



Beyond Pharmacological: Nursing Challenges of Chronic Pain Management in Geriatric care

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Bachelors Degree Thesis

Nursing

2018

DEGREE THESIS	
Arcada University of Applied Sciences	
Degree Programme:	Nursing
Identification number:	18947
Author:	Khimananda Chapagain
Title:	Beyond pharmacological: Nursing challenges of chronic pain management in geriatric Care
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Commissioned by:	
<p>Abstract:</p> <p>This study aims to display diverse human experiences about pain perception and management in geriatric nursing care. It attempts to identify and investigate major non-pharmacological nursing challenges of chronic pain management in geriatric care. The scope of thematic exploration limits to psychosocial cognitive challenges of pain experience, long-held beliefs and myths about pain and aging, ethical limitations of pain management, and hurdles of pain assessment among aging populations. Towards the end, it offers potential solutions for pain management, which are non-pharmacological in nature. In order to carry out a systematic and a more focused analysis of the themes, the study uses biopsychosocial model of pain and pain management as its conceptual framework. This work is designed with qualitative research method by using inductive analysis. It underscores that pain is a subjective perceptual event that is not solely dependent on the extent of tissue damage or organic dysfunction. The intensity of pain reported and the responses to the perception of pain are influenced by a wide range of factors, such as meaning of the situation, attentional focus, mood, prior learning history, cultural background, environmental contingencies, social supports, beliefs and myths, assessment techniques, and ethics, among others. Pain, especially chronic pain, has unique health implications based upon race and ethnicity, gender, age, class and ethnicity that are often overlooked. Overall, adequate pain relief is a human rights and social justice issue and there remains much more to do to improve the quality of pain care for all.</p>	
Keywords:	chronic pain, geriatric care, non-pharmacological pain management, beliefs and myths about pain, sociocultural pain experience, pain expression, pain tolerance, bio-sociocultural pain model, ethics in pain management
Number of pages:	94
Language:	English
Date of acceptance:	

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FOREWORD

I would like to express my special gratitude towards Head of Nursing Department and my supervisor, Pamela Gray, for believing in my abilities by ensuring maximum autonomy during this project. Your guidance, understanding and support made it a pleasant learning experience for me.

I want to take this opportunity to extend my sincere thanks to all my honorable lecturers and other professionals at Arcada University of Applied Sciences for giving me a front-line company during my maiden academic journey into the amazing world of nursing sciences. Also, many thanks to the University for trusting me with a study place and providing a fantastic learning environment throughout.

To my classmates from NS15, thank you all for great memories. It was an absolute pleasure being a member of an extremely talented and mosaic international learning group.

Lastly, I would like to thank my soulmate and dear mother of our baby girl for supporting my idea of gaining a nursing degree, and ensuring that I have enough amount of time in order to achieve it effectively within the desired period, even though it would ultimately mean her taking an extra stress in her work-life balance.

Khimananda Chapagain

Helsinki, April 2018

1 INTRODUCTION

Pain is a symptom common to most illness and is often the presenting factor, which will prompt the patient to seek medical attention, yet surprisingly until recently pain, has been given a low priority by most health professionals (Dawn & David 1993 p. 33).

The treatment and alleviation of pain to be a basic human right that exists regardless of age, and mandates treatment for this reason alone but unfortunately failure to treat or under treatment of it has severe patient consequences (Schechter et al. 1993 p.43).

The experience of pain is complex and known to be influenced by a multitude of factors, including previous pain experiences, emotion, mood, culture, age and situation. The inadequacies of the management of pain have been reported consistently for over 30 years. (Marks & Sachar 1973; Fagerhaugh & Strauss 1977; Svensson et al. 2000, Kirou-Mauro et al. 2009)

In Europe, it is found that chronic pain of moderate to severe intensity occurs in 19% of adults, seriously affecting the quality of their social and working lives (Breivik et al. 2006 p.38). Many people with chronic pain often report poorer self-rated health, mental well-being and social functioning as well as greater levels of depression and work loss (Mallen et al. 2005 p.39). Undertreated or untreated pain has many negative consequences for older patients, including depression, decreased socialization, disturbed sleep, impaired ambulation, increased health care utilization and subsequent cost, impaired cognition, altered nutrition (D'Arcy 2007; Bruckenthal & D'Arcy 2007, AGS 2002).

Currently, death in developed countries is more likely to occur after a long chronic illness. This is in contrast to a century ago when people died a more rapid death, often due to infection. Currently, the most common causes of death in high-income countries include ischemic cardiac disease, cerebrovascular disease, and cancer (Lopez et al. 2001 p.1747). According to Abegunde et al. (2007 p.1929) globally, 60% of deaths are due to chronic diseases, principally cardiovascular diseases and diabetes, cancers, and chronic respiratory diseases. Thus, people are more likely to die after a long, protracted illness, and pain is a common comorbidity of these illnesses.

A number of factors may combine to make control of pain more difficult in an older than in a younger patient. These include, coexistent diseases and concurrent medications, putting them at risk from drug–drug and disease–drug interactions; diminished functional status and physiological reserve; age-related changes in pharmacodynamics and pharmacokinetics; altered pain responses; different non-pharmacological issues, difficulties in the assessment of pain, including problems related to cognitive impairment and communication. (Rowbotham & Macintyre 2003 p.535)

Nurses play an active and critical role in pain control. Pain is officially recognized as a nursing diagnosis and may be one of the most frequently identified ones. Nurses probably spend more time with patients and their families than any other member of health care team does. By virtue of the proximity to the child and the parents, nursing may be said to be the cornerstone of pain control (McCaffery & Wong 2006 p.111). She is the person who is responsible for the administration of analgesic drugs, assessment, monitoring and reporting the effects of given treatments to ensure that an acceptable level of pain relief is achieved. It is crucial that nurse is aware of the pain-relieving methods, both pharmacological and non-pharmacological, which are available and how and when to use them safely (Schechter et al. 2009 p.92)

According to Carr et al. (2009 p.296) although the primary aim of pain management is about relieving suffering, this aim is also a prerequisite for achieving a range of other positive health and social outcomes. They view that skilled pain management has great potential for enabling patients to feel positively different but also enables them, as a consequence, to get on with their everyday activities. This in turn impacts on how they experience the quality of their life. The consequence of not getting this right, according to them, results in a burden not just for the individual and those important to them, but also for the society.

