PERCEPTIONS OF PROFESSIONAL NURSES TOWARDS ALTERNATIVE THERAPIES IN THE UMGUNGUNDLOVU DISTRICT, SOUTH AFRICA

Loshni Maharaj

Dissertation submitted in fulfilment of the requirements for the Degree in Masters of Technology in Nursing in the Faculty of Health Sciences at the Durban University of Technology

Supervisor : Prof R Bhagwan
Co-supervisor : Prof MN Sibiya
Date : 4 May 2015

Declaration

This is to certify that the work is entirely my own and not of any other person, unless explicitly acknowledged (including citation of published and unpublished sources). The work has not previously been submitted in any form to the Durban University of Technology or to any other institution for assessment or for any other purpose.

_____ _____

Signature of student Date

Approved for final submission

_____ _____

Prof R Bhagwan Date

PhD in Com & Dev Disciplines

_____ _____

Prof MN Sibiya Date

RN, RM, D Tech: Nursing

ABSTRACT

INTRODUCTION

Globally, the use of alternative therapies by the public as well as healthcare workers has been widely documented. In South Africa, no studies have been done on alternative therapies specifically related to nurses. The vast amount of media attention with regards to alternative therapies related to the positive and negative outcomes has sparked major interest in this topic. The aim of the study was to determine the perceptions of professional nurses at nine hospitals within the uMgungundlovu District, South Africa, towards alternative therapies in a nursing context.

OBJECTIVES OF THE STUDY

The objectives of the study were to determine the professional nurses' perceptions as well as knowledge of alternative therapies. The possible barriers in providing alternative therapies in nursing practice was also explored in order to make recommendations to guide professional nurses with regard to alternative therapies in patient care.

METHODOLOGY

A quantitative exploratory research approach underpinned this study. A survey questionnaire was used to obtain information from professional nurses who had consented to participate. The total population of professional nurses was 1218. A total of 616 questionnaires were distributed to participants at the nine participating hospitals. Three hundred and eighty six (386) questionnaires were returned, which resulted in a 63% response rate.

FINDINGS

It was evident from the data that professional nurses used various forms of alternative therapies. The results revealed that almost 69% (n=265) used prayer/spiritual healing, followed by 53.9% (n=207) who used nutritional supplements, whilst 51.9% (n=199) used music therapy. Participants rated their satisfaction on the information received regarding alternative therapies in nursing education as follows: prayer/spiritual healing 71.1% (n=271), nutritional

supplements 71.7% (n=273), music therapy 57.9% (n=220), massage therapy 46.7% (n=216) and support groups 80.3% (n=306).

About two thirds (n=272) felt that alternative therapies was beneficial rather than a threat to patient's health. However, 60% (n=229) agreed that the use of alternative therapies that were not tested in a scientific manner should be discouraged. More than 80% (n=313) of the sample thought that health professionals should have the ability to advise patients in the clinical setting about the most commonly used alternative therapies.

More than half of the sample (n=254) stated that they did encounter patients in the clinical setting who enquired about alternative therapies. Only 39.6% (n=153) stated that they felt confident to advise patients about alternative therapies, whilst 26.7% (n=103) stated that they were unable to do so.

As the evidence base for the use of alternative therapies grows, so too does the demand increases for the integration of alternative therapies in nursing education. Nurses being the patient's advocate need to be well versed regarding the use and safety aspects of alternative therapies.

DEDICATION

I dedicate this dissertation to my loving family, Jeevi, Alisha and Jared for their unconditional love and support. Thank you for affording me the opportunity to complete this degree.

ACKNOWLEDGEMENTS

To my supervisor Prof. Raisuyah Bhagwan, thank you for your professional guidance, understanding and continued encouragement during the course of my study.

To my co-supervisor Prof. Nokuthula Sibiya, your dedication, thoroughness and late night e-mails inspired me to persevere and complete this degree.

Thank you to The Durban University of Technology for the funding to complete my study.

To Deepak Singh, thank you for always being so calm and helpful when I was so stressed, your efficiency and high standard of work is appreciated.

My sincere gratitude goes to the KwaZulu-Natal Department of Health, as well as the Management of all the hospitals in the uMgungundlovu District for your support during this study.

A special thank you to my husband Jeevi, for the hours spent on driving me around and assisting me with the data collection and shouldering all the responsibilities of our family during the time of my studies. You are truly my pillar of strength.

To my children Alisha and Jared, your love, support and understanding has taught me that we can achieve anything together as a family.

Table of Contents

List of Tables

List of figures

Annexures

Glossary of Terms

Professional nurse: A person registered with the South African Nursing Council (SANC) as a nurse under Article 16 of *Nursing Act, No 33 of 2005,* as amended (Republic of South Africa 2005). The terms 'registered nurse' and 'professional nurse' are used interchangeably.

South African Nursing Council: The body entrusted to set and maintain standards of nursing education and practice in the Republic of South Africa. It is an autonomous, financially independent, statutory body, initially established by the *Nursing Act, No. 45 of 1944*, and currently by the *Nursing Act, No. 50 of 1978* as amended to the *Nursing Act No. 33 of 2005* (Republic of South Africa 2005).

Complementary and Alternative Medicine/Therapies: Complementary and alternative medicine is a group of diverse medical and health care systems, practices and products that are not considered to be part of conventional medicine (NCCAM 2008).

Complementary Medicine/Therapy: Is used together with conventional medicine (NCCAM 2008).

Alternative Medicine/Therapy: Is used in place of conventional medicine (NCCAM 2008).

Integrative Medicine: Combines conventional and complementary and alternative therapies (NCCAM 2008).

List of Acronyms

Acronym	Full Word
AHPCSA	: Allied health professional council of South Africa
AIDS	: Acquired immunodeficiency syndrome
CAM	: Complementary and alternative medicine
CAT	: Complementary and alternative therapy
CRF	: Chronic renal failure
IREC	: Institutional Research Ethics Council
KZN	: KwaZulu-Natal
NCCAM	: National centre for complementary and alternative medicine
OTC	: Over the counter
PHC	: Primary Health Care
PN	: Professional nurse
RDA	: Recommended daily allowance
SA	: South Africa
TB	: Tuberculosis
TCM	: Traditional Chinese medicine
UKZN	: University of KwaZulu-Natal
UWR	: Upper Western Region
WHO	: World Health Organisation

CHAPTER 1
OVERVIEW OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND TO THE STUDY

The World Health Organisation (WHO) defined health as, “the state of complete mental, physical and social well-being and not merely the absence of disease or infirmity” (WHO 2012). Holistic nursing practice reflects this definition as it includes the promotion of well-being at all levels, involving namely the physical, psychosocial and spiritual needs of a patient (Whitehead 1999; Fenton and Morris 2003; King and Gates 2006).

Holistic care encompasses the interplay of the mind, body and spirit which is in line with many of the nursing theories, and ensures that patients are treated as a whole as opposed to treating the symptoms of a disease (Fountouki and Theofanidis 2009; Mitchell 2014). Modern medicine does not claim to cure chronic diseases, but merely to control the symptoms, using drugs which patients must take for the rest of their lives. Most medications are accompanied by adverse effects, which may be harmful or even fatal to the patient (De Schepper 2001: 254). This supports the rationale for patients and health care workers who are in constant search for alternative forms of treatment (De Schepper 2001; Zoe, Charalambous, Popi, Maria, Aris, Agoritsa, and Evangelia 2014).

Patients are more aware of the importance of their health and are making concerted efforts to prevent illness and promote their health and well-being (Cehousky 2002; Amichai, Grossman and Richard 2012; Zoe, Charalambous, Popi, Maria, Aris, Agoritsa, and Evangelia 2014). They often explore healthcare remedies, which integrate complementary and alternative therapies (CAT) with conventional medical approaches (Thorvaldsen 2007; Naicker 2008). Health care workers in South Africa have argued that there is a degree of ignorance about complementary and alternative therapies, and that varied opinions with regards to its application and efficacy exists among the general public. However, very little

empirical evidence exists in South Africa to substantiate this notion (Small 2004: 1).

In South Africa, CAT is governed by the Allied Health Professionals Council of South Africa (AHPCSA). Approximately 3600 complementary and alternative medical practitioners were registered with the AHPCSA in 2007. Initially ten complementary and alternative therapies were allowed by the Allied Health Professionals Act, which included: osteopathy, chiropractic, homeopathy, naturopathy and three therapeutic professions namely aromatherapy, massage therapy and reflexology (Gqaleni, Moodley, Kruger, Ntuli and McLeod 2007: 178).

The Health Products Association of South Africa conducted a market survey between 2001 and 2003 and found that in the year 2001, the market size was R1.377 billion and by the year 2003, South African consumers had spent R1.928 billion on natural health care products. This reflects an increase of 17.9% in the use of these products (Health Products Association of South Africa 2005). In a more recent study done in South Africa, many people believed that herbal and traditional medicine is helpful and can be used in treating an array of illnesses that conventional medicines have failed to treat as desired. It was estimated that the trade in traditional and herbal medicines in South Africa is worth R2.9 billion a year, with about twenty-seven million consumers (Mander, Ntuli, Diederichs and Mavundla 2008: 189).

A survey of 142 countries by the WHO (2004), found that in ninety-nine countries many of the alternative therapies used, could be purchased over the counter (OTC) without a doctor's prescription. Many of these therapies were either recommended by friends or relatives of the patient. The increase in the use of alternative therapy in many countries has sparked concern about the quality of such modalities, their appropriateness and the failure to seek medical advice regarding alternative therapy. This further emphasises the need for health care workers to enquire about the use of alternative therapies by patients (Dayhew, Wilkinson and Simpson 2009; Adeyeye, Onadeko, Ogunleye, Bamisile and Olubusi 2011). Most alternative therapies are considered to be natural products

and are perceived to be harmless, although this has yet to be proven (Lim, Cranswick and South 2011; Otang, Grierson and Ndip 2011; Licata, Macaluso and Craxi 2013).

1.2 CATEGORIES OF ALTERNATIVE THERAPIES

CAT includes many healing approaches and therapies that were founded from around the world. Various aspects of CAM are rooted in the ancient systems of healing, found in China, India, Tibet, Africa and America (Varghese, Koshy, Mary, Silvipriya and Resmi 2010: 2). According to the National Centre for Complementary and Alternative Medicine (NCCAM 2012), alternative therapies are grouped into broad categories, which are outlined below. The NCCAM functions as part of the National Institute for Health; which sponsors and conducts extensive scientific research into complementary and alternative therapies (Trail-Mahan, Mao and Bawal-Brinkley 2013: 278).

For the purpose of this study, the knowledge and perceptions of the following alternative therapies was explored.

Natural products – herbal and nutritional supplements

These therapies are extracted from nature and include herbs, vitamins and mineral as well as probiotics. They are widely marketed, readily available to consumers and are often sold as dietary supplements (NCCAM 2012).

Mind and body medicine – meditation, acupuncture, relaxation techniques, therapeutic touch, prayer/spiritual healing, music therapy and support groups

A large number of ancient cultures believe that the mind is a powerful tool and has a significant influence on the body. These therapies make use of different techniques to enhance the mind's ability to have an impact on the functioning of the body as well as symptoms experienced by the patient (NCCAM 2012).

Manipulative and body-based practices – massage therapy and aromatherapy.

Massage therapy includes many different techniques in which practitioners manually manipulate the soft tissue of the body. Aromatherapy is the use of

various oils which are externally applied and inhaled and is sometimes used together with massage therapy (NCCAM 2012).

In the literature search, CAM was most commonly used globally in oncology (Agarwal, Chandra and Tyagi 2011; Hart, Freel, Haylock and Lutgendorf 2011; Garrett, Oliffe, Bottorff, Mckenzie, Han and Ogrodniczuk 2014), to treat HIV/AIDS (Hassan, See, Choong, Ahmed, Ahmadi and Anwar 2010; Littlewood and Vanable 2011; Limsatchapanich, Sillabutra and Nicharojana 2013) and for backache and other chronic illnesses (Armstrong, Thiebaut and Nepal 2011; Kumar, Beaton and Hughes 2013; Murray 2014).

1.3 DISEASE PROFILE IN SOUTH AFRICA

A country's disease profile is determined according to the number of deaths that occur on a yearly basis (Econex 2009: 2). The mortality profile for the South African population in accordance with the burden of disease was estimated as follows: injuries (11.5%); other communicable diseases, maternal and peri-natal conditions including nutritional deficiencies (22.2%); HIV/AIDS (25.5%) and non-communicable diseases (40.8%) (Econex 2009:2).

In South Africa, it was found that CAM was mostly used to treat HIV/AIDS related illness and tuberculosis (TB) (Malangu 2007; Minnaar and Bodkin 2009; Mbutho, Gqaleni and Korporaal 2012), with herbal therapies being one of the most popular forms of alternative therapy used (Mander, Ntuli, Diederichs and Mavundla 2007; Hughes, Aboyade, Clark and Puoane 2013). Studies on the disease profile of South Africa have revealed a huge increase in diseases, namely pre-transitional diseases and conditions relating to poverty and chronic diseases which included HIV/AIDS followed by homicide, TB, road traffic accidents and diarrhoea (Bradshaw, Groenewald, Laubscher, Nannan, Nojilana, Pieterse, Schneider, Bourne, Timacus, Dorrington and Johnson 2003; Mayosi, Flisher, Lalloo, Sitas, Tollman and Bradshaw 2009). The rise in non-communicable diseases is evident by the increase in deaths from diabetes, kidney diseases and cancer (Mayosi et al. 2009: 1).

According to Kahn (2011), South Africa has a complex burden of disease where the mortality rates, now include an array of new infectious diseases, namely HIV and AIDS and related infections, diabetes, chronic obstructive lung disease and cancers. The second highest cause of deaths in South Africa are violence and injuries, followed by motor vehicle accidents, suicides and unintentional injuries including falls and drowning incidents. The increase in the morbidity and mortality rates has impacted on the health system and the delivery of quality services.

Norman, Matzopoulos, Groenewald and Bradshaw (2007) investigated the high burden of injuries in South Africa. The global burden of disease methodology was used to estimate the injury of burden from various data which included population and mortality level estimates, causes of deaths and disability as well as the incidence, severity and duration of disabilities. Interpersonal violence was 1 million (6.5%), road traffic injuries, 0.5 million (3.0%) and HIV/AIDS, 14.3%. The largely growing burden of disease in South Africa warrants that the government ensures that interventions are put in place to improve the health of all South Africans (Norman, Bradshaw, Schneider, Joubert, Groenewald, Lewin, Steyn, Vos, Nannan, Pieterse 2007: 639).

1.4 PROBLEM STATEMENT

Despite evidence for the integration of CAT into professional nursing practice, little has been done to infuse this area into nursing practice and education. In this context it is necessary to identify nurses' knowledge, perceptions and beliefs regarding the utilization and efficacy of CAT in order to facilitate the integration of these therapies into nursing practice. Nurses cannot advocate for CAT, or understand their patient's use of such treatments, unless they themselves are familiar with both the risks and benefits of these practices in a nursing environment (Taylor and Blackwell 2010; Buchan, Shakeel, Trinidade, Buchan and Ah-See 2012; Trail-Mahan, Mao and Bawel-Brinkley 2013). It is important to establish what their knowledge and beliefs are related to CAT , so that relevant educational programmes can be included in their curricula, to help eliminate the barriers to incorporating CAT into the acute nursing setting (Trail-Mahan et al. 2013: 277).

A study conducted by Singh, Raidoo and Harris (2004), described the patterns of usage and people's attitudes towards complementary and alternative medicine (CAM) among the Indian community in Chatsworth, South Africa. Face to face interviews were conducted with 200 randomly selected adult English speaking Indian residents. The prevalence of CAM usage for the period 2000 – 2001 was found to be 38.5 %. Spiritual healing and herbal / natural medicines, including vitamins were the most common types of CAM used, accounting for 42.8% and 48.1% respectively of overall CAM usage. Alternative therapies were used to treat conditions such as hypertension and nasal disorders. Age, marital status, religion, level of education and income were shown not to have any influence on the use of these therapies. It was also revealed that 51.9% of CAM users were made aware of its benefits, through individuals that they knew or after having read about CAM in the newspapers. Fifty-four percent of CAM users did not inform their doctors of their use of CAM, as they not deem it necessary to do so.

Uncertainty regarding the use of alternative therapy and its benefits exists among the South African public (Harripershad 2009: 4). Through determining the perceptions of professional nurses towards alternative therapies, this study will contribute to enhanced patient care, as nurses will be in a better position to understand the extent and benefits of these interventions within the context of clinical care. It will also contribute to determining their level of knowledge regarding the entire continuum of alternative therapies and the barriers that they are faced with in providing advice regarding alternative therapies in nursing care.

1.5 AIM OF THE STUDY

The aim of the study was to determine the perceptions of professional nurses at nine hospitals within the uMgungundlovu District, South Africa, towards alternative therapies in a nursing context.

1.6 OBJECTIVES OF THE STUDY

The objectives of the study were to:

- Determine professional nurse's level of knowledge of alternative therapies.

- Determine professional nurse's perceptions regarding the use of alternative therapies in a nursing context.
- Identify potential challenges faced by professional nurses in providing alternative therapies.
- Provide recommendations to guide nurses who may have to manage patients who use CAT.

1.7 SIGNIFICANCE OF THE STUDY

Thus far much of the research in terms of CAT has been done in the field of homeopathy which points to a gap in the nursing context. Perceptions studies conducted in South Africa have revealed that there is a degree of ignorance or misunderstanding regarding homeopathy, and that varied opinions regarding its application and efficacy exists amongst the general public (Small 2004; Maharajh 2005; Paruk 2006). Homeopathy is an alternative medical system that was developed more than 200 years ago (NCCAM 2012). The lack of research regarding public perceptions of alternative therapies in South Africa indicates that more research is required in this field of study. Through further research, strategies can be formulated to create a more significant awareness of alternative therapies amongst South Africans (Harripershad 2009: 3).

A study by Chitindingu, George and Gow (2014) investigated whether traditional, complementary and alternative medicine has been integrated into the curriculum of South African medical schools. Seven of the eight medical schools participated, in which the Heads of the medical schools were interviewed telephonically, followed by the submission of their curricula to the researchers. With the exception of the University of KwaZulu-Natal (UKZN), all schools reflected neglect in terms of teaching alternative therapies. Medical schools did not include CAM in their curricula, despite the high demand of consumer use.

This is the first study in nursing to explore the perceptions of professional nurses towards alternative therapies within the uMgungundlovu District in South Africa. As such it will shed valuable light on nurses' views regarding its integration and

will also highlight potential strategies to deal with aspects of CAT, when patients bring this into the nursing environment.

1.8 OVERVIEW OF THE RESEARCH METHODOLOGY

A quantitative research approach underpinned this study. This approach is also known as a positivist approach (Welman, Kruger and Mitchell 2005: 6) which places emphasis on measurable aspects of human behaviour (Brink, van der Walt and van Rensburg 2008: 10).

A questionnaire by Avino (2011) was adapted to meet the objectives of this study. Survey research is a vital part of nursing research, and uses questionnaires to collect data (Botma, Greeff, Mulaudzi and Wright 2010: 133-134). The questionnaire consisted of seven sections, which tested a variety of areas relating to alternative therapies. The use of a questionnaire is beneficial in studies that require a large number of data to be collected within a short space of time (Botma et al. 2010: 135). The questionnaire was pre-tested by participants from a different hospital as opposed to those participating in the study. Typographical errors were corrected; otherwise the questionnaire was reported to be clearly understood. It is beneficial to pretest the data collection tool in order to ensure that possible mistakes and ambiguous statements are corrected prior to the study commencing (Welman, Kruger and Mitchell 2005: 148).

1.9 THEORETICAL FRAMEWORK

The model of transaction developed by King (1981) was used as a theoretical framework to guide this study. This model was chosen as it was clear from the review of the literature that a lack of communication between nurses and patients regarding alternative therapies was common in many studies (Metcalfe, Williams, MacChesney, Scott and Jette 2010; Armstrong, Thiebaut, Brown and Nepal 2011). King (1981) has inter-related the concepts of interaction, perception, communication, transaction, self, role, growth and development, time and space into a theory of goal attainment. Firstly the nurse and patient communicate during their interaction and then in transaction to attain mutually set goals. The

relationship takes place in space, identified by their behaviours and occurs in forward moving time.

1.9.1 Definitions of concepts in the model of transaction by King (1981)

- Function is demonstrated in reciprocal relations of individuals in interaction.
- Resources include nurses and the patients, money, goods and services for items needed to carry out specific activities.
- In order to attain systems goals, decision making regarding the choices of allocated resources takes place.
- Interaction is defined as the observable behaviours of two or more individuals in mutual presence.
- Perception is each person's representation of reality.
- Communication is a process whereby information is shared form person to person either directly or indirectly verbally or written.
- Transaction is a process of interactions in which people communicate with the environment, to achieve goals that are valued.
- The Self is defined as a person's essential being that distinguishes them from others, which is also known as an individual.
- A role is a set of behaviours that is expected of that person, who occupies a position in society.
- Growth and development is a continuous change, in an individual at all levels of activities.
- Time relates to a sequence of events moving onward to the future, a continuous flow of events in succession which implies change.
- Space exists in every direction and is the same in all directions, and is defined by the behaviours of the individuals who occupy it.

1.9.2 Assumptions of the model of transaction

King (1981) stated that the perceptions of nurses and patients influence the interaction process as well as the goals, needs and values of each other. Patients have a right to participate in decisions that influence their lives, health and community services. In some cases the goals of nurses and patients may not

always be the same with regards to health care and patients reserve the right to accept or refuse care.

It is in the health care environment that nurses and patients establish a relationship to cope with situational events. The goal of every nurse is to assist patients attain, maintain and restore health. If this is not possible; nurses are there to ensure that patients' die with dignity. If nurses and patients' perceptions, judgements and actions are congruent, then this will lead to goal directed transaction. If goals are attained then this will lead to satisfaction and in turn effective nursing care will occur. As soon as nurses with specialised knowledge and skills communicate effectively with clients, mutual goals will be attained.

The concepts and assumptions of King's model of transaction were used and adapted to suit this study, which is depicted in Figure 1 that follows below. The double sided arrow linking both nurses and patients indicates the relationship that they acquire when in the health care setting. Their perceptions and knowledge about CAT is inter-related and this influences both nurses and patients. If nurses are knowledgeable about CAT, this will further enhance and strengthen the nurse-patient relationship. Patients will therefore, feel confident to acquire knowledge from nurses knowing that they are well informed regarding CAT and are open to communicate regarding their fears and concerns. This open communication will allow nurses the opportunity to guide and assist patients towards the safe use of CAT. This model allows open feedback between both nurses and patients, which will ensure mutual goals, are met and the qualities of life of patients are improved.
It is also important that nurses are provided with adequate education regarding the safety and use of alternative therapies.

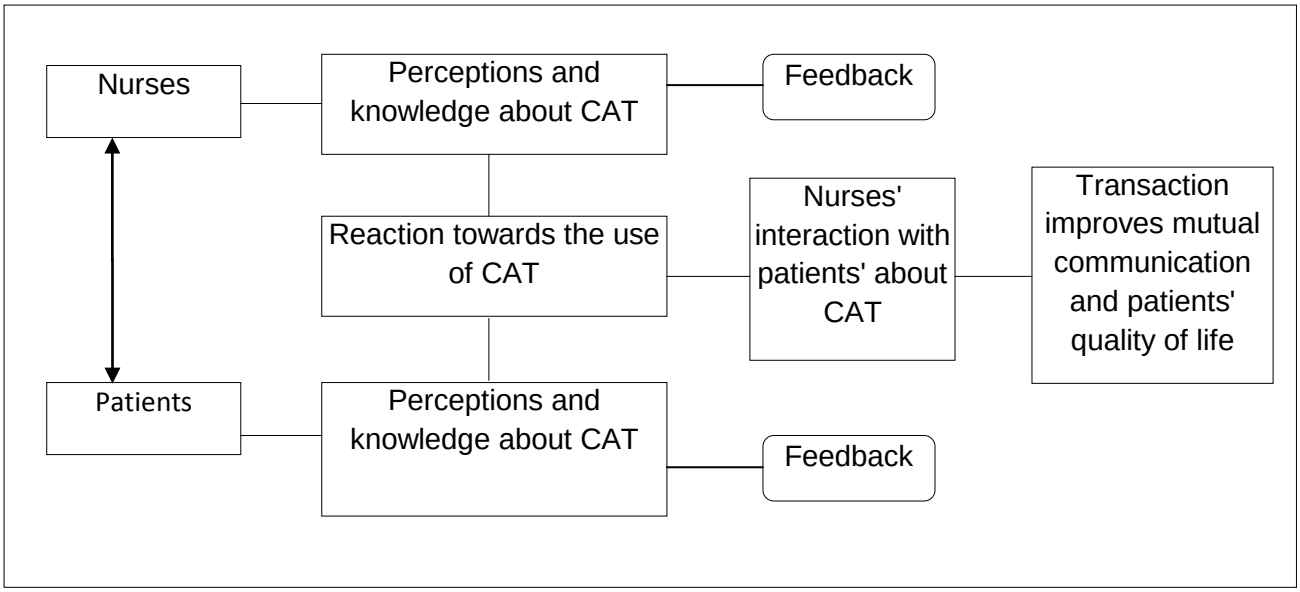

Figure 1: Model of transaction (King 1981)

1.10 STRUCTURE OF THE DISSERTATION

- Chapter 1: Introduction and background to the study.
- Chapter 2: Literature Review.
- Chapter 3: Research methodology.
- Chapter 4: Presentation of results.
- Chapter 5: Discussion of results, conclusion, and recommendations

1.11 CONCLUSION

In conclusion, the aim of this study was to determine the perceptions of professional nurses within the uMgungundlovu District towards alternative therapies. For the purpose of this study, only the following therapies were explored, i.e. acupuncture, aromatherapy, relaxation techniques, therapeutic touch, massage therapy, prayer/spiritual healing, meditation, herbal therapy, music therapy, support groups and nutritional supplements. The following Chapter is a summary of the literature review that was undertaken. This is followed by a chapter on the research methodology.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

The aim of this study was to determine the perceptions of professional nurses in the uMgungundlovu District towards alternative therapies. The literature review focused on CAT in nursing practice and holistic nursing. In addition, the different types of CAT and their benefits are elucidated.

A vast number of studies validate the use of alternative therapies for different health reasons and the management of symptoms of illnesses and diseases (Engebretson 1999; Meghani, Lindquist and Tracy 2003; Trail-Mahan, Mao and Bawel-Brinkley 2013). Significant evidence exists to support the integration of CAM into nursing practice, yet there are still many gaps which exist regarding nurses' knowledge, beliefs of efficacy and learning needs required for the integration of CAM into nursing practice (Burman 2003; Trail-Mahan et al. 2013). Ajazzudin and Saraf (2012: 154) stated that a large percentage of the population in developing countries still depend on medicinal plants and other alternative therapy to meet their basic health needs. Conventional medicines are easily available in most countries around the world; yet alternative therapies have remained popular for its historical and cultural reasons (Sackett, Carter and Stanton 2014: 115). CAT is commonly known for its holistic approach in promoting health and preventing diseases and illnesses (Tyreman 2011; Ajazzudin and Saraf 2012; Emmett 2014).

Emmett (2014: 950) argued that since CAT was here to stay, the efficacy of these modalities should be adequately tested in order to ascertain exactly which therapies should be used for the different illnesses and diseases. In this way the potential side effects as well as adverse effects, could be determined in order to promote the safe use of these therapies.

2.2 PURPOSE AND VALUE OF A LITERATURE REVIEW

A literature review is important as it enlightens the researcher and reader about studies already published on the study topic. It allows the researcher to compare studies in detail and enables the marrying together of studies, which if read in isolation, may not seem to make much sense. Literature reviews therefore, enables the researcher to present the "whole jigsaw" in order to create a clear picture and understanding of the topic under investigation (Aveyard, Sharp and Woolliams 2011:8).

A review of related literature may be able to assist the researcher to identify important aspects regarding their study. By extensively reviewing relevant literature, the repetition of studies that have already been done in a certain area is eliminated. This will allow the researcher to explore other areas, relating to the same topic, which is yet to be published. The weaknesses and strengths of previous studies can be identified, thus enabling the researcher to extend the boundaries of their study (Welman, Kruger and Mitchell 2005: 39).

2.3 COMPLEMENTARY AND ALTERNATIVE THERAPIES

2.3.1 Definition

Mariano (2007: 59) defined CAM as *"a broad set of healthcare practices, therapies and modalities that address the whole person-body, mind, emotion, spirit and environment and not just signs and symptoms. CAM can replace or may be used as complements to conventional medical, surgical and pharmacological treatments."*

Gaboury, April and Verhoef (2012: 5) defined CAM as *"a broad range of therapeutic interventions developed and practiced by trained healthcare professionals and disciplines who have created a body of knowledge that are used for education and training. These interventions are based on three important principles: (1) to treat the whole person; (2) to see the individual as a facilitator of health; (3) to see the body as having the inherent ability to heal itself."*

According to the National Centre for Complementary and Alternative Medicine (2012), CAM is classified into five categories, which include: (1) alternative medical systems, such as traditional Chinese medicine which includes acupuncture, naturopathic medicine, homeopathy and Ayurvedic medicine; (2) mind body interventions such as prayer, yoga, music therapy and meditation; (3) biological based therapies including vitamins, aromatherapy, dietary supplements and herbal therapies; (4) manipulative and body-based methods, which includes massage therapy and chiropractic; (5) energy therapies such as therapeutic touch. The following alternative therapies were included in this study.

2.4. BIOLOGICALLY BASED /NATURAL PRODUCTS

These products include an array of substances found in nature, such as a variety of herbal medicines. Natural products also have a probiotic effect that is similar to those found in the human digestive tract (NCCCAM 2012).

2.4.1 Herbal therapies

Herbal medicines include various parts of or the whole plant for medicinal or therapeutic purposes for example, seeds, berries or flowers (Gratus, Wilson, Greenfield, Damery, Warmington, Grieve, Steven and Routledge 2009). Herbal therapies are commonly used in Africa, as well as South Africa (Abdullahi 2011; Hughes et al. 2013). Hassan, Hadi and Keng (2012) conducted a comparative study among final year nursing and medical students. It showed that nursing students were more knowledgeable about CAM and presented positive attitudes and willingness to practice CAM, as compared to medical students. In nursing practice, the most commonly recommended therapy was herbal therapies, followed by diet and nutritional supplements.

