

*PAIN CONTROL IN PALLIATIVE CARE A
SOUTH AFRICAN NURSING PERSPECTIVE*

BY

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NURSING PERSPECTIVE

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Cape Peninsula
University of Technology

**PAIN CONTROL IN PALLIATIVE CARE: A SOUTH AFRICAN
NURSING PERSPECTIVE**

by

LINDA FOURIE

Thesis submitted in fulfilment of the requirements for the degree

Master of Technology

Nursing

in the Faculty of Health and Wellness Sciences

at the Cape Peninsula University of Technology

Supervisor: Associate Professor. M. Clarke

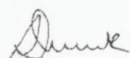
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Mrs. C.S. Uys

DECLARATION

I, Linda Fourie, declare that the contents of this dissertation/thesis represent my own unaided work, and that the dissertation/thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

Signed:



Date: 20/12/2008

ABSTRACT

Background

In South Africa the need for palliative care for the terminally ill is exacerbated by the upsurge of the HIV/AIDS epidemic resulting in more patients being in need of palliative care and the provision of effective pain management as part of providing them with palliative care. Effective pain management requires sound knowledge of the pathophysiology of pain and its treatment. Research found the attitudes, beliefs, and knowledge of healthcare professionals regarding pain management impact significantly on how these professionals practice pain control measures of the terminally ill.

Despite the increase in knowledge and technological advances people still die in pain. The upsurge of cancer and AIDS cases require that all nursing practitioners be competent to deliver palliative care. Effective pain management is an integral part of palliative care. South Africa has a nurse-driven health care system where Registered Nurses are expected to become competent in among other health care issues, to manage pain in the increasing numbers of terminally ill patients due to especially AIDS epidemic.

Study aim

The study aimed to establish the knowledge level, attitudes, beliefs, and practice of practicing Registered Nurses in South Africa in terms of pain management of patients under palliative care.

Methods

A descriptive survey Knowledge, Attitudes, Beliefs, and Practice (KABP) design was used.

Results

In total 87 respondents were enrolled in this study: 52(59.8%) worked in the acute care section of the private hospital; 22(25.3%) in the acute care section of the public health hospital; 5(5.7%) respondents in the Hospice setting, whereas 4(4.6%) of the respondents were employed in chronic care in the private as well as public health sector. Four respondents, (4.6%) worked in a private nursing practice. Twenty-four (42.2%) respondents had 11-20 years, and 22(38.6%) had more than 21 years

experience as Registered Nurse. Only 4(7.0%) respondents had a Masters Degree qualification. Thirty-six (63.2%) were knowledgeable on the WHO pain control stepladder to relieve pain in the terminally ill. Forty-six (80.7%) indicated that patients need to be individually assessed to determine whether their approach to pain is influenced by their particular culture. Of the respondents 27(48.2%) believed that the pain of the terminally ill is adequately managed, whereas 21(35.7%) did not agree with the latter. Forty-five (80.7%) agreed that measures other than medication, i.e. massages are effective strategies to relieve pain in the terminally ill.

Concluding remarks

In South Africa Registered Nurses are increasingly exposed to terminally ill patients who are in need of pain management; a task for which they do not always feel competent to execute.

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DEDICATION

It's with the deepest gratitude I am dedicating my thesis to Johannes Christiaan Jacobus Basson. Nursing him changed my life as well as my career forever. When he passed away I made it my mission to do research to broaden my horizon on pain management in palliative care.

Without knowing it, he was my mentor and greatest inspiration.

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Abbreviations

| | |
|---------------|--|
| AIDS | Acquired Immune Deficiency Syndrome |
| HIV | Human Immunodeficiency Virus |
| HPCA | The Hospice and Palliative Care Association |
| PEPFAR | The President's Emergency Plan For AIDS Relief |
| SANC | South African Nursing Council |
| UN | The United Nations |
| UNAIDS | The Joint United Nations Program on HIV and AIDS |
| WHO | The World Health Organization |

CHAPTER ONE

ORIENTATION TO THE STUDY

Death should simply become a discreet but dignified exit of a peaceful person from a helpful society...without pain or suffering and ultimately without fear. (Philippe Aries, 1981)

1.1 Introduction

The World Health Organization (WHO) defines palliative care as: “an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual” (WHO Palliative Care, 2002). From this definition it is clear that the WHO views pain assessment and treatment as a key component of palliative care.

In South Africa the need for palliative care is exacerbated by the upsurge of the HIV/AIDS pandemic (Gwyther, 2006), and consequently more patients need palliative care and effective pain management. The United Nations AIDS report on the Global AIDS epidemic estimated that HIV positive patients would account for 60 – 70% of medical expenditure in South African Hospitals (UNAIDS, 2006). The majority of patients with advanced cancer suffer pain to some degree. There are studies that report prevalence of pain in cancer patients (Twycross, 1994) and in AIDS patients (Breitbart, 1998) on patients in the USA, and (Norval, 2004) on patients in South Africa. According to Woodruff (1998) it is not possible to deal adequately with the other aspects of care if the patient has unrelieved pain. Therefore the treatment of pain and physical symptoms are the most important component of caring for patients with life threatening diseases such as HIV/AIDS and cancer (Woodruff, 1998).

According to a survey of the Medical Research Council and Actuarial Society of South Africa the life expectancy for males was 49 years and 53 years for females in the year 2006. The current average life expectancy in South Africa is thus 51 years, compared to 64 years in 1990 which implies that the life expectancy had dropped with 13 years over a period of only 16 years (News 24, 11/12/2006). There is an

overlap between cancer and HIV/AIDS instances since the development of certain cancers is encouraged by the absence of a fully functional immune system. The upsurge of the HIV/AIDS pandemic influenced the cancer statistics in South Africa (Bradshaw, Groenewald & Bourne, 2006), which implies a growing need for palliative care and support.

Pain is one of the most common but also the most feared symptoms palliative care patients experience during the terminal phase of their lives (Hanson, Tulskey & Danis, 1997). Effective pain management requires a sound knowledge of pain and its treatment (Lebovits, Florence, Bathina, Hunko, Fox & Bramble, 1997) and research results indicate that the attitudes, beliefs, and knowledge of healthcare professionals regarding pain management have a significant impact on their practise of treatment and patient care (McCaffery & Ferrell 1995; McCaffery & Robinson, 2002).

Unrelieved pain causes unnecessary suffering for the patient, complicating the bereavement process for their families (Quill and Byock, 2000). "It is hard to see somebody die in pain, especially somebody that you love..." (Galloway, 2004). Lifting the burden of suffering from patients and their families is one of the main benefits of effective pain management.

1.2 Background

Since the growing emphasis on palliative care, radical changes in the attempt to understand the complexity of pain led to the identification of the concept of total pain (Clark 1999). Saunders described "total pain" as a combination of sensory, affective, and emotional factors (Saunders, 2006). The social and mental pain suffered by patients with life threatening diseases intensifies the physical pain they experience. Failure to treat the total pain of the patient is one of the most common reasons why patients fail to achieve adequate symptomatic relief (Twycross, 1990).

In January 2006 the Joint United Nations Programme on HIV/AIDS estimated that AIDS has killed more than 25 million people since it was first recognized in 1981. A third of these deaths occurred in sub-Saharan Africa (The President's Emergency Plan for Aids (PEPFAR), 2006). Patients with HIV/AIDS experience pain, even in the absence of an opportunistic cancer such as Kaposi's sarcoma. In HIV/AIDS studies

to date, the most common pain syndrome includes peripheral sensory neuropathy, extensive Kaposi's sarcoma, abdominal pain, arthralgias, myalgias, arthritis, and painful dermatologic conditions (Breitbart, Kaim & Rosenfieldal, 1998).

Studies conducted by the American Cancer society on Global Cancer facts and figures (American Cancer Society, 2007) revealed that one in eight deaths worldwide are due to cancer. By 2050 the global burden is expected to grow to 27 million new cancer cases. Shockingly, 17.5 million (approximately 65%) is simply due to the growth and aging of the population.

Pain should be treated using a holistic approach and the effect of culture, fear, social support, individual coping capacities, and the extent of illness should never be underestimated in nursing patients with life threatening diseases (Spector, 2002).

1.3 The need for effective pain control in palliative care: Historical overview

1.3.1 International

Care in the terminal stage of life was practised in ancient Greece in refuge houses, similar to hospices, which were built at cross roads to religious shrines to provide care and shelter for the pilgrims (The World Federation of Right to Die Societies, 2007). During the 16th to the 18th century, religious orders offered palliative care to the sick and dying. Regardless of that most people died at home, cared for by a female family member. Until the 19th century, care of the dying and their family was regarded as the responsibility of church officials and institutions such as the hospices of "St. Luke" and "Hospice of God" were built in London during the first few years of the twentieth century (The World Federation of Right to Die Societies, 2007).

Cicely Mary Saunders, born in 1918 in Hertfordshire, England died in 2005 at St Christopher's Hospice. She is considered to be the founder of modern palliative care and promoted the hospice movement. She started her career with training to become a Registered Nurse and later also became qualified as a social worker. She finally pursued a medical practitioner career at St Joseph Hospice (The World Federation of Right to Die Societies, 2007) and specialized in pain control in advanced cancers (Clarke, 1999).

Interest in the psycho-social aspects of death and the associated period of grief increased in the 20th century and in 1940 the British Hospice Movement resulted in the renaissance and consolidation of palliative care. The St Christopher's Hospice, widely acknowledged as the pioneering institution of the modern hospice movement, opened its doors in 1967. Saunders' concept of "total pain" care to support a patient's physical, spiritual, and psychological wellbeing, marked a new beginning for the care of the dying as well as the practice of medicine as a whole (Clarke, 1999).

At the turn of the 20th century the need for better and more effective models for pain control in palliative care was recognised world-wide. Approximately six million cancer patients die each year and more than ten million new patients are diagnosed with cancer. It is estimated that the number of deaths from cancer alone will double to 12 million by 2020 (WHO, 2007), which emphasises the need for effective palliative care methods.

1.3.2 South Africa

During the late 1970's issues regarding care for the dying attracted a groundswell of interest in South Africa. Two main cornerstones for palliative care in South Africa developed from this interest, namely an affirmation of the value of all human beings irrespective of race or religion and an open engagement in the debate concerning death, the dying process, and care for the dying (International Observatory of end of life care, 2007).

This debate on the subject of the process of caring for the dying led to the forming of organizations like Pathways and Tender Loving Care (TLC) in 1979 in the Witwatersrand. During the same period the Student Visiting Lecturers Organization at the University of Cape Town Medical School, invited Saunders to lecture on end of life care. This led to the initiation of the Hospice movement in South Africa (International Observatory of end of life care, 2007). The St Luke's Hospice opened its doors in August 1980 (van Niekerk, 2002) and at the same time two dedicated volunteers, Stan and Shirley Henen, became actively involved in hospice related activities and started the Hospice of Witwatersrand (Hospice Witwatersrand, 2007).

Many branches developed from these two organisations to provide palliative care services in local settings. In 2007, the Hospice and Palliative Care Association (HPCA) cared for 69,857 patients. Patients diagnosed with AIDS constituted 50.43% of the total number of patients cared for by HPCA and patients diagnosed with cancer made up 37.51% (Wright, Wood, Lynch & Clarke, 2006). There are currently 157 registered hospice and palliative care organizations and/or branches of accredited hospice organizations working together to provide in the growing need for palliative care in South Africa. In South Africa, the public health sector is a nurse-driven health care system. Registered Nurses play a central role in the public health sector of South Africa (Nursing Act No. 33 of 2005). It is the goal of HPCA to have a hospice service in each of South Africa's 170 health zones by 2009 (Hospice Palliative Care Association of South Africa, 2007).

1.4 Implementing palliative care and pain management

1.4.1 International

The prevalence and multidimensional nature of pain attracted much attention from policy makers around the world which resulted in a growing awareness of pain control. The WHO developed an analgesic ladder which has been effective in relieving pain in approximately 90% of the cancer cases that required pain control and in more than 75% of cancer patients who were terminally ill (Ventafridda, Tamburini & Caraceni, 1987).

Governments worldwide showed increased interest in palliative care. Palliative medicine was recognised as a medical specialist field in 1987 in Europe. The Ministry of Health in the UK provided added impetus with an investment of 12 million British pounds in 2006 over a 3-year period to improve end of life care (Wright *et al.*, 2006).

Palliative care was incorporated into health legislation in Hungary in 1997 and a palliative care training programme was established and accredited by the Minister of Health of Hungary in 1994. Since then more than 3,200 participants have been trained (International Observatory of end of life care, 2007).

Tetsuya Kashiwagi (Nippon Medical School – Department Internal Medicine), set up a programme for care of terminally ill patients in 1970 in Osaka, Japan. In 1997 in Japan, palliative care standards were approved and palliative care education formed part of the curricula in most medical and nursing schools country wide (Asia Pacific Hospice Palliative Care Network, 2007).

The first hospice in the U.S.A was founded in 1974 in New Haven, Connecticut, followed by more centers for patients with cancer, AIDS, and other terminal illnesses. Hospice care, usually with the emphasis on home care, expanded through the United States in the 1980s (Hospice education institute, 2007). The first palliative care meeting in Latin America took place in San Nicolas in 1991 and the decision was taken to find a national association for palliative care under the leadership of Dr. Eduardo Bruera. In August 2000, palliative care was recognised as a medical discipline which should be available at all levels of the health system (International Observatory on end of life care, 2007).

Palliative care services commenced in the beginning of the 1980s in Australia. In 1987 Ian Maddocks accepted the world's first Chair in Palliative Care at Flinders University, South Australia. Palliative Medicine has been recognised as a medical speciality in Australia since 2005 (Wright *et al.*, 2006).

In New Zealand palliative care commenced in 1979 when Te Omanga Hospice provided a wide range of services to the community. In 2000, New Zealand's first palliative care strategy was disseminated in a discussion document by the Ministry of Health. Palliative care has been recognised as a medical speciality and a palliative care education programme has been developed since then (Hospice education institute, 2007).