Pain management has come a long way in the last two decades and nursing has been at the fore of many of these developments. The challenges of managing pain have been well documented, and it would be fair to say that whilst the management of acute pain and particularly that associated with surgery have shown radical improvement in recent years,

many people continue to experience unrelieved chronic or persistent pain which is tremendously debilitating in terms of their function and quality of life. (Carr et al. 2009 p.303)

Surprisingly, it seems that non-pharmacological challenges of pain management is more complex compared to the pharmacological pain management for nurses today in geriatric care, especially while dealing with patients who are suffering from chronic pain. The primary attempt so in this research work is to investigate nursing challenges of chronic pain management in elderly care by using biopsychosocial model of pain and pain management.

2 BACKGROUND

In this chapter, a holistic background to the topic is developed by defining and explaining the different dynamisms of pain, particularly the geriatric chronic pain, together with a thorough review on pervious canonical nursing researches on the topic.

2.1 Meaning of pain

Pain has been defined as whatever the experiencing person says it is and existing whenever he says it does (McCaffery 1968 p.18). This is helpful as it emphasizes believing the person and what they say about their pain.

The definition of pain most widely accepted by pain specialists was proposed by the International Association for the Study of Pain and published in the journal *Pain* in 1979. The development of this definition, along with a taxonomy of pain terminology, provides a common language for the different disciplines involved in the research and treatment of pain. It defined pain as ‘an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.’

This definition of pain has been later argued as incomplete. McCaffery & Beebe (1989 p.6) stated that whilst this definition is useful, it does not sufficiently reflect chronic pain which is the pain that has lasted 6 months or longer, is ongoing on a daily basis, is due to nonthreatening causes, has not responded to currently available treatment methods, and may continue for the remainder of the patient’s life.

Myers (2002 pp. 221-224) view that pain is always subjective. Each individual learns the application of the word through experiences related to injury in early life. Biologists recognize that stimuli that cause pain are likely to damage tissue. Accordingly, pain is the experience that we associate with actual or potential tissue damage. It is unquestionably a sensation in part or parts of the body, but it is also always unpleasant and therefore also an emotional experience. Mayers add that experiences that resemble pain (e.g., pricking)

but are not unpleasant should not be called pain. Unpleasant abnormal experiences, according to Myers, may also be pain but are not necessarily so because, subjectively, they may not have the usual sensory qualities of pain.

Myers maintain that many people report pain in the absence of tissue damage or any likely pathophysiologic cause; usually this happens for psychologic reasons. There is no way to distinguish their experience from that due to tissue damage if one takes the subjective report. If they regard their experience as pain and if they report it in the same ways as pain caused by tissue damage, it should be accepted as pain. This definition, Mayers opine, avoids tying pain to the stimulus. Activity induced in the nociceptor and nociceptive pathways [sensory receptors that respond to pain] by a noxious stimulus is not pain, which is always a psychologic state, even though pain most often has a proximate physical cause.

According to Myers, generally speaking, pain is our body's alarm system. It tells us that something is wrong. When part of our body is injured or hurt, nerves in that area release chemical signals. Other nerves send these signals to our brain, where they are recognized as pain. Pain often tells us that we need to do something. For example, if we touch a hot furnace, pain signals from our brain make us pull our hand away. This type of pain helps protect us.

Despite various attempts, the essential tenet remains the same for many definitions of pain. Pain can be viewed as a multidimensional experience which reflects emotional, sensory and cognitive elements.

2.2 Physiology of pain and consequences of untreated or under-treated pain

Given that nurses have a sound understanding of physiology of pain, it rewards them on multiple levels. It becomes easier to connect with doctor and his expectations. It makes them more empathetic to the patient situation which may ultimately lead to improved therapeutic communication. It certainly fosters confidence in nursing as it is likely to give better caring results.

It is medically accepted that pain involves tissue injury, ischemia, and destruction which will cause the local release of prostaglandins, serotonin, bradykinin, norepinephrine, hydrogen ion, potassium ion, and substance P, a peripheral pain transmitter. These substances increase the responsiveness of peripheral nociceptors to painful stimuli, thereby producing the sensation of pain and a systematic “flight or fight” response by evoking the release of systemic stress hormones. (Schechter et al. 1993 p. 109)

Schechter et al. also maintain that these stress hormones which include epinephrine, norepinephrine, glucagon, cortisol, aldosterone, thyroid stimulating hormone, and growth hormone, promote the breakdown of body tissues and water retention. Not only that, they increase blood glucose, prevent its utilization, and increase the body’s metabolic rate. They increase heart rate, blood pressure, cardiac output, and inotropic state of heart and impair normal gastric and bowel function and motility. Finally, according to them, they also impair immune function and increase the ability of blood to clot. The consequences of non-treating or ameliorating acute pain can therefore be catastrophic.

Schechter et al. further state that the unchecked release of stress hormones by untreated pain may exacerbate injury, prevent wound healing, lead to infection, prolong hospitalization, and even lead to death. These deleterious effects, they believe, are greatest in the sickest and frailest of patients.

The management of acute pain and particularly that associated with surgery have shown radical improvement in recent years, many people continue to experience unrelieved chronic or persistent pain, which is tremendously debilitating in terms of their function and quality of life (Carr et al. eds. 2009 p.307).

2.3 Components of pain

Nursing with knowledge is much awaited and valued phenomenon in modern patient care. Even though it is a challenging task for many nurses, especially the new ones, to have a graphic and holistic understanding of pain, it helps them a lot to connect with patient’s situation and experiences just in case they have it. Pain can be regarded as having three components: the sensory-discriminative, the motivational- affective, and the cognitive-evaluative (Melzack & Dennis 1978 pp.1-27).

According to Melzack & Dennis, sensory-discriminative component of pain allows the injury to be recognized in time and space, and its exact extent to be determined. They view that in addition to the transmission of nociceptive stimuli, this component requires large-fiber transmission of touch and other sensory stimuli to enable the source, site and severity of the pain to be identified.

