
("organization"[All Fields] AND "administration"[All Fields]) OR "organization and
administration"[All Fields] OR "management"[All Fields] OR "disease management"[MeSH
Terms] OR ("disease"[All Fields] AND "management"[All Fields]) OR "disease
management"[All Fields]) AND ("loattrfull text"[sb] AND "loattrfree full text"[sb] AND
hasabstract[text] AND "humans"[MeSH Terms] AND (Clinical Trial[ptyp] OR Meta-
Analysis[ptyp] OR Practice Guideline[ptyp] OR Randomized Controlled Trial[ptyp] OR
Review[ptyp] OR Clinical Trial, Phase I[ptyp] OR Clinical Trial, Phase II[ptyp] OR Clinical
Trial, Phase III[ptyp] OR Clinical Trial, Phase IV[ptyp] OR Consensus Development
Conference[ptyp] OR Consensus Development Conference, NIH[ptyp] OR Controlled
Clinical Trial[ptyp] OR Electronic Supplementary Materials[ptyp] OR English Abstract[ptyp]
OR Government Publications[ptyp] OR Guideline[ptyp] OR Journal Article[ptyp])) AND

English[lang] AND (jsubsetaim[text] OR medline[sb] OR jsubsetn[text] OR systematic[sb])
AND "middle aged"[MeSH Terms] AND "2002/03/20"[PDat] : "2012/03/16"[PDat])

JSTOR

((postoperative pain)) AND ((clinical management))) AND (cty:(journal) AND ty:(fla OR
brv)) AND (year:[2005 TO 2012]) AND la:(eng)

((postoperative pain)) AND ((nursing intervention))) AND (cty:(journal) AND ty:(fla OR
brv)) AND (year:[2005 TO 2012]) AND la:(eng)

((postoperative pain)) AND ((clinical trial))) AND (cty:(journal) AND ty:(fla OR brv)) AND
(year:[2005 TO 2012]) AND la:(eng)

Medline Search engine/key words Articles retrieved

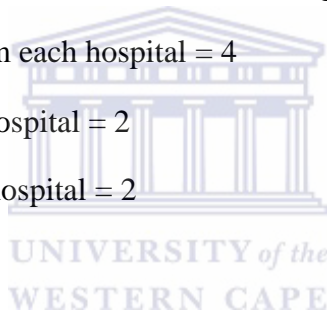
1. postoperative pain 55938
2. pain management 56491
3. I combined 1 and 2 above 8420
4. Adult 3875624
5. Combined 3 and 4 3662
6. I limited #4 by date (2005-2011, english,
review article, human, adult:19-44yrs, 26731
7. developing countries 402
8. I combined 6 and 7 402
9. limited #8 by criteria in #6 81
10. I typed resource limited clinical environment 0



CINAHL database using the same search terms and did not get any related articles. I
combined developing country or resource limited environment with post-operative pain, I
had 2 and 7 articles each. Upon reading through them, the articles do not meet the inclusion
and exclusion criteria.

Appendix 9 - List of Consensus Panel

- 1 representative of Ghana Health Service/Institutional Care Division (GHS)
- 1 representative of Ghana Registered Nurses Association (GRNA)
- 1 representative of West African College of Nurses (WACN)
- 1 representative Ghana Anaesthetists' Society
- 1 representative Ghana College of Physicians and Surgeons
- 1 representative of World Health Organization (WHO)
- 1 representative of Commission for Human Rights and Administrative Justice (CHRAJ)
- 1 Peri-operative Nursing (PON) tutor
- 1 Registered General Nurse (RGN) tutor
- 1 Lecturer – Department of Adult Health, School of Nursing
- 2 Leaders (Nurse and doctor) from each hospital = 4
- 1 in-service educator from each hospital = 2
- 1 surgical ward nurse from each hospital = 2
- 1 surgeon from each hospital = 2
- 1 anaesthetist from each hospital = 2
- 1 clinical pharmacist from each hospital = 2
- 1 discharged patient from each hospital = 2
- 1 patient relative from each hospital = 2
- Head, Department of Surgery KBTH
- DDNS, Department of Surgery KBTH
- DNS i/c, Korle-Bu Teaching Hospital
- Head, Department of Surgery Ridge Hospital
- PNO i/c, Department of Surgery Ridge Hospital
- Physiotherapist (2)



Appendix 10: Sample Decision Forms

ID Code: ...

INDIVIDUAL DECISION FORM

Key: **A** = Agree (maintain statement); **B** = Modify statement; **C** = Abstain (will go by decision of others); **D** = Delete/remove statement

STATEMENT	A	B	C	D
Patient and Family information and education				
Statement 1				
Statement 2				
Statement 3				
Statement 4				
Statement 5				
Statement 6				
Statement 7				
Statement 8				
Statement 9				
Statement 10				



ID Code: ...

INDIVIDUAL DECISION FORM

Key: **A** = Agree (maintain statement); **B** = Modify statement; **C** = Abstain (will go by decision of others); **D** = Delete/remove statement

STATEMENT	A	B	C	D
Effective Teamwork between Nurses and Doctors				
Statement 1				
Statement 2				
Statement 3				
Statement 4				
Statement 5				
Statement 6				
Statement 7				
Statement 8				
Statement 9				
Statement 10				
Statement 11				
Statement 12				
Statement 13				
Statement 14				
Statement 15				




ID Code: ...