The growing need for palliative care, national strategies, and innovative mentoring programmes enabled palliative care services to reach the remote districts of Africa. In sub-Saharan Africa the Hospice and Palliative care movement started in 1979. The first hospice to be established in Harare, Zimbabwe, was Island Hospice (International Observatory of end of life care, 2007). In 1990 Nairobi Hospice was founded in Kenya, and in 1993 Hospice Africa Uganda opened its doors. Hospice

programmes in Kenya and Uganda were based on the approach to hospice care in the United Kingdom. The main difference was the focus on home-based care and not on specialized in-patient facilities (Merriman, 2002). The training of health workers and nurses in pain control formed a major part of the work of Hospice Uganda. Clinical developments were supported by an education and resource centre and in 2002 a distance learning Diploma in Palliative Care was launched in conjunction with Uganda's largest university, the Makerere University in Kampala, the capital city of Uganda. (Wright et al., 2006). Almost all patients (98%) referred to Hospice Uganda with cancer and/or AIDS suffered from severe, uncontrolled pain (Merriman, 2002). Morphine, one of the cheapest analgesics in Africa, available in the form of a powder and costing about the same as a loaf of bread in Uganda, could keep most patients pain free for about two weeks being properly administered (Merriman, 2002).

1.4.2 South Africa

During the last decade the health care system in South Africa has been exposed to increasing demands. Mortality increased by 57%, from 318 287 in 1997 to 499 268 in 2002, mainly due to the increase of AIDS related diseases (Statistics South Africa, 2006).

South Africa benefited from the USA President's Emergency Plan for AIDS Relief (PEPFAR), announced by the USA President (George Bush), during his State of the Union address in 2003. Over a five year period, starting from 2003, PEPFAR would be donating a total of US \$15 billion to 15 countries worldwide (PEPFAR, 2007). This initiative, together with funding from The Diana, Princess of Wales Memorial Fund, dramatically changed the palliative landscape in Africa and in South Africa (The Diana, Princess of Wales Memorial Fund, 2007).

In South Africa palliative care is mostly offered by HPCA, private care centres, and private nurse practitioners. The increasing need for palliative care, and therefore also pain management, is evident in the disease profile in South Africa. South Africa's public health system faces many competing demands with limited resources. The vast majority of inhabitants live in remote rural areas or semi-urban slums close to South Africa's cities which leaves the poorest with limited access to medical treatment. Nurse driven healthcare also became a demand in the public health

sector due to the increasing need for health care and the shortage of medical doctors and trained nurses (Frolich, Karim, Mashego & Sturm, 2007). South Africa therefore requires palliative trained Registered Nurses to care for patients with life threatening diseases.

1.4.2.1 Palliative training

Palliative training is readily available to health care professionals in South Africa; i.e. medical practitioners, Registered Nurses, enrolled nursing assistants, and community caregivers. The University of Cape Town offers a post-graduate diploma in palliative medicine as well as an MPhil degree in palliative medicine for medical practitioners, (Gwyther , 2006) while a post-basic nursing degree is available for Registered Nurses at The Cape University of Technology (CPUT) and at Tswane Universities of Technology.

The aim of this training is to enhance the palliative care skills of all the health care professionals trained in South Africa. At present, palliative care training is not part of the basic curriculum for student nurses. However, indications are that the South African Nursing Council (SANC) aims to include a palliative nursing care component in the undergraduate training of nurses (Gwyther, 2006).

1.4.3 Pain control: role of Registered Nurses

Registered Nurses, as part of the Health care team, play a prominent role in pain management. This is confirmed by the Oncology Nursing Society who holds nurses "accountable for implementation and coordination of the plan for the management of cancer pain" (Spross, McGuire & Schmitt, 1990). It is the privilege of a Registered Nurse is to be in close contact with the patient, more so than any other member of the health care team. Therefore, it is through nurses that most patients have the opportunity to benefit from an interdisciplinary approach and receive adequate pain management (McCaffery & Ferrell, 1995). The failure to manage pain is considered to be professional negligence (Furrow, 2002). It is Registered Nurses' moral, ethical, professional, and legal obligation to assess the patients' pain and to intervene and relieve pain and suffering with appropriate interventions.

1.5 Rationale for this study

Private health care in South Africa render health care to nearly 15% of the population. The majority of the population (85%) is forced to rely on the under-funded public sector (Adler, 2005). Due to South Africa's nurse driven public health care system, consequently palliative care by Registered Nurses is mostly done at community level via non governmental organizations or the private sector.

In 2004, 60 000 new cancer cases were reported in South Africa (Mqoqi Kellet, Sitas & Jula, 2004). The South African government is currently in the process of developing a cancer registration policy (Zitha, 2006). Therefore the current cancer statistics might not reflect the extent of pain management in palliative care in South Africa today amongst cancer patients.

AIDS related death rates are rising in South Africa. The AIDS and demographic model of South Africa (ASSA, 2003) estimated that 5.4 million people were living with HIV in mid-2006. ASSA predicted that the number will exceed 6 million by 2015 and that 5.4 million South Africans in the region would have died of AIDS by then (The Demographic impact of HIV/AIDS in South Africa, 2006). The severe pain in HIV/AIDS sufferers is often due to inter-current opportunistic infections. Often the patient has several different sources of pain and an accurate diagnosis of the cause of the pain is essential for the pain management. The aforementioned HIV/AIDS and cancer information emphasizes that the need for effective pain management has become an essential component of health care in South Africa.

The researcher, during her clinical experience in providing nursing care for patients in palliative care, observed that practicing Registered Nurses were unsure how to manage the pain suffered by the patients in their care.

1.6 Statement of the problem

Despite the increase in knowledge and technological advances, people still die in severe pain in hospitals, caring centres, and at home (Hanson, Tulskey & Danis, 1997). The upsurge in the numbers of cancer and AIDS cases requires that

Registered Nurse practitioners become competent to deliver palliative nursing care, of which effective pain management forms an integral part. It is not currently known whether the practicing Registered Nurses are competent to manage effective pain control of patients under palliative care.

1.7 Study aim

The aim of this study is to establish the knowledge level, attitudes, beliefs, and practice of practising Registered Nurses in South Africa in terms of pain management of patients under palliative care.

1.7.1 Research questions

This study will be guided by the following questions:

- What knowledge do Registered Nurses have of pain management?
- What are the attitudes of practicing Registered Nurses towards pain management of the terminally ill?
- What are the beliefs of Registered Nurses regarding pain management when they care for the terminally ill?
- What are the pain control practices of Registered Nurses in palliative care in a semi-rural environment of South Africa?

1.7.2 Objectives

The objectives of this study are to establish the: (i) knowledge; (ii) attitude; (iii) beliefs, and (iv) practice of Registered Nurses regarding pain management in caring for the terminally ill in a semi-rural area of South Africa.

1.8 Operational definitions

For the purpose of this study, the following operational definitions will be utilized:

1.8.1 Life threatening illness

Hospice and palliative care documents the following diseases as life threatening illnesses: AIDS, cancer, progressive neurological disorders, and end-stage cardiac, respiratory, hepatic and renal conditions (Hospice Palliative Care Association of South Africa, 2007).

1.8.2 Nursing

In 1953 the Grand Council of the International Council of Nurses formulated the following definition of nursing: "Registered Nurses minister to the sick, assume the responsibility for creating a physical, social and spiritual environment which will be conducive to recovery, and stress the prevention of illness and promotion of health by teaching and example" (Vlok, 1974 p1).

1.8.3 Pain

"Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage" (International Association for the study of pain, 1986).

1.8.4 Pain management

Pain management is a multidisciplinary and team effort that must include ongoing individual assessment, planning integration, evaluation of pain, and pain relief. Comprehensive pain management addresses physical, psychological, spiritual, and sociocultural effects of unrelieved pain (Oncology Nursing Society, 2004).

1.8.5 Palliative care

The World Health Organization (WHO, 2002) defines Palliative care as: "An approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification, and impeccable assessment and treatment of pain and other problems, physical, psychosocial, and spiritual."

1.8.6 Registered Nurse

A registered professional nurse is an individual who completed a four year curriculum at a university or nursing college approved by the South African Nursing Council. As from 1985 the curriculum includes general nursing, midwifery, psychiatric nursing, and community health nursing (Government Notice No.425 as amended, 1988). According to the scope of practice for South African nurses a professional nurse is a person who is qualified and competent to independently practise comprehensive nursing in the manner and to the level prescribed and who is capable of assuming responsibility and accountability for such practice (Nursing Act, 2005 Act No. 33 of 2005).

1.8.7 Terminal phase of life:

"The terminal phase can be defined as the period when day-to-day deterioration is occurring. There is weakness (sometimes profound), drowsiness, recumbency, poor appetite, organ failure, and finally peripheral cyanosis" (Kaye, 1996 p. 238).

1.8.8 The role of the Registered Nurse in palliative care:

The Registered Nurse's role, as part of the multidisciplinary palliative care team, is defined as being an educator for the patient and his family, a coordinator of care, and as an advocate for the patient (Spross, McGuire, Schmitt, 1990).

1.9 Study outline

Chapter one presents an introduction to palliative care on an international level with specific reference to palliative care and the need for effective pain management by Registered Nurses in South Africa.

A review of available published literature on pain management will be presented in chapter two.

In chapter three the research methodology and ethical considerations of the study will be presented.

The analysis of the results and a discussion thereof will be presented in chapters 4 and 5. In chapter 5, the final chapter, the conclusions and recommendations of this research will also be presented.

1.10 Summary

Since early 1980, with the start of the first hospices in South Africa, knowledge of pain management in palliative care has expanded. The ethical duty to relieve pain and suffering forms the core of a Registered Nurse's commitment. The area of pain management is discussed worldwide by various authors and failure to consider the complexity of pain management is one of the most common reasons why patients fail to achieve adequate pain relief.

This study aims to establish the knowledge, attitudes, beliefs, and practice of Registered Nurses practising in South Africa in terms of effective pain management of those under palliative care.

"Each day, we must actively choose to be troubled by and attend to our patient's pain and suffering". (Brescia, 1993 p. 51).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The review that is presented in this chapter will focus on publications dealing with the current findings of the perceptions and attitudes of nurses towards pain and pain management.

The literature study is divided into four major sections: The WHO approach to pain management; the knowledge of Registered Nurses on the subject of pain management; the attitudes and beliefs of Registered Nurses regarding pain management; and the barriers that may be experienced while delivering effective pain management as part of palliative care.

2.2. Pain management: World Health Organization approach

The prevalence and multi-dimensional nature of pain management has attracted much attention over the last few decades. Pain management is grounded in attitudes which developed as a result of a sound knowledge of pain control (Manworren, 2006).

In 1980 an international effort was led by the WHO to promote pain relief for cancer patients throughout the world. The WHO developed a three-step pain management strategy in 1986 to guide clinicians in the management of cancer pain using drugs that are easily accessible (WHO, 1990). This three step strategy illustrates a process of selecting a specific drug for a specific type of pain based on the intensity of the pain.

The pain management guidelines of the WHO can be summarized in five phases: "by mouth", "by the clock", "by the ladder", "for the individual," and "attention to detail" (Foley, 2006). The phase "by mouth" refers to the oral route as the preferred route of administering pain medication. Analgesics should be given prophylactically and preventatively, as indicated by the "by the clock" phase. "By the ladder" refers to the

application of the three step analgesic ladder. The last two phases refer to the individual nature of pain and the monitoring process that is employed to ensure that the benefits of the treatment are maximized (Twycross, 1990). The WHO pain control ladder was tested in clinical trials, but there is still a need for population-based studies to determine which patients respond to which drugs and which doses are the most effective (Foley, 2006).

In 2006, the WHO together with the International Association for Hospice and Palliative care (HPCA) developed a list of essential medicines for palliative care. The aim was to compile a list of the most efficacious, safe, and cost-effective medicines for conditions based on current and future public health relevance (Doyle, 2006). This list included a section on analgesics for HIV/AIDS patients, but the list will be of little use if physicians and nursing staff are not taught how to use these medicines in palliative care settings (Doyle, 2006).

2.3 Knowledge of Registered Nurses on pain management

2.3.1 International situation

Several studies have investigated the knowledge base of health care professionals regarding pain management (Fothergill-Bourbonnais & Wilson-Barnett, 1992; Furstenburg, Ahles, Whedon *et al.*, 1998; Ferrell, McGuire & Donovan, 1993; McCaffery & Ferrell, 1995). In 1995 McCaffery and Ferrell conducted a survey to determine nurses' knowledge about cancer pain in five countries, i.e. Australia, Canada, Japan, Spain, and the United States. This study found that the knowledge level of the respondents differed from country to country. In the United States, Australia, and Canada the knowledge levels were higher than in countries like Japan and Spain where palliative care had recently been introduced. Furthermore, the overall conclusion of the survey identified a need for further education of health care professionals regarding pain management (McCaffery & Ferrell, 1995).

Improving knowledge of pain management in nursing, as part of nursing care, has been repeatedly identified as an important step towards improvement of effective pain management strategies (Sessle, 1999). As a result of deficiencies in training in pain assessment and treatment, students lacked important pain related knowledge once they had graduated (Simpson, Kautzman & Dodd, 2002). Few studies regarding

student's knowledge about pain management have been conducted within schools of nursing. In 2003, Lofmark, Gustavsson, & Wikblad did a study on the ability of student nurses to complete a systematic pain assessment. Research found that 66% of nursing students (N=32), were unable to complete the pain assessment accurately. The ability to identify the intensity of pain and the necessity to evaluate and re-evaluate the effect of suggested pain relief interventions were stumbling blocks for the students in the effective completion of pain assessment. The investigators noted in the conclusions drawn from this research that the students lacked satisfactory knowledge of pain assessment after basic training (Lofmark, Gustavsson & Wikblad, 2003).