Melzack & Dennis maintain that motivational-affective component produces somatic (bodily) and autonomic activity which result in various protective processes such as movement away from pain, immobilization of damaged tissue or preparation for flight. According to them, no spatial or temporal information is involved at this stage. The neural areas of reticular formation and the limbic system are involved in the motivational-affective features of pain.

So far as cognitive-evaluative is concerned, it is a complex component in which the response to the painful stimulus is influenced by cultural values, anxiety, attention and many other factors, state Melzack & Dennis. They view that these activities, which involve cortical processes, may affect the sensory-discriminative and motivational-affective dimensions. Arousal in situations of extreme danger may block the sensory-discriminative and motivational-affective components of pain. Additionally, suggestion and placebo are likely to modulate the motivational-affective component and leave the sensory-discriminative component relatively undisturbed.

2.4 Types of pain and nursing scope of pain management

It becomes crucial for nurses to know about different pain situations well in an advance in order to foster effective pain care. According to Von Roenn et al. (2006), there are different types of pain situations, such as pain related to underlying disease, pain related to treatment, and pain unrelated to disease or its treatment.

According to Von Roenn et al., underlying disease related pain includes tumor related, pain due to pressure or compression, chest pain due to end stage cardiac disease, ischemia caused by atherosclerotic disease, abdominal pain with referral to thorax and shoulder due to liver failure or cirrhosis, abdominal pain due to ascites, extremity skin pain due to edema, back pain and skin discomfort/pruritus due to end-stage renal disease, chest pain

due to pulmonary fibrosis, emphysema, other advanced lung disorders, central nervous system infection (meningitis, cryptosporidium) leading to headache, central pain after stroke, particularly affecting thalamus, trigeminal neuralgia in multiple sclerosis. Vaso-occlusion leading to bone, muscle, and visceral pain in sickle cell disease, rapid onset of cachexia leading to peripheral neuropathy, and spasticity due to neuromuscular disorders.

Similarly, they mention that treatment related pain includes peripheral neuropathy due to chemotherapy, arthralgias and myalgias due to aromatase inhibitors, surgically induced phantom pain, chronic neuropathy, immunocompromised leading to post herpetic neuropathy, and aseptic necrosis due to prolonged corticosteroid use. Finally, pain situations that are unrelated to diseases and its treatment comprise of pressure ulcers, reduced muscle and fat padding at bony prominences, muscle atrophy leading to myalgia, immobility leading to joint pain, and contractures.

According to McCaffery & Wong (1993 p.295), a nurse contributes to pain relief in three primary areas:

- i. Pain sensation and its effects: Initially the nurse assesses the pain and its effects and then maintains ongoing assessment.
- ii. Pharmacologic methods, or analgesics: In acute care settings the nurse usually administers the analgesics. In home care the nurse teaches the patient or the family how to administer them. In both settings the nurse evaluates safety and effectiveness of analgesics and initiates changes as necessary.
- iii. Non-pharmacological methods, e.g., relaxation, distraction: The nurse may use these methods with the patient and or teach the patient and or family to use them.

2.5 Epidemiology of pain in older adults

Getting to know about epidemiology of pain in older adults, though may appear a contextual rather than an immediate issue for many nurses, is important for this kind of broader historical look provides scope, intensity and trend of the concerned patient group, which ultimately makes it clear and easier to work by developing a larger mental framework.

According to the American Health Care Act (2009), older patients have been categorized into three different groups: younger old, older old and elite old. Younger old group consists of 65 to 75 years of age. The number in this group is 7% of the total population. 75 to 84 years of age make up older old group. The number in this group is 4% of the total population. And elite old group refers to 85 years of age or older. This group is 1% of the total population.

The epidemiology of pain in the older adult has not been widely studied until recently. The International Association for the Study of Pain (IASP, 2006) has recently published some epidemiological information on their website for the Global Year against Pain in Older Adults.

According to the report, the population is ageing worldwide and it is expected that there will be a rise in the over 65 age group by 17 per cent by 2050, meaning that over 65s will make up more than 36 per cent of the total population. The percentage over the age of 85 is expected to triple. Pain is very common amongst older people, with chronic pain affecting more than 50 per cent of older persons living in the community and, reportedly, more than 80 percent of residents living in nursing homes. Older people are more likely to be in pain than younger people (Ferrell 1995 p.201; Helme & Gibson 2001 p.417).

Pain is the most frequently reported symptom by older adults, being reported by 73 per cent of older adults living in the community (Brody & Kleban 1983 pp.75-85) and it tends to be constant, of moderate to severe intensity and lasting for several years (Brattberg et al. 1996 pp.144-149).

Of those admitted into hospital, almost 46 per cent report pain, of which 19 per cent experience moderately or extremely severe pain and almost 13 percent is dissatisfied with their pain control (Desbiens et al. 1997 p. 495).

Cancer is the second leading cause of death for adults over the age of 65 (D'Agostino et al. 1990 pp.12-15) and 67 per cent of cancer deaths occur in those over the age of 65 (Kennedy 1995 pp.14-16). Furthermore, Bernabi et al. (1998 pp.18877-1882) highlighted in their study that 26 per cent of cancer patients over the age of 65 who are in daily pain did not receive any analgesia.

2.6 Chronic pain

According to Myers (2002 p.7) chronic pain is pain that is ongoing and has lasted six months or longer; it is pain that has not responded to traditional medical interventions, or one for which a medical “cure” is not available. Additionally, it is also defined as pain that persists a month beyond the usual course of an acute disease or a reasonable time for an injury to heal. Myers further maintain that chronic pain can be associated with a chronic pathologic process that causes continuous pain or pain that recurs at intervals for months or years.

With this type of pain the emphasis changes from finding a diagnosis and cure to rehabilitation and minimization of the negative effects of the painful condition. This is an important difference between chronic pain and acute pain, state Mayers.

Myers also maintain that it directs the focus of treatment away from the underlying cause of the pain to the pain itself and the lifestyle disruption it creates. Myers argue that pain is no longer just a symptom; pain is the problem. Typically, this type of pain is not a useful pain, in that it does not serve as an alarm system, alerting us that something is wrong.