Otang, Grierson and Ndip (2011: 19460) identified six themes in their study as the rationale for the use of herbal medicine: (1) ‘Herbal medicine is part of our cultural identity’ (n=37); (2) ‘You thought it would be interesting to try herbal medicine’ (n=26); (3) ‘Herbal medicine combined with conventional medical treatment would help you’ (n=36); (4) ‘Conventional medical treatments are too expensive’ (n=18); (5) ‘Conventional medical treatments would not help you’

(n=1); (6) ‘A conventional medical practitioner suggested you try herbal medicine’ (n=1). The results revealed that 52.5% of the patients, who used herbal medicines, stated that herbal medicine didn’t help their illness. Only 15% reported that very little benefit was experienced and 32.5% had a huge improvement in their condition.

In Africa, North America and Europe, three out of four people living with HIV/AIDS, use some form of alternative therapy to help lessen the symptoms of the disease and other conditions. In South Africa, the Medical Research Council has conducted studies on the plant Sutherlandia microphylla's efficacy in treating patients living with HIV/AIDS. Normally this plant is used as a tonic, and may help increase appetite, body mass and energy in HIV positive patients (WHO 2002). Mills, Cooper, Seely and Kanfer (2005) investigated the evidence and pharmacology of African herbal medicines in the treatment of HIV, namely hypoxis and sutherlandia. These two specific African herbals are currently recommended by the Ministry of Health in South Africa for the use in patients with HIV. Hypoxis is also known as African potato, magic muthi, yellow stars, star lily and many other names and is recognised by its bright yellow star shaped flowers and strap like leaves. This herb is currently being used by the South African primary health care (PHC) community as an immuno-stimulant for HIV/AIDS patients. Sutherlandia is also known as insiswa, unwele, mukakana, phetola, lerumo-lamadi, cancer bush, kankerbos and kankerbossie. It has been known to be used to treat many other diseases, namely cancer, diabetes, HIV, arthritis and many more. It has been proven to be safe for use, based on primate safety studies, although scientific data relating to the mechanism of how sutherlandia acts on the immune system has not been comprehensively documented. Mills et al. (2005: 4) concluded that there should be consultation between traditional healers and the health care workers in order to completely understand what remedies are being used in the treatment of HIV, and those providing alternative therapies should be educated against unsafe practices.

Malangu (2007) investigated the use of OTC medicine as well as complementary and alternative therapies by HIV infected patients on antiretroviral therapy in

Pretoria, South Africa. One hundred and eighty patients consented to being interviewed. Participants were mostly female, single, unemployed and had a high school level of education. Only 4.4% of the participants used alternative therapy medicines (ATM), whilst 3.3% used CAM and 1.7% used over the counter medicines. The use of ATM mixtures included unspecified traditional mixtures and those made of the African potato and coconut. Commonly used OTC products were paracetamol and sennosides (senokot) as well as triclosan soap (Tetmosol). The CAM products used were sex booster capsules of unknown composition, soaps containing mercury, rooibos tea and sunflower oil. Malangu (2007) further suggested that this information could be used by healthcare providers in order to intervene and appropriately educate and advise patients on the use of potentially dangerous substances, example: soaps containing mercury.

According to Griffith and Tengnah (2010: 445), the use of herbal therapies is perceived to be much safer than pharmaceutical products. It has therefore become very easy to access this form of alternative therapy especially, as it is available at many health shops and pharmacies as over the counter medications. This has become a huge concern for health care workers, particularly its increasing use and whether they are indeed effective in the face of medicine. A study by Agarwal, Chandra and Tyagi (2011: 2249) revealed that cancer is a leading cause of death worldwide (Anand, Kunnumakara, Harikumar, Tharakan, Lai, Sung and Aggarwal 2008: 2097) and alternative therapies are commonly used by patients with hemato-oncological neoplasias, during the course of their specific treatment. Herbal therapies and Ayurveda is useful in the prevention of cancer as they have antineoplastic, radio protective and chemo protective effects. The treatment of cancer encompasses a number of alternative therapies. These therapies are commonly used in many countries, for example in Japan, Korea, India and South East Asia.

According to Salamonsen (2012: 74) patients with the diagnosis of cancer express the need to play an active role in the treatment decisions and treatment processes. From the perspective of a patient, health care workers should focus on patient centred cancer care by focusing on subjective aspects that seem to affect

patients' quality of life. This is evident in the model of transaction (King 1981), where open feedback from both nurses and patients ensures mutual goals are met and the quality of life of patients are improved.

2.4.2 Nutritional supplements

These supplements include a variety of minerals and vitamins that exceed the recommended daily allowance (RDA). They are used as a supplement as many natural vitamins and nutrients in food products, are lost through the cooking process and storage (Eliopoulos 1999: 140). Since nutritional and dietary supplements are not considered to be drugs, the quality and biomedical efficacy is not required to be controlled by clinical trials (Pokryka, Obminski, Malczewka-Lenczowska, Fijalek, Turek-Lepa and Grucza 2014: 99): 99). Cohen (2014: 1279) however, argued that every ingredient in nutritional supplements should undergo extensive testing in order to ensure it is totally safe to use by the public. Protein, creatine and amino acid supplements are often used by gym adepts, although most people are usually unaware of the recommended protein intake. Men consume around 30% more protein supplements compared to women (Bianco, Mammina, Thomas, Ciulla, Pupella, Gagliardo, Bellafiore, Battaglia, Paoli and Palma 2014: 4).

Kowluru, Zhong, Santos, Thadampallayam, Putt and Gierhart (2014: 1) concluded in their study that nutritional supplements assisted in the prevention of diabetic retinopathy as well as maintained normal retinal function. Their study was conducted using laboratory rodents, and found that nutritional supplements could benefit patients living with diabetes mellitus. Hubbard, Elia, Holdoway and Stratton (2012: 293) stated that oral nutritional supplements are beneficial in the treatment of patients who are at risk of malnutrition.

Emmett (2014) explored the problems with alternative medicines in the health care setting from a nurses' perspective. A survey was administered to 94 nurses, who were part of a nurse anaesthesia programme. The sample was made of 36 males and 58 females, with all individuals having prior critical care nursing experience. The following alternative therapy was included in the study:

acupuncture, aromatherapy, herbal healing, Chinese or Ayurvedic and other therapies that nurses may have come across in their experiences. It was evident that nurses had very little experience with alternative therapy, with the most experience being in herbal healing (22.3%). The other type of experience was chiropractic, massage, music and religion. According to their exposure and experience, they found herbal healing (12.8%) to be most effective in nursing practice, followed by acupuncture (11.1%). Most of the respondents reported that vitamins (82.7%), fish oil (78.8%) and other herbs (52.4%) were very effective in patient recovery. The respondents also revealed some negative experiences with the use of alternative therapy together with medical procedures. They reported twelve cases where alternative therapy, had interfered with surgical procedures and nine cases of adverse impact on anaesthesia. The most common adverse reactions to the use of alternative therapy together with conventional medicine were bleeding. This finding was consistent with findings made by Norred and Finlayson (2000: 217) who reported that the use of herbal therapies pre-operatively inhibits platelet adhesion and causes bleeding. It is therefore, important to ensure that a proper history is obtained from patients on admission and prior to any surgical procedure (Okoronkwo, Onyia-pat, Okpala, Agbo and Ndu 2014: 4).

Limsatchapanich et al. (2013) investigated the factors related to the use of complementary and alternative medicine among people living with HIV/AIDS (PLWH) in Bangkok, Thailand. A cross sectional descriptive study was conducted among people living with HIV/AIDS, who were members of the HIV associations that cooperated with the Thai Red Cross AIDS research centre. A total of 225 questionnaires were distributed to PLWH. The questionnaire tested the respondents' knowledge, general information and side effects of CAM. Majority of CAM users had a high school level of education, with majority respondents being males. Most respondents had little knowledge of CAM, yet had positive perceptions towards the use of CAM. Information regarding CAM was obtained via the television, newspapers and magazines and the internet, which was consistent with other studies (Singh et al. 2004; Griffith and Tengnah 2010). The three most commonly used alternative therapies were vitamin-mineral products, dietary

supplements and herbal products. The respondents had a poor level of knowledge regarding the side adverse effects of CAM and they lacked knowledge with regard to the management of health related decisions. In conclusion, this study revealed that PLWH should ensure that their use of CAM be disclosed to health care workers, in order to establish open communication with their treatment and care.

2.5 MIND AND BODY MEDICINE

These therapies focus on the interactions that occur within the brain, mind, body and behaviour. These interactions are used to impact on the physical function and to enhance health (NCCAM 2012).

Hastings-Tolsma and Vincent (2013) explored decision making for the use of complementary and alternative therapies by pregnant women and nurse midwives in their study. A qualitative descriptive design was used with focus groups to obtain data from pregnant women and midwives. Midwives were between the ages of 18-65 years with at least 3 years midwifery experience. Pregnant respondents were English speaking between the ages of 18-45 years, with low risk single pregnancies greater than 20 weeks gestation. Focus group sessions lasting 90 minutes long were conducted, in a way that was convenient for all respondents.

All pregnant respondents admitted to using several CAM therapies before and during their pregnancies. Therapies used included: natural products, mind-body medicine, manipulative and body-based practices and homeopathy. Many pregnant respondents were sometimes not fully aware of exactly what the products were, but used them because they believed the source of these products. They received information regarding CAM from midwives, co-workers, doulas, massage therapists, herbalists, books and family members. Respondents also expressed their concerns about some midwives and obstetricians not being helpful in providing information about CAM. Nurse midwives reported using many CAM therapies, including natural products (herbs, vitamins and minerals) and homeopathy. Midwives expressed their reluctance to recommend these therapies as they were unaware of their safety and or efficacy. Midwives reported that their

knowledge regarding CAM was limited; therefore open communication between patients and midwives about CAM was minimal. The overall results were similar to other studies done on the use of CAM with pregnant women (Mitchell 2014; Warriner, Bryan and Brown 2014).

2.5.1 Meditation

There are many forms of meditation which emanate from ancient religious and spiritual traditions. During meditation a person may use a specific posture and focus their attention elsewhere in order to block out distractions. Meditation aims to instil calmness and promote relaxation as well as to improve psychological balance which assists with health and well-being (NCCAM 2012).

Miller (2012) explained that meditation is made of two components namely; concentration and mindfulness. Concentration requires a person to focus their attention on a specific object, and then they soon find themselves moving away from that object. Once this is realised, their attention is slowly re-directed to the original object. Mindfulness requires practice of concentration meditation, whereby one's attention is focussed thus allowing that attention to focus on whatever mind objects arises in one's consciousness (Sahdra, MacLean, Ferrer, Shaver, Rosenberg, Jacobs, Zanesco, King, Aichele, Mangun, Wallace, Bridwell, Lavy and Saron 2011: 300). Various forms of meditation may improve negative mood and stress in healthy adults, which could reap long term health benefits (Lane, Seskevich and Peiper 2007: 38). Empirical evidence has shown that meditation is beneficial in the treatment of chronic pain, neck pain and backache (Zeidan, Gordan, Merchant and Goolkasian 2009; Rosenzweig, Greeson, Reibel, Green, Jasser and Beasley 2010).

The use of complementary and alternative medicine among chronic renal failure patients in Turkey was done by Akyol, Yildirim and Yavuz (2011). A cross sectional research design was used with participants from an outpatient nephrology clinic. The study included 206 participants with chronic renal failure. They had to be at least 18 years and older with chronic renal failure (CRF) for at least 3 months. Patients with end-stage renal failure and other related illnesses

were excluded from the study. A questionnaire comprising of a total of 15 questions was used. The use of CAM among CRF patients was 25.2% with women being more frequent users, than that of men with CRF. The most commonly used therapy was mind-body techniques. These results were consistent with a study by Birdee, Phillips and Brown (2013: 4) with regards to the use of CAM among patients with end-stage renal disease.

According to Seppala, Hutcherson, Nguyen, Doty and Gross (2014: 3), the levels of stress and burnout in medical organisations are high. This directly affects the quality of medical treatment rendered in hospitals; as a result both patients and providers suffer the consequences. It was found that as a result of a 10 minute session of meditation over a period of time, healthcare workers stress levels had decreased and their performance had improved in the work place. Healthcare workers with an increased satisfaction in the workplace, has positive implications for quality patient care.

2.5.2 Acupuncture

Acupuncture is an alternative therapy used in traditional Chinese medicine (TCM). Special needles are inserted through the skin into specific points, on the body by trained therapists (Novella 2011: 2). Research studies supports the use of acupuncture in musculo-skeletal injuries, back related injuries and pain caused by various illnesses and diseases (Kanodia, Legedza, Davis, Eisenberg and Phillips 2010; Ang and Kaptchuk 2011; Que, Ye, Wang, Chu, Mei, Huang, Lu and Zheng 2013). Patients are continuously searching for ways to effectively relieve pain. The prompt treatment and relief of pain enables patients to heal quicker and improve quality of life (Sadeghi, Heidarnia, Tafreshi, Rassouli and Soori 2014: 1). The decision to choose acupuncture as a treatment depends on many variables, namely the limitations of conventional medicine, internal and external influences and the perceived efficacy of acupuncture (Sadeghi et al. 2014: 6).

A national survey by Kanodia, Legedza, Davis, Eisenberg and Phillips (2010) was done to determine the perceived benefit of CAM for back pain. A multi-stage sampling technique was used to select participants. One adult member from each

household was randomly selected to participate in the study. A response rate of 74% was obtained. The survey included 17 complementary and alternative therapies: acupuncture, Ayurveda, biofeedback, chelation, chiropractic, energy healing/reiki, folk medicine, homeopathy, hypnosis, massage, naturopathy, natural herbs, prayer, relaxation techniques, special diets, vitamins and yoga/tai chi/qi gong. The respondents were limited to the 6 most used CAM modalities for back pain, which included viz. chiropractic, acupuncture, massage, relaxation techniques herbal therapy and yoga/tai chi/qi gong. It was reported that 95% of the respondents had used at least one of the 6 therapies for back pain. The most commonly used therapies were chiropractic (74%) and massage therapy (22%). Respondents reported that chiropractic; massage therapy and yoga/tai chi/qi gong had the greatest perceived benefit. More than half of the respondents stated that CAM together with conventional medicine worked, with only 24% revealing that their medical practitioner had suggested the use of CAM for back pain. Kanodia et al. (2010) concluded that back pain is the second most common reason for the use of CAM in the United States of America and future research is needed to further investigate the benefits of the use of CAM in back pain.

2.5.3 Relaxation techniques

Joy, Jose and Nayak (2014: 87) stated that there are various forms of relaxation techniques that can sometimes be used to assist to improve self-esteem and reduce anxiety and depression levels, namely Jacobson's progressive muscle relaxation (JPMR). Relaxation techniques have been proven to reduce stress in infertile women (Valiani, Abediyan, Ahmadi, Pahlavanzadeh and Hassanzadeh 2010: 263), and has also shown to have a significant reduction in social anxiety among adolescents (Joy, Jose and Nayak 2014: 90). Instead of pharmacological therapy, these techniques are sometimes used to reduce the frequency of seizures experienced, in order to try and improve the quality of life of epileptic patients (Sorour and Mohammed 2014: 9).

Sorour and Mohammed (2014) studied the effectiveness of progressive relaxation techniques in reducing epileptic seizures among adolescents. A quasi-experimental uncontrolled study design was used, with a convenience sample of

28 secondary school students that attended the school health insurance centre. The students were instructed on the relaxation techniques, which included slow paced breathing, thus ensuring that they sat in a comfortable chair with adequate support as well as through wearing loose fitting clothes. A diary was given to the students to document the frequency and duration of performing the exercises, as well as the frequency and duration of epileptic seizures experienced. After eight weeks, the students were re-interviewed to assess the outcome of the interventions. The findings revealed that the levels of stress and the frequency of seizures were significantly decreased. They recommended that progressive relaxation techniques be applied to epileptics on a long term basis to show its long term benefits.

2.5.4 Therapeutic touch

Therapeutic touch is the systematic manipulation of the soft tissues, which is done to improve the metabolic and energetic balance of the body. Various forms of therapeutic touch may be offered to patients, which has worked especially well with HIV/AIDS patients (Bodkin 2003: 40). Therapeutic touch is based on the assumption, that the body is surrounded by an “aura” and is penetrated and kept alive by an energy called “prana” which is a Sanskrit word for vital force. Therapeutic touch may be used as a form of nursing intervention in order to promote the rhythmic flow of energy in patients (Aghabati, Mohammadi and Esmaiel 2010: 376). Therapeutic touch has been found to be beneficial in providing a soothing and calming effect in preterm infants, in the treatment of pain, anxiety and depression as well as the healing of acute wounds (Bijari, Iranmanesh, Eshghi and Baneshi 2012; Demir, Gulbeyaz and Celek 2013; O` Mathuna and Ashford 2014).

In South Africa Bodkin (2003) provided an overview of alternative therapies for the holistic care of the HIV/AIDS patients. She explained that alternative therapies can be applied to nursing practice in any setting, including home-based care, community clinics, hospital based and palliative care. Therapeutic touch takes the form of therapeutic massage, reflexology reiki and aromatherapy which has become very popular in the management of HIV/AIDS. Bodkin (2003: 40) further

stated that the physiological well-being of the HIV/AIDS person is addressed through the provision of nutrition, vitamins, minerals and nutritional supplements, herbal medicine, Chinese medicine and homeopathy. Given this continuum of remedies, alternative therapies may be used in nursing care on a daily basis in order to provide holistic care.

2.5.5 Prayer/spiritual healing

Prayer is used extensively globally by people from faith backgrounds. Prayer and spirituality are interrelated and they acknowledge the existence of a greater or Supreme Being (Snyder and Lindquist 2010: 169). Aldrin (2010: 7) defined prayer as “the action of communication between human beings and the divine realms, believed to be good, such as God or Angels.” Spirituality is the experience of transcendence, connectedness and purpose in life that integrates aspects of the self (Dedeli and Kaptan 2013: 154). It is the belief of many that rituals and customs, praying or visiting places of worship, has a positive effect on healing and health (Ghaderi, Kaviani, Fakhrejahani, Mehrdad, Hazar and Karbaksh 2014: 26). Believing in God and spirituality reduces psychological insecurity, anxiety and promotes well-being (Stewart, Adams, Stewart and Nelson 2013; Mahboubi, Ghahramani, Shamohammadi and Parazdeh 2014).

Tokpah and Middleton (2013: 92) explored psychiatric nurses' understanding of the spiritual dimension of holistic psychiatric nursing practice in South Africa. Their study revealed that spirituality and religion was interrelated although not the same, but spirituality was an important dimension if psychiatric nursing care was to be truly holistic in nature. Psychiatric nurses should therefore acknowledge the spiritual dimension in the nursing process and include the patient's religion, degree of observance and meaningful religious practices in the nursing care plan. The integration of concepts of spirituality and religion into the mental health curricula will therefore enhance nurses' understanding of and respect its role in the caring process and its relationship to holistic nursing care. The fact that prayer and spiritual healing is part of alternative therapies is often over looked by nurses. It is therefore vital that nurses are aware of the variety of alternative therapies that are available to patients. Crawford and Thornton (2010: 24) suggested that, the

shift from an illness based system to one that embraces health and wellness, offers nurses the opportunity to create a healing environment throughout the health care setting and communities. As patients and nurses assume a greater sense of responsibility for their health and engage in health-promoting practices, the cost of health care services will decrease. Furthermore as hospitals integrate holistic principles and practices, a more healing culture will emerge.

2.5.6 Music therapy

Music is a multi-dimensional methodology which is known for its therapeutic effects in many illnesses (Erkkila, Punkanen, Fachner, Ala-ruona, Pontio, Tervaniemi, Vanhala and Gold 2011: 34). The different rhythms and pitches harmonised together can impact on peoples' feelings and emotions (Olaniyan 2013: 1). According to Whitehead (2011: 697), music therapy has been found to be one of the most popular forms of alternative therapies especially in the use of terminally ill and cancer patients. Music therapy assists patients to take their minds off their illness and symptoms offering support and relaxation. It is therefore, important for nurses to understand the benefits of music therapy in order to offer holistic nursing to patients. Music therapy may also be used as a nursing intervention for improving the quality of life of patients, by reducing anxiety as well as depression (Martinez 2009; Whitehead 2011). Furthermore emotional, physical, social and spiritual benefits of music therapy were also found in other studies (O' Kelly and Koffman 2007; Li, Huang, Lai and Hsieh 2013).

Sang, Lee and Smith (2011) explored nursing staff's attitudes and use of music with older people with dementia in long term care facilities. Nursing staff make up the majority of the multi-disciplinary team, which provides care for these patients on a daily basis. Geriatrics' living at these long term facilities has limited access to these forms of therapy that could prove to be beneficial and therapeutic to them. A cross sectional survey done in Taiwan, with 285 nurses and nursing assistants working at these facilities with patients with dementia found that that there was an overall positive attitude towards the use of music with older patients with dementia. Almost 75% of the sample agreed that music therapy had healing benefits for patients and the majority felt that music therapy should be included in

their daily routine. Despite this 69.2% mentioned that they did not use music therapy for the residents. Some of the reasons for not using music therapy included a lack of knowledge and skills (72.9%), lack of training with regard to this form of therapy (67.3%), insufficient time available (56.1%), and a lack of resources (55.1%). Twenty one percent admitted that they were not interested in providing such a service to their patients.

Li et al. (2013) conducted a nationwide survey of nurse's attitudes towards music therapy and their need for education in its application. Nurses were recruited from six hospitals around Taiwan to participate in this study. Of the 1486 questionnaires that were distributed to participants, 1197 were included in the analysis. Participants showed a positive attitude towards music therapy, with over 80% (n=978) of the participants who agreed that music therapy had a positive effect on patients. Nurses also enjoyed the inclusion of music therapy in their place of work as they felt that it further enhanced the quality of care provided. More than 80% (n=976) of the nurses were happy to provide music therapy for those patients, that requested it. About 63% (n=757) identified one of the barriers to the implementation of music therapy in the clinical setting to be a lack of education for nurses. More than 70% (n=858) of the participants supported the inclusion of music therapy in nursing education, as they believed that evidence based music therapy in nursing practice would enhance their professional status.

2.5.7 Support groups

Support groups often offer a variety of services and resources in order to assist and educate patients with skills on how to cope and adapt to lifestyle changes due to a particular illness or disease (Tayabas and Lugo 2014: 1984). Support groups allow patients to share knowledge and skills related to common illnesses and diseases, which also gives them a sense of belonging (Milani, Ashktorab, Saeedi and Majd 2012: 31).

There are a variety of support groups available, either offering in-patient or out-patient services, namely: multiple sclerosis support groups, support groups for the mentally ill, counselling and support groups for patients with TB and social support

groups for children and adolescents (Milani et al 2012; Simpson, Flood, Rowe, Quigley, Henry, Hall, Evans, Sherman and Bowers 2014; Lloyd-Evans, Wilson, Istead, Brown, Pilling, Johnson and Kendall 2014 and Baral, Aryal, Bhattrai, King and Newell 2014).

Tejada-Tayabas and Lugo (2014: 1991) reported that although support groups are beneficial to patients, there are difficulties and barriers that are faced. Patients mentioned that it was sometimes difficult to travel to these support groups if they were offered on an outpatient basis. They observed that due to staff shortages and over worked health care workers and a lack of leadership, it was difficult to keep the groups going.

2.6 MANIPULATIVE AND BODY-BASED PRACTICES

These therapies focus mainly on the structures and systems of the body which includes the soft tissues, bones and joints, lymphatic and circulatory systems (NCCAM 2012).

2.6.1 Massage therapy

Massage involves the manipulation of connective tissues and muscle in order to help the body recover from an injury or to enhance the functioning of the tissues and muscles (NCCAM 2012). Massage therapy makes use of various treatments in order to work with different diseases, pain and injury (Kanodia et al 2010; Tanwir, Ansari, Aisha and Anzar 2013). Field (1998:1270) described massage therapy to be one of the oldest forms of alternative therapy. Empirical evidence shows that this form of therapy is effective in the reduction of pain, improving alertness and immune function as well as diminishing depression. Other studies have found massage therapy to be effective with persistent backache (Cherkin, Sherman, Deyo and Shekelle 2003: 1) and oncology patients (Chang, Brodie, Choong, Sweeney and Kerin 2011; Krohn, Listing, Tjahjono, Reisshauer, Peters, Klapp and Rauchfuss 2011) as well as constipation (Lamas, Graneheim and Jacobsson 2011; Lamas 2011).

Hodgson and Lafferty (2012:3) argued that massage therapy was proven to be effective in reducing pain, as well as stress in cancer patients. This form of therapy is commonly used both with children and adults (Field 1998; Kulkarni, Kaushik, Gupta, Sharma and Agrawal 2010; Elliot and Burkett 2013), and has shown to be more popular in studies with females (Krohn et al 2011; Taavoni, Darsareh, Joolaee and Haghani 2013). Collinge, MacDonald and Walton (2012:45) stated that in nursing practice, massage therapy has a great deal of potential for improving quality of life of cancer patients provided it is applied with adequate understanding and knowledge.

Gelinas, Arbour, Michaud, Robar and Cote (2014) studied patients' and Intensive Care Unit (ICU) Nurses' perspectives of non-pharmacological interventions for pain management. A qualitative design with focus groups was used in their study. A convenience sample was used consisting of patients, family members and ICU nurses. Two focus groups were conducted with patients and family members and six with ICU nurses. The participants identified 33 non-pharmacological interventions for the management of pain in the ICU. Massage therapy was identified as the most popular with family presence and emotional support which was ranked second. Other non-pharmacological interventions ranking higher in the list included: music therapy, touch therapy (application of heat and cold), guided imagery, reflexology, relaxation therapy, meditation. The therapies that were mentioned less frequently included hypnosis, acupressure and therapeutic touch.

Keir and Saling (2012) conducted a pilot study on the impact of massage therapy on sources and levels of distress in brain tumour patients. A sample of 25 brain tumour patients at an academic medical centre was used. Patients had to attend a twice weekly massage therapy session for four consecutive weeks. Participants completed the questionnaires at baseline, after weeks one, two, three and four, and one week after the last massage session was completed, which was in week five. Classic Swedish massage techniques were used on patients, which included kneading, friction, tapping, percussion, vibration and other techniques. Each session was done by well-trained massage therapists, with each session lasting

45 minutes. Participants reported as a group that their levels of distress and some items of concern had decreased significantly as the weeks passed. At the end of week three, 75% of the participants reported only one item of concern (pain) and 50% of participants reported two items of concern (fatigue and worry). On completion of the intervention at week five, 50% of the participants reported an increase in the following concerns: worry, sadness, nervousness, insurance fears and pain. Keir and Saling (2012) therefore concluded from their study that patients living with the diagnosis of a brain tumour caused varying levels of distress and participants reported improvements in their overall quality of life while receiving massage therapy.

2.6.2 Aromatherapy

According to Fradelos and Komini (2014) aromatherapy dates back many years. Aromatherapy makes use of essential oils extracted from trees, flowers and fruit to assist and promote health and well-being. These oils may be used topically as an agent during massage therapy or inhaled for the treatment of symptoms of upper respiratory tract infections (Blunt 2003: 329). According to Siegel and Filice de Barros (2013: 2), the application of essential oils, are used for many symptoms of illnesses namely anxiety, constipation, hypothermia, impaired memory, acute and chronic pain, nausea and immunological inefficiency. Various applications of oils are used depending on the condition and symptoms experienced. Once these oils are inhaled, they are directed to the sensory cells of the olfactory scheme. Neurochemical substances are released, which soothes and relaxes the user, causing reduced anxiety levels, improvements in depression and fatigue and overall improved quality of life.

Kamble, Mehta and Shinde (2014: 147) asserted that clinical aromatherapy has measurable outcomes and has a place in nursing care in Switzerland, Germany, Australia, the United Kingdom (UK) and United States of America (USA). Safety issues concerning the use of aromatherapy exist taking into account their chemical components. Large amounts of aldehydes and phenols have the potential to cause skin irritation. Insufficient evidence about the efficacy of

aromatherapy and the probable potential to cause adverse effects raises concerns regarding its usefulness.

Ghani and Ibrahim (2013: 15) investigated the effect of aromatherapy inhalation on nausea and vomiting that is characteristic during early pregnancy. Their study produced positive results whereby episodes of nausea and vomiting were decreased by the third day of treatment. Participants also reported feeling much more energetic after immediate inhalation. In contrast, Hines, Steels, Chang and Gibbons (2012: 2) reported that the use of aromatherapy inhalation, on post-operative nausea and vomiting was less effective than conventional treatment.

2.7 CAM IN SOUTH AFRICA

According to du Plessis (2012: 8), most CAM modalities in South Africa are easily available to the public from a number of pharmacies and health shops as well as the local supermarkets as OTC medicines. CAM products that are currently available are; homeopathy, Ayurveda, TCM, naturopathy, osteopathy, phytotherapy, therapeutic aromatherapy, therapeutic massage, therapeutic reflexology. Reports have shown that in South Africa, approximately 75% of HIV infected patients use some form of CAM (Malangu 2007: 274).

Singh et al (2004) conducted face to face interviews on the prevalence, patterns of usage and people's attitude towards CAM among the Indian community in Chatsworth. Participants revealed that they used CAM for the following reasons: CAM was considered to be a natural form of treatment (85%), CAM was perceived to be safer than allopathic medicine (40%) and there was evidence that CAM was effective (21%). The most common conditions that CAM was used for was: diabetes (22.1%), headaches (22.1%) and arthritis or joint pains (18.2%). Participants mostly used spiritual healing (42.7%) and herbal/natural medicines (48.1%).

Similarly Du Plessis (2012) conducted a survey to determine the attitudes towards CAM by users in Cape Town. The reasons for the use of CAM by the participants were slightly different to that of Singh et al (2004). Participants used CAM for the

following reasons: For the prevention of disease (21.9%), it gave individuals a sense of being (14.7%) and users had the perception that CAM had fewer side effects (9.6%). CAM was used for problems related to the digestive system (31.1%) and illnesses related to the nervous system (22.2%). The most commonly used therapies were: vitamins and supplements (29%), homeopathy (16.4%) and herbal preparations (14.3%).