Studies within the clinical situation found that there is a lack of theoretical knowledge as well as practical application of effective pain management practices (Lasch, Greenhill, Wilkes *et al.*, 2002). A study conducted in 2004 to determine the knowledge of nursing staff working in nursing homes, revealed a notable knowledge deficit in the areas of pharmacology and drug dependence. This knowledge deficit led to the under estimation of patients' reports of pain (Jones, Fink, Pepper *et al.*, 2004). Based on the above findings, theoretical as well as practical knowledge are crucial components in pain management.

Insufficient knowledge of pain mechanisms and basic treatment principles were noted in a study involving final year nursing students in Australia and the Philippines. The study involved 150 students in three schools of nursing. The results indicated that the students had insufficient knowledge about basic pain mechanisms and complex regional pain management. Most students were of the opinion that teaching on the subject of pain during their undergraduate years had been inadequate (Chui, Lim & Tuazon, 2003).

Research among Registered Nurses who held either a bachelors or a masters qualification in nursing science found that nurses with greater professional development and education were more knowledgeable about pain. The outcome of a research questionnaire indicated an average score of 75% by nurses holding a bachelors qualification in nursing science and those with a Masters degree qualification scored an average of 83% on the survey (McCaffery & Robinson 2002). Vortheims, Ryan & Ward (1992) as well as Clarke, French, Bilodeau *et al.*, (1996)

observed similar findings in earlier studies. In their research results they indicated that nurses with greater professional development and education were more knowledgeable about pain.

A study done by Breitbart, Kaim and Rosenfeld (1998), illustrates that the more knowledgeable the respondents were, the more successful they were in pain management. They surveyed 492 AIDS health care workers in five major United States cities on their attitude and knowledge of pain management in patients with HIV/AIDS. The results revealed that a lack of knowledge and access to pain management expertise were the main barriers to successful pain management in HIV/AIDS sufferers (Breitbart, Kaim & Rosenfeld, 1998).

Knowledge about pain management and attitudes of health care workers towards pain management go hand in hand. Sound knowledge of pain treatment and the pharmacology of pain directly influence nurses' attitudes towards pain management (Lebovits, Isiah & Ramesh, 1997).

2.3.2 Knowledge of pain management in Africa

'Nothing would have a greater impact on the care of patients with advanced incurable disease than instituting the knowledge we have now to improve their quality of life.'

Jan Stjernsward (O'Neill, Selwyn, Schietinger, 2003. p19)

A three-month study of 141 Registered Nurses enrolled in a Baccalaureate of Science nursing programme at the University of Ibadan, Nigeria in 2002, illustrated the importance to nursing staff of sufficient knowledge in pain management of HIV/AIDS patients. This study found that intense instruction about HIV/AIDS patient care not only enhanced their knowledge, but also transformed their attitudes. The conclusion emphasized the importance of continuous education and in-service training programmes for Nigerian nurses (Uwakwe, 2000).

2.3.3 Knowledge of pain management in South Africa

An ethnographic study of factors influencing cancer pain management in South Africa (Beck, 2002) identified a lack of knowledge of cultural differences as a barrier to

effective cancer pain management. Knowledge of cultural variability, communication, and professional relationships promotes effective pain management, whereas their absence creates a barrier towards achieving this aim (Beck, 2000).

A prospective descriptive study was done in the rural areas of Kwa Zulu Natal with 147 Registered Nurses working in mobile or permanent health clinics. The aim of the study was to determine nurses' knowledge regarding caring for a patient with HIV/AIDS. These nurses worked mostly in nurse- driven clinics. Pain is second to fever as the most common symptom in patients with HIV/AIDS and a pre- and post study design found a significant positive correlation between HIV/AIDS knowledge and self-efficacy. This emphasised the need for ongoing education and support for Registered Nurses working in under-resourced, rural community settings (Chambers 2006).

2.4. Attitudes and beliefs on pain management

2.4.1 International

"How we think shows through in how we act. Attitudes are mirrors of the mind. They reflect thinking." (Schwartz, 1964 p.44)

To change a settled way of thinking, or an attitude, can be a slow process. A number of authors have looked into it over time (Elliot, Murray & Elliot 1995; McCaffery & Ferrell, 1997). Some studies have investigated the role of educational interventions and the effect thereof on the attitudes of the students (Dalton, Blau, Carlson *et al.*, 1996; Elliot, Murray & Oken, 1997; Howell, Butler & Vincent, 2000). Breithart, Rosenfield & Passik,(1998) indicated a positive change in attitude of nurses who attended his multidisciplinary cancer education and training program on pain management. Some improvement was also identified in surveys conducted after the offering of an educational program on pain management, but the results were not sustained (Howel, Butler & Vincent, 2000).

A qualitative study conducted in 2002 revealed the subjectivity and inter-subjectivity of pain management amongst nursing students (Lasch, Greenhill, Wilkes *et al.*, 2002). The socio-historical heart of nursing education requires objectivity as part of

biological science studies. To see pain management subjectively and inter-subjectively is a challenge to the prerequisite of objectivity in biological sciences. Regarding the attitudes relating to opioids, Lasch *et al.*, (2002), exposed the moral stances or codes of conduct of the medical and nursing professions as tending towards the exaggeration of the addiction potential of opioids. The misplaced notions of the addiction potential of opioids in patients with pain imply that patients who grow tolerant on the current dosage will be perceived with suspicion (Lasch *et al.*, 2002). The awakening of the need for palliative care worldwide challenged medicine's focus on cure as well as on the moral imperative to prolong life. The focus on the total person and subjectivity regarding pain emphasized that the process of dying and the alleviation of suffering are as important as the prolongation of life (Lasch *et al.*, 2002).

Pain is a complex and multidimensional experience, which is affected by physical, psychological, emotional and cultural factors (Cadden, 2007). Nurses' beliefs and feelings about palliative care are more likely to represent their personal experiences and value system (Vachon, 1987). Values are significant as they influence perceptions and guide actions. A value system can have an important impact on one's perception of stress and on the ability to cope. According to Vachon (1987), for some a value system is a philosophy of life that does not necessarily involve religious values, while for others, their value systems are fairly heavily influenced by their religion.

2.4.2. Attitudes and beliefs on pain management in Africa

In Nigeria, HIV/AIDS has been treated as a moral rather than a medical issue. A study was done at a Nigerian University teaching hospital to reveal the attitudes of nurses caring for HIV/AIDS patients in their terminal stage. One of the findings of the study was that the attitude of nurses towards patients was not significantly altered by their knowledge that these patients were infected with HIV/AIDS. In addition, no significant difference was found in the attitude of nurses exposed to HIV/AIDS and those nurses who had not been exposed. A further finding of the study showed that 70.5 % of the nurses sampled believed that the hospital was not equipped to manage HIV/AIDS cases in terms of materials (even water shortages), resources and skills. The majority (54.9%) of nurses would have willingly cared for HIV/AIDS patients if their work could be carried out in a well-equipped hospital. An overwhelming 82.4% of the nurses agreed that pain management was essential and that the patients

should not be left alone to die (Effa-Heap,1997). A similar study done in Uganda (2007) indicated that insufficient resources to manage HIV/AIDS sufferers lead to moral distress amongst Registered Nurses (Fournier, Kipp, Mill *et al.*, 2007).

2.4.3 Attitudes and beliefs on pain management in South Africa

The main finding of a study on the perceptions and experiences of Registered Nurses while caring for patients with HIV/AIDS in the public health sector in South Africa reveals the influences of their attitudes towards these patients (Smit, 2005). A qualitative approach using in-depth interviews with 35 Registered Nurses revealed helplessness, anger, and frustration on the side of the Registered Nurse. Pain is a frequent complication in HIV infection and AIDS and the incidence of pain increases as the disease progresses (Woodruff, 1998). To ensure quality care for patients with HIV/AIDS, it is important to understand nurses' experiences of nursing HIV-positive patients and how that may influence their attitudes towards these patients (Smit, 2005). Attitude develops as a result of experience and contact with the world around us (Davis & Houghton, 1995) and inadequate resources, poverty, and fear of contagion contribute negatively to experiences that influence attitudes towards the disease.

2.5. Barriers to effective pain management

2.5.1 International

Existing literature identifies three main categories in terms of barriers relating to pain control, i.e. (i) barriers related to health care personnel; (ii) the patient and his/her family, and (iii) the Health care system (Cleeland, 1993).

Inadequate pain assessment, opioid fear, and lack of adequate pain management documentation were amongst the barriers related to health care personnel (Ferrell, McCaffery, & Rhiner, 1992; McCaffery, Ferrell, O'Neil-Page *et al.*, 1990). The fear of respiratory depression was a concern for many Registered Nurses administering an opioid and some nurses might consequently hesitate to administer the drug (Roach & Ford, 2006).

Pain assessment in palliative care is widely researched (Twycross, 1994; Donovan, Dillon & McGuire, 1987). Patient satisfaction surveys identified phrases such as "pain is whatever the patient says it is" (Portenoy & Lesage, 1999; Atber, 2004; Lamb, 1999). This one-dimensional assessment is too simplistic for a problem as complicated as pain. Pain assessment needs to be multidimensional because a multidimensional assessment would explore physical, psychological, social, cultural, and spiritual components (Mann & Redwood, 2000; Davis & Walch, 2004). Information obtained during pain assessment would form the basis for communication in seeking and obtaining further intervention and changes to the management of pain.

A study conducted in 2002, using the grounded theory methodology to reveal the constraints to opioid use in Hospice care, revealed opioidophobia in the thinking of Registered Nurses working in Hospice environments. Opioidophobia manifested in the Registered Nurse's comments when they expressed fear of being accused of over-medication, fear of killing by suppressing respiration, and fear of legal repercussions of possessing or administering opioids. The study was performed in five South Florida (USA) Hospices and the respondents were nurses with at least two years working experience in palliative care (Zerwekh, Riddell & Richard, 2002).

Inadequate pain management documentation by Registered Nurses is an identified concern (Joint Commission on accreditation of Healthcare Organizations, 2000; Malek & Oliveri, 1996; Dalton, Blau, Carlson, Mann, Bernard, Toomey & Germino., 1996). A study involving Registered Nurses in a predominantly rural area in North Carolina, USA showed their willingness to document pain, nausea, and other related physical symptoms, but identified a hesitancy to report the patients' emotional and spiritual pain (Dalton, Carlson, Mann *et al.*, 1996). This hesitancy spiralled through to the behaviour of the patient, as patients felt that their behaviour would influence the quality of their care. There might often be a perception that "good" patients would receive proportionately more time and attention from nursing staff. Some family members might also reinforce the patient's lack of complaining, because they were uncomfortable with it and viewed it as socially embarrassing (Cleeland, 1993). Barriers like fear of being a nuisance and fear of appearing weak were also reported in literature (Mann & Redwood, 2000; Arber, 2004).

Several factors in the health care system limit the effectiveness of pain management. This includes inadequate funding, excessive paperwork, and staff shortages (Heaven & Maguire, 1996; Mann & Redwood, 2000). Increased cost consciousness among staff contributes to the under-treatment of pain. Where primary health care is weak, widespread access to oral opioids depends on the development of new systems such as community- or hospital-based palliative care networks (Hamzah, 2006).

2.5.2. Africa

Hospice Uganda's founder, Anne Merriman, convinced the government to amend the law to allow palliative care nurses and clinical officers to prescribe morphine (Merriman, 2002). Currently morphine, paid for by the government, is available for terminally ill patients in 15 out of 52 (29%) districts in Uganda (Merriman, 2002). In Kenya, however, the high cost of basic health care limits the provision of hospital-based care. Families care for patients at home without drugs and without the knowledge required to help the patients (Foley, Wagner & Joranson, 2006).

2.5.3. South Africa

The shortage of Registered Nurses in South Africa is not only a barrier to effective pain management but also to the health system in general. The ratio in the Dora Nginza Hospital in Port Elizabeth is one Registered Nurse for ninety patients (News 24. com. 15/8/ 2007).

South Africa is an ethnically diverse country with vast cultural differences. Davidhizar and Giger (1998) defined cultural competency as the ability to care for clients in a sensitive and appropriate manner. Beck (2000) explained how cultural differences lead to misunderstandings and under-treatment of pain. "*Some (South African) people are stoical, and so for that reason ...we are not as mindful of their pain relief... It's cultural... for instance, to be a moaner is frowned upon*" (Physician quoted in Beck, 2000). Respect for others is vital for the improvement of cultural competency (Davidhizar & Giger, 1998).

Effective pain management and the barriers to effective pain management are widely discussed in literature. Pain manifests itself in a non-standardized manner, i.e. no

two patients react in the same manner. It is therefore unreasonable to expect nurses to act in a standardized way when interpreting the options of pain management (Manwarren, 2006).

Knowing and understanding the patient is presented as a process for acquiring and using clinical knowledge. It is an intrinsic dimension of nursing that permits the individualization of patient care. Failure to utilize the process can result in a lack of patient trust which may affect therapeutic outcomes (Bottoroff & Varcoe, 1995).

Nursing is a caring profession. It is more than skills and knowledge. *"It is something that flows from a compassionate human being who has the ability to dispel anxiety and to handle people with sensitivity, patience and insight. It is something which flows from persons who are not egocentric, whose love of self does not smother the capacity to serve"* (Searle, 1987 p 295).

2.7 Theoretical framework

The theoretical framework for this study will be guided by the work of Ruland and Moore (1998) and Knowles's theory of adult learning (1998).

2.7.1 Theory of Peaceful End of Life

Ruland and Moore (1998) based their theory of Peaceful End of Life on five concepts:

- not being in pain
- the experience of comfort
- the experience of dignity and respect
- being at peace
- closeness of significant others or other caring persons.