According to Myers, chronic pain is caused by active disease processes, tissue damage, and other insults to our body. Rheumatoid arthritis, cancer, musculoskeletal problems, cardiac disease, and headache are but a few of the conditions that can lead to chronic pain. She argues that although science has made great advancements in its understanding of the underlying neurophysiological, anatomical, and chemical mechanisms of this complex phenomenon, much remains unknown as many people still suffer from chronic pain for which the underlying cause is widely unknown or the level of their suffering is considered in excess of identified pathology or disease process.

2.7 Pain management nursing research review

Appropriate pain assessment and management are key indicators of pain care quality and patient satisfaction, regardless of health care setting—the hospital, ambulatory setting and long-term care (Beck et al. 2010; Pett et al. 2013; Topolovec et al. 2010).

Approximately 50%-80% of hospitalized patients experience pain at some time during their hospitalization as a result of procedures, surgical interventions, and disease states (Coker et al. 2008; Goldberg & Morrison 2007; Gregory & McGowan 2016). Additionally, 100 million adults suffer from chronic pain in the United States.

Pain is a nursing sensitive indicator; therefore, nurses have a pivotal role in the assessment and management of pain. Unfortunately, the treatment of pain is highly inadequate because of social stigma about pain, fears of addiction, and inadequate clinician knowledge about the best ways to manage pain (Institute of Medicine 2011; Meeker, Finnell & Othman 2011; Oliver et al. 2012). Although clinician knowledge about pain is known to be insufficient, studies are lacking that identify whether improving knowledge and attitudes about pain can influence outcomes (Beck et al. 2016 pp. 67-76).

Some evidence exists that Pain Resource Nurse (PRN) programs have been instrumental in improving pain care quality (Ferrell et al. 1993 pp. 549-556). A recent systematic review indicated successful elements of PRN programs, including leadership commitment, an embedded culture of effective pain management throughout the organization, recognizing pain management barriers, identifying strategies to overcome these barriers, and collaborative multidisciplinary teamwork and communication (Crawford et al. 2016 pp. 64-82).

Pain management literature so far is replete with decades of research describing inadequate knowledge and attitudes about pain and suboptimal pain management practices among health professionals, including nurses. Ignorance regarding the use of opioids has fueled fears related to addiction despite care recommendations by the American Society of Pain Management Nurses and others. (Oliver et al. 2012; van Boekel et al. 2015)

According to Jarzyna et al. (2011 pp.118-145), fear related to side effects such as respiratory depression is warranted, but opioids can be delivered safely with adequate knowledge. As nurses distribute medicines to patients and follow up the situations closely, their role is also very important in pain management besides physicians.

Misconceptions exist as far as prevalence and inevitability of pain are concerned, especially in older adults; mistaken beliefs about pain assessment; and inadequate knowledge of opioid pharmacology (Lewthwaite et al. 2011; Swafford et al. 2014). Some clinicians

find it difficult to believe a patient's report of pain, which can affect pain management practices (Briggs et al. 2013), and the high incidence of addiction in society complicates this issue (Paice et al. 2016). Physicians and nurses have also been known to rely on personal experiences when assessing another individual's pain (Vaismoradiet et al. 2016). It is evident that studies that evaluate a personal experience of pain and its influence on pain knowledge and attitudes in a convincing manner are limited. Not only are that studies, according to Vaismoradiet, also lacking on the relationship between a personal or family history of substance abuse and knowledge and attitudes about pain and addiction.

It is believed that some data exist regarding which nurses have more knowledge and better attitudes about pain and whether or not this knowledge translates to improved patient outcomes. For example, some studies report that a higher education level results in increased knowledge (Brunieret al. 1995; Lewthwaite et al. 2011), but other studies found no difference (Brown et al. 1999; Matthews & Malcolm, 2007).

There are a number of studies that show that the influence of nursing certification on pain knowledge and attitudes has been studied in handful studies. Oncology certified nurses, as per those study findings, scored significantly higher than non-certified nurses. Although there may be knowledge differences, more knowledge and better attitudes about pain has not necessarily translated to improved pain management outcomes, and further investigation is needed. (Beck et al, 2016 pp. 67-76; Coleman et al. 2010 pp. 35-42; Frank Stormberg et al. 2002 pp.665-672)

Through the general literature review, it is noticed that pain is primarily understood as biological phenomenon, so the mainstream studies focused more on medical or clinical management of pain. Nursing role in pain management is not seen much acknowledged. However, in recent time health phenomena have undergone massive changes. In this changed and globalized context, pain management is being looked at in a broader social, cognitive and ethical context devoid of universal generalizations. Greater nursing responsibilities are therefore, at play. Consequently, nurses are undoubtedly encountering unprecedented number of non-pharmacologic challenges of pain management at work. This study shows the scope of the non-pharmacologic pain management in geriatric care in order to make its readers realize that the role of cultural competence is no way less important than the clinical competence in geriatric care of chronic pain management.

3 THEORETICAL FRAMEWORK

This study uses biopsychosocial model of pain and pain management as its conceptual framework. Most of the ideas presented here are taken from the article ‘Biopsychosocial management of pain and pain management’ by Turk et al. (2011).

According to Turk et al. (2011 p. 9) pain is a part of existence since it is used as a means of torture, as a rite of passage, and is a source of inspiration for artists. The human experience of pain, they state, is personal, influenced by cultural norms, individual history, as well as genetics and neurophysiology. Accordingly, treatments aimed at alleviating pain are influenced by wider societal and political views and the accepted theoretical understanding of pain processing and experience.

Biopsychosocial model of pain considers that the theoretical view of pain has changed dramatically over the past century although vestiges of early thinking remains. It suggests that the mind and body are an integrated and dynamic system. According to the model, the course of a disease or recovery from injury is determined by the interaction of physiological mechanisms, psychological factors, and sociocultural influences. For the course of an illness or for the experience of suffering physical pathology does not merely account for. So their argumentation is that current view of pain experience is multidimensional and dynamic rather than linear. This line of theorists view that psychological, social, cognitive, physiological, and behavioral factors are hypothesized in order to interact and result in individual pain experience. (Turk et al. 2011 pp. 25-27)

According to them, the distinction between “disease” and “illness” is crucial to understanding chronic pain. Disease, they believe, is generally characterized by an “objective biological event” that involves disruption of specific body structures or organ systems caused by pathological, anatomical, or caused by pathological, anatomical, or physiological changes. In contrast to this customary view of physical disease, illness can be seen and conceptualized as a “subjective experience or self-attribution” that a disease is present; it gives rise to physical discomfort, emotional distress, behavioral limitations, and psychosocial disruption. In other words, for them illness refers to how the sick person and members of his or her family and wider social network receives, live with, and respond to symptoms and disability. (Turk et al. 2011 pp.29–31)

Turk et al. (2011 pp. 30-34) argue that the distinction between disease and illness is analogous to the distinction between “pain” and “nociception.” They explain that nociception entails stimulation of nerves that communicate information regarding damage of tissues to the brain, whereas pain is a subjective perception that results from the transduction, transmission, and modulation of sensory input which is filtered through genetic composition, prior learning history of a person, and modulated further by his current physiological status, idiosyncratic appraisals, expectations, current mood state, and sociocultural environment.