2.8 ALTERNATIVE THERAPIES AND HOLISTIC NURSING PRACTICE

While there is an increase in patient and professional interest in alternative and complementary care, professional nurses are incorporating alternative and complementary therapies into their practices outside the traditional health care setting. Nursing and the concept of holism provides a framework for the practice of alternative and complementary practices outside the institutional setting (Gilbert 2007: 1). According to Mariano (2007: 63), holism in health care and nursing is a philosophy that evolved directly from Florence Nightingale, who believed in care that concentrated on unity, wellness and the interrelationship of human beings, events and the environment. The term "holism" and "holistic" come from a Greek word meaning all, whole, entire, total. Papathanasiou, Sklavo and Kourkouta (2013: 1) said that holistic therapies dealt with human beings as a whole, whereby a multi-faceted approach to the health and disease is adopted.

Chu and Wallis (2006) investigated nurse's attitudes towards and use of complementary and alternative medicine in nursing practice. A total of 265 questionnaires were distributed to nurses at a college in Taiwan. Interestingly more than 60% (n=108) of the nurses reported that, they used CAM in the work place, although 36.5% (n=62) said that they did not practice CAM in the work place. Some of the reasons stated for CAM not being implemented in the work place were as follows: nurses stated that there was a lack of resources (34.1%), lack or institutional polices regarding the use of CAM (27.6%) and no provisions were made for nurses to educate themselves about CAM (23.5%).

Participants reported that the therapies that were most often used in nursing practice were as follows: relaxation, massage therapy, music therapy, therapeutic

touch and aromatherapy. About 16% of nurses revealed that they used relaxation techniques as least once a day or more. It was also reported that nurses didn't necessarily obtain a written consent from patients with regards to implementing the use of CAM in the clinical setting. According to the Taiwanese health care system, CAM is usually not freely available to patients with the exception of acupuncture as it is offered as part of Traditional Chinese Medicine and by the Chinese Medical doctors.

Lindquist, Snyder and Tracy (2014: 7) revealed that the goal of alternative therapies is to bring harmony or balance within a person, and patients are now seeking health care workers, who offer these therapies as they wish to be treated as a whole, as opposed to treating the symptoms of a disease. Caring which has been the cornerstone of the nursing profession is a vital component in the delivery of alternative therapies.

A study done by Selimen and Andsoy (2011: 486) on the importance of a holistic approach during the perioperative period concluded that the needs of the surgical patient and his or her family members are important in the perioperative nursing. By ensuring that holistic care is provided, the nurse might be able to help the surgical patient to cope more easily with surgical trauma, experience less pain, use less analgesia and experience fewer complications. These authors further stated that a successful surgery for the patient meant recovering health, as well as regaining physical, mental and spiritual health as a whole.

2.9 PUBLIC DEMAND AND USES OF ALTERNATIVE THERAPIES

CAT has become increasingly popular amongst the general population globally (Chu and Wallis 2006; Erci 2007; Yom and Lee 2008; Hassan et al. 2012). With the obvious increase in patient use of CAT, it is imperative that patients are able to receive accurate information regarding these therapies. Nurses are one of the largest groups of health care workers that patients have constant contact with, when in hospital and at PHC. It is therefore, important that nurses are well informed regarding CAT (Burman 2003; Chu and Wallis 2006). Internationally many studies have been done on the prevalence and use of CAM, although only

one study has been done thus far in Chatsworth, South Africa by Singh et al (2004).

The WHO's Regional Director for Africa, Ebrahim Samba said that *"about 80 percent of the people in Africa use traditional medicine. It is for this reason that we must act quickly to evaluate its safety, efficacy, quality and standardisation - to protect our heritage and to preserve out traditional knowledge. We must also integrate it into our national health systems"* (WHO 2002).
According to the WHO (2002), the estimated use of CAM around the world was as follows:

Table 1: The estimated use of CAM globally

Country	Estimated use of CAM
Australia	Almost one billion Australian dollars is spent
Africa	Is used by 80% of the population for PHC
Japan	Is practiced by 72% of physicians
India	CAM is very popular amongst Indians and is practiced at 2860 hospitals
Indonesia	40% of the population used CAM
France	75% of the population has used CAM at least once
Germany	77% of the clinics provide acupuncture

Sawalha (2007) investigated the use and safety implications of CAM in northern Palestine. A questionnaire was used to assess the attitude, use and reasons for CAM utilisation. Participants were randomly selected, with a total return of 312 questionnaires that were completely and correctly filled. This yielded a response rate of 78%. More than half of the respondents were young, educated females and the majority of the respondents reflected a positive attitude towards CAM and were willing to use CAM when they did not feel well.

The age of respondents was a significant factor affecting the use of CAM, whereby CAM use was greatest amongst those between the ages 30-39 years. The use of CAM was most common among women, university graduates and low-income respondents. Their place of living and exercise habits, did not have a significant impact on their use of CAM. The types of CAM reportedly used were:

herbals, prayer, honey, vitamins and others. The most commonly used were herbal therapy and prayers and the least used were bloodletting and moxa. Respiratory and gastro-intestinal problems were the most common problems for the utilisation of CAM, whereas herbal therapies and honey was to treat these illnesses. The least common illnesses for which CAM was used were urinary tract infections and diabetes mellitus. When asked about the reasons for the use of CAM, most respondents chose safety, being natural and the belief in the power of cure. Information regarding CAM was sourced mainly from relatives and friends who used CAM themselves. More than half of the respondents reported that they did not inform their physicians about their use of CAM. According to Sawalha (2007), these findings support the need for awareness levels to be elevated among CAM users. The medical curriculum should be expanded to include sections related to CAM, since its popularity has been proven in Northern Palestine.

A study conducted by Kuunibe and Domanban (2012) to investigate the demand for CAM in the Upper Western Region (UWR) of Ghana, yielded results that were in contrast to those made by Sawalha (2007). The UWR of Ghana is the poorest in the country with few health care facilities. The region was clustered into rural and urban based on the populations' size to take care of the rural dichotomy. Simple random sampling was undertaken between both the rural and urban regions. To ensure representation, the sample size was distributed according to the proportion of households within the urban and rural regions.

Their study revealed that CAM use was more prevalent with people who had very low levels of education. This was in contrast to another study done, in an urban tertiary centre in Nigeria by Adeyeye, Onadeko, Ogunleye, Bamisile and Olubusi (2011), where the educational level and income did not seem to have had any effect on the use of CAM. The most common forms of CAM used in UWR were herbal medicine, spiritual healing and a local orthopaedic service, which was similar to the study by Sawalha (2007). Many of the household members in UWR resorted to CAM in times of sickness. About 29% of the samples were found to visit CAM providers while the rest of the 70.1% did not use CAM. The cost of CAM

was less costly compared to that of conventional treatment, which indicated the incentive for use. In conclusion, Kuunibe and Domanban recommended that public education at community levels be enforced, to ensure that the dangers and risks involved in the use of CAM be communicated.

In a study done by Fennell, Liberato and Zsembik (2009), the patterns of use of CAM by the lay public were explored. Respondents recruited were sociology students from different majors of a public university. Semi-structured, self-administered questionnaires were completed by 109 respondents. The respondents were of traditional college age, with a majority being females from different ethnic and racial backgrounds. The patterns of use of CAM were generally used in conjunction, with conventional over the counter (OTC) or prescription medication. When asked whether they revealed to their physicians their use of CAM, many respondents did not respond on the questionnaire. Many did not have health insurance, so they did not have anyone to whom they would reveal their use of CAM. Some said that they would wait for their physician to enquire first before they revealed their use. This shifts the blame for the lack of communication between physicians and patients onto health care providers, instead of vice versa. The most frequently used therapies were acupuncture, herbs, massage and yoga.

The frequent use of alternative therapies and the lack of communication between health care workers and patients, is evident in many studies done globally (Akyol, Yildirim, Toker and Yavuz 2011; Okoro, Zhao, Chaoyang and Balluz 2011; Harris, Cooper, Relton and Thomas 2012; Limsatchapanich, Sillabutra and Nicharojana 2013). In many countries, the increasing numbers of patients rely on alternative medicine for preventative or palliative care. In France, 75% of the population have used complementary medicine at least once; in Germany 77% of pain clinics provide acupuncture; and in the United Kingdom 2300 million US dollars (USD) was spent on complementary or alternative therapies per year (WHO 2002).

In a study by Amichai, Grossman and Richard (2012), lung cancer patients' beliefs about complementary and alternative medicine in the promotion of their wellness

were explored. An interpretive qualitative design with semi-structured interviews was used in order to identify common themes and patterns regarding the use of CAM. The sampling method involved deliberately choosing patients from the outpatient clinic of a major hospital in Canada. Their findings revealed that patients began re-evaluating their options of treatments once they were diagnosed with cancer. They began developing new beliefs about getting well and that they were related to CAM. Many patients still wanted to remain in control of their own health and healing. Their faith in the use of CAM only became a reality, once they used and experienced it for themselves. There seemed to be an overall improvement in their wellness and health through a process of trial and error when using CAM. Although there were no tests done to prove its effectiveness, patients reported feeling better. Positive beliefs and expectations were seen in all participants who believed CAM may be of benefit. An important theme was revealed; where patients were able to tailor their CAM to meet their own needs. It is therefore, vital that health care workers involve patients in their care in order to employ an integrative approach.

2.10 ALTERNATIVE THERAPIES IN NURSING EDUCATION

Many studies related to nursing education suggested that faculty development programs are needed, in order to ensure that information regarding CAM is integrated into nursing curricula across the different courses and at all levels (Fenton and Morris 2003; Kim, Erlen, Kim and Sok 2006; Avino 2011). Moore (2010: 612) reviewed the rationale for complementary and alternative therapies in nursing school curricula. She stated that with the increase in the popularity and use of CAM, nurses should be able to assess safety issues related to it and that the foundation for CAM is best established in nursing school training. Current nursing colleges and schools are basically providing an overview to CAM, although more in-depth knowledge is required to prepare nursing staff for the huge demand of CAM by the public. Due to the lack of formal lectures regarding these therapies, nurses are not prepared to answer questions or interpret data about CAM for their patients' and this places them in a predicament.

Kim et al. (2006) investigated nursing students and faculty members' knowledge, experience and attitudes towards complementary and alternative therapies. The sample was made up of undergraduate students (n=41), graduate students (n=57) and faculty (n=55). A survey questionnaire was used to determine the students and faculty knowledge of and experience of complementary and alternative therapies. All three categories of the sample, undergraduate (73.2%), graduate (93%) and faculty (92.7%) agreed that they had general knowledge of CAT. All participants revealed that they have more knowledge on massage therapy and meditation. The least amount of knowledge in all groups was in reflexology. In comparison, faculty members indicated that they had more knowledge on meditation and acupuncture compared to the students. The undergraduate students revealed that they had least knowledge regarding herbal therapy than the graduates and faculty. It was found that over 50% of both undergraduate and graduate nursing students as well as faculty, had limited or no personal or professional experience with CAT. Although more than 80% of faculty and students agreed that CAT did indeed have benefits. All categories of the sample showed a positive attitude towards CAT. Just over 91% of the sample agreed that patients should be given the opportunity to choose CAT. Almost 86% of the nurses believed that education and training in the use of CAT was important to them as nurses.

A study was done by Avino (2011) with regard to the knowledge, attitudes and practices of nursing faculty and students related to complementary and alternative medicine. Nursing faculty and student participants were recruited from eight schools of nursing in the state of Delaware. A convenience sample included all current part-time and full-time nursing faculty (155) and both undergraduate and graduate nursing students (1420). Using a descriptive study design, the following was explored viz. frequencies and general attitudes, perceived barriers to the use of CAM, personal use, previous training and the intended use in teaching and clinical practice. Data pertaining to the curriculum content was also collected.

The results of the faculty survey was as follows: more than 48% reported that western biomedicine guided their personal health view as compared to 47% who

reported that they used a combination of western biomedicine and another health tradition to guide their personal health. Their sources of information were from peer professionals (90%), professional journals and sources (75%), other health care providers (69%) and mass media (58%). CAM modalities, healing systems and practices were included in the nursing curriculum and were emphasised in course objectives and in the syllabus. The top three modalities addressed in the courses were nutritional supplements (58%), prayer/spiritual healing (58%) and massage therapy (57%).

The results of the student survey was as follows : almost 50% of students responded that western biomedicine guided their personal health view as compared to 46 % who used a combination of western biomedicine and another health tradition to guide their personal view. Their sources of information regarding CAM was sought from peer professionals (73%), mass media (55%), the internet (53%), professional journals and sources (52%) and other care providers (45%). A total of 66% of students' attitudes towards CAM was influenced by their spiritual and religious beliefs, as compared to 27%, who did not relate their spiritual and religious beliefs to their attitude towards CAM.

Both faculty and students' attitudes towards the barriers to CAM were similar. Lack of time was the least frequently reported barrier, as they felt that they would be providing more advice and referrals as compared to carrying out the actual therapies. Lack of evidence and staff training were the top barriers reported. It was supported that CAM should be integrated into the nursing curriculum. Students were satisfied with the health benefits that CAM can provide for their patients, yet they were not too keen to have the extra information or to be trained where they would personally provide these therapies. It was concluded that the integration of a broad overview of CAM and holistic concepts as well as evidence regarding CAM into the curriculum is necessary.

Al-Rukban, Albedah, Khalil, El-Olemy, Khalil and Alrashid (2012) investigated the status of CAM in the curricula of health colleges in Saudi Arabia. A cross sectional descriptive study was conducted on all medical, dentistry, pharmacy, nursing,

allied medical science and health colleges in Saudi Arabia. A questionnaire was used to determine the various courses and contents of curricula used in the various health colleges. In addition, face to face as well as telephone interviews were conducted with the Dean, Vice-Dean or the faculty member responsible for the curriculum development in the various colleges. A total of 90 colleges of the 110 colleges in the Ministry of Higher Education participated in the study, which yielded a response rate of 81.8%. The results revealed that there was no CAM special track in any of the health colleges. Only eleven colleges (12.2%) were already implementing CAM in their curriculum, with three colleges having planned to include CAM the following academic year.

Of the eleven colleges, five were teaching an overview of CAM. Fifteen colleges included topics related to CAM. Medical ethics related to CAM were included in the curricula of 7 colleges whilst 5 colleges included pharmacology related to CAM. Seven colleges had 16 members of staff who were specialized in CAM, with 7 faculty members in possession of a Ph.D. degree in certain areas of CAM. It was found that government colleges (45.5%) were more interested in CAM compared to the private college (8.7%).

Their study concluded that CAM education in the health colleges in Saudi Arabia was weak in direct contrast to the high use of CAM. It was recommended that a national committee should be used in order to integrate CAM into the curricula of the health colleges of Saudi Arabia.

2.11 CONCLUSION

The literature review highlighted the increase in the use and demand of alternative therapies amongst the general public, both internationally and in South Africa. The studies revealed that complementary and alternative therapies are popular and patients will continue to use it even where health care workers may not support its use. In South Africa, nurses represent a large percentage of the health care system. Moore (2010: 611) stated that nurses are the front line "gate keepers" in health care today, as they act as an important safety net for all providers. This puts nurses in a favourable position to assess and educate patients regarding

CAT. Open communication and well informed nurses and patients are the key to successfully ensuring the safe use of CAT. Together with open communication and relevant knowledge, this could reduce the misuse and potential side effects of these therapies. The research methodology used in this study is presented in the chapter that follows.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research is a method of collecting empirical data using a variety of objective methods (Welman, Kruger and Mitchell 2005: 2). This chapter outlines the research design that was used to guide this study. The study setting and population and sample size is highlighted and the ethical aspects of the study are also presented. The process used to collect and analyze the data is also explained.

3.2 RESEARCH DESIGN

Khan (2008: 69) defined a research design as the blue print of any research study. One of the main steps in formulating a research design is the selection of an appropriate methodology. The research design forms the operational framework, within which the researcher will accomplish the intended study. The selection of an appropriate research methodology helps to explain the reasoning behind the research methods and techniques used (Welman et al 2005: 2). In this study, quantitative research methodology was used to guide the research process. Quantitative research is a formal, objective, systematic study process to describe and test relationships and to examine cause and effect interactions among variables (Brink, van der Walt and van Rensburg 2008: 11). Quantitative research starts with the researcher determining the variables and units of analysis that will be used in the study. It begins with an idea, which is then measured using an instrument, in order to yield empirical results (Neuman 1997: 132).

Quantitative research can be divided into experimental and non-experimental designs. An experimental research design involves some form of intervention and the extent to which the intervention has changed the dependent variable is measured. In contrast to this non-experimental designs are those where there is no planned intervention with regard to the independent variables. (Welman et al. 2005:78-92). In this study, the researcher made use of a non-experimental

exploratory research design using a survey questionnaire to collect data. According to Ehrenstein, Christiansen, Schmidt and Sorensen (2014: 5) methodology rigor, specific rules as well as transparency in communication, are the main principles in non-experimental research, with the objective of improving patient care and public health.

Survey research is often used in nursing research as exploratory, descriptive or explanatory research. Surveys are generally used with much larger populations, using probability sampling techniques. The results may then be generalised to the larger population that the sample was drawn from. Survey questionnaires are used to collect a large amount of data over a short period of time (Botma et al. 2010: 134). According to Neuman (1997: 228), surveys describe quantitative information regarding features of people or the social world. The researcher is therefore, able to explore respondent's beliefs, behaviours and perceptions using a survey questionnaire.

3.3 STUDY SETTING

The study was conducted in the uMgungundlovu District, which is also referred to as District 22. The district has 48 fixed clinics, 12 mobile clinics, four community health centres and nine hospitals (KZN Department of Health: 2014). These nine hospitals provide an array of health services to the community, hence a diverse range of patients with differing health conditions are seen at these facilities. This was important to the study, as a diverse pool of nurses treating a diverse patient population was included for the survey. The hospitals ranged from district level hospitals to specialized and regional/tertiary levels. Participating hospitals were coded as follows to ensure anonymity: Hospital 1; Hospital 2; Hospital 3; Hospital 4; Hospital 5; Hospital 6; Hospital 7; Hospital 8; Hospital 9.

3.4 POPULATION AND SAMPLE

3.4.1 Population

The population is the study object which is made up of individuals, groups, organizations or human products (Brink, Van der Walt and Van Rensburg 2008;

Botma et al. 2010). A target population refers to a whole set of objects, units or persons that meet the sampling criteria and are generally accessible to the researcher (Botma 2010: 124). The total population of professional nurses consisted of 1218; these numbers were obtained by personally telephoning the Human Resource Practitioners of every hospital that was part of the study. Once the researcher began distributing questionnaires in the different wards and units, final figures of the numbers of professional nurses was obtained from the operational managers. Only the day shift nurses were included in the study. Professional nurses that were either on study leave or seconded to other institutions for study purposes were excluded as well as night duty staff. Travelling distances to the target population ranged from 3.1 kilometres to 65.45 kilometres in relation to the researcher's place of work.

3.4.2 Sample

Brink et al. (2008: 124) defined a sample as part or fraction of a whole, which is selected by the researcher to participate in a study. Sampling technique refers to the researcher's process of selecting the sample from a population in order to obtain information regarding a phenomenon, in a way that represents the population of interest. The population of 1218 was sampled; therefore the population and sample were one and the same. It is possible that sampling bias could occur, if the researcher gives preference in the selection process (Botma, Greeff, Mulaudzi and Wright 2010: 86). In this study, the sample included all grades of professional nurses. Day staffs from all wards/departments were given the opportunity to participate in the study, thus eliminating the probability of sampling bias.

In consultation with a statistician, the minimum recommended number of participants was 321. A sample of this many people, are more likely to get a correct answer than one would get from a large sample where only a small percentage of the sample responds to the survey. This size sample would yield a confidence level of 95%.

A census study enables the researcher to include the entire population of a specific biographical variable. It is time consuming to conduct a census study, yet beneficial as every member has an equal chance to participate (Neuman 1997; Welman et al. 2005). The researcher undertook a census study, which enabled professional nurses of all grades and categories to participate. Further, it meant that nurses who cared for a variety of patients who had diverse health conditions were included in the survey. This was particularly important given that the study explored CAM and therefore the views of nurses who treated diverse patients with diverse conditions could have contributed to an understanding of the use of CAM in this context. This was a census study hence no sampling strategy was used. All nurses were included as per the inclusion criteria below.

3.4.3 Inclusion criteria

- Professional nurses of all grades
- Professional nurses working on day duty from all nursing wards/departments

3.4.4 Exclusion criteria

- Enrolled nurses
- Enrolled nursing assistants
- Students in training
- Professional nurses away from their institutions on study leave or secondment.
- Professional nurses working on night duty.

3.5 DATA COLLECTION TOOL

A survey questionnaire (Annexure 5) was used to obtain information from professional nurses who had consented to participate. The survey instrument was based on the questionnaire which was used by Karen Avino (2011) and was adapted to suit the objectives of this study. Permission was granted by Avino (2011) for the use of some sections, of her questionnaire (Annexure 6). The questionnaire consisted of nine pages with seven sections. These sections focused on perceptions regarding the following alternative therapies; acupuncture, aromatherapy, relaxation techniques, therapeutic touch, massage therapy,

prayer/spiritual healing, meditation, herbal therapy, music therapy, support groups and nutritional supplements.

Section A – This section included the following information; age, gender, ethnic background, marital status, years of experience in nursing practice and professional designation.
Section B – The personal use of alternative therapy by professional nurses.
Section C – Professional nurses perceptions with regard to the inclusion of alternative therapy in nursing practice.
Section D – The frequency with which nurses encountered patients who use alternative therapy.
Section E – Views about the efficacy of alternative therapy used in nursing care.
Section F – The extent to which alternative therapy is included in nursing education/training.
Section G – The potential barriers that professional nurses are faced with regarding the use of alternative therapy in nursing practice.

3.6 DATA COLLECTION

The data collection process commenced once ethics clearance was granted by the uMgungundlovu Health District (Annexure 1), KZN Department of Health (Annexure 3b) and The Durban University of Technology (DUT). Arrangements were made with the management of each institution with regards to convenient days and times to make contact with the professional nurses. At some facilities, nurses were eager as they had been informed of the visit, although many nurses refused to participate in the study due to having been asked recently to participate in other research studies. The researcher handed out questionnaires to those willing to participate and a date was arranged at their convenience for collection, as they felt that tea times was too short to complete the questionnaires. The number of professional nurses in each unit was determined by the operational manager. The completed questionnaires and consent forms were placed into a sealed, slotted box provided by the researcher. The sealed boxes were kept in a locked cupboard, accessible only to the researcher.

A letter of information and consent forms (Annexure 4) were given to participants regarding the study as well as any other information requested by the participants. Participants were given the choice to participate and were in no way pressured to do so. Participants were given a week to complete questionnaires due to the wards being busy.

A total of 616 questionnaires were distributed to participants, at the nine participating hospitals. Three hundred and eighty six (386) questionnaires were correctly completed and returned, which resulted in a 63% response rate. This was deemed acceptable by the statistician to commence analysis. A data capturing spreadsheet using the Statistical Package for the Social Sciences (SPSS) version 22.0 was formulated by the statistician with relevant coding to be used.

3.7 VALIDITY AND RELIABILITY

3.7.1 Validity

Validity is the extent to which the research outcomes accurately represent what is really happening in that specific situation. Research errors, such as faulty research procedures, poor samples and inaccurate measurements may undermine validity (Welman et al. 2005:142). Pre-testing of the survey questionnaire was done to ensure that valid responses were received. The questionnaire was pre-tested by ten participants from a different hospital as opposed to those participating in the study. Relevant information regarding the study was provided as well as written consent was obtained. Apart from typographical errors no other changes were suggested, and the questionnaire remained unchanged. Construct validity ensures that the instrument used in the measurement of the variable, should measure what it is intended to measure (Welman et al. 2005:142). The questionnaire was adapted to ensure that relevant questions were included in order to determine the perceptions of professional nurses' towards alternative therapies.

3.7.2 Reliability

Reliability refers to the degree to which the instrument can be depended upon to yield consistent results, if used repeatedly on the same person or if used by two separate researchers (Brink et al. 2008:163). According to Botma et al. (2010: 177) reliability has three vital areas of importance which include stability, equivalence and homogeneity. Stability is also known as test-retest reliability, which ensures that repeated measurement of an instrument reveals consistent results. It is most often used for physical and technological measures as well as paper and pencil scales. Equivalence is referred to as inter-rater reliability whereby two different participants measure the same action and their results are compared. Homogeneity is referred to split-half reliability and is used mostly for pencil and paper tests. In order to test reliability, the Cronbach's alpha tests were used for internal consistency. A correlation of 0.8 to 0.9 showed a good internal consistency.

3.8 DATA ANALYSIS

The data was reduced and analyzed with the help of a statistician, using the statistical software SPSS version 22.0. Descriptive statistics using frequency and cross-tabulation tables and various types of graphs were used. Numerical analysis included the use of the arithmetic mean and standard deviations. Inferential statistics using Pearson's and or Spearman's correlations at a significance level of 0.05 was used. For sections that include ordinal data, reliability testing was done using Cronbach's alpha.

Botma et al. (2010: 146-7) explained that descriptive and inferential statistics are commonly used in nursing research. Descriptive statistics is used to describe the entire population while inferential statistics is used to make inferences from the sample with reference to the population that it was selected from. Once data was correctly entered into the Excel spreadsheet, the survey questionnaires were stored accordingly to ensure safekeeping in a steel locker. The data captured data was then checked to make sure that the correct codes were used appropriately.

3.9 ETHICAL CONSIDERATIONS

Any form of research conducted involving human participants should be reviewed by an accredited research ethics committee. Research may only commence once the researcher is given written approval to conduct the study (Botma et al. 2010: 12). Ethics clearance was obtained from the DUT, Faculty of Health Sciences Ethics Committee. (Annexure1). Thereafter permission was sought from the uMgungundlovu District Manager (Annexure 2a) and KZN Department of Health (Annexure 3a) to distribute survey questionnaires at their facilities.

Botma et al. (2010: 17) emphasized that the main aspects in the data collection process, are respect, justice and beneficence. It was therefore, important to respect the anonymity and confidentiality of the participants. It was not necessary for the researcher to know who completed the survey questionnaires, as long as consent was obtained. The researcher was obliged to ensure that all information pertaining to the participants be kept confidential and not be revealed to anyone not involved in the research process.

Information regarding the study as well as the benefits of the study was fully explained to the nurses in the letter of information and consent form (Annexure 4). Questionnaires were coded to identify the hospitals that were used and participants were not expected to fill in any personal information on the questionnaire that would reveal their identity. Participants were given the choice to complete the questionnaire and were not obliged to participate in the study. The letter also clarified that participants could withdraw from the study, at any point without any explanation. No names or personal information were captured during the data capturing. Completed questionnaires and consent forms will be stored for five years as per the DUT policy and will be shredded thereafter.

3.10 CONCLUSION

This chapter provided an overview of the research methodology used to guide the study. The data analyzed will be presented in the chapter that follows.

CHAPTER 4
PRESENTATION OF RESULTS

4.1 INTRODUCTION

This chapter presents the results and discusses the findings obtained from the data collected in this study. A survey questionnaire was the primary tool that was used to collect data from nurses in the uMgungundlovu District, South Africa. The data collected was analyzed with SPSS version 22.0. The results will be presented as descriptive statistics in the form of graphs, cross tabulations and other figures. Inferential techniques used included correlations and chi square test values; which were interpreted using the p-values.

4.2 THE SAMPLE

In total, 616 questionnaires were distributed, and 386 were returned which yielded a response rate of 63%. This was deemed sufficient by the statistician to commence analysis.

Table 2: Total number of questionnaires distributed and returned

Hospitals	**Total number of professional nurses per hospital (N)**	**Total number of questionnaires distributed (N)**	**Total number of questionnaires returned**
Hospital 1	54	30	0% (n=0)
Hospital 2	325	106	10.6% (n=41)
Hospital 3	36	20	2.3% (n=9)
Hospital 4	186	120	18.9% (n=73)
Hospital 5	219	124	28.8% (n=111)
Hospital 6	149	46	12.2% (n=47)
Hospital 7	41	25	.8% (n=3)
Hospital 8	155	110	19.9% (n=77)
Hospital 9	53	35	6.5% (n=25)
Total	1218	616	100% (n=386)

4.3 THE RESEARCH INSTRUMENT

The research instrument consisted of 86 items, with a level of measurement at a nominal or an ordinal level. The questionnaire was divided into 7 sections which explored the measured various themes as illustrated below:

Table 3: Sections of Questionnaire sub-headings

Section	Sub-Headings
A	Biographical data
B	Personal use of alternative therapies
C	Alternative therapies in nursing practice
D	The frequency with which patients use alternative therapies
E	Views about the efficacy of alternative therapies used in nursing care
F	The inclusion of alternative therapies in nursing education
G	Barriers to the use of alternative therapies in nursing practice

4 4 RELIABILITY STATISTICS

The two most important aspects of precision are reliability and validity. Reliability is computed by taking several measurements on the same subjects. A reliability coefficient of 0.70 or higher is considered as “acceptable”.

Table 4: Cronbach’s alpha score

Section	Title	Number of Items	Cronbach's Alpha
B	Personal use of alternative therapies	11 of 11	.758
C	Alternative therapies in nursing practice	6 of 11	.735
D	The frequency with which you encounter patients who use alternative therapies	11 of 11	.726
E	Views about the efficacy of alternative therapies used in nursing care	11 of 11	.758
F	Alternative therapies in nursing education	11 of 11	.877
G	Barriers to the use of alternative therapies in the nursing practice setting	7 of 7	.743
Overall		62 of 62	.762

Table 5 reflects the Cronbach's alpha score for all the items on the questionnaire. The overall reliability score of 0.762 exceeded the recommended value of 0.700. This indicated a high (overall) degree of acceptable, consistent scoring for this research. All of the sections met the minimum requirement value, with only Section C being slightly below when all variables were considered. The primary reason for this is that the construct has been newly developed with each sub-section having the minimum number of variables.

SECTION A

4.5 BIOGRAPHICAL DATA

This section presents data in respect of the biographical characteristics of the respondents. It focuses on age, gender, marital status, racial composition, years of experience, job title as well as the hospital that respondents worked at.

Table 5: Age and gender of the sample

Age (years)	Male	Female	Total
20-30	6.2% (n=24)	22.3% (n=86)	28.5% (n=110)
31-40	6.0% (n=23)	28.2% (n=109)	34.2% (n=132)
41-50	4.4% (n=17)	18.1% (n=70)	22.5% (n=87)
51-60	3.1% (n=12)	9.1% (n=35)	12.2% (n=47)
Over 60	0.0% (n=0)	2.6% (n=10)	2.6% (n=10)
% of Total	19.7%	80.3%	100%

4.5.1 Age and gender

The gender of the respondents is described in the context of the age of the sample in Table 6. The age grouping of the sample was as follows: 34.2% (n=132) were between the ages 31-40; 28.5 % (n=110) were between 20-30 years and 22.5% (n=87) were between 41-50 years of age. About 12% (n=47) of the sample was between 51-60 years and a small percentage was over 60 years of age (2.6%; n=10). The majority of the participants were found to be female (80.3%; n=310) with a smaller portion being males (19.7% n=76). The ratio of males to females was approximately 1:4.