Registered Nurses are usually the providers of knowledgeable and compassionate care in the terminal phase of life (Searle, 1975). When pain is relieved nurses can determine the effectiveness of the medication, and according to that, adjust the

nursing care programme (Ruland and Moore, 1998). This interaction between knowledge and care is described by Searle as: “*Competence in the science and art of nursing is a basic requirement for successful guidance in the clinical situation*” (Searle, 1975 p 248).

2.7.2 Malcolm Knowles’s theory of adult learning

According to Knowles (1998), an andragogical approach should be utilized when educating the adult learner. When utilizing this approach, there are some assumptions that must be made about adult learners:

- adult learners are self-directed
- they can utilize life experiences as a resource for learning
- they are problem-centred and interested in the immediate application of knowledge
- they must perceive a need to know

Adults need to know why they need to learn something before they take the time to learn it. Adult learners are motivated to learn when it will help them to perform tasks or deal with problems in real life situations (Knowles, 1998). Registered Nurses bring life experiences into nursing that inhibit or enhance their learning experience. This richness of experience contributes to a problem-centred learning approach. The team approach of palliative nursing enhances the effectiveness of palliative care by using the experience of the team together with relevant knowledge to solve the problem (Donaghy & Breige, 2002).

2.7.3 Pain management in palliative care by Registered Nurses

In Fig. 2.1 the theory of Ruland and Moore (1998) and the andragogical model of Malcolm Knowles (1980) are used as the basis for the model of pain management in palliative care offered by Registered Nurses.

The chart is composed of three circles (Fig. 2.1). The innermost circle is divided into five pie pieces representing the end of life concepts, i.e. Not being in pain, The experience of comfort, being at peace, experience of dignity and respect, and closeness to significant others. The variables in the intermediate circle: institution,

practise, level of education, clinical area, years of experience and age remain the same for all the concepts. There is an interaction between the concepts in the innermost circle and the variables in the intermediate circle.

The aspect of adult learners is dealt with in the outer circle. Adults are motivated to learn when it will help them to perform tasks or deal with problems in real-life situations (Knowles, 1998). Changes in pain practice begin with education, which not only includes theory but incorporates hands-on-learning (Sternman, Gauker & Krieger, 2003).

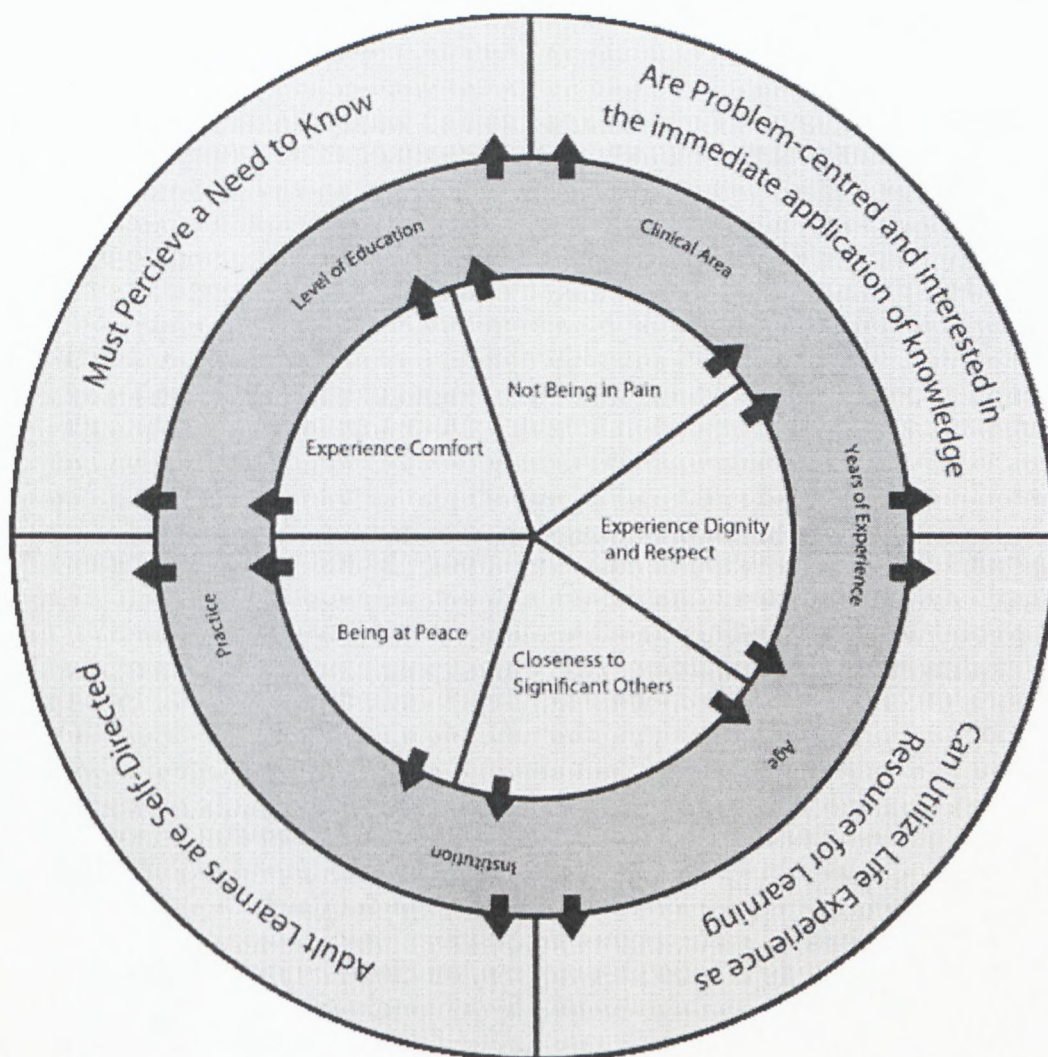


Fig. 2.1 Interrelationships between Peaceful end of life (Ruland & Moore, 1998) and Adult Learning (Knowles, 1998) theories, and the motivators to learn pain control by Registered Nurses working in palliative care settings.

2.8 Summary

An overview of the literature, the known data on pain control, and the involvement of Registered Nurses, as well as the theoretical framework, provides a rationale for the importance of investigating the relationships between pain management in palliative care and the knowledge, attitudes, beliefs, and practice of Registered Nurses. The research methodology will be discussed in Chapter 3.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In the previous chapter an in-depth study of the published literature, relevant to pain management among Registered Nurses, was presented. The published literature indicated a lack of sufficient training of staff working with the terminally ill, inadequate funding, and staff shortages as limitations to the management of pain in patients with life threatening diseases.

This chapter will describe the research methodology used to establish the knowledge, attitudes, beliefs, and practises of Registered Nurses, regarding pain management in palliative care, in selected public and private health care facilities in the Stellenbosch area in South Africa.

3.2 Research methodology

3.2.1 Study design

A KABP (Knowledge, Attitude, Belief, and Practice) descriptive study survey design will be conducted to explore and describe the knowledge, attitudes, beliefs, and practices of Registered Nurses, regarding pain management of those in palliative care, using a quantitative approach (Katzenellenbogen, Joubert, Abdool-Karim (ed), 1997).

Descriptive studies were performed to clarify clinical variability, course and prognosis, quality of care, and services (Caraceni, Cherry, Fainsiger *et al.*, 2002). Descriptive research creates an opportunity for researchers to provide a description of phenomena (Loiselle, Profetto-McGrath, Polit *et al.*, 2007). According to Dempsey and Dempsey (1992), descriptive research is based on the present state of affairs and is designed to answer questions about ongoing events in the present situation.

The most common descriptive research tool is the survey (Vincent, 1999). A survey is a non-experimental study which focuses on obtaining information regarding the status quo of a

situation through the direct questioning of a sample of respondents (Polit & Hungler, 1993). Stevens, Schade, Chalk *et al.*, 1993 add that a survey is a form of exploratory research with a strongly quantitative nature.

The KABP descriptive study survey design was chosen as being the most suitable for this study as it attempts to provide accurate descriptions of the respondent's knowledge, attitude, beliefs and practice pertaining to pain management by Registered Nurses working with patients with a life threatening disease in palliative care.

3.2.2.1 Knowledge, Attitude, Belief, and Practice (KABP)

The KABP descriptive study is divided into four parts. Each of the four parts; knowledge, attitudes, beliefs and practice examine an aspect of the caring nature of the Registered Nurse (Andrist, Nicholas & Wolf, 1998).

3.2.2.2 Development of data collection tool

This study was guided by similar knowledge, attitudes, beliefs, and practice (KABP) studies (Ferrell & McCaffery, 1998; Lebovits *et al.*, 1997; Heath, 1998).

Ferrell and McCaffery (1998) developed the Nursing Knowledge and Attitude survey regarding pain (NKASRP). This was a self-administered inventory that contained 37 items and has undergone several revisions since 1987. Items included in the instrument were derived from pain management standards, such as the American Pain Society, WHO, and the Agency for Healthcare Research and Quality. Content validity was established by using a panel of experts on the subject of pain. Construct validity was established by comparing the survey scores of nurses at varying levels of expertise and education, such as nursing students, new graduates, experienced nurses, and experts in pain management (Ferrell & McCaffery, 1998).

The Pain Knowledge, and Attitudes of Healthcare Providers survey was developed by Lebovits, Florence, Bathina *et al.*, 1997. Their objective with this questionnaire was to evaluate the knowledge and attitudes of different healthcare professionals regarding issues that surround pain, such as addiction, assessment of pain, scheduling and use of

analgesics, and paediatric pain management. Additionally, the study attempted to determine whether differences exist based on hospital setting, years of service and clinical area (Lebovits, 1997). This questionnaire was developed from the Nurses Knowledge and attitudes survey regarding pain management (Ferrell & McCaffery, 1998); Cancer Pain Knowledge Questionnaire (Sheenen, Webb, Bower *et al.*, 1992), and the Knowledge and Beliefs Regarding Pain Survey (Brunier, Carson & Harrison, 1995).

Heath (1988) conducted a study to ascertain whether Registered Nurses working in an Australian hospital have a similar knowledge base and attitude concerning management of their patients' pain to those in the North American and Canadian situation. The questionnaire used for the study was the revised version of the Nursing Knowledge and Attitude survey regarding pain. The NKASRP includes 22 true/false items and 13 multiple-choice questions. The revised version of the questionnaire included two additional questions. The last two items contain patient care scenarios that require the participant to assess and subsequently reassess a patient.

3.2.3 Study setting

The study took place in Stellenbosch, a university town, in the Western Cape Province, 50 kilometres east of Cape Town, South Africa. Excluding the university students, the population was 90,000 in 2004 (South Africa Statistics, 2004).

Health care facilities in Stellenbosch include public, private, and community care facilities. For the purposes of this study these facilities were grouped into four clusters according to the care that they provide:

- (i) Acute Care: one public hospital and one private clinic. At the time of this study there were 22 Registered Nurses employed in public hospital and 52 in the private hospital (total 74).
- (ii) Chronic Care: two faith-based facilities and one private facility. At the time of this study there were four (4) Registered Nurses employed in chronic care.
- (iii) Terminal Care: one Non Government Organization (NGO). At the time of this study there were five (5) Registered Nurses employed in terminal care.
- (iv) Community Care: one private nursing agency. At the time of this study there were four (4) Registered Nurses employed at the private nursing agency.

3.2.4 Study Population

The study population included all the 87 Registered Nurses who were employed in all the above mentioned health care facilities at the time of this study. All the Health Care facilities included in the study were involved in the provision of palliative care.

3.3 Ethical approval and considerations

The study proposal was submitted and granted approval by the Research Committee of the Faculty of Applied Sciences situated in the Cape Peninsula University of Technology (CPUT) on 21 November 2006.

The study was guided by the following ethical principles; (Beauchamp & Childress, 1994).

Autonomy:

The requirement for autonomy was satisfied by self determination of the research participants. They made their own decision whether to take part or not (Beauchamp & Childress, 1994).

Anonymity:

De Vos (1998), states that all information that could lead to identification of respondents in such surveys should be destroyed after use. To satisfy the principle of anonymity, the questionnaires were numbered and nothing that could identify the respondents appeared on them. The numbering of the questionnaires enabled the researcher to establish the number of completed questionnaires returned, but did not enable the researcher to trace the respondents.

Confidentiality:

Only the researcher was able to link the questionnaire with the specific institution (Brink, 2002). Information gathered from the questionnaires of personal or institutional nature was not disclosed. Confidentiality will rest with the researcher.

Beneficence:

The beneficial consequence of the proposed study is the enhanced awareness amongst the nursing profession of the importance of effective pain management for patients with life threatening diseases. The study also aims to benefit future patients with life threatening illness and their families. This awareness should be confidence-building to Registered Nurses working with patients under palliative care in terms of the administration of pain control measures (Beauchamp and Childress, 1994).

Non - maleficence:

In terms of the non-maleficent concept this study should not harm either patient, family member, or Registered Nurses. Current pain management practices were not interfered with in any way, i.e. pain control measures were applied as prescribed and not interfered with (Beauchamp and Childress, 1994).

Justice:

The principle of justice is demonstrated in the handling of the research data. The questionnaires were numbered and no name or personal information was connected to it. The respondent's right to privacy is hereby protected. Although this study is focused on testing the respondent's beliefs, attitudes, knowledge, and how these attributes influence pain management, no invasive questions were asked (Beauchamp and Childress, 1994).

Scientific honesty:

Scientific honesty is regarded as being one of the ethical responsibilities associated with conducting a research study (Brink, 2002). Personal influences or an even manipulation of data has been avoided by engaging a statistician (not part of the research team) to conduct the statistical analyses of the collected data.

Risk to respondents:

Some measure of risk to research participants is inevitable during any research study. The researcher attempted to minimize possible risks to participants by the following measures:

- The nature of the study was described to the respondents in a cover letter accompanying the questionnaire.