In contrast to the biomedical model’s emphasis on disease, Turk et al. (2011 pp.39-45) argue that the biopsychosocial model focuses on illness, the result of a complex interaction of biological, psychological, and social variables. According to them, from this perspective, diversity in illness expression (which includes its severity, duration, and consequences for the individual) is accounted for by the interrelationships among biological changes, psychological status, and the social and cultural contexts. The person’s perception and response to illness are shaped by all of these variables.

According to the authors, the biopsychosocial way of thinking about the varying reactions and responses of patients to the different chronic conditions and symptoms are based on the sound understanding of the changing nature of these conditions. It means that chronic syndromes may extend over time. So, longitudinal viewing of these conditions is needed. This viewing sees conditions as ongoing, multifactorial processes in which there is a dynamic and reciprocal interplay among biological, psychological, and social factors that shapes the experience and responses of patients. Biological factors, they maintain, may initiate, maintain, and modulate physical perturbations whereas psychological variables influence appraisals and perception of internal physiological signs. Similarly, behavioral responses of the patient’s to the perceptions of their physical perturbations are shaped by social factors. It is very much likely that psychological factors influence biology by affecting hormone production, brain structure and processes and the autonomic nervous system. Biological contributors might get affected through behavioral responses, as when a person avoids engaging in certain activities in order to reduce his or her symptoms. (Turk et al. 2011 p.33)

The theory views that the relative weighting of physical, psychological, and social factors may vary at different points during the evolution of a disease or impairment. Biological factors, for example, may predominate during the acute phase of a disease, but over time, in accounting for symptoms and disability, psychological and social factors may assume a disproportionate role. Moreover, there is considerable discrepancy in behavioral and psychological manifestations of dysfunction, both across persons with comparable symptoms and within the same person over time, according to the theorists. (Turk et al. 2011 pp.57-63)

According to Turk et al. (2011 pp. 109-113) it is essential that biological, psychological, and social factors all be considered in order to understand the diverse responses of people to chronic conditions. Moreover, a longitudinal perspective is required. No single factor in isolation will adequately explain chronic pain status. Pathophysiological, psychological, or social approaches are required. It is on this regard it differs from the traditional biomedical model which puts emphasis on the somatogenic-psychogenic dichotomy which, as per biosocial scientists of pain management, is too narrow in scope in order to accommodate the complexity of chronic pain. They clarify that the traditional model is inadequate and incomplete, not that it is completely wrong and misleading.

The major intention thus behind using this theory is to examine how a biopsychosocial framework integrating psychological, social, and physical factors can be applied in a treatment setting to improve the quality of life of people especially with chronic pain. The role of psychological, behavioral, and social factors in pain, and the implications of these contributors for treatment and rehabilitation within nursing scope is investigated.

3.1 Limitations to the theory

The basic argument of biopsychosocial theory of pain and pain management is that the bio-medical perspective is too reductionist and that a holistic perspective grounded in general systems theory was necessary to address health related issues. It is argued by biopsychosocial theorists of pain management that the bio-medical lens only focuses attention on the physiological mechanisms associated, for example, with the heart attack,

which results in psychological and sociological factors being either systematically excluded or ineffectually reduced. Interestingly, the World Health Organization seems to agree with this view as it defines its central mission of health as to improve well-being, which is explained as an overall state of health and happiness at the biological, psychological and social levels.

As far as the limitation of the theory is concerned, Henriques (2015 p. 26) argue that the biggest problem with the BPS model is that its inclusiveness results in an unscientific, “fluffy”, pluralistic approach where all perspectives win and deserve prizes. He adds that the goal of science is analytic understanding and that understanding requires intelligible frames that break the world into its component parts. But unfortunately in contrast to this, the BPS model potentially justifies a morass of “anything goes” in medicine and health.

Similarly, Ghaemi (2011 pp. 53-61) argues that if BPS model is adopted as it is, there is a real danger of losing clear boundaries regarding their knowledge and expertise. If knowledge expectations and training become too diffuse, then expertise will inevitably suffer. He opines that it is worth noting that the general trend in medicine has been toward specialization, not in broadening one’s perspective.

It is generally argued that BPS model of pain and pain management has little relevance or even no relevance at all in acute clinical pain management settings as pain medications are the only options for urgent pain relief to the patients.

4 AIM AND RESEARCH QUESTIONS

The purpose of this study is to identify and investigate major non-pharmacological nursing challenges of chronic pain management in geriatric care. It explores this objective with help of the following research questions:

1. How far nursing knowledge and experience about psycho-sociocultural, cognitive, affective and personality factors of patients influence in perception and management of chronic pain in elderly care?
2. To what extent beliefs and myths about pain and aging complicates chronic pain management temperament among nurses?
3. How far existing ethical issues denigrate nursing scope for adequate chronic pain management in geriatric care?
4. What are the challenges of chronic pain assessment in geriatric patients?
5. What could be the non-pharmacological solutions of chronic pain management in geriatric care?

5 METHODOLOGY

This work is designed with qualitative research method by using inductive analysis. The information or data collected and analyzed is primarily non- quantitative in character, consisting of book articles and journal articles that document insights and understandings

about pain management in patient care. The goal of this research is to display diverse human experiences about pain perception and management in geriatric nursing care.

According to Dudovaskiy (2016 p.41), the focus of inductive analysis is either to explore new phenomena or to delve into existing ones in a new perspective. He further maintains that beginning with a topic, a researcher tends to develop empirical generalizations and identify preliminary relationships as he progresses through his research. In line with this thought, an attempt is made to provide a non-pharmacological nursing perspective of pain management of geriatric care in the context that mainstream pain management literature extensively focus on pain management in general from medicinal perspective.