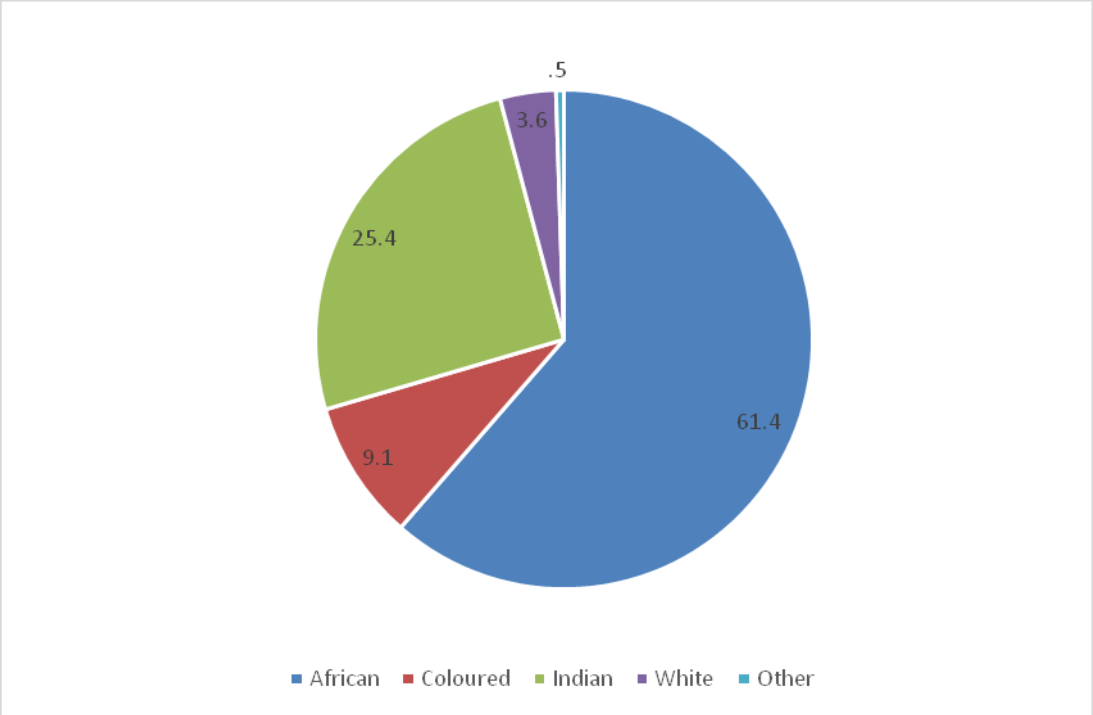

Figure 2: Racial composition

4.5.2 Racial composition

Figure 2 above represents the racial composition of the sample. The sample was predominantly African (61.4%; n=237), with Indians forming the next highest grouping (25.4%; n=98). This was followed by Coloureds (9.1%; n=35) and Whites (3.6%; n=14). A small percentage was unspecified (0.5%; n=2).

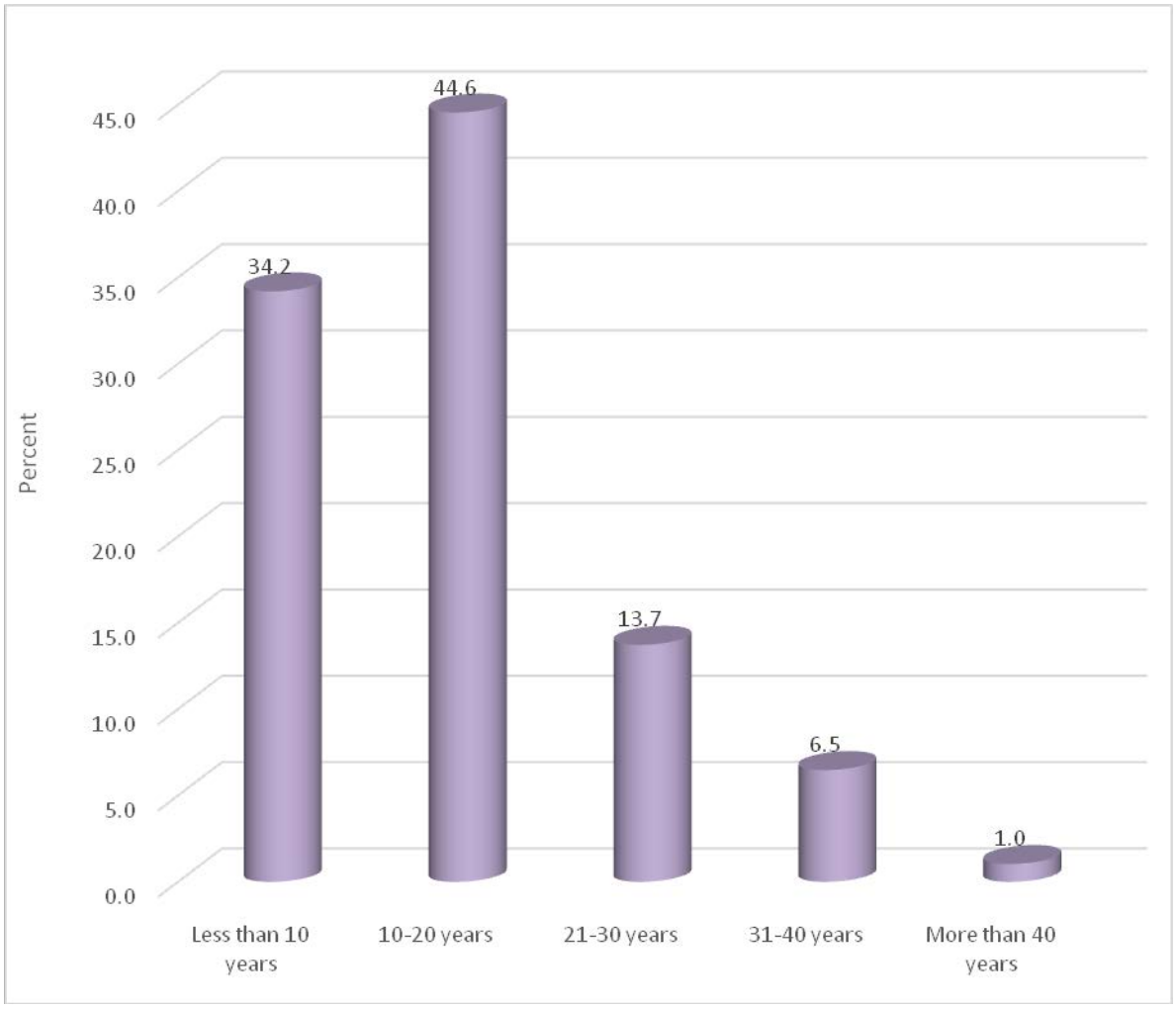

Figure 3: Years of experience in nursing practice

4.5.3 Years of experience in nursing practice

The data revealed that 44.6% (n=172) of the participants had between 10-20 years of experience; and 35% (n=132), less than 10 years of nursing practice experience. About 14% (n=53) had 21-30 years of experience and a much smaller percentage had between 31-40 years (6.5% n=25) of experience. Only 1.0% (n=4) had more than 40 years of experience. Collectively participants with between 10 to 40 years of experience was 65.8% (n=254), which reflects a mature sample.

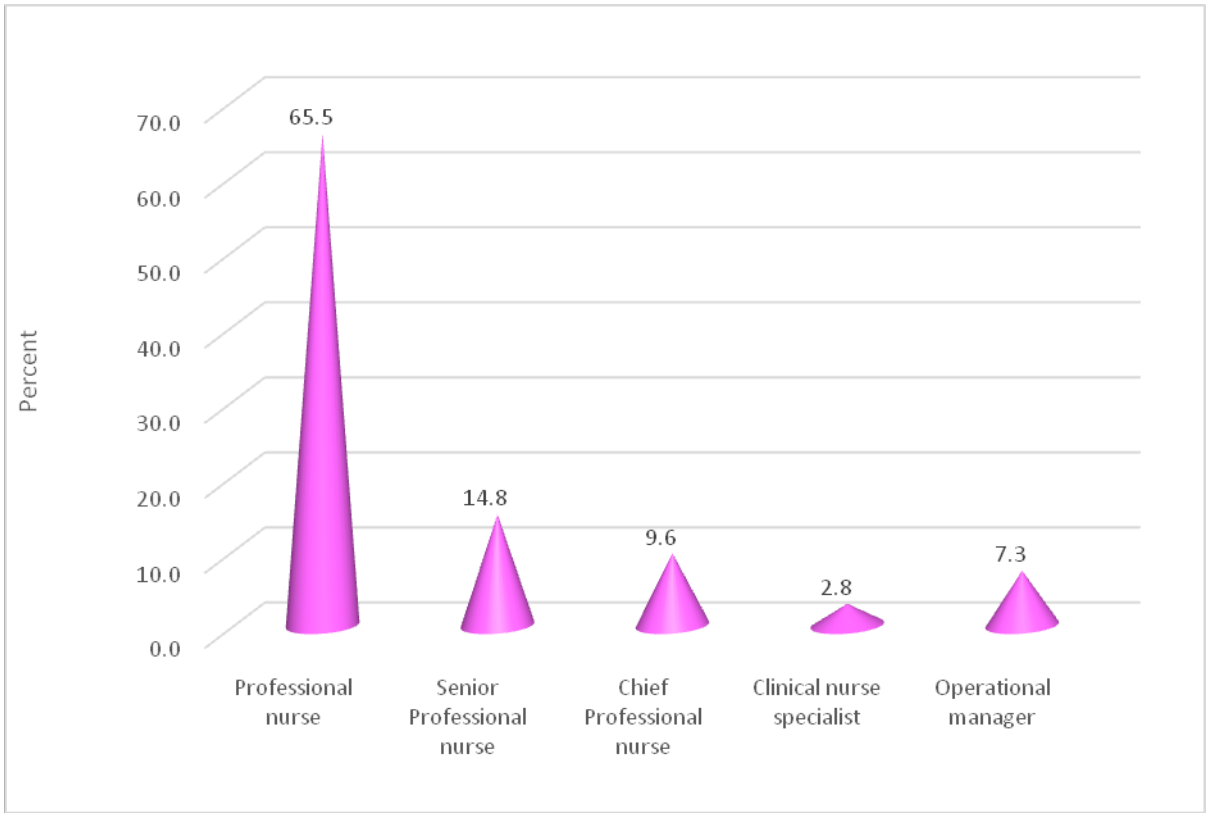

Figure 4: Job titles

4.5.4 Job titles

Figure 4 above reflects the job titles of the participants. About 66% (n=253) of the participants were professional nurses. Senior professional nurses accounted for almost 15% (n=57) of the sample. About 10% (n=37) were chief professional nurses, with operational managers consisting of 7.3% (n=28). A small portion of the ample were clinical nurse specialists (2.8%; n=11).

SECTION B

This section deals with the participant's personal use of alternative therapies at any point in their life, either before nursing or during their nursing practice. The sections that follow present findings with regards to this.

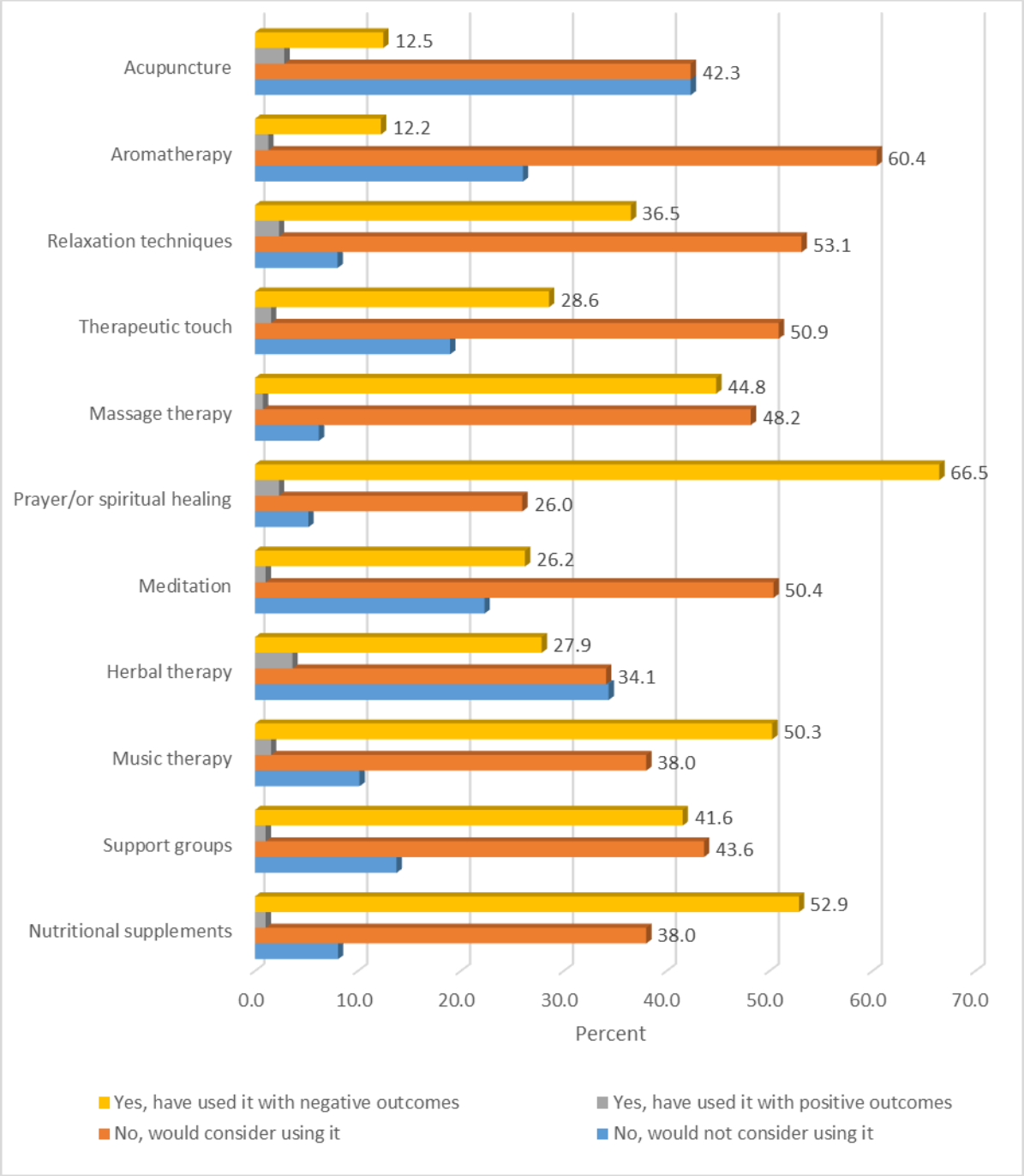

Figure 5: Personal use of alternative therapies

4.6 PERSONAL USE OF ALTERNATIVE THERAPIES

Figure 5 reflects the personal use of alternative therapy by nurses. The sample indicated that they used the following therapies with positive outcomes: herbal therapies (3.6%; n=14); acupuncture (2.9%; n=11); relaxation techniques (2.3%; n=9); prayer or spiritual healing (2.3%; n=9); music therapy (1.6%; n=6);

therapeutic touch (1.6%; n=6); aromatherapy (1.3%; n=5); meditation (1.0%; n=4); support group (1.0%; (n=4); nutritional supplements (1.0%; n=4) and lastly massage therapy (0.8%; n=3).

The alternative therapies used by the sample, with a negative outcome were as follows: prayer or spiritual healing (66.5%; n=256); nutritional supplements (52.9%; n=203); music therapy (50.3%; n=193); massage therapy (44.8%; n=173); support groups (41.6%; n=160); relaxation techniques (36.5%; n=141); therapeutic touch (28.6%; n=110); herbal therapy (27.9%; n=107); meditation (26.2%; n=100); acupuncture (12.5%; n=48) and aromatherapy (12.2%; n=47).

The therapies that nurses indicated that they had not used before, but would consider using were as follows: aromatherapy (60.4%; n=232); relaxation techniques (53.1%; n=205); therapeutic touch (50.9%; n=196); meditation (50.4%; n=192); massage therapy (48.2%; n=186), support groups (43.6%; n=168); acupuncture (42.3%; n=163), music therapy (38%; n=146); nutritional supplements (38%; n=146); herbal therapy (34.1%; n=131) and prayer/spiritual healing (26%; n=100).

Some participants revealed that they had never used alternative therapies and would not consider using it in the future. These therapies were as follows: acupuncture (42.3%; n=163); herbal therapy (34.4%; n=132); aromatherapy (26%; n=100); meditation (22.3%; n=85); therapeutic touch (19%; n=73); support groups (13.8%; n=53); music therapy (10.2%; n=39); relaxation techniques (8%; n=31); nutritional supplements (8%; n=31); massage therapy (6.2%; n=24) and prayer/spiritual healing (5.2%; n=20).

SECTION C

This section focuses on the professional nurses' views about alternative therapies in nursing practice. The rating scale used was 'agree', 'neutral' and 'disagree'.
The scoring patterns are shown in Table 7.

Table 6: Alternative therapies in nursing practice

	Agree	Neutral	Disagree
Clinical care should integrate the best of conventional and alternative therapies	88.6% (n=341)	9.6% (n=37)	1.8% (n=7)
Knowledge about alternative therapies is important to me as a nurse	86.5% (n=333)	7.5% (n=29)	6.0% (n=23)
Alternative therapies should be included in my nursing curriculum	82.1% (n=316)	13.0% (n=50)	4.9% (n=19)
Health professionals should be able to advise their patients about commonly used alternative therapies	81.3% (n=313)	12.7% (n=49)	6.0% (n=23)
Alternative therapies includes ideas from which conventional medicine could benefit	81.3% (n=312)	15.6% (n=60)	3.1% (n=12)
A number of alternative therapies hold promise for treatment of symptoms, conditions and or diseases	75.3% (n=290)	20.5% (n=79)	4.2% (n=16)
Alternative therapies that are not tested in a scientific manner should be discouraged	59.5% (n=229)	24.2% (n=93)	16.4% (n=63)
While a few alternative therapies may have limited benefits, they have no true impact on treatment of symptoms, conditions and or diseases	25.7% (n=99)	37.1% (n=143)	37.1% (n=143)
The results of alternative therapies are in most cases due to placebo effect	21.5% (n=82)	42.4% (n=162)	36.1% (n=138)
Alternative therapies are outside of the scope of nursing practice	20.5% (n=79)	22.1% (n=85)	57.4% (n=221)
Alternative therapies are a threat to patient's health	10.9% (n=42)	18.4% (n=71)	70.6% (n=272)

4.7 ALTERNATIVE THERAPIES IN NURSING PRACTICE

About 90% (n=341) of the sample agreed that clinical care should integrate the best of conventional alternative therapies. A majority of the sample (86.5%; n=333) felt that knowledge about alternative therapies is important to nurses, and 82.1% (n=316) agreed that alternative therapies should be included in the nursing curriculum.

Participants also reported that health professionals should be able to advise their patients about commonly used alternative therapies (81.3%; n=313). More than 80% (n=312) believed that alternative therapies included ideas from which conventional medicine could benefit and 75.3% (n=290) agreed that a number of alternative therapies hold promise for treatment of symptoms, conditions and or diseases.

About 70% (n=272) disagreed that alternative therapies were a threat to patient's health. Nearly 60% (n=221) of the sample disagreed that alternative therapies were outside of the scope of nursing practice. Over 42% (n=162) of nurses remained neutral about whether the results of alternative therapies were in most cases due to a placebo effect. About 37% (n=143) of the participants remained neutral as well as 37% (n=143) disagreed regarding the benefits of alternative therapies and the impact that it has on treatment of symptoms, conditions and diseases.

SECTION D

This section deals with the frequency with which professional nurses have encountered patients who use alternative therapies. Nurses were asked to rate their use on a continuum from 'frequently', to 'seldom' and 'never.'

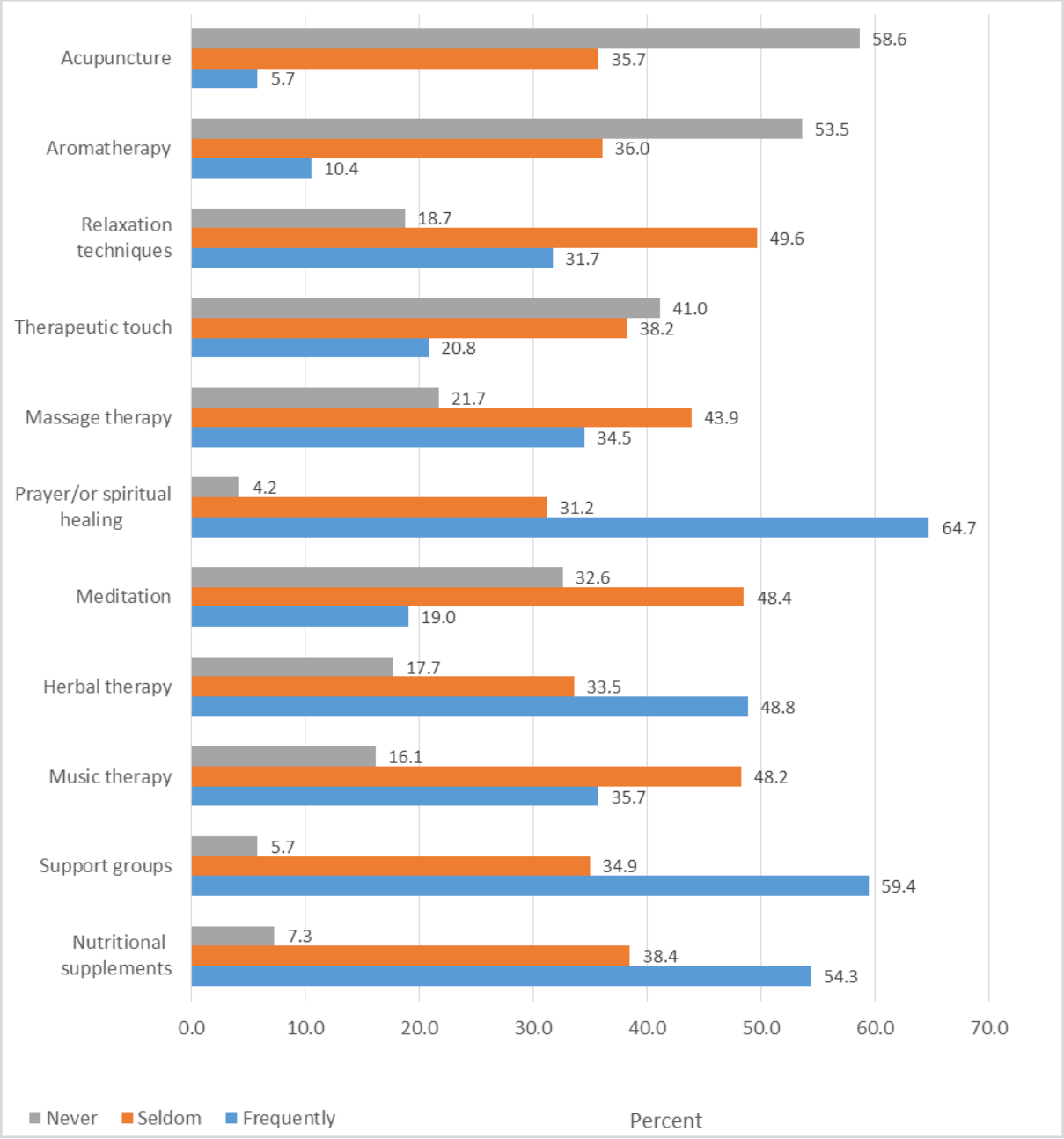

Figure 6: The frequency with which the use of alternative therapy was encountered

4.8 THE FREQUENCY WITH WHICH PROFESSIONAL NURSES ENCOUNTERED PATIENTS WHO USE ALTERNATIVE THERAPIES

According to Figure 6, the sample reported that they frequently encountered patients who used the following alternative therapies: prayer/spiritual healing (64.7%; n=249); support groups (59.4%; n=228); nutritional supplements (54.3%; n=209); herbal therapy (48.8%; n=188); music therapy (35.7%; n=137); massage therapy (34.5%; n=132); relaxation techniques (31.7%; n=122); therapeutic touch

(20.8%; n=80); meditation (19%; n=73); aromatherapy (10.4%; n=40) and acupuncture (5.7%; (n=22).

The therapies that were seldom encountered by nurses were found to be: relaxation techniques (49.6%; n=191); meditation (48.4%; n=186); music therapy (48.2%; n=185); massage therapy (43.9%; n=168); nutritional supplements (38.4%; n=148); therapeutic touch (38.2%; n=147); aromatherapy (36%; n=138); acupuncture (35.7%; n=137); support groups (34.9%; n=134); herbal therapy (33.5%; n=129) and prayer/spiritual healing (31.2%; n=120).

The alternative therapies that were never encountered were reported as follows: acupuncture (58.6%; n=225); aromatherapy (53.5%; n=205); therapeutic touch (41%; n=158); meditation (32.6%; n=125); massage therapy (21.7%; n=83); relaxation techniques (18.7%; n=72); herbal therapy (17.7%; n=68); music therapy (16.1%; n=62); nutritional supplements (7.3%; n=28); support groups (5.7%; n=22) and prayer/spiritual healing (4.2%;n=16).

SECTION E

This section deals with the professional nurses views about the effectiveness of alternative therapies used in nursing care. It also explored the professional nurses' views about which individuals are responsible for providing information on alternative therapies.

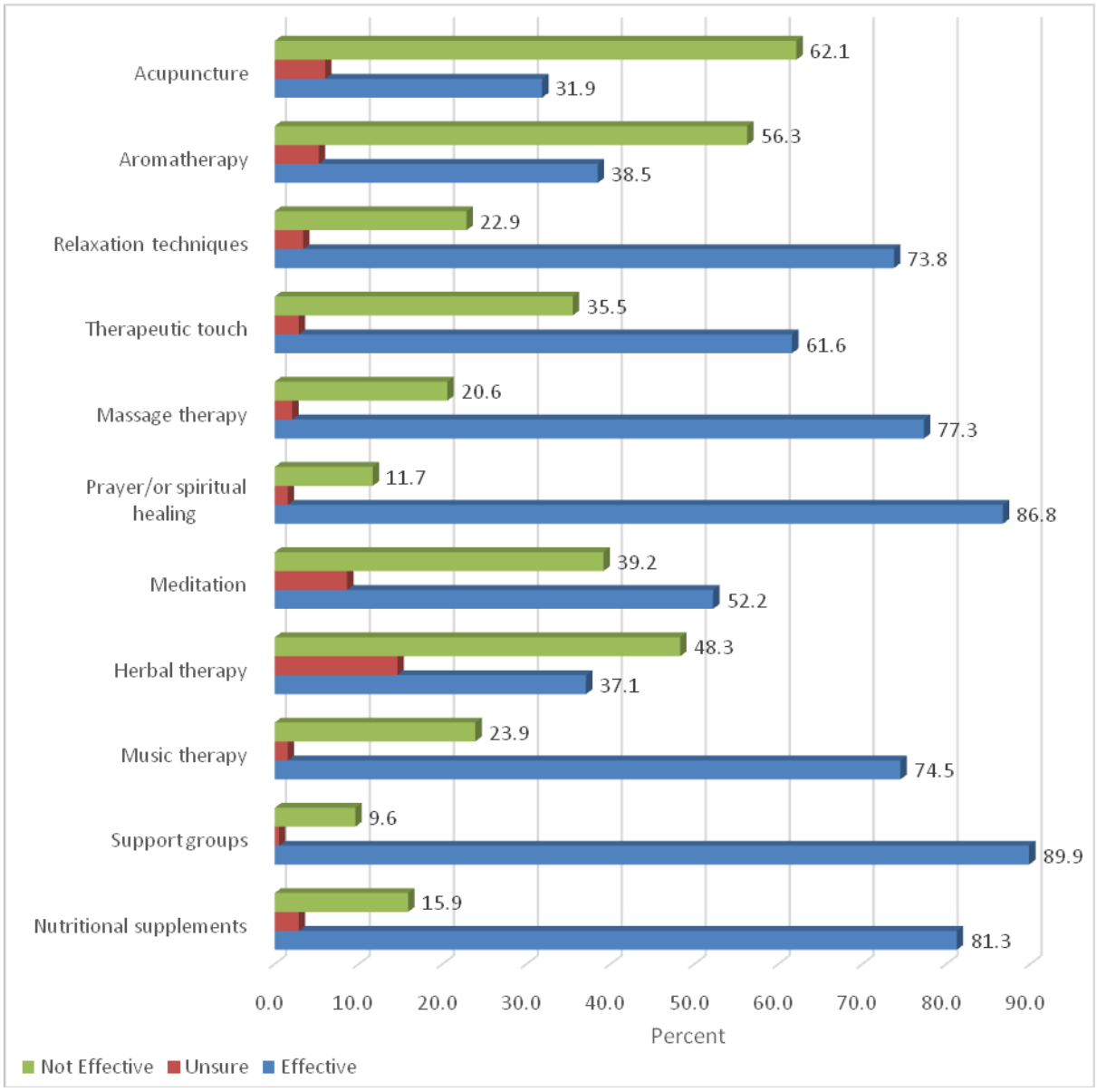

Figure 7: Views about the effectiveness of alternative therapy used in nursing care

4.9 VIEWS ABOUT THE EFFICACY OF ALTERNATIVE THERAPIES USED IN NURSING CARE

The study also explored the views of professional nurses with regards to the efficacy of alternative therapies used in nursing care. They were asked to select either ‘effective’, ‘not effective’ or ‘unsure’, to provide their views about the efficacy of the therapies used.

Participants viewed the following alternative therapies to be effective: support groups (89.9%; n=346); prayer/spiritual healing (86.8%; n=334); nutritional supplements (81.3%; n=312); massage therapy (77.3%; n=279); music therapy (74.5%; n=287); relaxation techniques (73.8%; n=284); therapeutic touch (61.6%; n=236); meditation (52.2%; n=200); aromatherapy (38.5%; n=147);herbal therapy (37.1%; n=142) and acupuncture (31.9%; n=122).