- It was explained that the numbers appearing on the questionnaires were for the researcher's purposes of analyses only.
- No names or any kind of personal information appeared on the questionnaires and no respondent's answers could be traced to any specific person.
- No person or institution was mentioned in the research report based on the information supplied by the respondents.
- No specific risk was identified to any study participant.

Informed consent:

Informed consent includes being informed and giving consent (Appendix C). The researcher attached a letter explaining (Appendix C) the aim of the study. Contact details of the researcher were supplied, and the respondents were invited to contact her any time during the study. By completing and submitting a complete questionnaire (Appendix D), each respondent gave her consent to participation in the study (Brink, 2002).

3.4 Pilot study

The pilot study was carried out to:

- Ensure validity (collects data required to answer question) and reliability (question elicit similar response each time);
- Identify ambiguities in statements or items that were not clearly phrased;
- Determine if all the items in the questionnaire were relevant to the topic, and
- Determine the average time it will take to complete the questionnaire.

The pilot study was conducted included 25 Registered Nurses practicing in Somerset West, an adjacent town to Stellenbosch, at similar health care facilities. The reason for this larger than usual number of respondents included in the pilot study was due to the fact that all possible 25 respondents met the inclusion criteria responded to the request of participating in the pilot study.

The facilities involved in the pilot study were also grouped to form four clusters according to the care provided: (i) acute care; (ii) chronic care; (iii) terminal care, (iv) community care. After arrangement with the management of each health care facility, the relevant number of packages including an explanatory letter discussing the study was distributed (Appendix C).

The questionnaire (Appendix D) and an envelope were delivered. The identical process that was planned for the actual study was followed to test practicability and to estimate the time that would be required to complete the questionnaire. In total 25 questionnaires were distributed:

- (i) Acute care: 14 questionnaires
- (ii) Chronic care: four questionnaires
- (iii) Terminal care: five questionnaires
- (iv) Community care: two questionnaires.

Each health care facility was provided with a sealed container with a slot to receive the completed questionnaires and to ensure confidentiality. Anonymity was maintained by not having study respondents indicate their name and contact details. After a pre-arranged period of seven days the sealed containers with completed questionnaires were collected by the researcher.

The overall response rate of the pilot study was 22/25 (88.0%). Twelve questionnaires were received from the acute care facilities; three from the chronic care facility; five questionnaires from the terminal care facility, and two from the community care facility. Most likely the reason for the 88.0% response rate in the pilot study was due to the fact that the researcher monitored the response on a daily basis and emptied the sealed container every afternoon at a specific time as agreed with management.

The respondents included in the pilot study were requested to maintain the necessary confidentiality in order not to contaminate the study population of the Stellenbosch area. The respondents included in the pilot study were not included in the main study.

From the pilot study a possible weakness was identified in the first part of the instrument regarding the biographical information of the respondents. Some Registered Nurses worked in more than one clinical area and more rows were provided in the instrument for the variety of clinical roles of the respondents.

The average time to read through the explanatory letter and to complete the questionnaire was 20 minutes. This time frame fitted in well with lunch and tea breaks of Registered Nurses should they wish to complete the questionnaire during either their lunch or tea breaks while at work.

The reliability and validity of the data collection tool was confirmed by previous studies that used this instrument. The pilot study checked and confirmed the face and construct validity. The reliability of the data collection tool refers to the degree the instrument can be depended on to yield consistent results if used over time on the same group of respondents (Brink, 2002). The pilot study finalised the way to analyse and present the data.

3.5 Data collection tool

Data was gathered using a self-administered (completed by the respondent) questionnaire (Appendix D). The questionnaire was divided into two sections:

Section one: collected the biographical data of the respondents. Demographic data included age, years of experience, educational level, current practice setting, and how frequently nurses worked with terminally ill patients.

Section two: collected data on knowledge, attitudes, beliefs, and practices of Registered Nurses concerning pain management in patients with life threatening diseases under palliative care.

The questions in both sections were adapted, through peer review sessions for the South African scenario, from the following sources: Nurses Knowledge and Attitudes Survey regarding pain (NKASRP) (Ferrell & McCaffery, 1997); Cancer pain information survey (McCaffery & Ferrell, 1995) and Family Pain Questionnaire (Ferrell, 2000).

Seven of the 17 items, in section 2 of the questionnaire, (items 2, 6, 7, 11, 12, 13 & 14) in the instrument were derived and adapted for the South African scenario from NKASRP (Ferrell & McCaffery, 1998). Nine items (item 1, 3, 4, 5, 10, 16 & 17) were from the Cancer

Pain Knowledge survey (McCaffery & Ferrell, 1995), and item 9 was derived and adapted from the Family Pain Questionnaire (Ferrell, 2000). Twelve items in the instrument were multiple-choice questions, two items were true/false questions, and three items were rated on a five point Likert scale.

The Likert scale contained the following possibilities: 5=strongly agree; 4=agree; 3=neither agree nor disagree; 2=disagree; and 1= strongly disagree.

3.6 Sampling

This study aimed to include all 87 employed Registered Nurses in the study population. Therefore no specific sampling process was followed. However, respondents who chose not to participate by not submitting a completed questionnaire would exclude themselves from this study.

3.7 Accessing health facilities

Following the necessary approval by the Research Committee and the pilot study, the researcher, met with the management of the various Health Care facilities included in this study to obtain permission to gather the required data. During these meetings details of the questionnaire (Appendix D) and the covering letter (Appendix B) were discussed. Once approval was obtained in writing (Appendix B), the researcher made an appointment with the particular unit managers of the various Health Care facilities included in the study to deliver the questionnaires.

3.8 Data collection procedure

3.8.1 Distribution of questionnaires

Appointments were made by the researcher with the respective managers of the health facilities for dates and times of distribution of the questionnaires to the respondents. A period of two weeks (10 working days) was granted to complete the questionnaire. Collection dates were arranged with each hospital/community care/ private care setting.

3.8.2 Collection of questionnaires

As per individual arrangement with the management of each health care facility a sealed container with a slot for the completed questionnaires was provided for a pre-arranged two week period. The researcher cleared this container on a daily basis and each questionnaire was filed in a securely locked cabinet at the researcher's home office for safekeeping until the year 2013.

3.8.3 Data analysis

All data was grouped, categorized, and coded. Each item of the questionnaire was assigned a numerical code to computerise each response. The software package, Excel (part of the Microsoft Office suite,) was used to capture the data. A statistician was involved during the finalisation of the questionnaire as well as during the data analysis. The Statistical Package for the Social Sciences (SPSS) 15.0, software program was used to analyse the results.

3.8.4 Data presentation

Data collected, using tables and discussions, will be presented using tables.

3.9 Delimitation of the study

Geographical limitation: This study is limited to Registered Nurses employed in the various health care facilities in Stellenbosch, South Africa. Therefore, study findings could not be generalised, however, it could provide some indication of the attitudes, beliefs, knowledge, and practice of Registered Nurses working in Health Care facilities in South Africa.

3.10 Summary

This chapter describes the KABP survey to determine the knowledge, attitude, belief, and practise of Registered Nurses regarding pain management in caring for the terminally ill. The data collected from the questionnaire, together with some findings will be presented in Chapter 4.

CHAPTER FOUR RESULTS

4.1 Introduction

In the previous chapter the research methodology was discussed. This chapter presents and discusses the results. The results will be presented in tables and the discussion of the findings and presentations are given with respect to each of the research questions.

The questionnaire was divided into two sections. Section 1 dealt with the biographical data. This included the age of the respondents, level of education, current practice setting, and frequency of work with terminally ill patients. Section 2 dealt with the knowledge levels, beliefs, and practices of Registered Nurses with respect to pain management in patients with life threatening diseases under palliative care.

4.1.1 Distribution of questionnaires

The questionnaire that was used to collect the data for this study was distributed to the different health care facilities as described in the previous chapter. See Table 4.1.

Table 4.1: Distribution of questionnaires and sample size

| Institution | Questionnaires Handed Out | | Questionnaires Completed | |
|--------------------------------|---------------------------|-------|--------------------------|-------|
| | n | % | n | % |
| Acute Care Provincial Hospital | 22 | 25.3 | 22 | 38.6 |
| Acute care Private Hospital | 52 | 59.8 | 23 | 40.4 |
| Chronic care | 4 | 4.6 | 3 | 5.3 |
| Hospice | 5 | 5.7 | 5 | 8.8 |
| Private Nursing Practise | 4 | 4.6 | 4 | 7.0 |
| TOTAL | 87 | 100.0 | 57 | 100.0 |

A total of 87 questionnaires were handed out, of which 57 were completed and returned: a response rate of 65.5% (57/87). The total sample size for this study was 57 Registered Nurse respondents. See Table 4.1.

4.2 Background variables of the respondents

Table 4.2 reflects the practice setting, level of education, current clinical involvement, years of experience as Registered Nurse, the age groups of the respondents, as well as how often they work with patients under palliative care.

Table 4.2 shows that the majority of respondents in the study, 28/57 (49.1%), were working in acute-care settings at the time of the research. Whereas 38.6% (22/57) of the respondents worked in hospices and chronic- and community care facilities. Respondents under the category "Other" included respondents who did not work in a clinical area where palliative care was being provided.

In terms of education, 77.1% (44/57) of the respondents were in possession of a Diploma qualification in nursing while 15.8% (9/57) of the respondents had obtained a Bachelors degree in nursing and only 7.0% (4/57) had completed a Master's degree in nursing.

Most respondents, (80.7%) 46/57) have more than 10 years experience as a Registered Nurse, whereas 10.5% respondents had less than 5 years of nursing experience as a Registered Nurse. See Table 4.2.

Most respondents (86%) were in the age group, 31 – 60 years with only (4/57) 7% of the respondents younger than 30 years of age. See Table 4.2.

Over a third, (21/57) or 36.8%, of respondents deals with terminally ill patients on a daily basis, while (19/57) 33.3% only dealt with terminally ill patients on a quarterly basis. A quarter (15/57) 26.0% of respondents dealt with terminally ill patients on a monthly basis. See Table 4.2.

Table 4.2: Profile of respondents N = 57

| Practice setting | N | % |
|---|----------|----------|
| Acute Care | 28 | 49.1 |
| Chronic Care | 7 | 12.3 |
| Hospice | 8 | 14.0 |
| Community Care | 3 | 5.3 |
| Other | 11 | 19.3 |
| Total | 57 | 100.0 |
| Level of Education | n | % |
| Diploma | 44 | 77.2 |
| Bachelors Degree | 9 | 15.8 |
| Masters Degree | 4 | 7.0 |
| Total | 57 | 100.0 |
| Current involvement in clinical area | n | % |
| Medical | 15 | 26.3 |
| Surgical | 12 | 21.1 |
| Geriatrics | 5 | 8.8 |
| Palliative | 9 | 15.8 |
| Paediatrics | 3 | 5.2 |
| Other | 13 | 22.8 |
| Total | 57 | 100.0 |
| Years of experience as Registered Nurse | n | % |
| Less than 5 years | 6 | 10.5 |
| 5 – 10 years | 5 | 8.8 |
| 11 – 15 years | 12 | 21.1 |
| 16 – 20 years | 12 | 21.1 |
| 21 – 25 years | 7 | 12.3 |
| More than 25 years | 15 | 26.3 |
| Total | 57 | 100.0 |
| Age group | n | % |
| 20 – 30 years | 4 | 7.0 |
| 31 – 40 years | 17 | 29.8 |
| 41 – 50 years | 18 | 31.6 |
| 51 – 60 years | 14 | 24.6 |
| 60 years and older | 4 | 7.0 |
| Total | 57 | 100.0 |
| Frequency of work with terminally ill patients | n | % |
| Quarterly | 19 | 33.3 |
| Monthly | 15 | 26.3 |
| Daily | 21 | 36.8 |
| Unknown | 2 | 3.5 |
| Total | 57 | 100.0 |

4.2.1 Current practice setting and frequency of work with terminally ill patients.

Table 4.3 shows the relationship between the current practice setting and the frequency of instances where the respondents have to deal with terminally ill patients.

Table 4.3: The comparison between the current practice setting of respondents and the frequency of work with terminally ill patients.

| | Acute care | | Chronic care | | Hospice | | Community Care | | Other | |
|---------------------|------------|-------|--------------|-------|---------|-------|----------------|-------|-------|-------|
| | n | % | n | % | n | % | n | % | n | % |
| Quarterly | 14 | 50.0 | 1 | 14.0 | 0 | 0.0 | 0 | 0.0 | 4 | 36.4 |
| Monthly | 6 | 21.4 | 2 | 28.6 | 2 | 25.0 | 2 | 66.7 | 3 | 27.3 |
| Daily | 7 | 25.0 | 4 | 57.1 | 6 | 75.0 | 1 | 33.3 | 3 | 27.3 |
| Not answered | 1 | 3.5 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 9.0 |
| Total | 28 | 100.0 | 7 | 100.0 | 8 | 100.0 | 3 | 100.0 | 11 | 100.0 |

All respondents that worked in a hospice and community based setting had either monthly or daily contact with terminally ill patients. In the hospice setting 75% (6/8) of the respondents dealt with terminally ill patients on a daily basis. Respondents working in chronic care settings also had a high percentage (4/7) 57.1% working with terminally ill patients on a daily basis, with (2/7) 28.6% working with terminally ill patients on a monthly basis. In the acute care settings, (14/28) 50.0% of respondents only dealt with the terminally ill on a quarterly basis, whereas 25.0% (7/28) of respondents dealt with terminally ill patients on a daily basis. See Table 4.3.

4.2.2 Précis

To summarize the demographic variables of the study respondents:

- The preponderance of respondents ([28/57] 49.9%) work in an acute care facility in a medical clinical environment.
- Most respondents ([46/57] 80.7%) in the study have more than 10 years of nursing experience and are between 30 and 60 years of age.
- Twenty-one out of fifty-seven respondents ([21/57] 36.8%) in the study dealt with terminally ill patients on a daily basis. These include all practice settings.
- The biggest proportion of Registered Nurses ([14/28] 50.0%) dealing with terminally ill patients on a quarterly basis is in acute care settings.