INDIVIDUAL DECISION FORM

Key: **A** = Agree (maintain statement); **B** = Modify statement; **C** = Abstain (will go by decision of others); **D** = Delete/remove statement

STATEMENT	A	B	C	D
Input and monitoring by Hospital Management or Unit heads				
Statement 1				
Statement 2				
Statement 3				
Statement 4				
Statement 5				
Statement 6				
Statement 7				
Statement 8				
Statement 9				



ID Code: ...

INDIVIDUAL DECISION FORM

Key: **A** = Agree (maintain statement); **B** = Modify statement; **C** = Abstain (will go by decision of others); **D** = Delete/remove statement

STATEMENT	A	B	C	D
Evidence-based contemporary recommendations of POPM				
Statement 1				
Statement 2				
Statement 3				
Statement 4				

Appendix 11

PROGRAMME FOR CONSENSUS FORUM - 17TH MAY, 2012

VENUE: DEPARTMENT OF SURGERY CONFERENCE ROOM

- 8.30am:** Registration of participants
- 9.00am:** Opening prayer
- 9.05am:** Welcome address and declaration of purpose of gathering
- 9.15am:** Introduction of participants and facilitator
- 9.40am:** Presentation of research findings and scientific evidence
- 10.15am:** Group discussion of draft clinical guideline
- 10.45am:** Snack Break
- 11.00am:** Review and discussion of group/individual feedback and taking individual (independent) decisions
- 1.30pm:** Lunch Break
- 2.30pm:** Short remarks by Director ICD/MOH, Director Medical Affairs KBTH and Medical Director, Ridge Hospital
- 3.00pm:** Concluding remarks by Facilitator
- 3.10pm:** Vote of thanks
- 3.15pm:** Closing Prayer

GROUPS FOR DISCUSSION OF DRAFT GUIDELINES

Group One – Statements for Patients/Relatives

Representatives of patients and relatives (4)

WACN representative (1)

CHRAJ representative (1)

Tutor (RGN) (1)

(7 group members)

Group Two – Statement for Nurses and Doctors

Surgical nurses (2)

Surgeons (2)

Anesthetist Ridge (1)

Clinical Pharmacist KBTH (1)

WHO representative (1)

Nursing Lecturer, SON (1)

(8 group members)



Group Three – Statements for Hospital Management/Unit Heads

Nursing and Medical Heads of Department of Surgery (4)

GHS/ICD representative (1)

In-service educator KBTH (1)

College of Physicians and Surgeons representative (1)

(7 group members)

Group Four – Statements on evidence-based recommendations

Anaesthetist KBTH (1)

Clinical pharmacist Ridge (1)

Tutor – PON (1)

Ghana Anaesthetists' Society representative (1)

GRNA representative (1)

Physiotherapist representative (2)

(7 group members)

GHANA HEALTH SERVICE ETHICAL REVIEW COMMITTEE

*In case of reply the
number and date of this
Letter should be quoted.*



Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra

*My Ref. :GHS-ERC: 3
Your Ref. No.*

*Tel: +233-0302-681109
Fax + 233-0302-685424
Email: Hannah.Frimpong@ghsmai.org*

December 21, 2011

LYDIA AZIATO
University of The Western Cape
Private Bag X17, Bellville 7535,
South Africa

ETHICAL CLEARANCE - ID NO: GHS-ERC: 10/11/11

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol titled:

“Development of Clinical Guidelines for the Management of Post-operative Pain within the Medico-socio-cultural Context of Ghana”

This approval requires that you submit periodic review of the protocol to the Committee and a final full review to the Ethical Review Committee (ERC) on completion of the study. The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Please note that any modification of the project must be submitted to the ERC for review and approval before its implementation.

You are also required to report all serious adverse events related to this study to the ERC within seven days verbally and fourteen days in writing.

You are requested to submit a final report on the study to assure the ERC that the project was implemented as per approved protocol. You are also to inform the ERC and your mother organization before any publication of the research findings.

Please always quote the protocol identification number in all future correspondence in relation to this protocol

SIGNED.....

PROFESSOR FRED BINKA
(GHS-ERC CHAIRMAN)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra



UNIVERSITY of the
WESTERN CAPE

OFFICE OF THE DEAN
DEPARTMENT OF RESEARCH DEVELOPMENT

25 October 2011

To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape has approved the methodology and ethics of the following research project by: Ms L Aziato (School of Nursing)

Research Project: Development of clinical guidelines for the management of post-operative pain within the medico-socio-cultural context of Ghana.

Registration no: 11/9/20

*Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape*

Private Bag X17, Bellville 7535, South Africa
T: +27 21 959 2948/2949 . F: +27 21 959 3170
E: ppjosias@uwc.ac.za
www.uwc.ac.za



UNIVERSITY of the
WESTERN CAPE

School of Nursing

Private Bag x17, Bellville, 7535, South
Africa

Tel: +27 21 9593024.

Fax: +27 21 9592679

Email; oadejumo@uwc.ac.za



Thursday, October 27, 2011
The Chief Executive
Korle-Bu Teaching Hospital
P.O. Box KB77
Korle-Bu
Accra

Dear Sir,

LETTER OF INTRODUCTION: MS LYDIA AZIATO


Ms Lydia Aziato is a PhD student at the University of the Western Cape, South Africa. She is conducting a research on **'Development of Clinical Guidelines for the Management of Post-operative Pain within the Medico-socio-cultural Context of Ghana'**.