The following therapies were viewed to be ineffective : acupuncture (62.1%; n=238); aromatherapy (56.3%; n=215); herbal therapy (48.3%; n=185);meditation (39.2%; n=150); therapeutic touch (35.5%; n=136); music therapy (23.9%; n=92); relaxation techniques (22.9%; n=88); massage therapy (20.6%; n=79); nutritional supplements (15.9%; n=61); prayer/spiritual healing (11.7%; n=51) and support groups (9.6%; n=37).

Some participants were unsure about the effectiveness of the following alternative therapies : herbal therapies (14.5%; n=56); meditation (8.5%; n=33); acupuncture (6%; n=23); aromatherapy (5.2%; n=20); relaxation therapy (3.4%; n=13); therapeutic touch (2.8%; n=11); nutritional supplements (2.8%; n=11);massage therapy (2.1%; n=8); prayer/spiritual healing (1.6%; n=6); music therapy (1.6%; n=6) and support groups (0.5%; n=2).

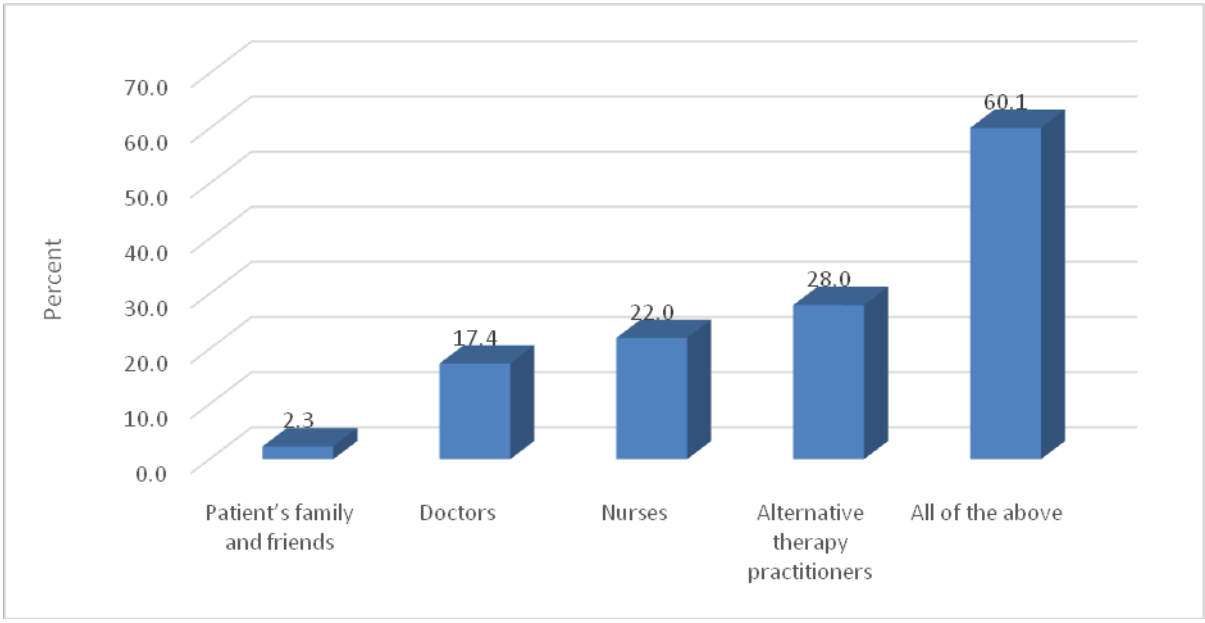

Figure 8: Individuals responsible for providing information on alternative therapies

4.9.1 Professional nurses' views on who is responsible for providing information regarding alternative therapies

Multiple options were provided for this question. There were varied responses as to who professional nurses thought was responsible for providing information to patients regarding alternative therapy. Exactly 28% (n=108) of the sample viewed alternative therapy practitioners to be responsible for the dissemination of information about these therapies. A smaller portion of the sample viz. 22% (n=85), thought that nurses and 17.4 % (n=67) thought that doctors should be responsible. Only 2.3% (n=9) felt it should be the patient's family and friends who should provide information regarding alternative therapies.

Table 8 reflects the results for the question: "In your nursing practice, have you ever encountered a patient(s) who has enquired about alternative therapies?" and "If YES, How often?"

Table 7: Frequency of which patients enquire about alternative therapy

In your nursing practice, have you ever encountered a patient(s) who has enquired about alternative therapy/therapies?	Frequently	Seldom	Never
If 'YES', How often? Total 97.3% (n=254)	28.4% (n=74)	69.0% (n=180)	0.0%
'NO' Total 2.7% (n=7)	0.0% (n=0)	0.4% (n=1)	2.3% (n=6)

4.9.2 Frequency with which patients enquire about alternative therapy

Participants were questioned about the frequency with which they encountered patients who enquired about alternative therapies. About 97% (n=254) did encounter patients in nursing practice who enquired about alternative therapies. Almost 70% (n=180) of the sample stated that patients seldom enquired about alternative therapies. About 30% (n=74) stated that they had frequently encountered patients who enquired about alternative therapies. Only 2.3% (n=6) of the participants reported never having encountered a patient who enquired about alternative therapies.

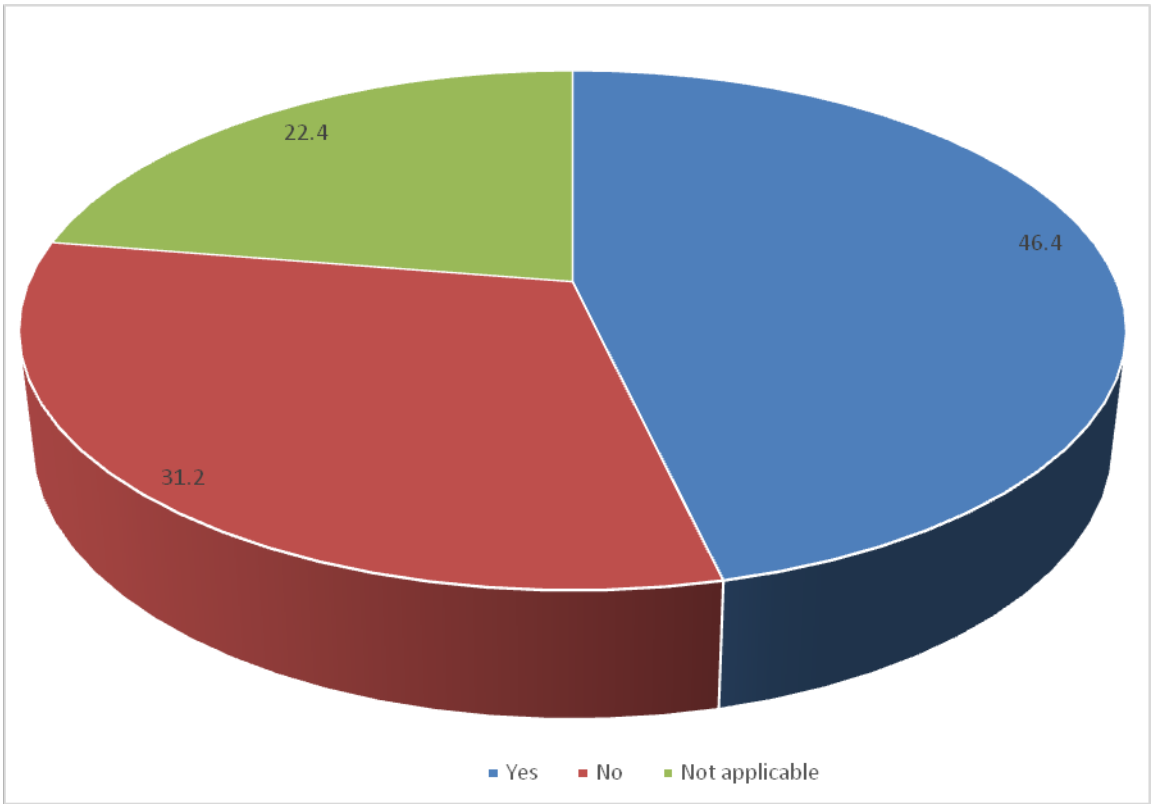

Figure 9: The ability to confidently advise patients on alternative therapies

2.9.3 Ability of professional nurses to advise patients about alternative therapies

Those participants that encountered patients, who enquired about alternative therapies, were further questioned about their ability to advise patients about alternative therapies. Approximately half of the sample (50 %; n=153) indicated that they could offer proper advice pertaining to alternative therapies. Almost a third of the nurses (n=103) stated that they were not able to confidently advise patients about alternative therapies.

SECTION F

4.10 ALTERNATIVE THERAPIES IN NURSING EDUCATION

This section deals with the frequency with which alternative therapies were included in professional nurses training, as well as their level of satisfaction with the training or information received.

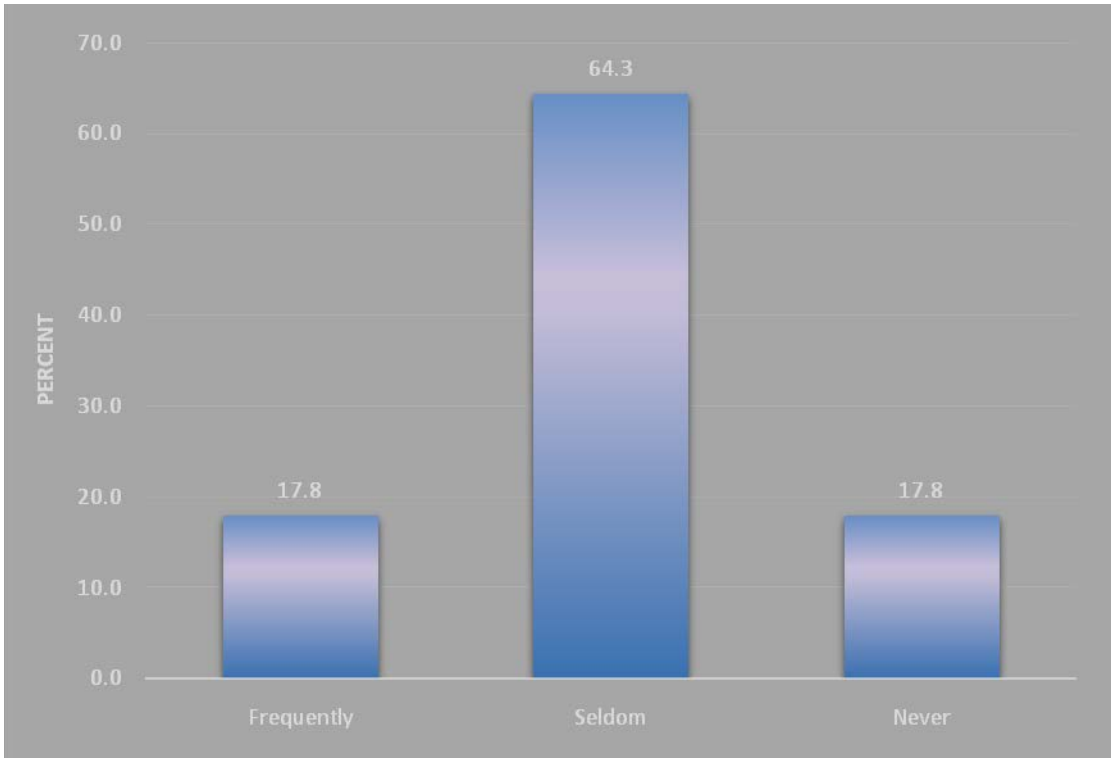

Figure 10: The frequency of which alternative therapy is included in nursing education

4.10.1 The frequency with which alternative therapies is included in nursing education

Only 17.8% (n=68) of the sample indicated that alternative therapies was frequently included in nursing education. Almost 65% (n=245) reported that these therapies were seldom included, whilst 18% (n=68) stated that it was never included in nursing education.

Table 8: Level of satisfaction of the inclusion of alternative therapies in nursing education

Alternative therapy	Satisfied	Neutral	Dissatisfied
Acupuncture	10.5 (n=40)	28.9 (n=110)	60.6 (n=231)
Aromatherapy	16.6 (n=63)	27.7 (n=105)	55.7 (n=211)
Relaxation techniques	54.6 (n=208)	24.1 (n=92)	21.3 (n=81)
Therapeutic touch	39.9 (n=152)	26.5 (n=101)	33.6 (n=128)
Massage therapy	56.7 (n=216)	26.0 (n=99)	17.3 (n=68)
Prayer/spiritual healing	71.1 (n=271)	19.4 (n=74)	9.4 (n=36)
Meditation	52.6 (n=200)	27.4 (n=104)	20.0 (n=76)
Herbal therapy	37.5 (n=142)	30.6 (n=116)	31.9 (n=121)
Music therapy	57.9 (n=220)	26.3 (n=100)	15.8 (n=60)
Support groups	80.3 (n=306)	11.3 (n=43)	8.4 (n=32)
Nutritional supplements	71.7 (n=273)	17.6 (n=67)	10.8 (n=41)

4.10.2 Level of satisfaction with information received in respect of alternative therapies in nursing education

Participants were asked to rate their levels of satisfaction with the information received on alternative therapies in nursing education. Table 9 reflects the findings made. It was revealed that the sample was satisfied with information received in respect of the following therapies: support groups (80.3%; n=306); nutritional supplements (71.7%; n=273); prayer/spiritual healing (71.1%; n=271); music therapy (57.9%; n=220); massage therapy (56.7%; n=216); relaxation techniques (54.6%; n=208); meditation (52.6%; n=200); therapeutic touch (39.9%; n=152); herbal therapy (37.5%; n=142); aromatherapy (16.6%; n=63) and acupuncture (10.5%; n=40).

Participants stated that they were dissatisfied with the information received during education and training with regard to the following alternative therapies: acupuncture (60.6%; n=231); aromatherapy (55.7%; n=211); therapeutic touch (33.6%; n=128); herbal therapy (31.9%; n=121); relaxation techniques (21.3%; n=81); meditation (20%; n=76); massage therapy (17.3%; n=68); music therapy (15.8%; n=60); nutritional supplements (10.8%; n=41); prayer/spiritual healing (9.4%; n=36) and support groups (8.4%; n=32).

Table 9: Training courses/workshops attended since qualifying

Therapy	Frequency (n)
Group therapy	1
Music therapy	4
Play therapy	1
Psychiatric nursing	2
Relaxation	11
Support groups	12
Meditation	2
Spiritual healing and prayer	2
Advanced Psychiatric nursing	2
Nutritional supplements	2

4.10.3 Alternative therapy training courses or workshops attended post qualification

The study investigated the extent to which professional nurses attended training courses or workshops on alternative therapies, post their nursing qualification. About 82% (n=320) stated that they did not attend any form/s of training or workshops.

Very few were found to have attended training courses or workshops. Table 10 reflects the therapies covered. Relaxation, support groups, psychiatric nursing course and music therapy appears to be some of the more commonly mentioned therapies. About 12% (n=48) of the participants who did attend the courses mentioned above, stated that these courses enhanced their knowledge and skills to meet their patient's needs regarding alternative therapies.

4.10.4 Therapies which should be included in nursing education

Participants were asked about which types of alternative therapies they thought should be included in nursing education. Overall, about 73% (n=281) recommended that all the alternative therapies mentioned in the study were important enough to be included in nursing education. About 21% (n=81) recommended that all eleven therapies be included in nursing education. Individually they supported the following therapies for inclusion: relaxation techniques (20.4%, n=79); support groups (18.6%; n=72); prayer/spiritual healing (17.3%; n=67); nutritional supplements (12.4%; n=48); massage therapy (12.1%; n=47); music therapy (11.9%; n=46); therapeutic touch (10.3%; n=40); meditation (9.5%; n=37); aromatherapy (8%;n=37) and acupuncture (6.2%, n=24).

4.10.5 Other forms of alternative therapies that were included in the nursing curriculum

Professional nurses were asked about other forms of alternative therapies that were included in nursing education which was not reflected in the study. A small percentage mentioned the following therapies: chiropractor, kangaroo care,

narrative therapy, reflexology, milan family therapy, cognitive behaviour therapy (CBT), and cannabis for chronic pain, traditional healers, hypnosis and psychology.

SECTION G

This section focuses on the barriers that professional nurses are faced with regarding the use of alternative therapies in the nursing practice setting. A five point Likert scale was used, which ranged from 1=strongly agree to 5=strongly disagree. It was observed that the levels of agreement were greater than those for disagreement for all statements on the scale.

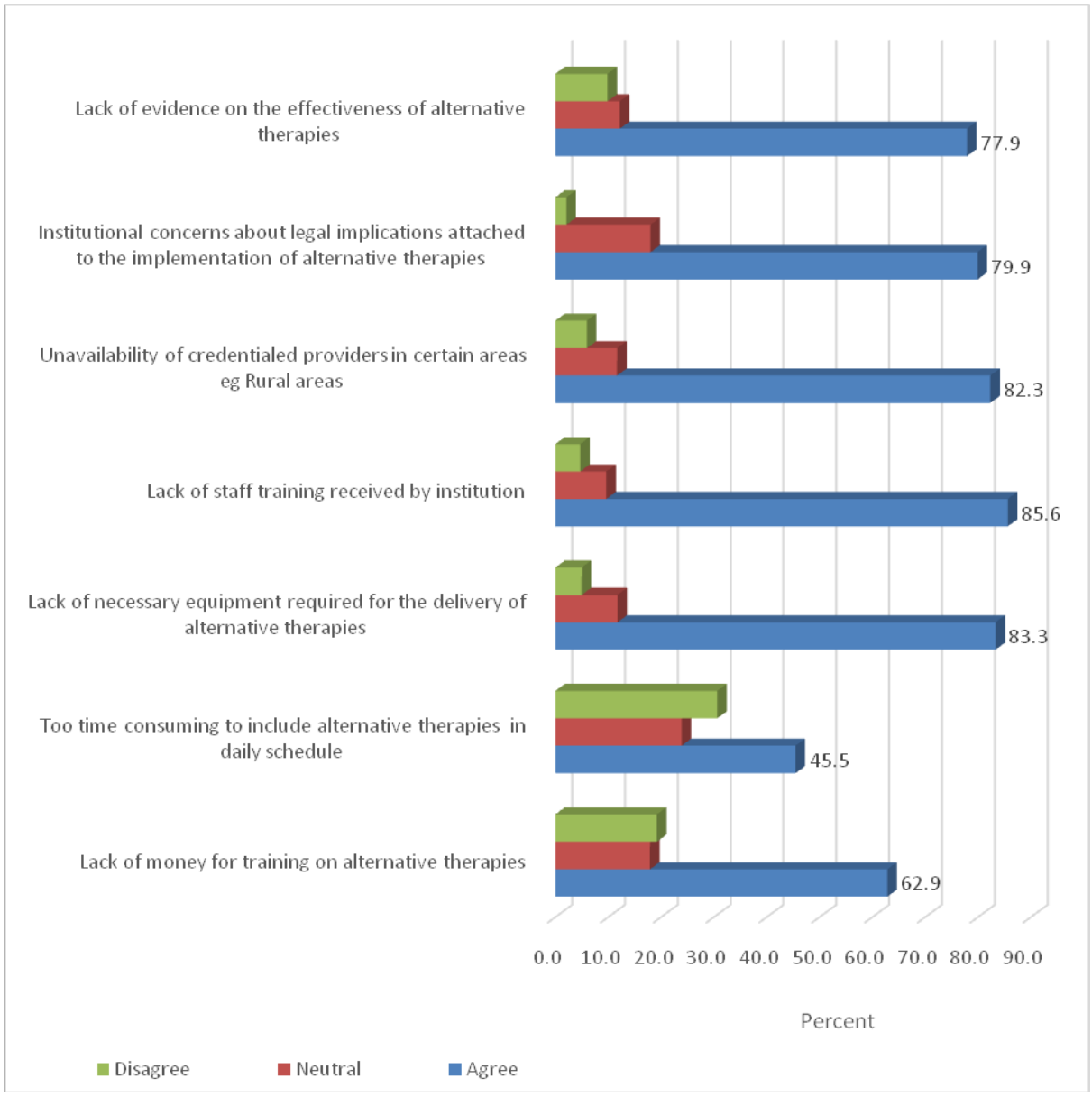

Figure 11: Barriers to the use of alternative therapy

4.11 BARRIERS TO THE USE OF ALTERNATIVE THERAPIES IN THE NURSING PRACTICE SETTING

The sample was asked about the potential barriers that they faced regarding the use of alternative therapies in the practical setting. The results are reflected in Figure 11. Almost 86% (n=328) believed that there was a lack of current training with regards to alternative therapies received by their places of work. In addition, 82.3% (n=317) were in agreement that there was a lack of credentialed alternative therapy providers available in the rural areas. Almost 80% (n=306) felt that one of the potential barriers was institutional concerns, regarding the legal implications associated with the use of alternative therapies.

A further 83.3% (n=319) stated that there was a lack of necessary equipment available for the implementation of alternative therapies in the clinical setting. Almost 80% (n=300) agreed that there was a lack of evidence regarding the effectiveness of alternative therapies. More than 60% (n=242) agreed that there was a lack of money for training regarding alternative therapies, whilst just over 45% (n=175) thought it was time consuming to include alternative therapies into their daily schedule.

4.11.1 Comments from respondents regarding the use of alternative therapies in the nursing practice setting

Participants were asked to comment on any other issues that they thought had impacted on the use of alternative therapies in nursing practice. There were many common comments regarding this. The following statements reflect the themes on the data:

"Alternative therapy is needed in nursing practice."
"Alternative therapy could be beneficial to patient's recovery."
"Alternative therapy should be included in present curriculum."
"Alternative therapy not emphasized in nursing practice."
"Barriers can be overcome by changing the attitudes of hospital authorities to prompt change."

“Budget to be included in training and development.”

“Lack of advice and evidence on the effectiveness of alternative therapy.”

“Lack of money and necessary equipment.”

“More emphasis should be placed on alternative therapy in nursing.”

“Nursing staff should have knowledge about alternative therapy.”

“This is not a nurse’s expectancy.”

“There is no time to offer alternative therapy. Qualified professionals should be employed.”

“These therapies have not been available to the black community and are not aware of the benefits. Cultural beliefs and lack of knowledge coupled with trained staff personnel and funding.”

“Wards are too busy to include in routine.”

4.12 CONCLUSION

This chapter included the presentation of the data obtained using a survey questionnaire on alternative therapies. The Chi square test was performed to determine whether there was a statistically significant relationship between the variables. Various graphs and tables were used to present data collected. The final chapter presents a discussion of the results.

CHAPTER 5
DISCUSSION OF FINDINGS AND CONCLUSION

5.1 INTRODUCTION

A discussion of the findings, conclusions and limitations of the study is presented in this chapter. Recommendations for further research are also made.

5.2 BIOGRAPHICAL DATA AND PROFESSIONAL BACKGROUND

5.2.1 Age and gender

About 60% (n=242) of the sample was found to be between the ages of 20-40 years. About 80% (n=310) of the sample was represented by females. This shows that nursing is largely dominated by females. This reiterates the notion that nursing is a caring profession affiliated with women (Lu 2008; Johnson, Green and Maben 2013; Mcintosh, Munro and McQuaid 2014). Males are reluctant to enter into the nursing profession generally, as they feel that they are not openly accepted into a female dominated field (O' Brien, Mooney and Glacken 2008: 1847). Gender stereotyping has been reported as having the potential to limit the development of males in the nursing profession. In addition male nurses are faced with many barriers from the general public as well as patients and colleagues to prove themselves, in the nursing profession (Abdel El-Halem, El-Hawashy, Gamal El-Dein and Taha 2011: 614).

5.2.2 Racial composition

More than 60% (n=237) of the participants were African. This reflects the racial profile of South Africa, where Africans are the majority. According to the Census (2011), the racial distribution of people in South Africa is African (79.2%), Whites (8.9%), Coloureds (8.9%) and Indian (2.5%). The racial distribution of people in KZN is Blacks (86.8%), Whites (4.2%), Coloureds (1.4%), Indians (7.4%) and others 0.3% (Statistics South Africa: 2012).

Black Economic Empowerment was enforced by the current South African Government in order to overcome apartheid and includes those who have been previously disadvantaged in trade and industry (Kruger 2011: 207). This also accounts for the large percentage of the African race group, as more blacks have been recruited into nursing compared to the other race groups.

5.2.3 Years of experience in nursing practice

About 44.6% (n=172) of the sample have between 10-20 years of experience in nursing practice. This is indicative of a sample with strong knowledge, skills and experience to be able to comment effectively on alternative therapies in nursing practice. Clinical experience is a vital part of nursing education. Nurses are able to integrate their theoretical knowledge with that of clinical experience. The greater the clinical exposure, the more confident and knowledgeable the nurse becomes.

5.3 PERSONAL USE OF ALTERNATIVE THERAPIES

The data reflected that alternative therapies were extensively used by professional nurses, with some therapies being more popular than others. The findings regarding high personal use of alternative therapies, are consistent with previous studies (Wallis, Peerson, Young, Parkinson and Grant 2004; Shorofi and Arbon 2010; Samuels, Zisk-Rony, Singer, Dulitzky, Mankuta, Shuval and Oberbaum 2010). The most frequently used therapies were as follows: prayer/spiritual healing, nutritional supplements, music therapy, massage therapy, and support groups. It is possible that these therapies were more popular amongst nurses, as they are easily accessible and are also covered by most medical aid schemes in South Africa. According to the Allied Health Professions Act, ten treatment modalities were initially registered (Gqaleni 2007: 179). These included, Ayurveda, traditional Chinese Medicine, Osteopathy, Chiropractic, Homeopathy, Naturopathy, Phytotherapy and the three therapeutic professions of Aromatherapy, Massage Therapy and Reflexology. Provisions were made to this Act to accommodate other modalities that may require registration at a later date (Gqaleni 2007: 179).

Johnson, Ward, Knutson and Sendelbach (2012: 220) revealed that the personal use of CAM by healthcare workers in USA was significantly higher than that of the average working person. It was further reported that the high personal use of CAM by health care workers could have possibly influenced the integration of CAM into conventional medicine. These results were consistent with two Australian studies where massage therapy, music therapy, prayer/spiritual healing were also found to be the six most commonly used therapies amongst nurses (Shorofi and Arbon 2010 and Cooke, Mitchell, Tiralongo and Murfield 2012). Other international studies revealed similar trends. Another study conducted by Xue, Zhang, Holroyd, and Suen (2008: 110) with student nurses in Hong Kong, found that 80% of nurses had personally used at least one form of alternative therapy. Nurse midwives in Israel were also found to be making use of CAM and support its use. They also were in agreement with the basic tenets of CAM, such as the existence of energy forces and the integration of health beliefs and values into their care (Samuels et al. 2010: 341).

With the current sample, it was found that nurses had personally used those therapies which they reported having had adequate knowledge on. Almost 65% (n=245) of the sample agreed that information was received during their nursing education regarding the therapies that they had personally used. These therapies were: prayer/spiritual healing, nutritional supplements, music therapy, massage therapy, and support groups. It is also possible that they were more comfortable using the above therapies as they are more commonly practiced as part of nursing care. These therapies are also gaining much popularity in the media and public use has increased as well due to the attention to their health benefits.

This result of high level of personal use of prayer is not surprising, as it is interlinked with spirituality which is deeply rooted in nursing care. Prayer and spirituality are practiced regularly in most hospitals. Some of these hospitals in the uMgungundlovu district have a chapel as well as a resident Chaplain. Both nurses and patients are free to consult the Chaplain or spend quiet time in the chapel. Nurses are well versed with the common spiritual rituals conducted by patients and relatives while in the clinical setting, especially in the African culture, when

relatives return to the ward to collect the spirit of a deceased patient. Also in the Hindu culture, a priest may be requested by relatives to perform a prayer for a dying patient. On a regular basis members of church groups are given permission by management to converse with patients, as well as sing and pray with them. Since some hospitals have made provisions for patients to practice their spiritual beliefs and cultures, it is possible that this may have influenced nurses to be more accepting of this. Further the high levels of religiosity and spirituality amongst the general public may also have led to the personal acceptance and use of prayer/spiritual healing.

Music is used globally for many therapeutic interventions. It is enjoyed by people of different backgrounds and cultures globally (Covington and Crosby: 1997; O' Kelly and Koffman: 2007; Whitehead: 2011). It would seem that this together with its emphasis in nursing education amongst the current sample, which led to a higher level of personal choice. Moreover, it is possible that they were exposed to the positive benefits of music, when used in the clinical setting by patients. Massage therapy and music therapy usually complement each other. Massage health spas are also becoming more popular these days as people are living with many stressors. Nursing is a demanding profession, with many nurses suffering from burnout (Bakker, Kilmer, Siegrist and Schaufeli: 2000; Lu: 2008; Katyal: 2013). It would appear that the fast paced and, demanding nature of the profession could have contributed to a higher personal use of massage and music therapy to de-stress. This was supported by, Katyal (2013:85) who stated that levels of stress and burnout amongst nurses was that much greater in Government Hospitals compared to Private Hospitals.

The therapies that the current sample reported that they did not use , but would consider using were as follows: aromatherapy (60.4%; n=232), relaxation techniques (53.1%; n=205), therapeutic touch (50.9%; n=196), meditation (50.4%; n=192) and support groups (43.6%; n=168). With the exception of support groups, it is possible that nurses didn’t use these other mentioned therapies as they are not offered as part of the services at Provincial Hospitals.

5.4 ALTERNATIVE THERAPIES IN NURSING PRACTICE

Professional nurses views about the inclusion of alternative therapies in nursing practice was also explored. Almost 90% (n=341) were in agreement that clinical care should include the best of both conventional and alternative therapies. About three quarters of the sample (75.3%; n= 290) felt that alternative therapies hold promise for the treatment of symptoms, conditions and diseases and nursing care specifically. Similar findings were made in a Kuwaiti study with nurses, where about a third of the sample (61.6%; n=236) also agreed that CAM does have a positive impact on the treatment of diseases (Awad et al. 2012: 353). The positive attitudes of this sample towards the use of alternative therapies in nursing practice, implies that professional nurses do encounter patients who require and are willing to use these therapies. This is perhaps due to nurses witnessing the therapeutic benefits of alternative therapies amongst patients who use them. In a more recent study done in South Africa, it was found that herbal and traditional medicine was helpful and can be used in treating an array of illnesses that conventional medicines have failed to treat as desired. It was estimated that the trade in traditional and herbal medicines in SA, is worth R2.9 billion a year, with about 27 million consumers (Mander, Ntuli, Diederichs and Mavundla 2008: 189).