4.3 Knowledge of Registered Nurses working with patients under palliative care

Table 4.4 presents the knowledge base of Registered Nurses regarding pain management as part of their nursing of terminally ill patients under palliative care. Questions 7 to 9 are aimed at establishing the respondent's knowledge level regarding the chemistry and physiological effects of opioids and other drugs used for pain control. Questions 10 and 11 deal with the beliefs of the respondents with the remaining questions exploring the pain management practices of Registered Nurses dealing with terminally ill patients in a palliative care set-up.

Table 4.4: Pain control knowledge of Registered Nurses working with terminally ill patients under palliative care

| Most accurate judge of the intensity of pain in a terminally ill patient is | n | % |
|---|----------|----------|
| The treating physician. | 2 | 3.5 |
| The patient's primary nurse. | 14 | 24.6 |
| The patient. | 40 | 70.2 |
| The patient's spouse or family. | 1 | 1.8 |
| Total | 57 | 100. |
| Analgesics for pain in the terminal phase should be given | n | % |
| Only when the patient asks for it. | 6 | 10.5 |
| Around the clock on a fixed schedule. | 35 | 61.4 |
| Only when the nurse determines the patient has moderate or greater discomfort. | 1 | 1.8 |
| As the physician has prescribed | 15 | 26.3 |
| Total | 57 | 100. |
| Pain experienced by cancer patients can be due to the following | n | % |
| Caused by the tumour. | 8 | 14.1 |
| Complications of the cancer. | 4 | 7.0 |
| Anti cancer treatment. | 0 | 0 |
| Conditions unrelated to cancer. | 0 | 0 |
| All of the above. | 45 | 78.9 |
| Total | 57 | 100.0 |
| Morphine causes | n | % |
| Physical dependence in the majority of cancer patients on long-term cancer treatment. | 6 | 10.7 |
| Psychological addiction in the majority of cancer patients on long-term cancer treatment. | 2 | 3.6 |
| Constipation in the majority of cancer patients on long-term cancer treatment. | 18 | 32.1 |
| All of the above. | 24 | 42.9 |
| None of the above. | 7 | 10.7 |

Table 4.4: Pain control knowledge of Registered Nurses working with terminally ill patients under palliative care (continued)

| | | |
|--|----------|----------|
| Total | 57 | 100.0 |
| The route of first choice for the administration of morphine is | n | % |
| Oral | 32 | 56.1 |
| Subcutaneous | 7 | 12.3 |
| Intravenous | 18 | 31.6 |
| Total | 57 | 100.0 |
| WHO pain control step ladder suggests using a single analgesic rather than combining drugs: | n | % |
| True | 27 | 47.3 |
| False | 30 | 52.7 |
| Total | 57 | 100.0 |

Note: Shaded reply indicate the most appropriate reply

Table 4.4 indicates that 40/57 (70.2%) of the respondents view the patient as the most accurate judge of the intensity of his/her pain, and (14/57) 24.6% view the patients' primary nurse as the most accurate judge of the intensity of the patients' pain.

The study data is an indication of the knowledge of the respondents of the WHO pain control stepladder as an approach to relieve pain during the terminal phase. Thirty-six (63.2%) of the respondents answered in accordance with the WHO pain control guidelines, whereas 26.3% (15/57) would request the physician to decide what analgesics should be used during the terminal phase of patient care. See Table 4.4.

Respondents were unable to identify specific factors that could lead to pain in the cancer patient during the terminal phase of the disease process. For example 45/57 (78.9%) selected the "all mentioned" option regarding causes of pain experienced by terminally ill patients, rather than the expected option. See Table 4.4.

In terms of the perceived side effects after opioid (Morphine) use, 10.7% (6/57) of the respondents did not indicate that any side effects were reported. However, 42.9% (24/57) indicated physical dependence, psychological addiction, and constipation as side effects of opioid use. One respondent did not answer this question. See Table 4.4.

Due to the characteristics of opioids, as least invasive, the oral administration of it is endorsed by current standards in pain management. Generally the oral route is also the least expensive, and was the choice of 56.2% (32/57) of the respondents. The study reveals the misconception that the intravenous route was preferred; this choice was selected by 18/57(31.6%) of the respondents.

The knowledge level of respondents regarding the WHO pain control step ladder approach on the combination of drugs and standards on pain management indicates that 52.6% (30/57) answered the question as expected. The WHO uses a combination of drug classes in palliative pain management, whereas 47.4 %, (27/57) answered incorrectly. One respondent in both an acute care setting and in a chronic care setting did not answer this question.

4.4 Attitudes of Registered Nurses working with terminally ill patients under palliative care

Attitudes as well as beliefs are always subjective concepts that can be influenced by different factors, especially when nursing the terminally ill. Table 4.5 depicts the knowledge level of the respondents on the chemistry and physiological effects of opioids and other drugs used for pain control, their sensitivity towards the cultural differences in nursing, their attitude towards pain relief, and the effectiveness of pain management of the terminally ill.

The data in Table 4.5 reflects the attitudes of Registered Nurses towards cultural sensitivity. Respondents indicated in 80.7% (46/57) of the responses that individual assessments to determine pain management strategies are required for the culturally diverse patients in their care. Whereas 4/57 (7.1%) view the current situation in South Africa, with its diversity and mixed cultures, as no longer requiring the consideration for cultural sensitivity in terms of pain management.

In terms of patients requesting increased doses of pain relief drugs, most 44/57 (77.2%) respondents, indicated the patients' experience of increasing pain as the favourable answer. The possibility of anxiety and depression as indicators for increasing doses of pain relief drugs were recognized by (6/57) 10.5% of the respondents. See Table 4.5.

Table 4.5 Frequency distribution of question data aimed at determining the attitudes of Registered Nurses working with terminally ill patients

| The best approach for cultural consideration in caring for patients in pain | n | % |
|--|----------|----------|
| Because of the diverse and mixed cultures in South Africa, there are no longer cultural influences. | 4 | 7.0 |
| Nurses should use knowledge that clearly defines the influence of culture on pain. | 7 | 12.3 |
| Patients should be individually assessed to determine cultural influences on pain. | 46 | 80.7 |
| Total | 57 | 100.0 |
| The most likely explanation why a terminal patient with chronic pain would request increased doses of pain relief drugs | n | % |
| The patient is experiencing increased pain. | 44 | 77.2 |
| The patient is experiencing anxiety or depression. | 6 | 10.5 |
| The patient is requesting more staff attention. | 2 | 3.5 |
| The patient's requests are related to addiction. | 5 | 8.8 |
| Total | 57 | 100.0 |
| Do you believe the management of pain in a patient with a life threatening disease in palliative care is | n | % |
| A major problem | 30 | 52.8 |
| Somewhat of a problem | 11 | 19.3 |
| A minor problem | 3 | 5.3 |
| Not a problem | 13 | 22.8 |
| Total | 57 | 100.0 |

Note: Due to the subjective nature of the questions in table 4.5, 4.6 and 4.7 no areas are shaded

Pain management in palliative care was identified as a major problem by 52.6% (30/57) of the respondents, whereas 13/57 (22.8%) did not recognise this as a problem at all. This indicates there is a wide range of attitudes towards pain management in palliative care.

4.5 Beliefs regarding pain management while working with terminally ill patients

The beliefs of the respondents regarding pain management in the terminally ill are depicted in Table 4.6. This information depicts the perception of respondent Registered Nurses on adequate pain management in terminally ill patients and their moral/ethic view on which their response is based.

Table 4.6 The beliefs of Registered Nurses regarding pain management while working with terminally ill patients

| In your opinion, which of the following is true | n | % |
|--|----------|----------|
| Most patients under terminal care receive adequate pain treatment | 27 | 48.2 |
| Patients under terminal care receive more pain medication than necessary | 2 | 3.5 |
| The majority of patients under terminal care are under-medicated regarding their pain management. | 7 | 12.5 |
| Only a few patients under terminal care experience adequate pain management | 21 | 35.7 |
| Total | 57 | 100.0 |
| Based on one's religious beliefs, a patient may think that pain and suffering is necessary. | n | % |
| True | 31 | 54.4 |
| False | 26 | 45.6 |
| Total | 57 | 100.0 |

As depicted in Table 4.6 , 27/57 (47.4%) of the respondents believe that terminally ill patients under palliative care experience adequate pain management, whereas 21/57 (36.8%) believe that only a few terminally ill patients experience adequate pain management. A 10.6 percentage point difference is noted between respondents that indicate most terminally ill patients received adequate pain relief and those who indicated that only a few terminally ill patients receive adequate pain relief in palliative care.

There were 31/57 (54.4%) of the respondents that indicated that according to their religious beliefs, suffering is necessary, whereas 26/57 (46.6%) believe suffering is unnecessary.

The concept "belief" appears to be subjective, indicated by the 48% choosing "adequate" (most patients under terminal care receive adequate pain management) and the 35.7% choosing "inadequate" (only a few patients under terminal care experience adequate pain management) as well as the almost equal number of respondents believing that suffering is necessary and those that believe suffering is unnecessary.

4.6 The application of Registered Nurses knowledge, attitudes and beliefs regarding pain management in patients under palliative care

Quality assurance of pain management is dependent on how the Registered Nurse applies her knowledge, experience, and beliefs in the practice of pain management.

Table 4.7 Pain management of the terminally ill by Registered Nurses

| Estimation of pain by a physicians or Registered Nurse is as valid a measure of pain the patient. | n | % |
|--|----------|----------|
| Disagree | 24 | 42.1 |
| Neither agrees or disagrees | 7 | 12.3 |
| Agree | 26 | 45.6 |
| Total | 57 | 100.0 |
| Pain medicines can be dangerous and often interfere with breathing | n | % |
| Disagree. | 17 | 29.8 |
| Neither agrees nor disagrees. | 8 | 14.0 |
| Agree. | 32 | 56.1 |
| Total | 57 | 100.0 |
| Treatments other than medications (such as massage, heat, relaxation) can be effective for relieving pain | n | % |
| Strongly disagree | 0 | 0 |
| Disagree | 3 | 5.2 |
| Neither agree or disagree | 8 | 14.0 |
| Agree | 37 | 64.9 |
| Strongly agree | 9 | 15.8 |
| Total | 57 | 100.0 |
| When a patient is given morphine for the first time | n | % |
| It is advised not to give any other drugs. | 10 | 17.9 |
| Laxatives should be given on a daily basis. | 26 | 46.4 |
| Laxatives should only be given when constipation develops. | 8 | 14.3 |
| Antiemetics should only be given if nausea occurs | 12 | 21.4 |
| Total | 57 | 100.0 |
| Level of job physicians do in relieving pain in terminally ill patients | n | % |
| A poor job | 5 | 8.7 |
| A fair job | 19 | 33.3 |
| A good job | 33 | 57.9 |
| Total | 57 | 100.0 |
| Level of job Registered Nurses do in relieving pain in terminally ill patients | n | % |
| A poor job | 2 | 3.5 |
| A fair job | 16 | 28.1 |
| A good job | 39 | 68.4 |
| Total | 57 | 100.0 |

On combining their knowledge and experience regarding pain management in practice, 45.6% (26/57) of the respondents agree that the estimation of pain by a medical doctor or Registered Nurse is as valid a measure of pain as that reported by the patient. However 42.1% (24/57) disagreed, while 12.3% (7/57) had a neutral response. See Table 4.7.

Just more than half (56.1%) of the respondents either agreed or strongly agreed that pain medication can interfere with breathing. Again 29.8% (17/57) disagreed with this statement while 14.0% (8/57) had a neutral response. See Table 4.7.

It appears that the use of alternative treatment in the management of pain in terminally ill patients under palliative care was a popular choice amongst the respondents. For instance a mere 5.2% (3/57) of the respondents disagreed with the statement that alternative treatment such as massages, heat, and relaxation can be effective for relieving pain. Rather, the majority 64.9% (37/57) agreed on using alternative methods, and 15.8% (9/57) indicated that they strongly agree with the statement that alternative treatments are effective for relieving pain. See Table 4.7.

Respondents were expected to select the option to give the patient laxatives daily from the first dose of morphine to counteract the side effect of constipation. Almost half, 46.0% (26/57) of the respondents indicated this as best practice in pain management. See Table 4.7.

On evaluating the pain relief provided by physicians in their settings, 10% identified weaknesses in the administration of pain relief treatment by physicians whereas 33.33% (19/57) rated them as doing a very good job and 57.8% (33/57) rated them as doing a good job with pain relief in their settings. See Table 4.7.

However, respondents differed in their indication about Registered Nurses providing pain relief to patients with life threatening diseases. For instance most respondents (68.4% [39/57]) rated their nursing colleagues either as 'very good' or 'good', although 3.5% rated their colleagues' ability to relieve pain as 'poor'.

4.7 Knowledge of Registered Nurses on the WHO pain management guidelines in palliative care linked with their level of education and years of experience

The knowledge level of Registered Nurses regarding the WHO guidelines on pain management in palliative care has been presented in Table 4.4. Table 4.8 presents a cross tabulation of the WHO guidelines regarding administration of analgesics in pain management of the terminally ill with the highest level of education and the years of experience of the respondent as Registered Nurse.

Table 4.8 Cross-tabulation: level of education of Registered Nurses with their knowledge of the WHO pain management (N= 57)

| Analgesics for pain in the terminal phase should be given: | Diploma | | Bachelors | | Masters | |
|--|---------|-------|-----------|-------|---------|-------|
| | n | % | N | % | n | % |
| Only when the patient asks for it | 5 | 11.4 | 2 | 22.2 | 0 | 0.0 |
| Around the clock on a fixed schedule | 27 | 61.4 | 5 | 55.6 | 3 | 75.0 |
| Only when the nurse determines the patient has moderate or greater comfort | 1 | 2.3 | 0 | 0.0 | 0 | 0.0 |
| As the physician has prescribed it | 12 | 27.3 | 2 | 22.2 | 1 | 25.0 |
| Total | 45 | 100.0 | 9 | 100.0 | 4 | 100.0 |

Note: The most appropriate answer has been shaded.