As part of her research, she needs to hold individual interviews with post-surgical patients and their relatives, nurses, and other health professionals working at your surgical department. She would also carry-out clinical observation on the ward as part of the research. During the interviews and observations, she will focus on understanding issues of post-operative pain management in the medical and socio-cultural context. The understanding will help her develop a clinical guideline that will guide post-operative pain management in the Ghanaian context. During the development of the clinical guideline, she will also seek the in-put of patients, health professionals, and other experts to ensure that a suitable guideline is developed.

Participants will be given an information sheet and the study will be explained to them after which they will sign/thumbprint consent forms before they participate in the study. Participation is essentially voluntary and any participant can withdraw at any stage of the study if they no more wish to participate. The study is not envisaged to cause any harm to participants. All information obtained shall be treated with utmost confidentiality.

It will therefore be appreciated if you could offer her the necessary assistance for her data collection and development of clinical guideline.

Please find attached copies of participant information sheets and consent form for your perusal

Sincerely


Oluyinka Adejumo
(Prof.) (Supervisor)

Cc: The DNS i/c



UNIVERSITY of the
WESTERN CAPE

School of Nursing

Private Bag x17,
Bellville 7535. South Africa
Tel: +27 21 9593024. Fax: +27 21 9592679
Email; oadejumo@uwc.ac.za



Thursday, October 27, 2011

The Medical Director i/c
Ridge Hospital, P.O
Box 473, Accra

Dear Sir,

LETTER OF INTRODUCTION: MS LYDIA AZIATO

Ms Lydia Aziato is a PhD student at the University of the Western Cape, South Africa. She is conducting a research on **'Development of Clinical Guidelines for the Management of Post-operative Pain within the Medico-socio-cultural Context of Ghana'**.

As part of her research, she needs to hold individual interviews with post-surgical patients and their relatives, nurses, and other health professionals working at your surgical department. She would also carry-out clinical observation on the ward as part of the research. During the interviews and observations, she will focus on understanding issues of post-operative pain management in the medical and socio-cultural context. The understanding will help her develop a clinical guideline that will guide post-operative pain management in the Ghanaian context. During the development of the clinical guideline, she will also seek the in-pur of patients, health professionals, and other experts to ensure that a suitable guideline is developed.

Participants will be given an information sheet and the study will be explained to them after which they will sign/thumbprint consent forms before they participate in the study. Participation is essentially voluntary and any participant can withdraw at any stage of the study if they no more wish to participate. The study is not envisaged to cause any harm to participants. All information obtained shall be treated with utmost confidentiality.

It will therefore be appreciated if you could offer her the necessary assistance for her data collection and development of clinical guideline.

Please find attached copies of participant information sheets and consent form for your perusal

Sincerely

Oluyinka Adejumo (Prof.)
(Supervisor)

Cc: The DDNS i/c

In case of reply the number
And the date of this
Letter should be quoted

My Ref. No.....

Your Ref. No.....



KORLE BU TEACHING HOSP
P.O. BOX 77
KORLE BU, ACCRA

Tel: 233-21- 673033-6
Fax: 233-21- 667759
Email: korlebu@ghana.com
Web Site: www.korlebu.com

4th November, 2011.

THE DDNS
DEPT. OF SURGERY
KORLE BU


PERMISSION TO CONDUCT RESEARCH

Permission is granted to Ms Lydia Aziato, from University of Western Cape, South Africa, to start a research at your department with effect from 31st October, 2011.

The topic for the research is: **'Development of Clinical Guidelines for the Management of Post-operative Pain within the Medico-socio-cultural Context of Ghana'.**

UNIVERSITY of the
WESTERN CAPE

Your usual support is very much appreciated.


VICTORIA A QUAYE (MRS)
DIRECTOR OF NURSING SERVICES

cc: Head of Department
Surgical Sub BMC
Korle Bu

se of a reply, the number and the
of this letter should be quoted

Ref. No: GHS/RH/PAS/G-28

Ref. No.



RIDGE REGIONAL HOSPITAL
GHANA HEALTH SERVICE
P. O. BOX 47
ACCRA-GHANA

21ST December, 2011

Tel: (0302)-22838
22831
22834
EL/FAX
22886

MS LYDIA AZIATO
UNIVERSITY OF THE WESTERN CAPE
PRIVATE BAG X17, BELLVILLE 7535
SOUTH AFRICA

Dear Madam,

**RE: APPLICATION TO UNDERTAKE RESEARCH ON DEVELOPMENT OF
CLINICAL GUIDELINES FOR THE MANAGEMENT OF POST OPERATIVE PAIN
WITHIN THE MEDICO-SOCIO-CULTURAL CONTEXT OF GHANA**

I am pleased to inform you of management's approval on your request to undertake a research on the above subject in the premises of Ridge Regional Hospital.

Management however, implores you to comply with research ethics and use the result for only academic purposes.

Yours faithfully,


DR. E. OBENG APORI
MEDICAL DIRECTOR

Appendix 14



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: 00233-244719686

E-mail: 3179857@uwc.ac.za

TRANSLATORS/TRANSCRIBER'S CONFIDENTIALITY SHEET

Title of Research Project: Development of Clinical Guidelines for the Management of Post-operative Pain within the Medico-socio-cultural Context of Ghana

Researcher: Lydia Aziato, PhD student, University of the Western Cape, South Africa.

I am a research student from the School of Nursing, University of the Western Cape. I am carrying out a study on post-operative pain and I would like you to translate/transcribe my individual interviews that were done in Twi/English.

Confidentiality/Anonymity

Participant's name will not be recorded on the tape or paper. Instead, a number or pseudonym will be applied. It is imperative for you to keep the information to yourself without disclosing it to other people not involved in the study.