In the current study, almost 60% (n=229) of the sample agreed that alternative therapies which were not tested in a scientific manner should be discouraged from use in nursing practice. The conventional notion of modern medicine being more effective than alternative therapies may have contributed to this. More than 80% (n=313) of the sample thought that health professionals should have the ability to advise patients in the clinical setting, about the commonly used alternative therapies. This indicates that they support the need for nurses to be competent to advise patients about CAM and its benefits. Booth-Laforce et al. (2010: 297) supported this notion saying that nurses should have adequate knowledge about CAM, as they should be able to safely advise about CAM in nursing practice. In the current study, just over 70% (n=272) of the participants felt that alternative therapies were beneficial, rather than a threat to patient's health.

In fact Somani, Ali, Ali and Lalani (2014: 45) who investigated the use of complementary and alternative medicine in oncology nursing reported that almost 80% of the nurses in their study had a positive attitude towards the implementation of alternative therapies in the clinical setting. They also found that 80% of their sample had reported that they should be able to advise their patients about the commonly used therapies in nursing practice. In order for this to happen it is critical that alternative therapies be introduced into nursing education. About 73% believed that if alternative therapies were regulated by the law and was supported by other health care professionals, that it would be easier to integrate these therapies into nursing practice. This however is dependent on nursing educators preparing students to be exposed to the full realm of alternative therapies and ensuring their competence to advise effectively on their benefits, risks and to make appropriate referrals to alternative therapy practitioners where appropriate.

Further support for the introduction of CAM into nursing education can be found in a study by Hassan, Allam, Al Kindi, Abu Zeibah, Eziada and Bahir (2014: 4). Their study with oncology nurses revealed that nurses felt strongly about the integration of CAM in nursing care, as it assists in the improvement of psychological and emotional well-being of patients as well as their quality of life. About 95% believed that complementary and alternative therapies were helpful to patients and just over 85% thought that CAM was safe to use in nursing practice and with patients. Comprehensive quality and holistic care requires however that nurses have professional preparation in deciding if and when to provide advice regarding the use of alternative therapies in nursing practice. Furthermore they should be aware of the positive and negative impacts of alternative therapy in order to maximise its use. (Fouladbakhsh, Stommel, Given and Given: 2005; Mariano 2007; Lindquist et al 2014). More importantly they should be able to ensure that patient care and well being is not compromised. The latter also hinges on careful consideration for whether it falls within the realm of professional practice and how. Regardless of whichever therapy is being suggested careful consideration must be given to upholding the ethical aspects that govern nursing care.

5.5 THE FREQUENCY WITH WHICH PROFESSIONAL NURSES ENCOUNTERED PATIENTS WHO USED ALTERNATIVE THERAPIES

The data revealed that, nurses in the clinical setting frequently encountered patients who used the following alternative therapies frequently: prayer/spiritual healing, nutritional supplements, herbal therapy, music therapy and relaxation techniques. This result is consistent with other studies where alternative therapies were found to be used frequently by the general public (Chu and Wallis 2006; Erci 2007; Yom and Lee 2008; Hassan et al. 2012). With the obvious increase in public and patient use of CAT, it is important that nurses who will encounter these patients are in a position to manage CAM as part of holistic nursing care. Nurses constitute one of the largest groups of health care workers that patients have constant contact with, when in hospital and at PHC. This reinforces earlier arguments that nurses are well informed regarding CAT (Burman 2003; Chu and Wallis 2007). Since the use of alternative therapies amongst patients has been reportedly high, as is evident in multiple research studies (Joos, Musselmann and Szecseyi 2011: 3; Frass, Strassl, Mullner, Kundi and Kaye 2012: 53), open communication between patients and nurses regarding alternative therapies as part of holistic nurse care is imperative (Singh et al. 2004; Peltzer, Friend-du Preez, Ramlagan and Fomundam 2008; Shelley, Sussman, Williams, Segal and Crabtree 2009).

The study found that there were several therapies that were never encountered in clinical care. This included acupuncture (58.6%), aromatherapy (53.5%) and therapeutic touch (41%). This could be due to the fact that acupuncture and aromatherapy are therapies that are offered by specialised, trained individuals, who are usually affiliated with medical aids. Aromatherapy is generally offered by Somatologists and acupuncture is still a relatively unknown treatment modality in South Africa as opposed to abroad. Therapeutic touch however is taught as part of therapeutic communication skills in the psychiatric nursing modules in the four year comprehensive nursing course as well as the one year psychiatric nursing diploma. Therefore, nurses may already be using therapeutic touch without

considering it a specialized service. Hence it may already be subsumed in practice and not seen as a discrete activity.

5.6 VIEWS ABOUT THE EFFICACY OF ALTERNATIVE THERAPIES IN NURSING CARE

According to Curtis (2004:1), the safety and effectiveness of CAM should not be examined in isolation to conventional medicine. Just as medical errors occur in conventional medicine, so too are there safety issues with the use of CAM. He discussed further that the negative effects associated with the use of CAM are relatively less frequent, to the number of deaths caused by medical mishaps. Ernst (2005: 547) rightfully stated that its high popularity and use does not necessarily prove the efficacy of alternative therapies.

In South Africa, complementary and alternative therapies was found to be mostly used in HIV/AIDS related illness and tuberculosis (Bodkin 2003; Malangu 2007; Mbutho, Gqaleni and Korporaal 2012), with herbal therapies being one of the most popular forms of alternative therapies used (Mander, Ntuli, Diederichs and Mavundla 2007; Hughes, Aboyade, Clark and Puoane 2013). Truant, Porcini, Ross, Wong and Hilario (2013) who investigated the use of complementary and alternative therapies with patients who had advanced cancer indicated that p patients believed that CAM was effective in the following ways: (1) CAM could possible help to cure their cancer by shrinking the tumour; (2) they felt that CAM could help to improve their general well-being and quality of life; and (3) patients believed spirituality was associated with a cure for cancer.

Professional nurses in the current study viewed the following therapies to be highly effective in the clinical setting; prayer/spiritual healing, nutritional supplements, massage therapy, music therapy and relaxation techniques. These therapies were also personally used extensively by professional nurses. It would appear that the personal use by nurses of the above mentioned therapies had a direct relationship support for its effectiveness. Nurses knowledge of the effectiveness of alternative therapies is important, as stated earlier particularly

since patients may bring this up in clinical care and so as to offer appropriate health education regarding interactions that may occur, if used with conventional medicine (Raynor, Dickenson, Knapp, Long and Nicolson 2011; Siponen, Ahonen, Kettis and Hameen-Anttila 2012).

Other studies have made similar findings. For example Chu and Wallis (2007: 1375) reported that 94.1% of nurses supported the use of CAM. They thought the following therapies were beneficial to patients in clinical practice: massage therapy (93%), relaxation techniques (87.7%), music therapy (87.7%), aromatherapy (78.2%), acupuncture (70.5%), meditation (55.3%) and therapeutic touch (54.7%). Although they supported the use of the above therapies, they remained unsure of the effectiveness of the following therapies: homeopathy (69.4%), osteopathy (68.2%), colour therapy (57.1%), Feng Shui (56.5%) and hypnotherapy (53%).

Holroyd, Zhang, Suen and Xue (2008) investigated the beliefs and attitudes towards complementary medicine among registered nurses in Hong Kong. Almost 72% of nurses believed that CAM should be integrated into mainstream conventional medicine. With regards to safety and efficacy, nurses agreed that CAM should not be taken together with conventional western medicine. About 95% of the nurses thought that CAM was highly effective in the treatment of symptoms of illnesses.

Fairfield, Eisenberg, Davis, Libman and Phillips (1998: 2260) found that HIV infected patients had supported the use of CAM as they found certain therapies to be effective in substantially improving their related conditions. More recently, a sample of HIV positive patients (n=325) were involved in a study by Hassan, See, Choong, Ahmed, Ahmadi and Anwar (2010: 1173) to determine the effectiveness of CAM. About 13.8% reported that they attributed their good health to the use of CAM and 40% found CAM to be effective in the improvement of their health. They added that they did not find a decline in their condition after the use of CAM.

5.6.1 Responsibility for providing information regarding alternative therapies

The data revealed differences amongst those who nurses thought should be responsible for providing information about alternative therapies. Almost a third (n=108) of the sample agreed that it was the responsibility of alternative therapy practitioners to disseminate this information. About 20% (n=85) thought that it should be nurses and just below 20% (n=67) said it should be doctors. The fact that nurses did not see it as part of nurse's duty to provide such information may be related to the fact that CAM is not currently included in nursing education extensively and nurses may feel underprepared to deal with such issues. The fact that patients and the public do use such approaches extensively however requires some professional preparation to deal with it as part of nursing care. Other studies such as those by

Frawley, Sibbritt, Adams, Steel, Wardle, Broom, Lui and Murthy (2012: 065) reflect similar findings where obstetricians (25.8%), general practitioners (14.4%) and alternative health practitioners (14.3%) were the patient's sources of information on CAM. They had also sourced information from friends, family, the internet and magazines. Another study done in Malaysia with 505 pharmacy students reported that their sources of information for alternative therapies was the internet (69%), family and friends (63%), the media (61%), alternative practitioners (53%) and healthcare providers (51%). Only 27% of students revealed that they obtained information on CAM through formal training (Hasan, Yong, Babar, Naing, Hameed, Baig, Iqbal and Kairuz 2011: 1175).

5.6.2 Frequency with which patients enquired about alternative therapies from nurses

Multiple studies have shown a high usage of alternative therapies by the general public (Kessler, Davis, Foster, Van Rompay, Walters, Wilkey, Kaptchuk and Eisenberg 2001; Wells, Bertisch, Buettner, Phillips and McCarthy 2011; Junaid, Abaas, Fatima, Anis, Hussain 2012). In the current study, only about 60% (n=254)

of the sample stated that they had encountered patients who enquired about alternative therapies. This supports the need for nurses to be prepared to be aware of the different types of Cam, its benefits and risks and integration within nursing care. In fact 30% (n=74) of professional nurses reported that patients had enquired frequently about alternative therapies.

This however must be seen against findings such as those made by Fennell, Liberato and Zsembik (2009: 75) who reported that in their study, patients had expressed that they had waited for the health care practitioner to ask them about the use of any forms of alternative therapies, otherwise they generally would not reveal their use of CAM. It is possible that patients sometimes may feel that their use of and belief in CAM may not be supported within the context of conventional medicine and hence be reluctant to discuss it with nurses It is also possible that the extent to which patients use CAM may be under detected in the SA context for this reason, and the fact that patients do not see it as part of a nurse's role. It is important then that nurses enquire from patients about whether they are using such therapies to support their health and recovery.

The need for same can be seen in studies such as those done by Singh, Raidoo and Harris (2004). They conducted interviews with 200 patients in the Indian community and found the prevalence of CAM usage to be 38.5%. Spiritual healing and herbal/ natural medicines, including vitamins were the most common types of CAM used, accounting for 42.8% and 48.1% respectively of overall usage. Alternative therapies were used to treat conditions such as hypertension and nasal disorders. It was interesting that 54 % of this sample did not inform their doctors of their use of CAM, as they not deem it necessary to do so.

5.6.3 The ability of professional nurses to confidently advise patients on alternative therapies

Only about 40% (n=153) of the current sample, they confident to advise their patients regarding alternative therapies. This inability to confidently advise may be due to a due to a lack of knowledge of alternative therapies and in particular the

fact that it is missing in the nursing curriculum. This notion is supported in other studies where nurses knowledge of complementary and alternative therapies was found to be limited or insufficient (Mitchell 2014; Warriner, Bryan and Brown 2014 and Somani, Ali, Ali, Lalani 2014).

Pillay (2013: 106) investigated the knowledge, attitudes and perceptions of PHC nurses regarding the inclusion of homeopathy in nursing. She argued that since nurses are usually the first contact that patients have, it is important that they have some basic knowledge about CAM so that correct information is disseminated. The personal use and knowledge of complementary and alternative medicine by of health educators from medical care facilities, colleges, universities as well as public and private schools was also studied. A significant difference in the basic knowledge of CAM between participants with a doctoral degree and those with a Bachelors degree was found. A correlation was also found between the levels of education and experience. Hence basic programmes should be offered to those with lower qualifications to equip them with relevant knowledge about CAM (Johnson, Priestley and Johnson 2008: 75).

5.7 ALTERNATIVE THERAPIES IN NURSING EDUCATION

About 65% (n=245) of the sample stated that alternative therapies were seldom included in nursing education indicating a significant void in nursing education. In fact about 20 % (n=68) supported this saying it was never included in their nursing education. Some nursing schools and colleges abroad have been including CAM into their nursing courses dues to the high demand by the public, although these courses are usually optional (Fenton and Morris 2003; Sok, Erlen, and Kim 2004; Dayhew, Wilkinson and Simpson 2009). In South Africa however, a more concerted effort to introduce this subject content into education must be made. This was supported in a study by Brolinson, Price, Ditmeyer and Reis (2001: 188), where only one in four nurses had received information on alternative therapies from their nursing curriculum. In Australia Cetinkaya, Dündar, and Azak (2013: 9) also found that almost 97% of nurses in their study had no formal training on prayer/spiritual healing. The latter is a form of alternative therapy.

Support for the introduction of CAM into education was found in the literature. In a study conducted with nursing faculty and students, more than 50% of the faculty were found to strongly support the integration of CAM programmes into their curriculum. With the student nurses sample which was made up of undergraduate, master's and doctoral students 50% reported that CAM was part of their nursing courses. This had also drastically improved their knowledge and interest in CAM (Booth-Laforce, Scott, Heitkemper, Cornman, Lan, Bond and Swanson 2010: 296). The fact that this was found lends support for the introduction of complementary and alternative therapies into nursing education in South Africa.

Further support for this argument can be found in that 80% (n=313) of the current sample believed that it was important for nurses to be able to advise patients in the clinical context about the commonly used alternative therapies. The high frequency of its use in the general public cements then the need for its introduction and support in nursing education. Cetinkaya, Dündar, and Azak (2013: 9) investigated Australian nurses' perceptions of spirituality and spiritual care. They found that almost 97% of nurses in their study had no formal training on prayer/spiritual healing, with only 3% having attended a course in spirituality.

In fact other studies have confirmed the importance of including CAM into the nursing curriculum (Fenton and Morris 2003; King and Gates 2006; Avino 2011; Booth-Laforce et al. 2010). Scholars have mentioned that the multi-disciplinary health team, as well the health care system will ultimately benefit if nursing education bridges the gap with CAM (Dayhew et al. 2009: 45). Moreover they argued that nurses should at least receive a compulsory course on CAM to emphasize the concepts of holistic nursing care (Schutz 2005: 4).

Currently in the undergraduate and postgraduate nursing courses in South Africa, alternative therapies are included in various components of nursing, but not as a module on its own. As Dayhew et al (2009:45), asserted that in South Africa, nurse educators would have to undergo further training courses regarding alternative therapies in order to educate nurses in training.

A correlation was found between the samples' level of satisfaction with information received on CAM in education and their personal use of these therapies. Participants were most satisfied with information on support groups (80.3%; n=306), nutritional supplements (71.7%; n=273), prayer/ spiritual healing (71.1%; n= 271), and music therapy (57.9%; n=210) and they were found to also personally use these alternative therapies. Awareness perhaps of their benefits to health and well-being through education may then have influenced personal use and comfort with them. More knowledge regarding the entire realm of alternative therapies then may empower nurses to advise more confidently about same and identify those that can support recovery and health of the patients in their care.

Participants were dissatisfied with the information on the following therapies: acupuncture (63.3%; n=231), and aromatherapy (55.7%; n=211) reflecting a greater need for attention to these modalities. This result could be due to the fact that these therapies are fairly newer therapies as opposed to prayer/spiritual healing. Both acupuncture and aromatherapy were also found not to have been used frequently by either nurses or patients. These findings concur with Esper (2014: 29) who found that nurses did not feel comfortable recommending invasive forms of CAM such as massage therapy, relaxation therapy and yoga. Invasive procedures such as massage and acupuncture can raise ethical issues and create a blurring of the professional nurse's role. It is important that where patients bring up such forms of treatment that they be referred to alternative practitioners for help.

Although a small portion viz 20% (n=63) of the sample thought it was necessary for all eleven therapies mentioned in this study to be included in nursing education namely acupuncture, aromatherapy, relaxation techniques, therapeutic touch, massage therapy, prayer/spiritual healing, meditation, herbal therapy, music therapy, support groups and nutritional supplements. Perhaps ambiguity with regard to whether this falls within the domain of professional practice may have led to lower levels of support despite its importance to patient health and well-being. The fact that it is not part of nursing education may have also added to a lack of support. However studies have shown the benefits of the above alternative

therapies in the treatment of a number of illnesses and diseases, viz. oncology (Hart, Freel, Haylock and Lutgendorf 2011; Garrett, Oliffe, Bottorff, Mckenzie, Han and Ogrodniczuk 2014), to treat HIV/AIDS (Littlewood and Vanable 2011; Limsatchapanich, Sillabutra and Nicharojana 2013), backache and other chronic illnesses (Armstrong, Thiebaut and Nepal 2011; Kumar, Beaton, Hughes 2013; Murray 2014).

Personal choice appears to have influenced which therapies nurses thought were important to include further in the nursing curriculum. Those therapies which nurses personally used were found to receive greater support. It has been said that the comprehensive four year nursing course is quite intensive as there is a large amount of content to cover and this may have contributed to a reluctance to indicate that alternative therapies be included into their current nursing course. An optional course or elective may be a route to begin a gradual infusion of this topic into education.

5.7.1 Courses or workshops attended on alternative therapies since qualifying as a professional nurse

A majority of the participants (82.9%; n=320) were found not to have attended any courses or workshops post qualification on CAM. A few nurses did attend some form of alternative therapy training such as group therapy, music therapy, play therapy, relaxation therapy, relaxation and music therapy, relaxation techniques, support groups, spiritual healing and prayer, nutritional supplements, and therapeutic touch. This supports an interest in its inclusion in education despite an intensive curriculum.

The lack of greater attendance at courses may be due to the fact that there is a lack of finance available at government hospitals for staff development and training. It is important then that structures to enable staff development on this topic be created to empower nurses to deal with this topic. Internationally Somani et al. (2014: 42) found that almost 25% of nurses in their study had some form of training or education and that about 30% attended conferences on CAM. Courses

and conferences may therefore be important for those already practicing professionally.

5.8 BARRIERS EXPERIENCED IN THE USE OF ALTERNATIVE THERAPIES IN THE NURSING PRACTICE SETTING

It was evident that professional nurses felt strongly regarding barriers faced in the use of AT in nursing practice. A total of 85.6% (n=328) stated that there was a huge shortage/lack of training offered to nurses by their institutions. This supports earlier discussions regarding this. About 85% (n=319) reported that there was a lack of necessary equipment required for the delivery of alternative therapies. Just more than 82% (n=317) said that there were not enough credentialed providers in certain areas, especially the rural areas. Almost 80% (n=300) said that lack of evidence on the effectiveness of alternative therapies was a huge barrier. Nearly 80% (n=306) believed that institutional concerns about legal implications attached to the implementation of alternative therapies in the clinical setting was the hugest concern. It is critical then that education includes the professional ethics aspects related to CAM. Almost half (n=175) agreed that it was time consuming to include these therapies into their daily nursing routine. Almost 63% (n=242) reported a lack of money for training on alternative therapies.

Similar results were found in an Australian study. It was reported that lack of staff training (91.8%) and lack of knowledge regarding appropriateness of CAM therapies (89.8%) were identified by nurses as barriers experienced at their institution. This was closely followed by lack of appropriate equipment (87.1%) and unavailability of credentialed providers (86.4%). About 76.4% reported lack of time as an impediment to CAM use, and 71.5% believed institutional concerns about legal issues was also a hindrance (Cooke, Mitchell, Tiralongo and Murfield 2012).

Other studies revealed other concerns which must be considered by nursing educators. Hasan et al. (2011: 4) reported that participants in their study had expressed that the lack of scientific evidence, followed by the insufficient number

of trained personnel available, the legal implications and a lack of time in the working day to implement these therapies in clinical nursing were the hugest barriers to its place in holistic nursing care. Here again nursing managers and educators will have to reflect on how to deal with these concerns related to each specific alternative therapy and begin by introducing those e.g. music therapy which do not have ethical and financial constraints.

Participants were also asked to add any further comments related to this topic. It was evident that nurses felt strongly that CAM was salient to nursing care and that it should be supported. They stated that: “Alternative therapies could be beneficial to patient’s recovery”, “Alternative therapies should be present in the nursing curriculum”, “Barriers should be addressed in order to promote holistic nursing care, nurses need to think out the box and treat their patients’ dynamically”. This captures the final conclusion that CAM has a salient role to play in nursing care and educators must prepare students to deal with the different treatments as they arise in clinical care in an ethical way.

5.9 CONCLUSION

This study found that the personal use of alternative therapies among professional nurses was high. It was also clear that they felt that the inclusion of alternative therapies in nursing practice was imperative although there were varying levels of support for each individual treatment. There was a high frequency with which patients who used of alternative therapies was encountered strengthening a need for its inclusion in education. The results of this study were consistent with many other studies conducted globally, where the salience of CAM in nursing practice and education was supported (Rojas-Cooley and Grant 2009; Booth-LaForce et al 2010; Johnson et al 2012).

5.10 LIMITATIONS OF THE STUDY

Very few South African studies were found which were specifically related to nurses on CAM. This made it difficult for comparison.

Time was also lost waiting for permission to conduct the study at some of the institutions. This delayed the data collection and analysis, which also impacted on the time frame that participants had to complete the questionnaires. Due to this, participants at one hospital accepted the questionnaires, but didn't complete them. Despite this the response rate was enough for generalization.

5.11 RECOMMENDATIONS

The following recommendations are made based on the findings of this study:
Results of this study show that professional nurses supported the use of alternative therapies in nursing practice. Further research related to alternative therapies within nursing care is necessary as it is evident that patient use of alternative therapies is high. Nurses should therefore initiate a dialogue with patients on initial contact in order to identify any alternative therapies that are used, especially if patients are using alternative therapies in conjunction with conventional medicine. If effective communication is achieved between the nurse and patient, this will improve the nurse-patient relationship and promote trust. This is an area for further research in South Africa. Open communication between nurses and patients further allows nurses the opportunity assist patients in the safe use of alternative therapies. A lack of communication between patient and nurses have been reported in many other research studies related to alternative therapies (Singh, Raidoo and Harris 2004; Limsatchapanich et al 2013; Hastings-Tolsma and Vincent 2013).

Nurses reported that information regarding alternative therapies was seldom included in nursing education. Despite the lack of formal education received in their nursing training, they believed that it was important for nurses to be able to confidently advise patients regarding alternative therapies. Further research must be done to guide nurse managers and educators on what other training courses or workshops need to be included in nurse training, in order to equip nurses with knowledge and skills on alternative therapies. Further research must also guide nursing education. Nursing education is currently in the process of being affiliated with higher education, it is recommended that modules on alternative therapies be included in the new nursing curriculum development. In order for alternative

therapies be included into the nursing curriculum. This should be based on a research inquiry.

Finally in order for nurses to assist patients who currently use alternative therapies, nurses should further their knowledge on alternative therapies. Nurses should also investigate short courses on alternative therapies to help them deal with the current patients who use these therapies as part of a holistic approach to nursing care.

REFERENCES

Abdel El-Halem, G. E., El-Hawashy, Z. I., Gamal El-Dein, A. A. and Taha, E. E. 2011. Undergraduate male nursing students' perception about the image of the nursing profession. *Journal of American Science*, 7(3): 614-623.

Abdullahi, A. A. 2011. Trends and challenges of Traditional Medicine in Africa. *African Journal of Complementary and Alternative Medicine,* 8(S): 115-123.

Adeyeye, O. O., Onadeko, B. O., Ogunleye, R. T., Bamisile, R. T. and Olubusi, A. 2011. The use of complementary and alternative medicine by asthma patients receiving care in an urban tertiary centre in Nigeria. *International Journal of Biological and Medical Research*, 2(4): 1026-1030.

Agarwal, N., Chandra, A. and Tyagi, L. K. 2011. Herbal Medicine: Alternative treatment for cancer therapy. *International Journal of Pharmaceutical Sciences and Research*, 2(9): 2249-2258.

Aghabati, N., Mohammadi, E. & Esmaiel, Z. P. 2010. The effect of therapeutic touch on pain and fatigue of cancer patients undergoing chemotherapy. *Complementary and Alternative Modalities,* 7(3): 375-381.

Ajazuddin and Saraf, S. 2012. Legal regulations of complementary and alternative medicines in different countries. *Pharmacognosy Reviews*, *6*(12): 154.

Akyol, A. D., Yildirim, Y., Toker, E., & Yavuz, B. 2011. The use of complementary and alternative medicine among chronic renal failure patients. *Journal of Clinical Nursing*, *20*(7-8): 1035-1043.

Aldrin, V. 2010. Prayer in Peasant communities: Ideals and practices of prayer in the late medieval Ecclesiastical Province of Uppsala, Sweden*. Doctor of Theology Dissertation in Religious Studies*, University of Gothenburg.

Allied Health Professions Council. Circular from the Acting Registrar of the Allied Health Professions Council of South Africa, June 2006.

Al-Rukban, M. O., Albedah, A. M. N., Khalil, M. K. M., El-Olemy, A. T., Khalil, A. A. H. and Alrashid, M. H. S. 2012. Status of complementary and alternative medicine in the curricula of health colleges in Saudi Arabia. *Complementary Therapies in Medicine*, 20: 334-339.

Amichai, T., Grossman, M. and Richard, M. 2012. Lung cancer patients' beliefs about complementary and alternative medicine in the promotion of their wellness. *European Journal of Oncology Nursing*, 16(5): 520-527.

Anand, P., Kunnumakara, A. B., Sundaram, C., Harikumar, K. B., Tharakan, S. T., Lai, O. S., Sung, B. & Aggarwal, B. B. 2008. Cancer is a preventable disease that requires major lifestyle changes. *Pharmaceutical Research,* 25(9): 2097-2116.

Ang Lee and Kaptchuk, T. J. 2011. The case of acupuncture for chronic low back pain: When efficacy and comparative effectiveness conflict. *PubMed Central,* 36(3): 181-182.

Armstrong, A., Thiebaut, S., Brown, L. and Nepal, B. 2011. Australian adults use complementary and alternative medicine in the treatment of chronic illness: A national study. *Australian and New Zealand Journal of Public Health*, 35(4): 384-390.

Aveyard, H., Sharp, P. and Woolliams, M. 2011. "A beginner's guide to critical thinking and writing in health and social care. Available www.openup.co.uk Accessed 24 April 2013.

Avino, K. 2011. Knowledge, Attitudes and practices of Nursing Faculty and students related to complementary and alternative medicine: A state wide look. *Holistic Nursing Practice*, 25(6): 280-288.

Awad, A. I., Al-Ajmi, S. and Wheedi, M. A. 2012. Knowledge, perceptions and attitudes toward complementary and alternative therapies among Kuwaiti medical and pharmacy students. *Medical Principles and Practice*, 21(4): 350-354.

Bakker, A. B., Kilmer, C. H., Siegrist, J. and Schaufeli, W. B. 2000. Effort-reward imbalance and burnout among nurses. *Journal of Advanced Nursing*, 31(4): 884-891.

Baral, S., Aryal, Y., Bhattrai, R., King, R. and Newell, J. N. 2014. The importance of providing counselling and financial support to patients receiving treatment for multi-drug resistant TB: mixed method qualitative and pilot intervention studies. *BioMed Central Public Health,* 14(46): 1-7.

Bianco, A., Mammina, C., Thomas, E., Ciulla, F., Pupella, U., Gagliardo, F., Bellafiore, M., Battaglia, G., Paoli, A. and Palma, A. 2014. Protein supplements consumption: a comparative study between the city centre and the suburbs of Palermo, Italy. *BioMed Central Sports Science, Medicine and Rehabilitation*, *6*(29): 1-5.

Bijari, B.B., Iranmanesh, S., Eshghi, F. and Banehi, M.R. 2012. Gentle Human Touch and Yakson: The effect on preterm's behavioral reactions. *International Scholarly Research Network Nursing*, 20(12): 1-6.

Birdee, G. S., Phillips, R. S. and Brown, R. 2013. Use of complementary and alternative medicine among patients with end-stage renal disease. *Evidence-Based Complementary and Alternative Medicine*: 1-6.

Blunt, E. 2003. Putting aromatherapy in practice. *Holistic Nursing Practice*, 17(6): 329.

Bodkin, C. 2008. Alternative therapies for the holistic care of the HIV/AIDS patient. *Health South Africa Gesondheid,* 8(3): 37-46.

Booth-Laforce, C., Scott, C. S., Heitkemper, M. M., Cornman, B. J., Lan, M. C., Bond, E. F. and Swanson, K. M. 2010. Complementary and alternative medicine (CAM) attitudes and competencies of nursing students and faculty: results of integrating CAM into the nursing curriculum. *Journal of Professional Nursing*, 26(5): 294-300.

Botma, Y., Greeff, M., Mulaudzi, F. M. and Wright, S. C. D. 2010. *Research in Health Sciences*. Cape Town: Pearson Education South Africa (Pty) Ltd.

Bradshaw D., Groenewald P., Laubscher R., Nannan N., Nojilana B., Norman R., Pieterse D., Schneider M., Bourne D., Timacus I., Dorrington R. and Johnson L. Initial burden of disease estimates for South Africa 2000. *South African Medical Journal* 2003; 93(9): 682- 688.

Brink, H., van der Walt, C. and van Rensburg, G. 2008. Fundamentals of research methodology for health care professionals. 2nd ed. Cape Town: Juta & Co.Pty Ltd.

Brolinson, P. G., Price, J. H., Ditmeyer, M. and Reis, D. 2001. Nurses' perceptions of complementary and alternative medical therapies. *Journal of Community Health*, 26(3): 175-187.

Buchan, S., Shakeel, M., Trinidade, A., Buchan, D. and Ah-See, K. 2012. The use of complementary and alternative medicine by nurses. *British Journal of Nursing*, 21(10): 672-675.

Burman, M. E. 2003. Complementary and alternative medicine: core competencies for family nurse practitioners. *The Journal of Nursing Education*, 42(1): 28-34.

Cehousky, J. 2002. Homoeopathy – More than a cure. [Online] Available from: http://www.alternativa.cz/book Accessed: April 20, 2013.