Table 4.8 shows that three of the four respondents, holding a Masters qualification in nursing gave the correct answer, and 55.6% (5/9) of respondents holding a bachelors qualification were aware that analgesics for pain relief in the terminal phase should be given around the clock on a fixed schedule. Whereas 60% (27/45) respondents who had obtained a diploma in nursing felt analgesics should be given around the clock, on a fixed schedule. Twelve respondents did not respond to this question.

A chi-square test showed that there is no significant relationship between level of education of the respondents and their knowledge of WHO guidelines regarding administration of analgesics in pain management (Chi-square value = 4.22, p-value = 0.377).

Table 4.9 Cross-tabulation: years of experience of respondents with their knowledge on pain management among the terminally ill (N=57)

| Analgesics for pain in the terminal phase should be given | Years of experience | | | | | | | | | | | |
|---|---------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-----|-------|
| | <5 | | 5-10 | | 11-15 | | 16-20 | | 21-25 | | >25 | |
| | N | % | n | % | n | % | n | % | n | % | n | % |
| Only when the patient asks for it. | 1 | 16.7 | 1 | 20.0 | 2 | 16.7 | 1 | 8.3 | 0 | 0.0 | 1 | 6.7 |
| Around the clock on a fixed schedule | 2 | 33.3 | 2 | 40.0 | 7 | 58.3 | 7 | 58.3 | 4 | 66.7 | 12 | 80.0 |
| Only when the nurse determines the patient has moderate or greater discomfort | 0 | 0.0 | 0 | 0.0 | 1 | 8.3 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| As the physician has prescribed it | 3 | 50.0 | 2 | 40.0 | 2 | 16.7 | 4 | 33.3 | 2 | 33.3 | 2 | 13.3 |
| Total | 6 | 100.0 | 5 | 100.0 | 12 | 100.0 | 12 | 100.0 | 6 | 100.0 | 15 | 100.0 |

Note: The most appropriate answer has been shaded.

In Table 4.9, 80.0% (12/15) of the respondents with 25 or more years of experience as a Registered Nurse answered the question on administration of analgesics according to WHO guidelines.

A chi-square test showed that there is no significant relationship between years of experience of the respondents and their knowledge of WHO guidelines regarding administration of analgesics in pain management (Chi-square value = 10.465, p-value = 0.0.575, d.f. = 12).

Table 4.10 presents a cross-tabulation of the level of education held by the respondents with their knowledge of the WHO step ladder approach to pain management.

Table 4.10 Cross tabulation: level of education of Registered Nurses with their knowledge of the WHO pain management step ladder management (N = 57)

| The WHO step ladder approach to pain management suggests using a single analgesic | Highest level of education | | | | | |
|---|----------------------------|-------|-----------|-------|---------|-------|
| | Diploma | | Bachelors | | Masters | |
| | n | % | n | % | n | % |
| True | 22 | 50.0 | 5 | 55.6 | 0 | 0.0 |
| False | 22 | 50.00 | 4 | 44.4 | 4 | 100.0 |
| Total | 44 | 100.0 | 9 | 100.0 | 4 | 100.0 |

Note: The most appropriate answer has been shaded.

Table 4.10 shows that half of the respondents with a nursing diploma qualification are aware of the WHO step ladder approach to pain management, suggesting a combination of analgesics were necessary to address the individual's nature of pain. However, all the respondents holding a Masters qualification, albeit only four respondents, answered the question correctly.

A chi-square test showed that there is no significant relationship between level of education of the respondents and knowledge of the WHO step ladder approach to pain management (Chi-square value = 0.530, p-value = 0.467).

Table 4.11 Cross-tabulation: years of experience as Registered Nurse with their knowledge of the WHO step ladder approach to pain management of the terminally ill

| The WHO step ladder approach to pain management suggests using a single analgesic | Years of experience | | | | | | | | | | | |
|---|---------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-----|-------|
| | <5 | | 5-10 | | 11-15 | | 16-20 | | 21-25 | | >25 | |
| | n | % | n | % | n | % | n | % | n | % | n | % |
| True | 5 | 83.3 | 3 | 60.0 | 6 | 50.0 | 6 | 50.0 | 1 | 16.7 | 6 | 40.0 |
| False | 1 | 16.7 | 2 | 40.0 | 6 | 50.0 | 6 | 50.0 | 5 | 83.3 | 9 | 60.0 |
| Total | 6 | 100.0 | 5 | 100.0 | 12 | 100.0 | 12 | 100.0 | 6 | 100.0 | 15 | 100.0 |

Note: The most appropriate answer has been shaded.

A chi-square test showed that there is no significant relationship between years of experience of the respondents and knowledge of the WHO step ladder approach to pain management (Chi-square value = 4.499, p-value = 0.212).

4.8 Cross-tabulation of the attitudes of the Registered Nurses with their clinical work area

Respondents were asked to select the most likely explanation for a terminal cancer patient requesting increased doses of pain medication, depicted in Table 4.12.

Table 4.12 Cross-tabulation of the attitudes of Registered Nurses with their clinical work area (N=57)

| Most likely explanation why a terminal cancer patient with chronic pain would request increased doses of pain medications is | Acute care | | Chronic Care | | Hospice | | Community Care | | Other | |
|--|------------|-------|--------------|-------|---------|-------|----------------|-------|-------|-------|
| | n | % | n | % | n | % | n | % | n | % |
| Patient is experiencing increased pain | 22 | 78.6 | 1 | 57.1 | 8 | 100.0 | 4 | 100.0 | 6 | 60.0 |
| Patient is experiencing anxiety or depression | 1 | 3.6 | 4 | 57.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Patient is requesting more staff attention | 2 | 7.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 4 | 40.0 |
| Patient requests are related to addiction | 3 | 10.7 | 2 | 28.6 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Total | 28 | 100.0 | 7 | 100.0 | 8 | 100.0 | 4 | 100.0 | 10 | 100.0 |

Note: The most appropriate answer has been shaded.

It is noted in Table 4.12 that all the respondents working in hospice and community care settings gave the correct answer in terms of the reason why a terminally ill patient will request increased doses of pain control medication. However 57.1% (4/7) respondents working in a chronic care setting attributed the request for increased doses of pain medications to anxiety or depression on the patient's side. The other 60.0% (6/10) of the respondents, who worked full time in administration or as nurse educators, answered the question correctly.

When combining the last three rows of table 4.12 (being the "incorrect" choices into one row and the two columns denoting "Hospice and Community Care" into one column the table becomes more concise and useful for statistical analysis.

Table 4.12.1: Transformed cross-tabulation of the attitudes of Registered Nurses with their clinical work area

| The most likely explanation for why a terminal cancer patient with chronic pain would request increased doses of pain medications is: | Acute care | Chronic Care | Hospice and Community Care | Other |
|---|------------|--------------|----------------------------|-------|
| | n | n | n | n |
| The patient is experiencing increased pain ("correct choice") | 22 | 1 | 12 | 6 |
| "Incorrect choices" | 6 | 6 | 0 | 4 |
| Total | 28 | 7 | 12 | 10 |

When the chi-square test was applied to this smaller table (4.12.1), it showed that there is a statistically significant relationship between clinical work area of the respondents and attitudes (Chi-square value = 17.52, p-value < 0.001).

4.9 Summary

This chapter presented the data that was collected using a structured questionnaire to establish the KABP of the Registered Nurses, in terms of pain management of patients in terminal care, with some level of interpretation. In the next chapter these findings will be discussed in relation to the literature presented in Chapter 2.

CHAPTER 5

DISCUSSION

Pain is inevitable. Suffering is optional.

(Casey, 1996).

5.1 Introduction

This study aimed to determine the findings regarding the knowledge, attitudes, beliefs and practice of Registered Nurses in South Africa in terms of pain management of patients under palliative care by analysing the data by means of a questionnaire. Furthermore this study aimed to contemplate the implications for nursing, and suggests recommendations for expanding this study. In the previous chapter the results of this study were presented. This chapter will discuss limitations of this study in relation to available literature and context. Some concluding remarks and recommendations will also be presented.

5.2 Further limitations of this study

A further limitation already mentioned in section 3.9, is that this study did not include other nursing categories beyond Registered Nurses who care for the terminally ill and can do much in terms of non-medication pain management.

5.3 KAPB data discussion

This discussion will be presented using the KAPB framework, followed by and integration of these issues.

5.3.1 Knowledge

Based on the data of this study, the level of academic nursing education, whether it be at Diploma or Bachelor level, seem not to have influenced the understanding of pain management of the terminally ill among the respondents (Table 4.8). However it would seem as if a higher academic qualification may influence how Registered Nurses understand pain management issues (Table 4.8). Albeit a small group (7.0% [4/57]), the Registered Nurses who have a Master's degree qualification, all responded reflecting their knowledge regarding the WHO stepladder approach to pain management in palliative care as correct (see Table 4.10). The results of this study appear to demonstrate that there is a correlation between the knowledge, attitudes, beliefs and practices of the respondents and their demographics (see

Table 4.7). However this has been proved to be insignificant (Chi-square value = 0.530, p-value = 0.467).

This study indicates that there is a link between the clinical practice setting and the knowledge level regarding pain management of the Registered Nurses (see Table 4.12). For instance Registered Nurses that work in a hospice setting are more knowledgeable of pain management and related issues. The statistical chi-square test, however, showed that there is no significant statistical relationship between the clinical area, and practise setting on the knowledge base of the respondents.

The importance of adult education should never be underestimated. As discussed in Chapter 2, adult learners are motivated to learn when it would assist them to competently perform tasks or deal with problems in real-life situations (Knowles, 1980).

This study's findings were in keeping with available literature: an increase in knowledge does not necessarily translate into improved practices of pain management. Brunier, Carson and Harrison (1995) conducted a similar study in three hospitals in New York. This study found significant differences in the knowledge, attitudes, and beliefs of the Registered Nurses regarding pain management, and this was strongly linked to their clinical practise area.

The results of this present study, as tabulated in Table 4.10, confirm the results of previous research indicating that Registered Nurses with further post registration education display significantly more knowledge and better therapeutic attitudes regarding pain management (Tanabe & Buschmann, 2000). Educational interventions designed to increase knowledge in the clinical field of the Registered Nurse has been recommended by Clarke, French, Bilodeau *et al.*, (1996).

5.3.2 Attitude

The data show a statistically significant relationship between the attitudes and the clinical work area of the respondents (see Table 4.12.1). More than half (57.9% [33/57]) of the study respondents are of the opinion that physicians relieve pain adequately in terminally ill

patients, with only 3.5% (2/57) holding the opinion that Registered Nurses lack in their quest for pain relief.

The management of opioid induced constipation is widely discussed in literature (O'Neill & Fallon 1997; Herndon, Jackson & Hallin 2002). Opioids interfere with normal fluid and electrolyte handling within the gastrointestinal lumen and inhibit the gastrointestinal tract's response of fluid and electrolyte secretion to toxins. Data in this study shows, only, 45.6% (26/57) of Registered Nurses will administer laxatives on a daily basis to prevent constipation.

The data show a relationship between the attitudes and the clinical work area of the respondents (Table 4.12). Registered Nurses working in a clinical area or institution where pain management is a core component of the required skills base, demonstrated better theoretical and practical skills than others not working in these disciplines or in this field.

The relationship that emerged in this study between experience in pain management and knowledge and attitude level is inconsistent with the findings of Lander (1990), who reports that the institution can be non-conducive to learning. A possible explanation for this apparent discrepancy could be that the context and clinical experience often facilitates the development of the knowledge and attitudes of these nurse practitioners.

5.3.3 Beliefs

The concept of belief is a rather subjective concept; therefore this aspect should be further explored using qualitative research methods.

5.3.4 Practice

The way Registered Nurses practice pain management appears to be influenced by a fear of the potential side-effects of opioids. For example the respondents indicated that the use of opioids in pain management is seen as "dangerous" in that it can interfere with breathing by 49/58 (87%) of the respondents (See Table 4.7). This fear is well documented in the literature. However, the findings of this study are in line with that of previous studies (Lasch,

Greenhill, Wilkes *et al.*, 2002) indicating the negative effects of opioiphobia (the unreasonable fear of the potential effects of opioids) on the pain management process.

The awareness and use of alternative treatment methods for pain management among 80.7% (46/57) of the respondents is positive, as it would appear that Registered Nurses are becoming aware of holistic treatment methods in pain management.

Literature reviewed, presented and discussed in Chapter 2, included numerous findings and recommendations related to pain management. Based on the literature review, management of pain in patients with life threatening diseases under palliative care remains inadequate despite increased awareness of pain management of the terminally ill in palliative care (Ferrell, McCaffery & Rhiner, 1992; McGuire & Sheidler, 1997; The Joint Commission on the accreditation of healthcare organizations, 2000).

5.4 Recommendation

Based on the findings of this study, it is recommended that Registered Nurses working in settings where they care for the terminally ill:

- Are involved in ongoing education and training programmes to equip these Registered Nurses with the required knowledge that will impact on their practice of pain management.
- Submit an annual portfolio of evidence of learning and practice for assessment by an approved body, such as the South African Nursing Council, to ensure they remain competent to manage pain. This should be compulsory to remain registered with the South African Nursing Council.
- Are exposed to continue monitoring of the knowledge, attitudes, beliefs and practices of Registered Nurses practicing pain management of the terminally ill.

Two further recommendations are:

- Undertake further research to establish how family members perceive the pain management regimes their terminally ill receive, and
- Review all Registered Nurse training and education programmes (basic and post registration programmes) towards including aspects of chemistry and pharmacokinetics in terms of pain management.