Qualitative research design, according to Saldana (2014 p.16), is used since this mode of inquiry is emergent and evolutionary in its process. Saldana maintains that by its nature qualitative research design may not follow a linear progression of discrete steps. It rather may undergo with even an overlapping of some major stages and each one might exert influence and affect on the others. The initial plan made in the concept paper so in the similar note has undergone sea changes, primarily due to unforeseen unique dimensions of the topic and the very nature of the research design.

The topic is developed keeping the challenges of chronic pain management that nurses face in their everyday working life, together with an attempt to provide some solutions. Despite this disciplinary and pragmatic need, the researcher has a personal passion to know more about overall pain management from nursing perspective. A review of research literature on the topic is carried out with various purposes such as not to 'reinvent the wheel', to be knowledgeable about the topic, to pinpoint the scope of this study and to present the possible contribution that it could make to the working nurses. Besides due to being passionate about the topic, a wide range of literature review has been tried out not to risk credibility and trustworthiness of the research.

Research questions are used to narrow down the scope of study. Luttrell (2010) maintain that research questions may also address the social meanings humans construct and attribute, the contexts of particular phenomena, and the variances that occur within them.

Since literature reviews provide a description, summary and evaluation of each source, which may include scholarly journal articles, books, government reports or websites

(Concordia University 2016), it is important to use only professional or academic literature as mentioned by Jolley (2013 p.93) in his Nursing & Health Research Skills Survival Guide. This line of thought is carried away throughout.

Literatures which are written using an accepted standard of language are used. It, in other words, means it is respectful of both the subject matter and other academics, non-emotional language and objective, and is focused on the subject. Similarly literatures that question and deal with conflicting arguments, ideas or evidences that were subject to peer review are used.

Arcada University of Applied Sciences online database services such as Academic Search Elite, Cinahl, Cochrane Library, PubMed and Sage are used. These resources are utilized effectively by keeping notes of searches made and making sure articles are peer-reviewed.

A note about keywords for searches is prepared keeping in the mind that each discipline's terminology has grown exponentially through time, and there can be multiple terms that generally refer to the same broad topic. It is acknowledged that standardization is antithetical to qualitative research (Saldana 2014 p.12). Initially monographs, journal articles, book chapters, and other sources that have already done literature reviews of some type is looked for. This has helped the researcher for getting a “grand tour” of a field and up to speed with the research in a subtopic. In addition, selected references listed in each piece of reviewed literature is taken into consideration. During the process, specific titles or recurring authors' names have provided with additional leads to follow for more information.

When reviewing individual selections of related research literature, the researcher is gone through the summary content. It includes the abstract, concluding paragraphs, the final chapter, executive summary, and so forth that generally provide the overview of a particular study or subject. Being “front loaded” with the headlines has given a more navigable journey through the entire work or informed whether the work is irrelevant to the topic at hand. Also, careful documentation of the source's full bibliographic information was prepared for citation and reference.

The full addresses of sites and pages that are accessed on the Internet, along with last visited date are documented. Keeping this information in an advance has helped to classify the materials during literature review, and the cells feature enabled to type in key quotations or content summaries from each source.

In addition, when accessed a book or journal from the library, attempt is made to include the item's call number in case it may need to access later. Required notes about all information such as an author's full name and the city of a book's publishing company is tried because the required format (in our case-Harvard) for papers and articles will vary from field to field and from journal to journal.

The researcher personally has tried some online materials of speed-reading course as it does not just offer a set of methods but retrains ones' cognitive processes to quickly review and retain text in more time-efficient ways (Saldana 2014 p.8).

5.1 Data collection

Data acquisition for this literature review is performed through Arcada's textbook collections and academic databases. Scientific articles are extracted from Academic Search Elite, Cinahl, and PubMed and Sage journals. The main search terms used are:

- Pain management AND nursing
- Pharmacological AND non-pharmacological pain management
- Pain management in geriatric care
- Research ethics in nursing
- Qualitative research design
- Biopsychosocial pain management
- Ethics in pain management
- Chronic pain assessment
- Chronic pain AND health implications
- Chronic pain

An important aspect of the data collection technique: inclusion and exclusion- is used. The majority of articles in use are published after 2000 AD but some older literatures that

are historically connected to the topic are also in use. Reference literatures that are written only in English are used. While making the search for literatures, careful attention has been paid to keywords and their possible combinations. A huge range of research articles are used in developing the thesis project and all of them are systematically listed in the reference section, but considering readers' further convenience, major reference articles, which are ten, are separately listed in the appendix.

5.2 Content analysis

Content analysis is a way of analyzing textual materials by coding and use of references about research data. It is utilized on qualitative research where it is considered relevant for analyzing large amounts of textual information obtained from various sources. (Fang & Shannon 2005 p.95)

This study utilizes the secondary research method by reviewing previous studies, articles, journals and research investigations that have primarily highlighted non pharmacological challenges of chronic pain management in elderly care.

A systematic examination of all the materials is carried out before the use in order to analyze their prominent manifest and latent meanings to certain whether they fit in the research context. A manifest meaning is one that is surface and apparent whereas a latent meaning is one that is suggestive, connotative, and sub textual. All sources are used for explanation, discussion and evaluation of the ideas, of course, considering all layers of meaning that could possibly be extracted in order to fit into the theme or the context at hand.

While analyzing a wide range of content, different sub-themes have emerged, which are discussed individually listing them in terms of their priorities, or using them as tools to compare and contrast with other recurrent motifs and themes. Coding through reading technique is used frequently followed by listing during the content analysis process.

6 ETHICAL CONSIDERATIONS AND OVERVIEW

The main purpose of the research is acquiring more knowledge on the topic from nursing perspective. It is thought that it could add to sum total of human knowledge and benefit the concerned professionals including the general public.

Ethical issues are strictly taken into an account from the early stages of this research project. This study utilizes empirical data from the relevant textbook collections from Arcada Library together with its academic databases. All citations are listed as per Harvard style of referencing. Researcher has not conducted any interviews and field surveys during the study even though existing data from sources such as scientific articles and case studies are used. The researcher accomplished this paper with the utmost consideration that every research regardless of its form should be well-planned and subject to review appropriately so to be considered legitimate.