This confidentiality requirement was explained to me by-----

I agree to keep all information confidential.

-----	-----	-----
Signature of transcriber/translator	Date	Witness

-----	-----	-----
Printed Name		Printed Name

-----	-----	-----
Signature of investigator	Date	Printed Name

Appendix 15: Sample NVivo Framework of Themes (Patients)

● Fear

Health System Factors			
●		Doctors' Attitude	
●		Health System Challenges	
		●	Drug Administration
		●	Financial issues
●		Nurses' Attitude	
Individual Factors			
●		Empathy	
●		Ignorance	
●		Personal Decision Making	
Subjectivism			
●		Pain Description	
●		Pain Effects	
●		Pain Expression	
●		Stoicism	



Appendix 16 – Complete Clinical Guideline



**CLINICAL GUIDELINE FOR ACUTE POST-OPERATIVE PAIN
MANAGEMENT IN THE CONTEXT OF GENERAL SURGERY**

ENDORSED BY

THE GHANA HEALTH SERVICE (GHS)

2012

Primary Author:

**LYDIA AZIATO (Doctoral Student, Lecturer, School of Nursing, University of Ghana,
Legon)**

Guideline Owner – Ghana Health Service

Version Number – 1

Year of Publication/Implementation – 2012

Year of Review – 2016

Primary Reviewers

Dr Cynthia Bannerman, Ag. Director Institutional Care Division (ICD), GHS

Prof J. N. Clegg-Lamptey, Head of Department of Surgery, Korle-Bu Teaching Hospital

Dr Chris Pasero, Pain Consultant, USA

Prof Oluyinka Adejumo, University of Western Cape, South Africa

Consensus Guideline Development Panel Members

Name	Institution	Profession/status
Victoria A. Quaye	KBTH	Director of Nursing
Emily Frimpomaa Appiah	Ridge Hospital	Staff Nurse
Mercy Osuteye	Ridge Hospital	PNO i/c, Surgical Unit
Emelia K Okai	KBTH	PNO, surgical ward
Juliana Hammah	KBTH	PNO, in-service
Christiana Akufo	Ghana Health Service	SNO, Institutional Care Division (ICD)
Florence Dedey	KBTH	Consultant surgeon
John Akoto	Nursing and Midwifery Training School, Korle-Bu	Tutor; surgical nursing
Josephine Kyei	West Africa College of Nursing, Ghana Chapter	Nurse; Tutor
Augustina Amoako	KBTH	Physiotherapist
Misbah Samir	KBTH	Physiotherapist
Ama F. Nkansah	KBTH	Specialist clinical pharmacist
Samira Mustapha-Ablordey	School of Nursing (SON), Univ. of Ghana	Lecturer
Isaac Annan	CHRAJ	Lawyer
Wumbei mbuer Jacob	Ridge Hospital	Anaesthetist
Antwi Amoateng	KBTH	Patient
Rita Aryee	KBTH	PNO i/c in-service training unit
Gertrude Addy	KBTH	DDNS i/c; dept. of surgery
Cecilia Eliason	SON	Lecturer
J. N. A. Clegg-Lampsey	KBTH	Prof in Surgery; in-charge of Dept. of Surgery
Faustina Excel Adipa	Peri-operative Nursing School	Tutor (Nurse)
Patience Asamoah	GRNA	In-Service Educator (KBTH)
Representative	Ghana College of Physicians and Surgeons	Consultant anaesthetist
Representative	KBTH	PNO surgical nurse
Representative	KBTH	Consultant Anaesthetist
Representative	KBTH	Pharmacist
Representative	WHO	Consultant Medical Doctor
Representative	Ridge Hospital	Consultant surgeon i/c of Dept of Surgery
Representative	KBTH	Patient

Disclaimer

This clinical guideline was developed following a research on post-operative pain management at the Korle-Bu Teaching Hospital and the Ridge Hospital by the first primary author. The contextual findings and findings from the current evidence of post-operative management (available until May, 2012) informed the formulation of guideline statements. Draft statements were reviewed by a technical team and experts in the area of pain management and a consensus forum involving all stakeholders finalized the guideline statements.

The guidelines do not replace the critical professional judgement of the health care provider during patient care activities.

There is the need to regularly review guidelines to accommodate updates in the evidence and changing local circumstances.

The guidelines are targeted at adult general surgical patients in a resource-limited clinical environment and there should be caution if it is used among other surgical populations.

The Ghana Health Service and the primary author hold copyright to this clinical guideline on post-operative pain management. Redistribution, publishing, or commercializing of the guideline in part or whole is prohibited. Where part of the guideline is quoted, the owners should be duly acknowledged. Permission must be sought to use the guideline as a stand-alone document. Request for permission should be directed to the Institutional Care Division, Ghana Health Service: **Tel** 233 302 662415, 662014; **Fax** 233 302 666808; and **E-mail** info.ghs@ghsmail.org

Executive Summary

Post-operative pain management has been a challenge to health professionals globally including Ghana. Although the Ghana Health Service (GHS) has made efforts over the years to ensure effective patient care, it has been realized that post-operative patients continue to experience undue pain. It is in this light that the GHS welcomes collaboration between health professionals in academia and clinicians to find context appropriate measures of improving patient care as this guideline seeks to provide.

The unique framework for this guideline calls for effective collaboration between patients and family, health professionals, hospital management, and the integration of contemporary literature on post-operative pain management. This framework gives a refreshing and thought-provoking idea that reiterates that effective post-operative pain management is not an individual affair and all relevant stakeholders must play their expected role to achieve desired targets of pain management. It is necessary for patients and their relatives to be empowered with the relevant information to ensure their maximum corporation and involvement in care decisions.