5.5 Final concluding remark

It would appear that adequate knowledge of pain management influence the attitude, belief and practice of the Registered Nurse that care for the terminally ill. Registered Nurses play an important role in pain management of terminally ill patients under palliative care in South Africa: a task for which they are not always adequately equipped.

5.6 Way Forward

Based on this study, it is proposed to investigate the possibility that Registered Nurses should be audited every three years by a body approved by the South African Nursing Council on the various aspects determined by their particular scope of practice. This system of audit applies to other professional disciplines that require registration with a professional body. The requirements for this audit and continuous registration can be based on in-service training courses, attending relevant conferences and seminars as well as appropriate formal further studies. This could form part of the Continued Professional Development (CPD) point structure as proposed by the South African Nursing Council. A similar system is already in place in countries like Australia, Canada, the United Kingdom, and New Zealand.

“We must all die. But that I can save him from days of torture that is what I feel as my great and ever new privilege. Pain is a more terrible lord of mankind than even death itself.”

— Albert Schweitzer, 1931

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APPENDIX A:

APPROVAL TO USE QUESTIONNAIRES BY ORIGINAL AUTHORS



Family Pain Questionnaire

Dear Colleague,

The Family Pain Questionnaire (FPQ) is a sixteen item ordinal scale that measures the Knowledge and Experience of a family caregiver in managing chronic cancer pain. This tool can be useful in clinical practice as well as for research. This instrument can be administered by mail or in person.

Directions: The caregiver is asked to read each question thoroughly and decide if he/she agrees with the statement or disagrees. The caregiver is then asked to circle a number to indicate the degree to which he/she agrees or disagrees with the statement according to the word anchors on each end of the scale.

The FPQ includes 9 items that measure knowledge about pain and 7 items that measure the caregivers experience with pain. All of the items have been formatted such that 0 = the most positive outcome and 10 = the most negative outcome. We have found it most helpful to analyze the data by focusing on the subscales as well as the individual items as each item has important implications.

You are welcome to use this instrument in your research/clinical practice to gain information about caregiver knowledge and experience to formulate or evaluate pain management programs. You have permission to duplicate this tool.

This tool is used in conjunction with a version created for use by patients, the Patient Pain Questionnaire (PPQ). The FPQ tool has been tested with established reliability (test retest, internal consistency) and validity (content, construct, concurrent). A series of psychometric analyses were performed on the instrument including content validity (CVI = .90), construct validity (ANOVA, $p < .05$), concurrent validity ($r = .60$, $p < .05$), factor analysis and test-retest reliability ($r = .80$) established with a retest of caregivers (N=67).

Good luck with your research!!

Sincerely,

A handwritten signature in cursive script that reads "Betty R. Ferrell PhD, FAAN".

Betty R. Ferrell PhD, FAAN
Research Scientist



Dear Colleague:

We have had many inquiries regarding the need for an instrument to measure nurses' knowledge and attitudes regarding pain. Therefore, we have prepared our instrument for distribution to others. The tool can be used to assess nurses in your setting and as an evaluation measure following educational programs. The tool was developed in 1987 and has been used extensively from 1987 - present. The tool was recently revised and tested in a pain education course with greater than 800 subjects. Psychometric analysis will be conducted on this data using the updated version.

The following data was based on evaluation of the previous version.

- Regarding issues of reliability and validity: This tool has been developed over several years. Content validity has been established by review of pain experts. The content of the tool is derived from current standards of pain management such as the American Pain Society, the World Health Organization, and the Agency for Health Care Policy and Research. Construct validity has been established by comparing scores of nurses at various levels of expertise such as students, new graduates, oncology nurses, graduate students, and senior pain experts. The tool was identified as discriminating between levels of expertise. Test-retest reliability was established ($r > .80$) by repeat testing in a continuing education class of staff nurses ($N = 60$). Internal consistency reliability was established ($\alpha > .70$) with items reflecting both knowledge and attitude domains.
- Regarding analysis of data: We have found that it is most helpful to avoid distinguishing items as measuring either knowledge or attitudes. Many items such as one measuring the incidence of addiction really measures both knowledge and attitude issues. Therefore, we have found the most benefit to be gained from analyzing the data in terms of the percentage of complete scores as well as in analyzing individual items. For example, we have found it very helpful to isolate those items with the least number of correct responses and those items with the best scores.

Enclosed for your use is a copy of our instrument and an answer key. You may use and duplicate the tool for any purpose you desire in whole or in part. References to some of our studies which have included this tool or similar versions are included below.

We hope that our tool will be a useful aid in your efforts to improve pain management in your setting.

Sincerely,

Betty R. Ferrell, RN, PhD, FAAN
Associate Research Scientist
8/97

Margo McCaffery, RN, MS, FAAN
Lecturer and Consultant

Appendix B

Permission to access study respondents.

The Nursing Service Manager
Stellenbosch Hospital
Merriman Street
Stellenbosch
4 September 2006.

Sir

RE: Permission required conducting pain management research at your health care facility.

I am registered as a Masters Degree student at the Cape Town University of Technology. My research study aims to establish the knowledge, attitude, beliefs and practice of registered nurses in terms of effective pain management of patients under palliative care.

Data will be collected using a questionnaire (Appendix 1). It would take about 20 minutes to complete this questionnaire.

Once your approval has been granted to access practicing registered nurses in this health care facility, a sealed container will be placed for a two week period. It will be placed in an area identified by yourself, wherein the registered nurses can place their completed questionnaires. This container will be emptied daily at 19h00 during this two week period by me.

The questionnaires will be handed to the registered nurses per our arrangement. A copy of the final report will be handed to you at the end of the study period.

My contact details are: 021-887 5436 (home) or 072 2240 5093(mobile). Please do not hesitate to contact me should clarification be required.

Your favorable consideration of this request will be appreciated.

Most sincerely

Linda Fourie (Mrs.)

APPENDIX C

Invitation to participate

P.O. Box 12525
Die Boord
Stellenbosch
4 September 2006

Dear Colleagues

RE: Request your participation in survey among registered nurses in terms of pain management.

I am a registered nurse who is a master's degree student at Cape Town University of Technology. The aim of my research is to establish the knowledge, attitude, beliefs and practice of registered nurses in terms of effective pain management of patients under palliative care.

Data will be collected using a questionnaire (Appendix 1). It would take about 20 minutes to complete this questionnaire.

Your management has granted me the permission to enroll you into this study. It is however your choice to participate or not.

Please note that each questionnaire has been allocated a number in order to assist me to establish whether all questionnaires were returned. This system will ensure that your anonymity will be maintained. Furthermore, all confidentiality will rest with the researcher.

The sealed container into which you'll deposit your completed questionnaire will empty daily at 19h00 by me for a two week period ending 18 September 2006.

A copy of the final report capturing the data gathered will be handed to your management at the end of this study.

Your participation is valued.

Yours sincerely

Linda Fourie (Mrs.)

APPENDIX D

QUESTIONNAIRE

P.O. Box 12525
Die Boord
Stellenbosch
1 August 2006

Dear Colleagues

RE: Request your participation in survey among registered nurses in terms of pain management.

I am a registered nurse who is a master's degree student at Cape Town University of Technology. The aim of my research is to establish the knowledge, attitude, beliefs and practice of registered nurses in terms of effective pain management of patients under palliative care.

Data will be collected using a questionnaire (Annexure 1). It would take about 20 minutes to complete this questionnaire.

Your management has granted me the permission to enroll you into this study. It is however your choice to participate or not.

Please note that each questionnaire has been allocated a number to establish whether all questionnaires were returned. This system will ensure that your anonymity will be maintained. Furthermore, all confidentiality will rest with the researcher.

The sealed container into which you'll deposit your completed questionnaire will empty daily at 19h00 by me for a two week period ending 15 August 2006.

A copy of the final report capturing the data gathered will be handed to your management at the end of this study.

Your participation is valued.

Yours sincerely

Linda Fourie

**CAPE TOWN UNIVERSITY OF TECHNOLOGY
FACULTY OF HEALTH AND WELLNESS SCIENCES**

Title of the Study: Pain Control in Palliative care: A South African Nursing Perspective.

Why is it that despite the increase in knowledge and technological advances people still dies in pain?

Study Leaders: Dr. Marina Clarke (Cape Town University of Technology). Dr. L. Gwyther (University of Cape Town).

Researcher: Linda Fourie (Registered Master's degree student).

Instructions to complete questionnaire:

To complete this questionnaire you are requested to indicate your response with an "x" in the most appropriate box e.g.

1. My preferred drink during the day is:

- a. Coffee
- b. Tea
- c. Water
- d. Other

Note: Should your preferred drink be tea, you indicate this with an "x" as shown above.

Please place the completed questionnaire in the sealed container at the nursing station. It will take no more than 20 minutes to complete. It will be cleared daily at 19h00 for the two week period 1 – 15 August 2006.

If there are any questions please feel free to contact me at either (021)887 5436(home) or 072 2405 093(mobile).

Thank you for your participation in this study.

Yours sincerely,
Linda Fourie (Mrs.)

No:.....

A Knowledge, Attitude, Belief and Practice (KABP) survey for registered nurses on effective pain management of patients under palliative care.

Section 1: General information about yourself.

| Practice setting | Highest level of education | Clinical area | Years of experience as registered nurse | Age Group | How frequently do you work with terminally ill patients? |
|------------------|----------------------------|------------------------------------|---|---------------|--|
| Acute care | Diploma | Medical | Less than 5 years | 20 – 30 years | Quarterly |
| Chronic care | Bachelors Degree | Surgical | 5-10 years | 30 – 40 years | Monthly |
| Hospice | Masters Degree | Geriatrics | 10 -15 years | 40 – 50 years | Daily |
| Community care | Doctorate | Palliative | 15 – 20 years | 50 – 60 years | |
| Other | | Pediatrics | 20 – 25 years | 60 and older | |
| | | Other Specify ----- ----- | more than 25 years | | |

Section 2:

1. The most accurate judge of the intensity of pain in a terminally ill patient is:

- a. The treating physician
- b. The patient's primary nurse
- c. The patient
- d. The patient's spouse or family

2. Analgesics for pain in the terminal phase should be given:

- a. Only when the patient asks for it
- b. Around the clock on a fixed schedule
- c. Only when the nurse determines the patient has moderate or greater discomfort.

3. Pain experienced by cancer patients can be due to the following:

- a. Caused by the tumor
- b. Complications of the cancer
- c. Anti cancer treatment
- d. Conditions unrelated to cancer.
- e. All of the above

4. Morphine causes:

- a. Physical dependence in the majority of cancer patients on long term cancer treatment
- b. Psychological addiction in the majority of cancer patients on long term cancer treatment.
- c. Constipation in the majority of cancer patients on long term cancer treatment.
- d. All of the above
- e. None of the above

5. The route of first choice for the administration of morphine is:

- a. Oral
- b. Subcutaneous
- c. Intravenous
- d. Intrathecal

6. Answer true or false.

The World Health Organization (WHO) pain ladder suggests using single analgesic agents rather than combining classes of drugs (e.g. combining an opioid with a nonsteroid

agent.

True.....

False

7. Which of the following describes the best approach for cultural consideration in caring for patients in pain?

- a. Because of the diverse and mixed cultures in South Africa, there are no longer cultural influences.
- b. Nurses should use knowledge that clearly defines the influence of culture on pain.
- c. Patients should be individually assessed to determine cultural influences on pain.

8. The most likely explanation for why a terminal cancer patient with chronic pain would request increased doses of pain medications is:

- a. The patient is experiencing increased pain
- b. The patient is experiencing anxiety or depression
- c. The patient is requesting more staff attention
- d. The patient requests are related to addiction

9. Do you believe the management of pain in a patient with a life threatening disease in palliative care is?

- a. A major problem
- b. Somewhat of a problem
- c. A minor problem
- d. Not a problem

10. Circle the response that best describes your attitude toward the following statement.

Codes for questions 10, 13 and 14:

5 = Strongly agree, 4 = Agree, 3 = Neither Agree or disagree, 2 = Disagree, 1 = Strongly Disagree.

Estimation of pain by a Medical Doctor or Clinical Nurse is as valid a measure of pain as patient self report.

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

11. In your opinion, which of the following is true?

- a. Most patients in terminal care receive adequate pain treatment
- b. Patients in terminal care receive more pain medication than necessary
- c. Majority of patients in terminal care are under-medicated to manage their pain.
- d. Only a few patients in terminal care experience adequate pain management.

12 Answer true or false.

Based on one's religious beliefs a patient may think that pain and suffering is necessary.

True.....

False.....

13. Circle a number on the line to indicate your response.

Pain medicines can be dangerous and can often interfere with breathing.

| | | | | | | | | | | | | |
|----------|---|---|---|---|---|---|---|---|---|---|----|-------|
| Disagree | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Agree |
|----------|---|---|---|---|---|---|---|---|---|---|----|-------|

14. Circle a number on the line to indicate your response.

Treatments other than medications (such as massage, heat, relaxation) can be effective for relieving pain.

| | | | | | | | | | | | | |
|----------|---|---|---|---|---|---|---|---|---|---|----|-------|
| Disagree | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Agree |
|----------|---|---|---|---|---|---|---|---|---|---|----|-------|

15. When a patient is given morphine for the first time:

- a. It is advised not to give any other drugs
- b. Laxatives should be given on a daily basis
- c. Laxatives should only be given when constipation develops
- d. Antemietics should only be given if nausea occurs

16. How good job do you think physicians in your setting do in relieving pain in patients with life threatening diseases under palliative care?

- a. A very poor job
- b. A poor job
- c. A fair job
- d. A good job
- e. A very good job

17. How good a job do you think registered nurses in your setting do in relieving pain in patients with a life threatening disease under palliative care?

- a. A very poor job
- b. A poor job
- c. A fair job
- d. A good job
- e. A very good job

Sources Used:

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NOTE: Written permission was granted to use the questionnaires by the original authors.