In the process of accomplishing this paper, primarily the research ethics ideas from Paul Oliver's *Student's Guide to Research Ethics* (2010) are used.

According to Oliver (2010 p.27) even though plagiarism is not easy to clarify, any form of intentional plagiarism is morally unacceptable to the researcher. He maintain that it is often very difficult to define precisely the origin of many ideas in education and the social sciences as it is not always easy to trace back an idea or an argument to one particular research paper.

Careful attention is given to the ethical concerns that the use of a particular language and Internet could generate. Use of English language is just for sake of convenience, not for promulgating any cultural hegemony of certain culture that it could possibly be connected with. The researcher is conscious of the fact that use of internet in as many different languages as possible would be helpful in order to maintain cultural diversity when there is increasing evidence that many languages in the world are in the process of disappearing, even though literatures other than English have not been required or be used. (Hamelink 2000 p.223)

The ethical issues that could be generated in the use of information and communication technology are strictly considered. When exploring the background to this research topic,

or conducting a literature search, attempt is made to use fully refereed articles. Un-refered articles available on the Internet are not used. Academic journals that offered selected issues and exclusive issues in Internet are used because these are likely to be fully refereed journals, hence readers could know that published articles have been subjected to a careful quality assurance procedure. Emails known for its convenience, brevity and succinct style of expression is used as a medium of communication with Supervisors and friends interested in the topic.

While collecting data, preference is given to conventional sources such as textbooks as the writing in these sources progresses through a number of different stages, each accompanied by rigorous quality checks. The final result is usually a carefully considered and balanced piece of writing. Reliable Internet sources too are equally used due to convenience and broad possibilities of research. It is understood that Internet is the relative ease with which information may be manipulated and adapted as it may not be as rigorously checked as in the conventional sources.

Possible terminological issues are taken into consideration by defining terminologies and using the language that even non-professional could amply understand the research intent. The non-specialist audience may have certain expectations of researchers, in terms of adding to knowledge and helping people to understand the world. It has been carefully maintained during the whole process. Forms of communication and language are used as appropriate to the context.

Researcher has equally acknowledged responsibilities to fellow researchers, respondents, and the public and academic community. High ethical standards of behavior or behavioral values such as truth-telling, accuracy of reporting findings, trying to make results understandable, and being honest about both the successes and failings of a research are given due place for the general and academic respect that it could bring with.

There is, in addition, the ethical issue of the exercise of undue influence by the supervisor. In this case, the research is free to develop the whole project just with the supervisor in a supporting role as it is a student academic project prepared to fulfill the requirement of the program. No taint of manipulation is experienced by the researcher.

One expects researchers to have their own specialized fields of inquiry, and it is reasonable that they should specialize in the use of specific methodologies (Hamelink 2000 p. 112). Considering the nature of the research, the student researcher has neither any specialized pre-decided field of inquiry nor any specialized methodologies as such. However, the researcher is fully aware that methodologies are appropriate to investigate the learning goals and is fully informed about what is being done.

A central feature of social science research ethics is the principle of informed consent (Oliver 2010 p.17). As this research is based on qualitative literature review, the extent of elaborating its scope is not felt much. The ideas such as taking written consents, for e.g. from the interviewees, vulnerable groups etc. are not subjects of concern here. Similarly, as it is a research project to fulfill an academic requirement at the University, it involves no ethical issues concerning, publication and dissemination, authorship and editorial procedures.

The researcher is also aware about meeting the expectations of existing ethics committee and board at University that also takes care for the development and dissemination of good practice in research ethics. Ethical cautions that own supervisor may show during the whole process of this research is acknowledged. Permission to conduct this research from the concerned authority is taken in an advance.

As there is no research funding in this project, researcher is independent in the whole process, including taking the ownership of the project.

According to Meerabeau et al. (2004 p.34), research governance mechanisms should ensure that all research undertaken within an organization is recorded and passed on to a central authority. The final version of this project is made available in the research governance mechanism of the University and will be publicly disseminated through the central system, which could be accessed through www.theseuses.fi. The existing Arcada Writing Guide that guides the conduct of research in the University is followed thoroughly.

According to Oliver (2010 p.19), the style of expression of academic judgement has certain implications. He maintains that people listen to opinions, and often change their behavior patterns as a result of what they are told by researchers. He adds that this places a

special responsibility upon academics and researchers for not only to carry out research as abided by certain well-established procedures but also to disseminate it in a manner which follows logically from the data, and does not exaggerate any element of the research. It is carefully acknowledged during the whole process of writing.

Synopses and abstracts are included as they play a significant role in the dissemination of research. They may often be the first point of contact for a reader or another researcher who wishes to gain a rapid grasp of the contents of a research report or article. A list of the key concepts which are included in the research study is included in it. It is expected that it will be helpful to the reader, conveying the main outcomes of the research, and providing guidance as to whether this research is relevant to their areas of interest.

It is understood that there is a possibility of applying different research methodologies in this project as social research is, in its broadest terms, about exploring the world, about examining the nature of human existence, and of the relationship between different human beings in society. Due to limited scope of this project, particular theory and methodology are applied to explore the research questions.

This research has its own limitations. Enough attempts are made in order to be as balanced, objective and accurate as possible in reporting and expressing the results of research and in drawing conclusions.

7 FINDING AND DISCUSSION

In this chapter, findings to all the research questions are brought into the readers' notice through considerable discussions by using a diverse range of references followed by a careful analysis.

7.1 Factors affecting chronic pain experience

As this study focuses on non-pharmacological chronic pain management on geriatric care applying biopsychosocial model, it remains a top priority to look at the issue by considering biopsychosocial, ethnic, cognitive, affective and personality factors. What are the connections of these factors to chronic pain so as to determine the experience of the chronic pain are explained here.