Cetinkaya, B., Dündar, S.A. and Azak, A. 2013. Nurses' perception of spirituality and spiritual care. *Australian Journal of Advanced Nursing*, 31(1): 1-10.

Chang, K. H., Brodie, R., Choong, M. A., Sweeney, K. J. and Kerin, M. J. 2011. Complementary and alternative medicine use in oncology: a questionnaire survey of patients and health care professionals. *BioMed Central Cancer,* 11(1): 1-196.

Cherkin, D. C., Sherman, K. J., Deyo, R. A. and Shekelle, P. G. 2003. A review of the evidence for the effectiveness, safety, and cost of acupuncture, massage therapy, and spinal manipulation for back pain. *Annals of Internal Medicine,* 138(11): 898-906.

Chitindingu, E., George, G. and Gow, J. 2014. A review of the integration of traditional, complementary and alternative medicine into the curriculum of South African medical schools. *BioMed Central Medical Education*, 14(40): 1-5.

Chu, F-Y. and Wallis, M. 2006. Taiwanese nurses' attitudes towards and use of complementary and alternative medicine in nursing practice: A cross sectional survey. *International Journal of Nursing Studies, 44(2007): 1371-1378.*

Cohen, P.A. 2014. Hazards of Hindsight – Monitoring the safety of Nutritional Supplements. *New England Journal of Medicine*, 370: 1277-1280.

Collinge, W., Macdonald, G. and Walton, T. Massage in supportive cancer care. 2012. *Seminars in Oncology Nursing*, *Elsevier*, 28(1): 45-54.

Cooke, M., Mitchell, M., Tiralongo, E. and Murfield, J. 2012. Complementary and alternative medicine and critical care nurses: A survey of knowledge and practices in Australia. *Australian Critical care*, 25(4): 213-223.

Covington, H. and Crosby, C. 1997. Music therapy as a nursing intervention. *Journal of Psychosocial Nursing and Mental Health Services*, 35(3): 34-37.

Crawford, J. and Thornton, L. 2010. Why has holistic nursing taken off in the last five years? What has changed? *Alternative Therapy Health Medicine,* 16(5): 22-24.

Curtis, P. Safety issues in complementary and alternative health care. 2004. *The convergence of Complementary, Alternative and Conventional Health Care*. 1-8.

Dayhew, M., Wilkinson, J. and Simpson, M. 2009. Complementary and alternative medicine and the search for knowledge by conventional health care practitioners. *Contemporary Nurse*, 33(1): 41-49.

Dedeli, O., and Kaptan, G. 2013. Spirituality and religion in pain and pain management. *Health Psychology Research*, *1*(3): 154-159.

Demir, M., Gulbeyaz, C. and Celek, E. 2013. Effect of Reiki on symptom management in oncology. *Asian Pacific Journal of Cancer Prevention*, 14(8): 4393-4933.

Department of Health 2014 Available http://www.kznhealth.gov.za/umgungundlovu.htm. [Accessed 15 September 2014].

DeSchepper, L. 2001. Hahnemann revisited: A textbook of classical homeopathy for the Professional. B. Jain Publishers. Available online http://www.narayana-verlag.com/ [Accessed 21 April 2014].

Du Plessis, S. 2013. A survey to determine the attitudes towards complementary and alternative medicine by users in Cape Town. Doctoral dissertation, University of Cape Town.

Econex, 2009. South Africa's Burden of Disease. Available http://www.mediclinic.co.za/about/ Documents/ECONEX%20NHI%20note%202.pdf. [Accessed 15 September 2013].

Ehrenstein, V., Christiansen, C. F., Schmidt, M. and Sorensen, H. T. 2014. Non-experimental comparative effectiveness research: How to plan and conduct a good study. *Current Epidemiology Report***,** 1-7.

Eliopoulos, C. (1999). Using complementary and alternative therapies wisely. *Geriatric Nursing*, *20*(3), 139-143.

Elliott, R., and Burkett, B. 2013. Massage therapy as an effective treatment for carpal tunnel syndrome. *Journal of Bodywork and Movement Therapies*, *17*(3): 332-338.

Emmett, D. 2014. Problems with alternative medicines in the health care setting: From nurses' experience. *Journal of Business and Economics*, 5(7): 945-950.

Engebretson, J. 1999. Alternative and complementary healing: implications for nursing. *Journal of Professional Nursing*, 15(4): 214-223.

Erci, B. 2007. Attitudes towards holistic complementary and alternative medicine: a sampe of healthy people in Turkey. *Journal of Clinical Nursing,* 16(4): 761-768.

Erkkila, J., Punkanen, M., Fachner, J., Ala- Ruona, E., Pontio, I., Tervaniemi, M., Vanhala, M. and Gold, C. 2011. Individual music therapy for depression: randomised controlled trial. *The British Journal of Psychiatry,* 199(2): 132-139.

Ernst, E. 2005. Is homeopathy a clinically valuable approach? *Trends in Pharmacological Sciences*, 26(11): 547-548.

Esper, S. M. 2014. Nurses' perceptions of the use of complementary and alternative medicine for pain management. *Master of Nursing*, Montana State University.

Fairfield, K.M., Eisenberg, D.M., Davis, R. B., Libman, H and Phillips, R.S. 1998. Patterns of use, Expenditures, and perceived efficacy of complementary and alternative therapies in HIV-infected patients. *Archive of Internal Medicine*. 158(20): 2257-2264.

Fennell, D., Liberato, A. S. Q. and Zsembik, B. 2009. Definitions and patterns of CAM use by the lay public. *Complementary Therapies in Medicine*, 17(2): 71-77.

Fenton, V. M. and Morris, D. L. 2003. The integration of holistic nursing practices and complementary and alternative modalities into curricula of schools of nursing. *Alternative Therapies in Health and Medicine*. 9(4): 62-67.

Field, T.M. 1998. Massage therapy effects. *American Psychologist Association*. 53(12): 1270-1281.

Fouladbakhsh, J. M., Stommel, M., Given, B. A. and Given, C. W. 2005. Predictors of use of complementary and alternative therapies among patients with cancer. *Oncology Nursing Forum*, 32(6): 1115-1122.

Fountouki, A. and Theofanidis, D. 2009. Nurses' attitudes towards complementary therapies. *Health Science Journal*, 3(3): 149-157.

Fradelos, E., & Komini, A. 2015. The use of essential oils as a complementary treatment for anxiety. *American Journal of Nursing*, *4*(1): 1-5.

Frass, M., Strassl, R.P., Friehs, H., Mullner, M., Kundi, M. and Kaye, A.D. 2012. Use and acceptance of complementary and alternative medicine among the general population and medical personnel: A systematic review. *The Ochsner Journal*, 12(1): 45-56.

Frawley, J., Sibbritt, D., Adams, J., Steel, A., Wardle, J., Broom, A., Lui, C and Murthy, V. 2012. Women's sources of information for CAM use during pregnancy. *Complementary and Alternative Medicine.* 12(1): 065.

Gaboury, I., April, K. T. & Verhoef, M. 2012. A qualitative study on the term CAM: is there a need to reinvent the wheel? *BioMed Central Complementary and Alternative Medicine,* 12(131):1-7. http://www.biomedcentral.com/1472-6882/12/131.

Garrett, B. M., Oliffe, J. L., Bottorff, J. L., McKenzie, M., Han, C. S. and Ogrodniczuk, J. S. 2014. The value of prostate cancer support groups: a pilot study of primary physicians' perspectives. *BioMed Central Family Practice*, 15(1): 56.

Gelinas, C., Arbour, C., Michaud, C., Robar, L., and Côté, J. 2013. Patients and ICU nurses' perspectives of non-pharmacological interventions for pain management. *Nursing in Critical Care*, *18*(6): 307-318.

Ghaderi, I., Kaviani, A., Fakhrejahaani, E., Mehrdad, N., Hazar, N. and Karbaksh, M. 2014. Religious, Cultural and social beliefs of Iranian women about breast cancer: A qualitative study. *Archives of Breast Cancer*, 1(1): 25-31.

Ghani, R. M. A., and Ibrahim, A. T. A. 2013. The Effect of Aromatherapy Inhalation on Nausea and Vomiting in Early Pregnancy: A Pilot Randomized Controlled Trial. *Journal of Natural Sciences Research*, *3*(5): 192-205.

Gilbert, T. 2007. Alternative Nursing Practice: Creating inroads for integrative healthcare. Alternative Journal of Nursing, 1.

Gqaleni, N., Moodley, I., Kruger, H., Ntuli, A. and Mcloed, H. 2007. Traditional and Complementary Medicine. *South African Health Review*: 175-188.

Gratus, C., Wilson, S., Greenfield, S. M., Damery, S. L., Warmington, S. A., Grieve, R., Steven, N. M. and Routledge, P. 2009. The use of herbal medicines by people with cancer: a qualitative study. *BioMed Central Complementary and Alternative Medicine,* 9(14): 1-7.

Griffith, R. and Tengnah, C. 2010. Regulation of herbal medicines. *British Journal of Community Nursing,* 15(9): 445-448.

Harripershad, S. 2009. A survey to determine the perceptions of parents in the central Durban area towards paediatric homeopathy. M.Tech: *Homeopathy Dissertation,* the Durban University of Technology, Durban.

Harris, P. E., Cooper, K. L., Relton, C., & Thomas, K. J. 2012. Prevalence of complementary and alternative medicine (CAM) use by the general population: a systematic review and update. *International Journal of Clinical Practice*, *66*(10): 924-939.

Hart, L. K., Freel, M. I., Haylock, P. J. and Lutgendorf, S. K. 2011. The use of healing touch in integrative oncology. *Clinical Journal of Oncology Nursing*, 15(5): 519-525.

Hasan, S. S., Yong, C. S., Babar, M. G., Naing, C. M., Hameed, A., Baig, M. R., Iqbal, S. M. and Kairuz, T. 2011. Understanding, perceptions and self-use of Complementary and alternative (CAM) among Malaysian pharmacy students. *BioMed Central Complementary and Alternative Medicine*, 11(95): 1-9.

Hassan, A., Allam, A., Al Kindi, S., Abu Zeinah, G., Eziada, S. and Bashir, A. 2014. Knowledge, Attitudes and Practices of oncology nurses towards complementary and alternative medicine for cancer care in Qatar. *Anesthesia and Clinical Research Journal*, 5(12): 1-7.

Hassan, I. I., Hadi, N. H. A. and Keng, S. L. 2012. Complementary and alternative (CAM): a comparative study between nursing and medical students. *Education in Medicine Journal,* 4(2): e94-e95.

Hassan, S.S., See, C.K., Choong, C.L.K., Ahmed, S. I., Ahmadi, K. and Anwar, M. 2010. Reasons, Perceived efficacy, and factors associated with complementary

and alternative medicine use among Malaysian patients with HIV/AIDS. *The Journal of Alternative and Complementary Medicine*. 16(11): 1171-1176.

Hastings-Tolsma, M. and Vincent, D. 2013. Decision-making for use of complementary and alternative therapies by pregnant women and nurse midwives during pregnancy: An exploratory qualitative study. *International Journal of Nursing and Midwifery*, 5(4): 76-89.

Hines, S., Steels, E., Chang, A. and Gibbons, K. 2012. Aromatherapy for treatment of postoperative nausea and vomiting. *The Cochrane Library*.

Hodgson, N. A. and Lafferty, D. 2012. Reflexology versus Swedish massage to reduce physiologic stress and pain and improve mood in nursing home residents with cancer: a pilot trial. *Evidence-Based Complementary and Alternative Medicine,* 1-5.

Holroyd, E., Zhang, A.L., Suen, L.K.P. and Xue, C.C.L. 2008. Beliefs and attitudes towards complementary medicine among registered nurses in Hong Kong. *International Journal of Nursing Studies,* 45(2008): 1660-1666.

Hubbard, G. P., Elia, M., Holdoway, A., & Stratton, R. J. 2012. A systematic review of compliance to oral nutritional supplements. *Clinical Nutrition*, *31*(3), 293-312.

Hughes, G. D., Aboyade, O. M., Clark, B. L. and Puoane, T. R. 2013. The prevalence of traditional herbal medicine use among hypertensives living in South African communities. *BioMed Central Complementary and Alternative Medicine*, 13(1): 38.

Johnson, P. J., Ward, A., Knutson, L. and Sendelbach, S. 2012. Personal use of complementary and alternative medicine (CAM) by U.S. Health care workers. *Health Research and Education Trust*, 47(1): 211-227.

Johnson, P., Priestley, J. L. and Johnson, R. D. 2008. A survey of complementary and alternative medicine knowledge among health educators in the United States. *American Journal of Health Education*, 39(2): 66-79.

Johnson, S. E., Green, J. and Maben, J. 2013. A suitable job? A qualitative study of becoming a nurse in the context of a globalising profession in India. *International Journal of Nursing Studies*: 1-26. Available online http://researchonline.lshtm.ac.uk/1277151/ (Accessed 20 September 2014).

Joos, S., Musselmann, B. and Szecsenyi, J. 2011. Integration of complementary and alternative medicine into family practices in Germany: Results of a National survey. *Evidence-Based Complementary and Alternative Medicine.* 1-8.

Joy, F.E., Jose, T.T. and Nayak. 2014. Effectiveness of Jacobson's progressive muscle relaxation (JPMR) technique on social anxiety among high school adolescents in a selected school of Udupi District, Karnataka State. *Nitte University Journal of Health Science*. 4(1): 86-90.

Junaid, R., Abaas, M., Fatima, B., Anis, I. and Hussain, M. 2012. Attitude and practice of patients and doctors towards complementary and alternative medicine. *Journal of Pakistan Medical Association*, 62(8): 865-868.

Kahn K. Population health in South Africa: dynamics over the past two decades. 2011. *Journal of Public Health*, 32(S1):S30–S36.

Kamble, R.N., Mehta, P.P. and Shinde, V.M. 2014. Aromatherapy as complementary and alternative medicine-systematic review. *World Journal of Pharmaceutical Research*, 3(7): 144-160.

Kanodia AK, Legedza AT, Davis RB, Eisenberg DM, and Phillips RS: Perceived benefit of complementary and alternative medicine (CAM) for back pain: a national survey. 2010. *Journal of American Board Family Medicine*. 23: 354–362.

Katyal, S. 2013. Burnout among nurses working in Government and Private Hospitals. *Studies on Home and Community Science*, 7(2): 83-85.

Keir, S. T., & Saling, J. R. 2012. Pilot study of the impact of massage therapy on sources and levels of distress in brain tumour patients. *British Medical Journal Supportive and Palliative Care*, *2*(4): 363-366.

Kessler, R. C., Davis, R. B., Foster, D. F., Van Rompay, M. I., Walters, E. E., Wilkey, S. A., Kaptchuk, T. J. and Eisenberg, D. M. 2001. Long-term trends in the use of complementary and alternative medical therapies in the United States. *Complementary and Alternative Medicine Series*, 135(4): 262-268.

Khan, J. A. 2008. Research Methodology. New Delhi: APH Publishing Corporation. Available http://www.amazon.com/Research-Methodology-J-A-Khan/dp/8131301362. [Accessed 21 March 2014].

Kim, S. S., Erlen, J. A., Kim, K. B., & Sok, S. R. 2006. Nursing students' and faculty members' knowledge of, experience with, and attitudes toward complementary and alternative therapies. *The Journal of Nursing Education*, *45*(9): 375-378.

King, I. M. 1981. A theory for nursing: Systems, concepts, process. Delmar Publishers.

King, M. O. B. and Gates, M. F. 2006. Perceived barriers to holistic nursing in undergraduate nursing programs. *Explore: The Journal of Science and Healing*, 2(4): 334-338.

Kowluru, R. A., Zhong, Q., Santos, J. M., Thadampallayam, M., Putt, D. and Gierhart, D. 2014. Beneficial effects of the nutritional supplements on the development of diabetic retinopathy. *Nutrition and Metabolism,* 11(8): 1-10.

Krohn, M., Listing, M., Tjahjono, G., Reisshauer, A., Peters, E., Klapp, B. F. and Rauchfuss, M. 2011. Depression, mood, stress, and Th1/Th2 immune balance in primary breast cancer patients undergoing classical massage therapy. *Supportive Care in Cancer,* 19(9): 1303-1311.

Kruger, L. P. 2011. The impact of black economic empowerment (BEE) on South African businesses: Focusing on ten dimensions of business performance. *Southern African Business Review*, 15(3): 207-233.

Kulkarni, A., Kaushik, J. S., Gupta, P., Sharma, H. and Agrawal, R. 2010. Massage and touch therapy in neonates: the current evidence. *Indian Paediatrics,* 47(9): 771-776.

Kumar, S., Beaton, K. and Hughs, T. 2013. The effectiveness of massage therapy for the treatment of nonspecific low back pain: a systematic review of systematic reviews. *International Journal of General Medicine*, 2013(6): 733-741.

Kuunibe, N. and Domanban, P. B. 2012. Demand for complementary and alternative medicine in Ghana. *International Journal of Humanity Social Science,* 2(2012): 288-294.

Lamas, K. 2010. Using massage to ease constipation. *Nursing times,* 107(4): 26-27.

Lamas, K., Graneheim, U. H. and Jacobsson, C. 2011. Experiences of abdominal massage for constipation. *Journal of Clinical Nursing,* 21(5-6): 757-765.

Lane, J. D., Seskevich, J. E., and Pieper, C. F. 2007. Brief meditation training can improve perceived stress and negative mood. *Alternative Therapies in Health and Medicine*, *13*(1): 38-45.

Li, Y.-M., Huang, C.-Y., Lai, H.-L. and Hsieh, Y.-M. 2013. A nationwide survey of nurses' attitudes toward music therapy and their need for education in its application. *The Journal of Continuing Education in Nursing*, 44(12): 544-552.

Licata, A., Macaluso, F. S. and Craxi, A. 2013. Herbal hepatotoxicity: a hidden epidemic. *Internal and Emergency Medicine*, 8(1): 13-22.

Lim, A., Cranswick, N. and South, M. 2011. Adverse events associated with the use of complementary and alternative medicine in children. *Archives of Disease in Childhood*, 96(3): 297-300.

Limsatchapanich S, Sillabutra J, Nicharojana LO (2013) Factors related to the use of complementary and alternative medicine among people living with HIV/ AIDS in Bangkok, Thailand. *Health Science Journal* 7: 436–446.

Lindquist, R., Snyder, M. and Tracy, M. F. 2014. Complementary and Alternative therapies in nursing. Seventh edition. New York: *Springer publishing Company*, LLC. 1-383.

Littlewood, R. A. and Vanable, P. A. 2011. A global perspective on complementary and alternative medicine use among people living with HIV/AIDS in the era of antiretroviral treatment. *Current HIV/AIDS Reports*, 8(4): 257-268.

Lloyd-Evans, B., Mayo-Wilson, E., Harrison, B., Istead, H., Brown, E., Pilling, S., and Kendall, T. 2014. A systematic review and meta-analysis of randomised controlled trials of peer support for people with severe mental illness. *BioMed Central Psychiatry*, *14*(1): 39-51.

Lu, J. L. 2008. Organizational role stress indices affecting burnout among nurses. *Journal of International Women's Studies*, 9(3): 1-17.

Maharajh, D. 2005. A survey to determine the perceptions of general practitioners and pharmacists in the greater Durban region towards homeopathy. M.Tech: *Homeopathy Dissertation*, the Durban University of Technology, Durban.

Mahboubi, M., Ghahramani, F., Shamohammadi, Z. and Parazdeh, S. 2014. Relationship between daily spiritual experiences and fear of death. *Journal of Biology and Today's World*, 3(1): 7-11.

Malangu, N. 2007. Self-reported use of traditional, complementary and over-the-counter medicines by HIV-infected patients on antiretroviral therapy in Pretoria, South Africa. *African Journal Traditional, Complementary and Alternative Medicines*, 4(3): 273-278.

Mander, M., Ntuli, L., Diederichs, N. and Mavundla, K. 2007. Economics of the traditional medicine trade in South Africa: health care delivery. *South African Health Review*. 189-196.

Mariano, C. 2007. Holistic Nursing: scope and standards of practice. *American Holistic Nurses Association***,** 59-84.

Martinez, J. 2009. Is music therapy? *Nephrology Nursing Journal*, 36(3): 329-330.

Mayosi, B. M., Flisher, A. J., Lalloo, U. G., Sitas, F., Tollman, S. M. and Bradshaw, D. 2009. The burden of non-communicable diseases in South Africa. *The Lancet*, 374(9693): 934-947.

Mbutho, N. P., Gqaleni, N. and Korporaal, C. M. 2012. Traditional complementary and alternative medicine: knowledge, attitudes and practices of health care workers in HIV and AIDS clinics in Durban hospitals. *African Journal of Traditional, Complementary and Alternative Medicines*, 9(3S): 64-72.

Mcintosh, B., Munro, A. and McQuaid, R. 2014. The impact of gender perceptions and professional values on women's careers in nursing. *Gender in Management: An International Journal* 30(1*)*: 1-23.

Meghani, N., Lindquist, R. and Tracy, M. F. 2003. Critical Care Nurses' Desire to Use Complementary Alternative Modalities (CAM) in Critical Care and Barriers to CAM Use. *Dimensions of Critical Care Nursing*, 22(3): 138-144.

Metcalfe, A., Williams, J., McChesney, J., Patten, S. B. and Jetté, N. 2010. Use of complementary and alternative medicine by those with a chronic disease and the general population-results of a national population based survey. *BioMed Central Complementary and Alternative Medicine*, 10(1): 58.

Milani, M. J., Ashktorab, T., Saeedi, Z. A. and Majd, H. A. 2012. The effect of illness perception on physical health-related quality of life promotion in multiple sclerosis (MS) patients attending peer support groups. *Journal of Paramedical Sciences* 3(2): 31-37.

Miller, I. 2012. Natural Philosophy: Beyond the Undulant Quiescence. *Journal of Consciousness Exploration and Research*, *3*(3): 354-373.

Mills, E., Cooper, C., Seely, C. and Kanfer, I. 2005. African herbal medicine in the treatment of HIV: Hypoxic and Sutherlandia. An overview of evidence and pharmacology. *Nutrition Journal*, 4(19): 1-6.

Minnaar, A. and Bodkin, C. 2009. The mourning process of HIV-positive pregnant women. *Africa Journal of Nursing and Midwifery*, 11(2): 3-15.

Mitchell, M. 2014. Women's use of complementary and alternative medicine in pregnancy: A search for holistic wellbeing. *Women and Birth*, 27(4): 276-280.

Moore, K. 2010. Rationale for complementary and alternative medicine in nursing school curriculum. *The Journal of Alternative and Complementary Medicine*, 16(6): 611-612.

Murray, K. R. 2014. The Efficacy of Yoga on the Amelioration of Non Specific Chronic Low Back Pain in Registered Nurses: A Literature Review and Study Proposal.

Naicker, S. 2008. A survey of medical specialists' perceptions and interactions with homoeopathy. M.Tech: *Homeopathy Dissertation*, the Durban University of Technology.

National Centre for Complementary and Alternative Medicine (NCCAM). 2002. [Online]. Available from: http://nccam.nih.gov/health/cancer/camcancer.htm. [Accessed 03 August 2013].

National Centre for Complementary and Alternative Medicine (NCCAM). 2008. The uses of complementary and alternative medicine in the United States. Available from http://nccam.nih.gov/news/camsurvey_fsl.htm

National Centre for Complementary and Alternative Medicine (NCCAM). Statistics on Complementary and Alternative Medicine National Health Interview Survey. 2012. Available: http://nccam.nih.gov/newa/camstats/NHIS.htm. (Accessed 13 June 2013).

Neuman, W. L. 1997. *Social research methods* (3rd ed.). Boston: Allyn and Bacon.

Norman, R., Bradshaw, D., Schneider, M., Joubert, J., Groenewald, P., Lewin, S., Steyn, K., Vos, T., Nannan, N., Pieterse, D. and the South African Comparative Risk Assessment Collaborating Group. 2007. A comparative risk assessment for South Africa in 2000: towards promoting health and preventing disease. *South African Medical Journal*, *97*(8), 637-641.

Norman, R., Matzopoulos, R., Groenewald, P. and Bradshaw, D. 2007. The high burden of injuries in South Africa. *Bulletin of the World Health Organization*, 85(9): 695-702.

Norred, C. L., & Finlayson, C. A. (2000). Haemorrhage after the preoperative use of complementary and alternative medicines. *Europe PubMed Central, 68*(3): 217-220.

Novella, S. 2011. Science Based Medicine. *Complementary and Alternative Medicine in Medical Schools*.

O' Brien, F., Mooney, M. and Glacken, M. 2008. Impressions of nursing before exposure to the field. *Journal of Clinical Nursing*, 17: 1843-1850.

O' Kelly, J. and Koffman, J. 2007. Multidisciplinary perspectives of music therapy in adult palliative care. *Palliative Medicine*, 21: 235-241.

O` Mathuna, D.P. and Ashford, R.L. 2014. Therapeutic touch for healing of acute wounds. *Cochrane Database of Systematic Reviews*, 7: 1-24.

Okoro, C. A., Zhao, G., Li, C., and Balluz, L. S. 2011. Use of complementary and alternative medicine among USA adults with functional limitations: for treatment or general use? *Complementary Therapies in Medicine*, *19*(4): 208-215.

Okoronkwo, I., Onyia-pat, J.-L., Okpala, P., Agbo, M.A. and Ndu, A. 2014. Patterns of complementary and alternative medicine use, perceived benefits, and adverse effects among adult users in Enugu Urban, Southeast Nigeria. *Evidence-Based Complementary and Alternative Medicine* 2014(2014): 1-6.

Olaniyan, Y. 2013. Music as a facilitator for healing: psychotherapy and psychotherapeutic portrayals in literature. *IFE PsychologIA: An International Journal: Psychotherapy: Unity in Diversity*, *21*(3): 94-102.

Otang, W. M., Grierson, D. S. and Ndip, R. N. 2011. Prevalence, perceived benefits and effectiveness of herbal medicine in the management of symptoms of opportunistic fungal infections in HIV/AIDS patients in the Eastern Cape, South Africa. *African Journal of Biotechnology*, 10(83): 19458-19463.

Papathanasiou, I., Sklavou, M. and Kourkouta, L. 2013. Holistic nursing care: theories and perspectives. *American Journal of Nursing Science,* 2(1): 1-5.

Paruk, F. 2006. A survey to determine the perceptions that exists amongst pregnant adults towards the use of homeopathy during pregnancy. M.Tech: Homeopathy Dissertation, Durban University of Technology. Durban.

Peltzer, K., Frieng-du Preez, N., Ramlagan, S. and Fomundam, H. 2008. Use of traditional complementary and alternative medicine for HIV patients in KwaZulu – Natal, South Africa. *BioMed Central*, 8(255): 1-4.

Pillay, S. 2013. A study on the knowledge, attitudes and perceptions of primary health care nurses in the EThekwini municipality district with regards to the inclusion of homeopathy in primary health care. M.Tech: *Homeopathy Dissertation*, the Durban University of Technology.

Pokryka, A., Obminski, Z., Malczewka-Lenczowska., Fijalek, Z., Turek-Lepa. and Grucza, R. 2014. Insights into Supplements with Tribulus Terrestris used by Athletes. *Journal of Human Kinetics* 41(2014): 99-105.

Que, Qinghui, Xiaode Ye, Quangui Su, Yan Weng, Jianfeng Chu, Lijuan Mei, Wenwen Huang, Renhui Lu, and Guohua Zheng. 2013. Effectiveness of acupuncture intervention for neck pain caused by cervical spondylosis: study protocol for a randomized controlled trial. *Trials* 14(1): 186-193.

Raynor, D.K., Dickenson, R., Knapp, P., Long, A.F and Nicolson. 2011. Buyer beware? Does the information provided with herbal products available over the counter enable safe use? *BioMed Medicine* 9(94): 1-8.

Rojas-Cooley, M. T. and Grant, M. 2009. Complementary and alternative medicine: Oncology nurses' knowledge and attitudes. *Oncology Nurses Forum*, 36(2): 217-224.

Rosenzweig, S., Greeson, J. M., Reibel, D. K., Green, J. S., Jasser, S. A., and Beasley, D. 2010. Mindfulness-based stress reduction for chronic pain conditions: variation in treatment outcomes and role of home meditation practice. *Journal of Psychosomatic Research*, *68*(1): 29-36.

Sackett, K., Carter, M. and Stanton, M. 2014. Elder's Use of Folk Medicine and Complementary and Alternative Therapies: An integrative review with implications for case managers. *Professional Case Management*. 19(3): 113-123.

Sadeghi, R., Heidarnia, M. A., Tafreshi, M. Z., Rassouli, M. & Soori, H. 2014. The reasons for using acupuncture for pain relief. *Iranian Red Crescent Medical Journal,* 16(9): 1-7.

Sahdra, B.K., MacLean, K.A., Ferrer, E., Shaver, P.R., Rosenberg, E.L., Jacobs, T.L., Zanesco, A.P., King, B.G., Aichele, S.R., Bridwell, D.A., Mangun, G.R., Lavy, S., Wallace, B.A. and Saron,C.D 2011. *Emotion,* 11(2): 299-312.

Salamonsen, A. 2012. Doctor-patient communication and cancer patient's choice of alternative therapies as supplement or alternative to conventional care. *Scandinavian Journal of Caring Sciences*, 27: 70-76.

Samuels, N., Zisk-Rony, R. Y., Singer, S. R., Dulitzky, M., Mankuta, D., Shuval, J. T. and Oberbaum, M. 2010. Use of and attitudes toward complementary and alternative medicine among nurse-midwives in Israel. *American Journal of Obstetrics and Gynecology*, 203: 341-342.

Sang, H. C., Lee, W. L., M., C. S. and Smith, G. D. 2011. Exploring nursing staff's attitudes and use of music for older people with dementia in long-term facilities. *Journal of Clinical Nursing,* 20:1776-1783.

Sawalha, A. F. 2007. Complementary and alternative medicine (CAM) in Palestine: use and safety implications. *The Journal of Alternative and Complementary Medicine*, *13*(2): 263-270.

Schutz, P. L. 2005. Trends and patterns of use of CAM among senior nursing students. *Master of Science in Nursing*, University of Witwatersrand.

Siegel, P. and de Barros, N. F. 2013. Nursing and Complementary Practices in Health. *Journal of Nursing*, 7(12): 7262-7264.