The GHS hopes that the implementation of this context appropriate clinical guideline would impact positively on post-operative pain management. Health professionals and management should be committed to ensure the effective implementation of this guideline. To all those who in diverse ways contributed to the development of this guideline, the GHS appreciates your good work.



Ag. Director-General – Ghana Health Service

Dr Frank Nyonator

26/6/12

Introduction

The first version of this context specific clinical guideline for post-operative pain management gives a summary of the contextual findings and the literature review that informed the statements of the guidelines.

Summary of contextual findings: The contextual findings demonstrated that patients within expressed pain both verbally and non-verbally and they exhibited individual differences in pain responses and effects. The patients' findings were consistent with the wider literature to a large extent. However, socio-cultural specific findings were the unlikelihood for patients to readily report pain and the patients' inadequate questioning about their care which resulted in lack of knowledge on post-operative pain management. Also, patients' previous surgical experience or encounter with a negative nurses' attitude influenced patients' response where some patients did not self-report pain to avoid negative attitude from nurses. It was discovered that severity of pain was more heightened in the night rather than during the day.

It was further established that nurses within the medico-socio-cultural context of this study perceived their patients' post-operative pain as an individual phenomenon. Thus, nurses responded to post-operative pain by the use of pharmacologic and non-pharmacologic measures. Analgesic such as pethidine was found to be inadequately administered as a result of fear of addiction, unavailability of the drug, and difficulty in contacting team doctors for prescription or to review patients in pain especially during the late afternoon and in the night. Hence, some nurses were found to be committed to effective pain management and they 'borrowed' analgesics for the patient or they used their discretion for an appropriate intervention. Other nurses who were inexperienced and not committed did not have any protocol to guide their care decisions. Also, nurses' response to pain was found to be influenced by organizational laxity where there was ineffective supervision, some nurses exhibited uncaring behaviour, and others loafed. The health professionals who did not work as expected were not held accountable for their behaviour. In addition, ward rounds were observed to be less inclusive and the nurses were usually not involved in pain management decisions. Pharmacists and anaesthetists were also not routinely involved in the management of post-operative pain on the general surgical ward.

It was further established that patients' relatives were influenced by empathy, faith, and commitment to ensure that their patients had safe surgery and were relieved of post-operative

pain. Also, the multidisciplinary team and key informants in this study demonstrated experience and knowledge in their respective fields of practice that showed insight in post-operative pain management. The findings were corroborated and validated within the confines of the study to ensure trustworthiness of findings.

Subsequently, the establishment of contemporary recommended post-operative pain management applicable to the Ghanaian context was obtained following a systematic review of the relevant literature.

Summary of literature Review: it was realized that there was paucity of studies in resource limited clinical settings where modern pain management gadgets such as patient-controlled analgesia (PCA) and epidural were not used to manage pain. However, the literature confirmed that contemporary post-operative pain (POP) management employs pre-emptive analgesia, combination or multimodal analgesia, and administering regular analgesia around the clock. Also, non-pharmacologic measures are used as adjuncts to analgesic therapy. Also, the importance of education for health professionals and patients and effective team work were confirmed to enhance POP management.

The findings of the literature and the contextual findings informed the drafting the clinical guideline for post-operative pain management. Subsequently, the draft clinical guideline was reviewed by study participants, technical expert team from the hospitals involved in the study, an external expert (pain consultant), and a forum of all relevant stakeholders. The input of reviewers ensured that the clinical guideline for post-operative pain incorporated the current evidence of pain management and that it is contextually appropriate for Ghana (Hewitt-Taylor, 2004; Keeley, 2003; National Institute for Health and Clinical Excellence (NICE), 2011; Rolls & Elliott, 2008; Rycroft-Malone, 2001; Scottish Intercollegiate Guideline Network (SIGN), 2004; The Appraisal of Guidelines Research and Evaluation in Europe (AGREE) Collaboration, 2004). Also, the guideline drew from existing clinical guidelines on acute pain management in other countries such as USA, Australia and New Zealand, UK, and Canada, (American Society of Anaesthesiologists (ASA), 2012; Australian and New Zealand College of Anaesthetists (ANZCA), 2010; European Association of Urology, 2010; The British Pain Society 2007).

The guideline was developed following a review of existing format and content of previous clinical guidelines (National Institute for Health and Clinical Excellence (NICE), 2011;

Pasero & McCaffery, 2011). The aim of the guideline was not to re-invent the wheel but develop an appropriate guideline that can fit the medico-socio-cultural context of Ghana as recommended by WHO (World Health Organization (WHO), 2007). Hence, the appropriate guideline is made up of four (4) main statements or dimensions:

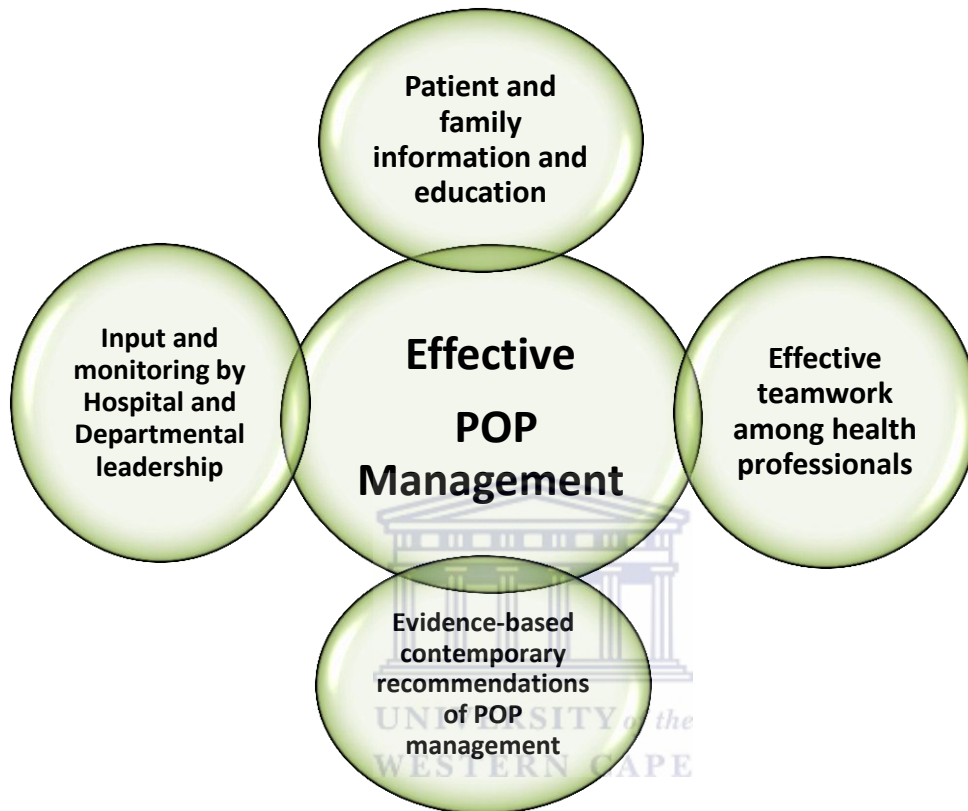
5. Patient and family require adequate information and education on post-operative pain management
6. Effective team work is required between nurses, doctors and other health team members regarding post-operative pain management
7. Input and monitoring from hospital management and departmental leadership is required to achieve effective pain management
8. Evidence-based contemporary recommendations for post-operative pain management should be employed

The framework within which to describe the guideline and the content statements

The framework for the effective management of post-operative pain is made of four equally important anchors and these form the basis of pain management. The framework holds that the inability to effectively integrate one anchor during post-operative pain management would result in an instability and hence ineffective pain management. Therefore, it is paramount that all the four anchors of the clinical guideline are fully integrated to achieve the desired pain management outcomes.

Thus, the framework integrates the need for patient and family education, effective team work between nurses, doctors, and other multidisciplinary team, input and monitoring by the hospital and unit leadership, and the use of evidence-based contemporary measures of post-operative pain management.

Figure 3: Framework for clinical guideline for post-operative pain management



The framework for the context specific clinical guideline shows the inter-relationship of all four anchors of the POP management; hence, the inter-sections in in the framework. The effective POP management within the local context requires that all the four dimensions of the guideline are involved. Context specific consensus statements that support the four dimensions of the guideline are delineated in Boxes 1, 2, 3, and 4.

Key Guideline Statements and component statements

The four main statements that support the framework with their context specific statements are presented as follows:

4. PATIENT AND FAMILY REQUIRE ADEQUATE INFORMATION AND EDUCATION ON POST-OPERATIVE PAIN MANAGEMENT

This section is targeted at patients who undergo general surgery and their families within the context of this study. POP management information or education should be provided pre-operatively and reinforced post-operatively in the appropriate language to patients and family for scheduled surgeries and as soon as patient's condition permits after undergoing emergency surgery. The appropriate version (Twi or English) of the written patient and family education form should be given to the patient and family at the time of explanation or as soon as possible so that they can refer to it as necessary. During the education, the health care provider should use the desired or appropriate words within the socio-cultural context such as 'please' and 'thank you' to enhance effective communication between the health care provider and the patient/family.

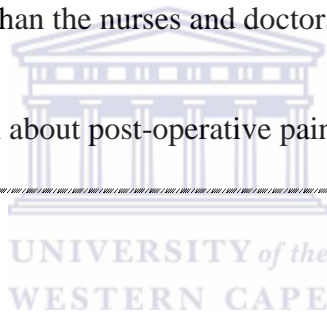
Box 1: Consensus guideline statements on patient information and education

11. Pain is a personal and individual experience, and it is important to tell the nurses or doctors about the severity and duration of your pain to ensure the best treatment is given.
12. Your nurses and doctors are committed to providing you with the safest and most effective post-operative pain management available. Do not think that reporting your pain is a bother to the nurses and doctors.
13. Talk about your pain management with the nurses or doctors so that whatever concerns or questions you have about pain will be answered. Always report before your pain is severe, because severe pain can delay recovery and affect other aspects of your health.
14. Ask the nurses or doctors what kind of pain medicine you will be given and how often you can take each of them so that you can help keep your pain under control by asking for the pain medicine on time. Also ask about the possible side-effects of your pain medicines.
15. Remember that it is important to ask everything you can about your pain medicine

because taking the right pain medicine in the right amount and in regular doses will help you feel more comfortable so that you can heal and recover faster

16. You may not be able to eat or drink right after surgery, so you may be given pain medicine in the form of an injection (needle) or inserted in the anus; but as your condition improves, your pain medicines may be given by mouth (swallowed).
17. It is important to take your pain medicine so that you can be comfortable enough to deep breathe, turn, and walk. Tell the nurses or doctors if you have a problem with pain medicine that is provided so that an alternative may be given.
18. Ensure that if prescriptions for pain-medicines are given to you, the drugs are made available so that the nurses can give you at the right time. Pain after an operation is best treated with pain medicines.
19. Family members who notice relations are in pain should report to the nurses or doctors and to do so before pain becomes severe.
20. Do not allow anyone other than the nurses and doctors to give you any medicines while you are in the hospital.

If you require more information about post-operative pain management contact your nurses and doctors.



5. EFFECTIVE TEAM WORK IS REQUIRED BETWEEN NURSES, DOCTORS AND OTHER HEALTH TEAM MEMBERS REGARDING POST-OPERATIVE PAIN MANAGEMENT

The statements below are targeted at nurses, doctors and other health team members on the surgical ward within the context of this study where the post-operative patient is mostly brought to the ward awake and in a stable condition. A copy of this document should be available on the ward to ensure that new health care personnel have easy access to the information. Its' availability on the ward will also serve as reminders for nurses and doctors. The statements were developed from contextual findings in this study and they are not meant to over-ride the professionals' clinical judgement in the management of individual patients.

Box 2: Consensus guideline statements on effective team work

16. Unrelieved pain produces many adverse effects and can negatively impact patient outcomes. It is important that nurses and doctors work together to ensure that patients' pain management needs are met so that patients can deep breathe, cough, turn, and walk safely after surgery.
17. Pain is a subjective and individual experience, and the patient is the best judge of his or her own pain. Nurses and doctors should encourage patients to promptly report pain so that appropriate or individualized actions can be taken to relieve it.
18. The doctor and other health personnel (as allowed by the institution) are responsible for prescribing appropriate analgesics in the patients' folder, on the treatment chart, prescription form, or the National Health Insurance (NHI) medication form as necessary.
19. Doctors and nurses share the responsibility for providing the patient and family with adequate information about how post-operative pain will be managed and to involve them in pain management decisions to enhance their co-operation
20. Doctors, clinical pharmacists and ward in-charges should follow-up on prescribed analgesics and ensure that the patient receives the prescribed dosage of analgesics. Deficits (missed-dose or under-dose) should be promptly investigated and corrected
21. Anaesthetist and clinical pharmacist should be actively involved in the management of patients' pain.
22. Although the patient's report of pain is the gold standard of pain assessment, there may be non-verbal cues of pain (e.g., grimacing, bracing, moaning, and change in activity) that nurses and doctors may observe. These non-verbal pain cues should be looked out for and investigated and addressed
23. Opioid analgesics should never be withheld because of fear of addiction. The risk of addiction when opioids are taken for post-operative pain relief is extremely rare. If pain persists beyond expected duration and severity depending on the type of surgery, then it should be investigated.
24. It is important to keep pain at the level that will allow patients to participate in recovery activities with relative ease. Waiting for patients to report severe pain is strongly discouraged; severe pain can be avoided by ensuring that all post-operative

- patients are given the right analgesic at the right time.
25. Pain is often worse at night. A doctor should be available or easily accessible during the night to enhance effective pain management during this time. Nurses should ensure at all times that patients are given all their prescribed analgesics and patients are monitored for pain and the safety of the prescribed analgesics.
 26. Nurses should effectively document and inform the other team members about their patients' pain reports and other pain management concerns raised by patients and their families to afford continuity of care.
 27. Nurses and other team members should regularly up-date their knowledge on pain management (e.g., pain assessment and analgesics) so that they will be more confident in their pain management activities. The team should also regularly evaluate their patient care objectives or goals.
 28. Uncontrolled pain requires immediate attention. Pain management protocol should be established to enhance patients' pain management.
 29. If a patient refuses an analgesic by a particular route, an alternative route of administration should be prescribed and given so that the patient will not suffer unduly. Pain management education should be reinforced in such cases.
 30. Non-pharmacologic measures may be helpful and encouraged to supplement but not replace analgesic administration in the management of post-operative pain

6. INPUT AND MONITORING FROM HOSPITAL MANAGEMENT AND DEPARTMENTAL LEADERSHIP IS REQUIRED TO ACHIEVE EFFECTIVE PAIN MANAGEMENT

This section of the guideline is targeted at the leadership of the hospital both at the departmental level and at the hospital level to ensure effective post-operative pain management on the ward.

Box 3: Consensus guideline statements on leadership input and monitoring

10. Leadership should recognize that effective and safe post-operative pain management will improve patient outcomes. There should be pain management policies in all healthcare institutions. The necessary equipment should also be provided to enhance the management of post-operative pain.
11. Leadership should be responsible for providing pain management education for the team (i.e. Doctors, nurses, pharmacists, physiotherapists etc.) This is accomplished through organization of initial and regular up-dates.
12. Leadership should ensure that all policies are strictly adhered to and all violations sanctioned appropriately
13. Leadership should ensure regular audit/evaluation of pain management and dissemination of results to all concerned.
14. Leadership should ensure regular departmental clinical meetings on pain management
15. Leadership should institute award schemes to deserving health teams/individuals in pain management
16. Leadership should ensure the proper storage and documentation of use of narcotic drugs in all units/departments
17. There should be hospital-based research committees to facilitate research at the hospitals. Findings from research should be implemented into practice, e.g., the use of a validated and reliable self-report pain assessment tool.
18. Leadership should establish a complaints system and information/education unit in all Units/departments to encourage feedback from clients on pain management

E. EVIDENCE-BASED CONTEMPORARY RECOMMENDATIONS FOR POST-OPERATIVE PAIN MANAGEMENT SHOULD BE EMPLOYED

At the time of developing this clinical guideline, the recommended post-operative management strategies that can be used within the context of this study identified through extensive literature review were: Pre-emptive analgesia, multimodal analgesia, and time-

scheduled analgesic administration. Hence, the following statements are grounded in these well researched concepts of post-operative pain management.