Selimen, D. and Andsoy, I. I. 2011. The importance of a holistic approach during the perioperative period. Journal of *Association of Perioperative Registered Nurses* 93(4): 482-487.

Seppala, E. M., Hutcherson, C. A., Nguyen, D. T., Doty, J. R., and Gross, J. J. 2015. Loving-kindness meditation: a tool to improve healthcare provider compassion, resilience, and patient care. *Journal of Compassionate Health Care*, 1(1):1-9.

Shelley, B. M., Sussman, A. L., Williams, R. L., Segal, A. R. and Crabtree, A. F. 2009. 'They don't ask me so I don't tell them' Patient-Clinician communication about traditional, complementary and alternative medicine. *Annals of Family Medicine*, 7(2): 139-147.

Shorofi, S. A. and Arbon, P. 2010. Nurses' knowledge, attitudes and professional use of complementary and alternative medicine (CAM): A survey at five metropolitan hospitals in Adelaide. *Complementary Therapies in Clinical Practice*, 16: 229-234.

Simpson, A., Flood, C., Rowe, J., Quigley, J., Henry, S., Hall, C., Evans, R., Sherman, P. and Bowers, L. 2014. Results of a pilot randomised controlled trial to measure the clinical and cost effectiveness of peer support in increasing hope and

quality of life in mental health patients discharged from hospital in the UK. *BioMed Central Psychiatry,* 14(30): 1-14.

Singer, J. and Adams, J. 2014. Integrating complementary and alternative medicine into mainstream healthcare service: the perspectives of health service managers. *BioMed Central Complementary and Alternative Medicine*, 14(167): 1-11.

Singh, V., Raidoo, M. D. and Harries, C. S. 2004. The prevalence, patterns of usage and people's attitude towards complementary and alternative medicine (CAM) among the Indian community in Chatsworth, South Africa. *BMC Complementary and Alternative Medicine* 4(3): 1472-6882.

Siponen, S.M., Ahonen, R.S., Kettis, A. and Hameen-Anttila, K.P. 2012. Complementary or alternative? Patterns of complementary and alternative medicine (CAM) use among Finnish children. *European Journal of Clinical Pharmacology*, 68: 1639-1645.

Small, D. 2004. The perceptions of homeopathy amongst Grade 12 learners in Durban, South Africa. M.Tech: *Homeopathy Dissertation*, the Durban University of Technology, Durban.

Snyder, M. 2010. Complementary and alternative therapies in nursing. *In:* Snyder, M. & Lindquist, R. (eds.) 6th ed.: Springer Publishing Company. 1-584.

Sok, S. Erlen, J.A. and Kim, K.B. 2004. Complementary and alternative therapies in nursing curricula: A new direction for Nurse Educators. Journal of Nursing Education, 43(9): 401-405.

Somani, S., Ali, F., Ali, T. S. and Lalani, N. S. 2014. Complementary and alternative medicine in oncology nursing. *British Journal of Nursing*, 23(1): 40-46.

Sorour, A. S. and Mohamed, N. A. 2014. Effect of progressive relaxation technique in reducing epileptic seizures among adolescents. *Journal of Education and Practice,* 4(7): 8-14.

South Africa. Statistics South Africa. 2012. Census 2011 Statistical Release-South Africa. Pretoria. Government Printer.

Stewart, W. C., Adams, M. P., Stewart, J. A. and Nelson, L. A. 2013. Review of Clinical medicine and Religious practice. *Journal of Religion and Health,* 52(1): 91-106.

Taavoni, S., Darsareh, F., Joolaee, S., and Haghani, H. 2013. The effect of aromatherapy massage on the psychological symptoms of postmenopausal Iranian women. *Complementary Therapies in Medicine*, *21*(3):158-163.

Tanwir, M., Ansari, A., Aisha, P. and Anzar, M. 2013. Dalk (Therapeutic Massage) and Their Indication for Musculoskeletal Disorder in Unani Medicine. *International Journal of Advanced Ayurveda, Yoga, Unani, Siddha and Homeopathy,* 2(1): 59-70.

Taylor, N. and Blackwell, A. 2010. Complementary and Alternative Medicine Familiarization: What's happening in Medical Schools in Wales? *Evidence-Based Complementary and Alternative Medicine*, 7(2): 265-269.

Tejada-Tayabas, L. M. and Lugo, M. J. R. 2014. The role of mutual support groups for the control of Diabetes in a Mexican City: Achievements and limitations from the patients' perspective. *Health Promotion International,* 6: 1984-1993.

Thorvaldsen, S. 2007. A survey to determine the perception of the third year medical students at the University of Cape Town and the University of KwaZulu Natal towards homoeopathy. M.Tech: *Homeopathy Dissertation*, the Durban University of Technology, Durban.

Tokpah, M. M. and Middleton, L. 2013. Psychiatric nurses' understanding of the spiritual dimension of holistic psychiatric nursing practice in South Africa: A phenomenological study. *Africa Journal of Nursing and Midwifery,* 15(1): 81-94.

Trail-Mahan, T., Mao, C. L. and Bawel-Brinkley, K. 2013. Complementary and Alternative Medicine: Nurse's attitudes and Knowledge. *Pain Management Nursing*, 14(4): 277-286.

Truant, T.L., Porcini, A.J., Ross, B.C., Wong, M.E. and Hilario C.T. 2013. Complementary and alternative medicine in advanced cancer: systematic review. *Journal of Supportive Oncology*, 11(14): 105-113.

Tyreman, S. Values in complementary and alternative medicine 2011. *Medical Health Care and Philosophy*, 14(2): 209-217.

Valiani, M., Abediyan, S., Ahmadi, S. M., Pahlavanzadeh, S. and Hassanzadeh, A. 2010. The effect of relaxation techniques to ease the stress in infertile women. *Iran Journal of Nursing and Midwifery,* 15(4): 259-264.

Varghese, K.J., Koshy, M.E., Mary, A.S., Silvipriya, K.S. and Resmi, S. 2010. Holistic Medicine: Stepping Stones of New Life in Modern Medicine. International *Journal of Pharmaceutical Sciences and Research*, 1(10): 1-10.

Wallis, M., Peerson, A., Young, J., Parkinson, S. and Grant, S. 2004. Nurse's utilisation of complementary therapies: a pilot study exploring scope of practice. *Collegian*, 11(4): 19-25.

Wang, S.-Y. C. and Yates, P. 2006. Nurse's responses to people with cancer who use complementary and alternative medicine. *International Journal of Nursing Practice*, 12(5): 288-294.

Warriner, S., Bryan, K., & Brown, A. M. 2014. Women's attitude towards the use of complementary and alternative medicines (CAM) in pregnancy. *Midwifery*, *30*(1): 138-143.

Wells, R. E., Bertisch, S. M., Buerrner, C., Phillips, R. S. and McCarthy, E. P. 2011. Complementary and alternative medicine use among adults with migraines/severe headaches. *Headache: The Journal of Head and Face Pain,* 51(7): 1087-1097.

Welman, C., Kruger, S. J. and Mitchell, B. 2005. Research Methodology. 3rd ed. Cape Town: Oxford University.

Whitehead, D. 1999. The relationship between health and complementary therapies. *Complementary Therapies in Nursing and Midwifery*, 5: 171-175.

Whitehead, P. 2011. Music therapy for End-of-Life Care. *Clinical Journal of Oncology Nursing,* 16(6): 697-698.

World Health Organisation (WHO) 2002. *Global WHO Traditional Strategy 2002-2005.* Geneva: WHO.

World Health Organisation (WHO) 2004. New WHO guidelines to promote proper use of alternative medicines. Available from: www.who.int/mediacentre/news/releases/2004/pr44/en/

Xue, C. C. L., Zhang, A. L., Holroyd, E. and Suen, L. K. P. 2008. Personal use and professional recommendations of complementary and alternative medicine by Hong Kong registered nurses. *Hong Kong Medical Journal*, 14(2): 110-115.

Yom, Y. H., & Lee, K. E. 2008. A comparison of the knowledge of, experience with and attitudes towards complementary and alternative medicine between nurses and patients in Korea. *Journal of Clinical Nursing*, *17*(19), 2565-2572.

Zeidan, F., Gordan, N. S., Merchant, J. and Goolkasian, P. 2009. The effects of brief mindfulness meditation training on experimentally induced pain. *The Journal of Pain*, 11(3): 199-209.

Zoe, R., Charalambous, C., Popi, S., Maria, R., Aris, V., Agoritsa, K. and Evangelia, K. 2014. Cypriot nurses' knowledge and attitudes towards alternative medicine. *Complementary therapies in Clinical Practice*, 20(1): 89-92.

Annexure 1

Institutional Research Ethics Committee
Faculty of Health Sciences
Room MS 49, Mansfield School Site
Gate 8, Ritson Campus
Durban University of Technology

P O Box 1334, Durban, South Africa, 4001

Tel: 031 373 2900
Fax: 031 373 2407
Email: lavishad@dut.ac.za
http://www.dut.ac.za/research/institutional_research_ethics

www.dut.ac.za

5 March 2014

IREC Reference Number: **REC 86/13**

Mrs L Maharaj
14 Patricia Road
Chase Valley
Pietermaritzburg

Dear Mrs Maharaj

Perceptions of professional nurses towards alternative therapies in the uMgungundlovu District, South Africa

The Institutional Research Ethics Committee acknowledges receipt of your final data collection tool for review.

We are pleased to inform you that the data collection tool has been APPROVED; you may now proceed with data collection on the proposed project.

Yours Sincerely

[redacted]

Prof J. K. Adam
Chairperson: IREC

Annexure 2a

14 Patricia Road
Chase Valley
Pietermaritzburg
3201

5 March 2014

Ms M Zuma-Mkhonza
The District Manager
UMgungundlovu Health District
Pietermaritzburg
3201

Dear Madam

Re: REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY

I am presently registered for a Master's Degree at the Durban University of Technology in the Department of Nursing. The proposed title of my study is 'Perceptions of professional nurses towards alternative therapies in the uMgungundlovu District, South Africa'. I hereby request permission to conduct the study at the following hospitals: Appelsbosch, Northdale, Doris Goodwin, Richmond, Fort Napier, Townhill, Umgeni, Greys and Edendale Hospitals.

A questionnaire will be used to collect data from the professional nurses. The total population of professional nurses is 1944. Participation is voluntary, and informed consent will be obtained from all participants. Confidentiality will be maintained at all times. Please find attached a copy of my research proposal for perusal.

Sincerely

……
Mrs L Maharaj (Researcher)
Telephone: 083 758 8387
Email: loshnimaharaj@yahoo.com

……
Prof R Bhagwan (Supervisor)
Telephone: 031-373 2197
Email: bhagwanr@dut.ac.za

……
Dr MN Sibiya (Co-supervisor)
Telephone: 031-373 2606
Email: nokuthulas@dut.ac.za

Annexure 2b

health

Department:
Health
PROVINCE OF KWAZULU-NATAL

UMGUNGUNDLOVU HEALTH DISTRICT OFFICE
OFFICE OF THE DISTRICT MANAGER
Private Bag X9124, Pietermaritzburg, 3200
Brasfort House, 262 Langalibalele Street, Pietermaritzburg, 3201
Tel.: 033-8971000,
Fax: 033-897 1078
Email.: thule.kunene@kznhealth.gov.za
www.kznhealth.gov.za

Enquiries: Mrs. N.M. Zuma - Mkhonza
Ref No: 15/16
Date: 11 APRIL 2014

TO: **MRS L. MAHARAJ**
14 PATRICIA ROAD
CHASE VALLEY
PIERTERMARITZBURG

Dear Mrs Maharaj

RE: PERCEPTION OF PROFESSIONAL NURSES TOWARDS ALTERATIVE THERAPIES IN UMGUNGUNDLOVU

I have the pleasure in informing you that permission has been granted to you by the District to conduct research on" ***Perception of Professional Nurses towards Alternative Therapies in Umgungundlovu*** "

Please note the following:

1. Please ensure that you adhere to all the policies, procedures, protocols and guidelines of the Department of Health with regards to this research.
2. This research will only commence once this office has received confirmation from the Provincial Health Research Office Committee in the Department of Health.
3. Please ensure this office is informed before you commence your research.
4. The District Office / Facility will not provide any financial resources for this research.
5. You will be expected to provide feedback on your findings to the District Office/Facility.

Thank you

[redacted]

MRS N.M. ZUMA - MKHONZA
THE DISTRICT MANAGER
UMGUNGUNDLOVU HEALTH DISTRICT

Annexure 3a

14 Patricia Road
Chase Valley
Pietermaritzburg
3201

5 March 2014

The Health Research and Knowledge Management Component
KwaZulu-Natal Department of Health
Private Bag X9051
Pietermaritzburg
3201

Dear Dr Lutge

Re: REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY

I am presently registered for a Master's Degree at the Durban University of Technology in the Department of Nursing. The proposed title of my study is 'Perceptions of professional nurses towards alternative therapies in the uMgungundlovu District, South Africa'. I hereby request permission to conduct the study at the following hospitals: Appelsbosch, Northdale, Doris Goodwin, Richmond, Fort Napier, Townhill, Umgeni, Greys and Edendale Hospitals.

A questionnaire will be used to collect data from the professional nurses. The total population of professional nurses is 1944. Participation is voluntary, and informed consent will be obtained from all participants. Confidentiality will be maintained at all times. Please find attached a copy of my research proposal for perusal.

Sincerely

……..
Mrs L Maharaj (Researcher)
Telephone: 083 785 8387
Email: loshnimaharaj@yahoo.com

……..
Prof R Bhagwan (Supervisor)
Telephone: 031-373 2197
Email: bhagwanr@dut.ac.za

……
Dr MN Sibiya (Co-supervisor)
Telephone: 031-373 2606
Email: nokuthulas@dut.ac.za

Annexure 3b

health

Department:
Health
PROVINCE OF KWAZULU-NATAL

Health Research & Knowledge Management sub-component
10 – 103 Natalia Building, 330 Langalibalele Street
Private Bag x9051
Pietermaritzburg
3200
Tel.: 033 – 3953189
Fax.: 033 – 394 3782
Email.: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

Reference : HRKM 106/14
Enquiries : Mr X Xaba
Tel : 033 – 395 2805

Dear Mrs L. Maharaj

Subject: Approval of a Research Proposal

1. The research proposal titled **'Perceptions of professional nurses towards alternative therapies in the uMgungundlovu District, SA'** was reviewed by the KwaZulu-Natal Department of Health.

   The proposal is hereby **approved** for research to be undertaken at Appelsbosch, Northdale, Doris Goodwin, Richmond, Fort Napier, Townhill, Umgeni, Grey's and Edendale Hospital.

2. You are requested to take note of the following:
   a. Make the necessary arrangement with the identified facility before commencing with your research project.
   b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.

3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za

For any additional information please contact Mr X. Xaba on 033-395 2805.

Yours Sincerely

[redacted]

Dr E Lutge
Chairperson, Health Research Committee
Date: 25/04/14

Annexure 4

LETTER OF INFORMATION

Thank you for agreeing to participate in this study. The details of the study are outlined below.

Title of the Research Study: Perceptions of professional nurses towards alternative therapies in the uMgungundlovu District, South Africa

Principal Investigator/s/researcher: Mrs Loshni Maharaj

Co-Investigator/s/supervisor/s: Prof. R. Bhagwan, PhD (Supervisor); Prof. MN Sibiya, D Tech: Nursing (Co-supervisor)

Brief Introduction and Purpose of the Study: Holistic nursing is based on the integration of patient's physical, psychological and emotional needs with his or her, social and cultural beliefs. This is done by establishing and maintaining a healthy link between these areas of a patient's life while meeting his or her health needs. With the increasing interest by the community and health care users of holistic nursing practices, it is critical that all levels of nurses have current knowledge about the safety and use of the variety of modalities included in holistic nursing practices. Adequate knowledge is vital in the delivery of competent care, yet the level of nurse's knowledge in this area is hugely unknown. The purpose of this study is to investigate the perceptions of professional nurses within the uMgungundlovu district towards alternative therapies.

Outline of the Procedures: You are kindly requested to complete a questionnaire and this will take you 10-15 minutes. The questionnaires will be delivered and collected by the research assistant. Participants will be given the opportunity to complete the questionnaires during their tea and lunch breaks, and will be collected thereafter by the research assistant.

Risks or Discomforts to the Participant: None

Benefits: To the participant: The researcher will make recommendations that will contribute towards ensuring quality care.

To the researcher: Publication in accredited journals and conference presentations

Reason/s why the Participant May Be Withdrawn from the Study: The researcher foresees no reason for withdrawing the participant from the study. The participant may withdraw at anytime as participation is voluntary.

Remuneration: There is no remuneration for participating in this study

Costs of the Study: You will not bear any costs by participating in this study.

Confidentiality: You will not be requested to fill in personal identifying details; instead a code will be used to number the questionnaire.

Research-related Injury: None

Persons to Contact in the Event of Any Problems or Queries: Should there be any query, please contact the researcher:-Mrs L. Maharaj on 083 785 8387 E-mail: loshnimaharaj@yahoo.com Should you still not be satisfied, please contact my supervisor, Prof Bhagwan on 031-3173219 E-mail: bhagwanr@dut.ac.za or Prof Sibiya, co-supervisor on 031-373 2606 E-mail: nokuthulas@dut.ac.za

CONSENT

Statement of Agreement to Participate in the Research Study:

I hereby confirm that I have been informed by the researcher, Loshni Maharaj, about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: IREC 86/13, I have also received, read and understood the above written information (Participant Letter of Information) regarding the study. I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report. In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher. I may, at any stage, without prejudice, withdraw my consent and participation in the study. I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study. I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

_____ _____ _____
_____

Full Name of Participant **Date** **Time** **Signature / Right Thumbprint**

I, Mrs. Loshni Maharaj herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Loshni Maharaj _____
_____

Full Name of Researcher **Date** **Signature**

_____ _____
_____

Full Name of Witness (If applicable) **Date**

Annexure 5

Questionnaire on alternative therapies

Letter of information

Dear Participant,

Warm greetings and thank you for your willingness to consider participating in this study.

This survey is being conducted to explore the Perceptions of professional nurses towards alternative therapies in the uMgungundlovu District, South Africa. This survey will use a questionnaire that has been adapted from the instrument used by Avino (2011). Permission has been obtained to make use of sections of the questionnaire.

Included in the questionnaire is the definition of alternative therapies to assist you in understanding the term more clearly. You will need approximately 10-15 minutes to complete the questionnaire. In order to ensure that all information will remain confidential, please do not include your name. Copies of the study will be provided to the Durban University of Technology and to the Kwazulu Natal College of Nursing. A summary of the study findings will be provided to the participating hospitals upon request.

Participation is strictly voluntary and you may withdraw from participation at any time. There will be no compensation for responding, nor are there any known risks involved. The data collected will provide useful information regarding the extent to which alternative therapies is being used by patients, as well as the level of knowledge of professional nurses. If you require additional information or have any questions, kindly contact me on the number listed below or alternatively you may e-mail me.

Kindly complete the consent from provided.

Thank you for taking the time to assist me in my educational endeavors.

Should there be any query, please contact the researcher:-Mrs. L. Maharaj on 083 785 8387 E-mail: loshnimaharaj@yahoo.com should you still not be satisfied, please contact my supervisor, Prof. Bhagwan on 031-3173219 E-mail: bhagwanr@dut.ac.za or Prof. Sibiya, co-supervisor on 031-373 2606 E-mail: nokuthulas@dut.ac.za

SECTION A

The first sections include questions on demographic and various personal and professional background variables.

Please indicate the appropriate response.

1. Please indicate your age.

   ☐ 20-30
   ☐ 31-40
   ☐ 41-50
   ☐ 51-60
   ☐ Over 60

2. Please indicate your gender.

   ☐ Male
   ☐ Female

3. Please indicate your ethnic group.

   ☐ African
   ☐ Coloured
   ☐ Indian
   ☐ White
   ☐ Other (specify) _____

4. Please indicate your marital status.

   ☐ Single
   ☐ Married/domestic partner
   ☐ Divorced/separated
   ☐ Widowed

5. Please indicate how long you have been in nursing practice.

   ☐ Less than 10 years
   ☐ 10-20 years
   ☐ 21-30 years
   ☐ 31-40 years
   ☐ More than 40 years

6. Please indicate the hospital at which you work.

   ☐ Appelsbosch Hospital
   ☐ Edendale Hospital
   ☐ Doris Goodwin Hospital
   ☐ Fort Napier Hospital
   ☐ Grey's Hospital
   ☐ Northdale Hospital
   ☐ Richmond Hospital
   ☐ Townhill Hospital
   ☐ Umgeni Hospital

7. Please indicate your job title.

   Professional nurse
   Senior Professional nurse
   Chief Professional nurse
   Clinical nurse specialist
   Operational manager
   Other (specify) _____

To aid in answering the following questions, a definition of alternative therapy is provided.

Alternative therapy is any therapy used in place of conventional medicine.

SECTION B

Personal use of alternative therapies

Have you personally used any of the alternative therapies listed below? Please choose the option that best describes your view(s)

1.Acupuncture	No, would not consider using it	No, would consider using it	Yes, have used it with positive outcomes	Yes, have used it with negative outcomes
2. Aromatherapy	No, would not consider using it	No, would consider using it	Yes, have used it with positive outcomes	Yes, have used it with negative outcomes
3. Relaxation techniques	No, would not consider using it	No, would consider using it	Yes, have used it with positive outcomes	Yes, have used it with negative outcomes
4. Therapeutic touch	No, would not consider using it	No, would consider using it	Yes, have used it with positive outcomes	Yes, have used it with negative outcomes
5. Massage therapy	No, would not consider using it	No, would consider using it	Yes, have used it with positive outcomes	Yes, have used it with negative outcomes
6. Prayer/or spiritual healing	No, would not consider using it	No, would consider using it	Yes, have used it with positive outcomes	Yes, have used it with negative outcomes
7. Meditation	No, would not consider using it	No, would consider using it	Yes, have used it with positive outcomes	Yes, have used it with negative outcomes
8. Herbal therapy	No, would not consider using it	No, would consider using it	Yes, have used it with positive outcomes	Yes, have used it with negative outcomes
9. Music therapy	No, would not consider using it	No, would consider using it	Yes, have used it with positive outcomes	Yes, have used it with negative outcomes
10. Support groups	No, would not consider using it	No, would consider using it	Yes, have used it with positive outcomes	Yes, have used it with negative outcomes
11. Nutritional supplements	No, would not consider using it	No, would consider using it	Yes, have used it with positive outcomes	Yes, have used it with negative outcomes

SECTION C

Alternative therapies in nursing practice

For each of the following statements please indicate how you feel about alternative therapies in nursing practice. Please rate your level of agreement or disagreement with each statement by circling the one number that best reflects your opinion on the 5 point scale.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. Clinical care should integrate the best of conventional and alternative therapies	1	2	3	4	5
2. Alternative therapies includes ideas from which conventional medicine could benefit	1	2	3	4	5
3. A number of alternative therapies hold promise for treatment of symptoms, conditions and or diseases	1	2	3	4	5
4. The results of alternative therapies are in most cases due to placebo effect	1	2	3	4	5
5.Alternative therapies that are not tested in a scientific manner should be discouraged	1	2	3	4	5
6. While a few alternative therapies may have limited benefits, they have no true impact on treatment of symptoms, conditions and or diseases	1	2	3	4	5
7. Alternative therapies is a threat to patient's health	1	2	3	4	5
8. Health professionals should be able to advise their patients about commonly used alternative therapies	1	2	3	4	5
9. Alternative therapies should be included in my nursing curriculum	1	2	3	4	5
10. Knowledge about alternative therapies is important to me as a nurse	1	2	3	4	5
11. Alternative therapies are outside of the scope of nursing practice.	1	2	3	4	5

SECTION D

The frequency with which you encounter patients who use alternative therapies.

The following questions ask your views about the frequency with which you encounter patients in nursing practice, who use any of the following therapies listed below. Please choose the appropriate response which best reflects your opinion.

1.Acupuncture	Frequently	Seldom	Never
2. Aromatherapy	Frequently	Seldom	Never
3. Relaxation techniques	Frequently	Seldom	Never
4. Therapeutic touch	Frequently	Seldom	Never
5. Massage therapy	Frequently	Seldom	Never
6. Prayer/or spiritual healing	Frequently	Seldom	Never
7. Meditation	Frequently	Seldom	Never
8. Herbal therapy	Frequently	Seldom	Never
9. Music therapy	Frequently	Seldom	Never
10. Support groups	Frequently	Seldom	Never
11. Nutritional supplements	Frequently	Seldom	Never

SECTION E

Views about the efficacy of alternative therapies used in nursing care

In your opinion, how effective are the following alternative therapies in nursing care? Please choose one response.

1.Acupuncture	Highly effective	Moderately effective	Ineffective	Harmful	Unsure
2. Aromatherapy	Highly effective	Moderately effective	Ineffective	Harmful	Unsure
3. Relaxation techniques	Highly effective	Moderately effective	Ineffective	Harmful	Unsure
4. Therapeutic touch	Highly effective	Moderately effective	Ineffective	Harmful	Unsure
5. Massage therapy	Highly effective	Moderately effective	Ineffective	Harmful	Unsure
6. Prayer/or spiritual healing	Highly effective	Moderately effective	Ineffective	Harmful	Unsure
7. Meditation	Highly effective	Moderately effective	Ineffective	Harmful	Unsure

8. Herbal therapy	Highly effective	Moderately effective	Ineffective	Harmful	Unsure
9. Music therapy	Highly effective	Moderately effective	Ineffective	Harmful	Unsure
10. Support groups	Highly effective	Moderately effective	Ineffective	Harmful	Unsure
11. Nutritional supplements	Highly effective	Moderately effective	Ineffective	Harmful	Unsure

12. Who do you feel is responsible for providing information regarding alternative therapies and its effectiveness?

- ☐ Nurses
- ☐ Alternative therapy practitioners
- ☐ Patient's family and friends
- ☐ Doctors
- ☐ All of the above (nurses, patient, family and friends, doctors and alternative therapy practitioners)

13. In your nursing practice, have you ever encountered a patient(s) who has enquired about alternative therapy/therapies?

- ☐ Yes
- ☐ No

14. If YES, How often

- ☐ Frequent
- ☐ Seldom
- ☐ Never

15. Were you able to confidently advise the patient(s)?

- ☐ Yes
- ☐ No
- ☐ Not Applicable

SECTION F

Alternative therapies in nursing education

1. How often have alternative therapies been included in your nursing education?

- ▭ Frequent
- ▭ Seldom
- ▭ Never

Indicate your level of satisfaction with the information received in respect of the following therapies.

2.Acupuncture	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
3. Aromatherapy	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
4. Relaxation techniques	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
5. Therapeutic touch	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
6. Massage therapy	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
7. Prayer/or spiritual healing	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
8. Meditation	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
9. Herbal therapy	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
10. Music therapy	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
11. Support groups	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
12. Nutritional supplements	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied

13. Based on your clinical experience, which of the above should be included in nursing education?

_____
_____
_____
_____

14. Are there any other forms of alternative therapies that were included in your nursing curriculum that is not reflected in the table above?

- ☐ Yes
- ☐ No

If YES,
pleasespecify_____
_____
_____
_____

15. Since qualifying as a professional nurse, have you been on any training courses or workshops which covered alternative therapies?

- ☐ Yes
- ☐ No

_____
_____
_____
_____

16. If YES, do you feel this had better enabled you to meet your patient's needs regarding alternative therapies?

- ☐ Yes
- ☐ No

_____
_____
_____
_____

SECTION G

Barriers to the use of alternative therapies in the nursing practice setting

Please indicate what you consider as potential barriers to the use of alternative therapies. Rate your level of agreement or disagreement with each statement by circling the one number that best reflects your opinion on the 5 point scale.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. Lack of evidence on the effectiveness of alternative therapies	1	2	3	4	5
2. Institutional concerns about legal implications attached to the implementation of alternative therapies	1	2	3	4	5
3. Unavailability of credentialed providers in certain areas e.g. Rural areas	1	2	3	4	5
4. Lack of staff training received by institution	1	2	3	4	5
5. Lack of necessary equipment required for the delivery of alternative therapies	1	2	3	4	5
6. Too time consuming to include alternative therapies in daily schedule	1	2	3	4	5
7. Lack of money for training on alternative therapies	1	2	3	4	5

Comments related to barriers

_____
_____
_____
_____
_____
_____

Annexure 6: Permission to use a questionnaire

From: Maharaj Loshni <Loshni.Maharaj@kznhealth.gov.za>
Sent: Monday, October 28, 2013 8:38 AM
Subject: FW: Request Permission

From: Karen Avino [mailto:kavino@udel.edu]
Sent: 21 May 2013 03:08 PM
To: Maharaj Loshni
Subject: Re: Request Permission

Loshni- Yes, you have my permission to use the tool. It was originally from MaryJoe Krietser at the University of Minnesota, Center for Spirituality and Healing. I modified it just minimally. You are from South Africa? Dr. Karen Avino

Karen Avino, EdD. RN, AHN-BC, HWNC-BC
University of Delaware
School of Nursing
25 N. College Ave.
363 McDowell Hall
Newark, DE 19716
302-831-8506

"Health is not only to be well, but to use well every power we have." Florence Nightingale, 1893

On Tue, May 21, 2013 at 3:27 AM, Maharaj Loshni <Loshni.Maharaj@kznhealth.gov.za> wrote:
Good day Karen

I am currently studying towards my Master's Degree in Nursing. My study is on "The views and perceptions of professional nurses in the UMgungundlovu district towards holistic nursing practices" I request permission to use the survey tool used in the following study below:-
"Knowledge, Attitudes, and Practices of Nursing Faculty and Students Related to Complementary and Alternative Medicine", A Statewide Look
Karen Avino, EdD, MSN, RN, AHN-BC

Kind Regards,

Loshni Maharaj
Clinical Lecturer
Iris Marwick-Sub Campus
Telephone: (033) 3415602
Fax No. 0867725462

1

Annexure 7

DEEPAK SINGH
Registered Scientist
Database and Statistical Analysis

P. O. Box 24002
Hillary
4024

(cell): 083-775-9239
singhd@telkomsa.net

25 October 2013

Prof R. Bhagwan
DUT

Dear Prof Bhagwan

Confirmation of Meeting with Ms Loshni Maharaj

This is to certify that Ms Maharaj has met with me on 3 occasions regarding aspects of her research for the Master's Degree and that I have given her the necessary statistical advice relating to the details of her research.

Kindly feel free to contact me if you have any queries.

Sincerely

Deepak Singh