Box 4: Consensus guideline statements on evidence-based recommendations

5. Pre-emptive analgesia (analgesic given before a painful stimulus) – the anaesthetist should ensure patient receives appropriate analgesic whiles in the operating theatre by the best recommended route such as rectal, intrathecal, or intravenous and should suggest the surgeon infiltrate the surgical site with appropriate analgesic or local anaesthetic.
6. Multi-modal analgesia (using two or more forms of analgesic concurrently, e.g., non opioid + opioid + local anaesthetic) is the recommended approach to the management of post-operative pain. Surgeons should ensure that different forms of analgesics are prescribed to enhance their synergistic effect. Pharmacists should supply the correctly prescribed medication and nurses should administer all of the analgesics as prescribed.
7. Time-scheduled analgesic administration (giving the analgesics according to the time prescribed regularly) is recommended. Surgeons should prescribe the regular administration of analgesics, clinical pharmacists should ensure the availability of prescribed analgesics, and nurses should administer analgesic at regular intervals around-the-clock as prescribed.
8. Non pharmacological methods of relieving pain such as early mobilization, passive mobilization, positioning, and other appropriate measures should be used as adjuncts to analgesic administration for post-operative pain management.

Appendix 17 – Twi Version of Patient and Family Information and Education Guideline

Afutuo nsɛm ne nkyerɛkyerɛ a yɛde ma ayarefoɔ.

1. Enam sɛ ɛsono obiara ne sɛdeɛ ɔte ne yaw fa nti ɛho hia sɛ, sɛ worefa yaw mu a woma nɛɛsefoɔ anaa dɔkotafɔɔ hunu. Afei ma wɔnhunu mmere dodoɔ a yaw no akɔ so wɔ wo wedeɛ mu ama watumi ama wo ɛho aduro a ɛfata.
2. Sɛ wo ho tutu wo a, ma nɛɛsefo anaa adɔkotafɔɔ no nhunu no ntem ama wɔama wo ho akwankyerɛ ne aduro a ɛbedwodwo ɔyaw na ano. Enye woadwene sɛ woka kyere wɔn a, na ɛkyere sɛ woreha wɔn.
3. Sɛ wo ho baabi ye wo ya a, ka kyere nɛɛsefoɔ no anaa sɛ dɔkotafɔɔ no ntem ma wɔasɔ ano ansa na nneema agye nsam. Efiri sɛ, sɛ ɔyaw no ano ye den bebree a, ɛbɛkoatia wapɔmuden, na ɛno de asem foforo beba.
4. Aduro a nɛɛsefoɔ anaa dɔkotafɔɔ de rema wo adwodwo wo yaw ano no, bisa ne din. Bisa bere ano bere ano ɛne dodoɔ a ɛsɛ sɛ wofa aduro no. Afei ɛho nsunsuanesoɔ nso ma wɔnka nkyere wo.
5. Kae sɛ ɛho hia sɛ, wobebisa biribiara a ɛfa ɔyaw aduro a worefa no ho ɛfiri sɛ wofa aduro pɔtee a ɛbegye wo wɔ ne bere ano ɛne ne dodoɔ a ɛsɛ sɛ wofa a, ɛboa wo ma wo ho tɔ wo ntem.
6. Sɛ yeɛ obi aperehyian foforo a, enam sɛ ɔntumi nnidi anaa sɛ ɔntumi nom nsuo nti ne nnuro no fa kɛsɛɛ no ara no yɛde bɛwɔ no panɛɛ anaa nso sɛ yɛde betua no. Sɛ woho firi aseɛ bae wo a, yɛde wo nnuro no bɛma wo anom.
7. ɛho hia sɛ, wo yaw nnuro no wobefa no sɛdeɛ yakyere wo no pɛpɛɛpɛ sɛdeɛ ɛbɛye a, wohome a, ɛbetumi asi so yie, na watumi adanedane wo ho na mpo watumi anante kama a a wonte yaw biara. Wohwe na aduro no nye wo a, ntem pa ara ma nɛɛsefoɔ no anaa dɔkota nhunu na ɔnsesa ma wo.
8. Enam sɛ ɔyaw pii wɔ ho ma obi a wɔayɛ aperehyian nti, ɛsɛ sɛ ɔbɔ mmɔden tɔ aduro biara a dɔkota betwere ama wo, ama sɛ ne ho tutu no a, nɛɛsefoɔ no ayi bi ama wo de adwodwo ne yaw ano.
9. Obiara a ɔte obusuani a wayɛ no aperehyin ho wɔ asopiti no, nka nkyere nɛɛsefoɔ anaa dɔkota a ɔwɔ ho saa bere no, bere a ɔhunu sɛ ɔyarefoɔ no ho tutu no; ɔnhwe no mma ɔnko ɔyaw mu pii ma nnoɔma nnye nsam ansa.

10. Bere a, wowɔ asopiti ho no, nnye aduro wɔ obiara nkyen gye se neɛsefoɔ no anaa dɔkotafoɔ a wɔrehwe wowɔ ayaresabea ho no nkoara ho.

Se wope nkyerɛkyere foforo biara aka wei ho a, bisa neɛsefoɔ no anaa dɔkotafoɔ a wɔrehwe wo so no.