7.1.1 Sociocultural factors: Social, operant, and respondent learning mechanisms

Prior experience and social as well as cultural transmission of beliefs and expectations are usual providers of common sense beliefs for human beings. As an example, ethnic group membership influences on the way how one perceives, labels, responds to, and communicates various symptoms, as well as from whom one elects to obtain care when it is sought, and the types of treatments received. There are a number of authors who have specifically noted the importance of sociocultural factors (Nerenz et al. 1983), and sex differences in beliefs about and responses to pain (Zboroski 1969). The way families and local groups respond to and interact with patients depend much on influences of the social factors. Similarly, the practitioner– patient relationship might get influenced by ethnic expectations and sex and age stereotypes.

The social learning mechanism is an integral part of sociocultural make-up. Regarding the development and maintenance of chronic pain states, the role of social learning has been increasing in recent times. From this perspective, pain behaviors (i.e., overt expressions of pain, distress, and suffering) may be acquired through observational learning and modeling processes. That is, people can learn responses that were not previously in their behavioral repertoire by observing others who respond in these ways (Bandura 1969 p.79). Similarly, according to McGrath 2002 (p.534) from parents, cultural stereotypes,

and the social environment, children develop attitudes about health and healthcare, perceptions and interpretations of symptoms, and appropriate responses to injury and disease. He adds further that children develop strategies to help them avoid pain and learn “appropriate” or expected ways to react depending on their experiences. Fearon et al. (1996 p.55) state that children experience a number of minor injuries daily and the way adults address these experiences provides ample learning opportunities for them; so children’s learning influences whether the grownups will ignore or respond, or over-respond to symptoms.

Operant learning mechanism is another. According to Fordyce (1976), behavioral manifestations of pain rather than pain per se are central in the operant formulation. He maintains that an immediate response of a person, when exposed to a stimulus that causes tissue damage, is withdrawal or an attempt to escape from the noxious sensations. The manifested behaviors are observable, and consequently are subject to the principles of learning. He further states that the operant conditioning model does not consider with the initial cause of pain, rather it considers pain an internal subjective experience that may be maintained even after its initial physical basis is resolved.

Respondent learning mechanisms equally influence on the overall pain experience. People with pain may learn to associate increases in pain with different kinds of stimuli in a course of time. Generally when the pain symptoms persist, it leads to anxiety and anticipatory pain and depression because of the low rate of reinforcement obtained when behavior is greatly reduced as found by Lenthen et al. (1983 p.408). The same study shows that an increase in anticipatory anxiety and concomitant physiological and biochemical changes might be caused by sitting, walking, cognitively demanding work or social interaction, sexual activity, or even thoughts about these activities. According to Philips (1987 pp. 273-279) physical abnormalities such as distorted gait, decreased range of motion, muscular fatigue often observed in chronic pain patients are more likely to result from secondary changes initiated in behavior through learning rather than continuing nociception. Philips argue that with chronic pain, the anticipation of suffering or prevention of suffering may be sufficient for the long-term maintenance of avoidance behaviors.

7.1.2 Sex, age, and ethnicity in the experience of pain

Even though there is a decent interest in different studies regarding the role of sex in an individual's response to pain, the findings have not been unequivocal. According to Bond (1979 p.151) & Taenzer et al. (1986 pp. 331-342) women report more pain or required more analgesic medication than men, but others have found the reverse pattern. Both of these findings contrast to other studies where no significant difference between males and females has been established (Streltzer and Wade 1981 p. 397, Khun et al.1990 pp. 1687-1690). There is therefore no research evidence to support a consistent pattern of pain appreciation related to sex.

Similarly, the literature addressing the influence of age on pain experience is not also straightforward. Goodman and McGrath (1991 pp. 247-264) argue that not a great deal is known about the epidemiology of pain, for example, in children because of the fact that children's pain has little social impact. This is because the cost cannot be calculated in terms of lost work-days and benefits claimed like by grownups. So there are not enough initiatives made to investigate the issue. When considering the adult's pain experience some researchers have found that aging is associated with enhanced analgesia, indicating that the elderly can obtain effective relief for longer periods with smaller doses of opioid analgesics than younger people (Taenzer et al 1986 pp. 331-342, Burns et al 1989 pp.2-6) and younger patients express greater dissatisfaction with pain relief (Donovan 1983 pp.125-129). On the one hand, unlike the common view that asserts that older people may systematically underreport the amount of pain they perceive, Miller & Shuter (1984 p.37) found that patients aged over 40 years reported more pain than those of a younger age group, whereas Khun et al. (1990 pp.1687-1690) found no relation between the amount of reported pain and age. Even though these findings may appear inconsistent, it still tells that age is an important variable in pain tolerance and expression.

Different studies show that without reference to cultural and ethnic differences, pain experience cannot be fully explained. Melzack & Wall (1998 p. 17) state that culture seems to influence the expressiveness rather than the sensory experience itself. Peck (1986 pp. 251-274) argues that cultural norms determining when and where to express pain are learnt at early age. There are many researches attempted on cultural difference

on pain over the years. People from Latin origins are typically more expressive and inclined to dramatize pain expression with excessive vocalization and posturing (Lipton & Marbach 1984 pp. 1289-1298). Chapman (1984 pp.1261-1277) found that people from Scandinavian origin tend to be more stoical and are on the whole less expressive about pain. According to Woodrow et al. (1972 pp. 548-556) Black English people of African/Caribbean ethnicity have been found to report more pain than the white Anglo British population, but other evidence (Thomas & Rose 1991 pp. 271-276) has indicated the reverse, and that the white population is better able to tolerate pain than those born in the UK whose parents originated from the Indian subcontinent. Other studies have failed to find differences between 'Old Americans', Southern US blacks, Irish, Italian and Jewish subjects in the amount of reported pain (Flannery et al.1987 pp. 39-50). Thus, it seems that the relationship between pain experience and ethnicity may be subtler than customarily thought, and that it may be possible only to describe certain responses as more or less characteristic of one group relative to another (Lipton & Marbach 1984 pp. 1289-1298).

7.1.3 Cognitive factors: Beliefs, self-efficacy, cognitive error and coping mechanisms

Turk et al. (1996 pp. 435-453) state that people are not passive responders to physical sensation, instead they actively seek to make sense of their experience. They look at their conditions by attempting to match the given sensations to some pre-existing implicit model or experiences and determine whether a particular sensation is a symptom of a particular physical disorder that requires attention or can be ignored. In this regard, each person has a uniquely constructed reality, and so is more likely respond differently. Normally people tend to rely on general attitudes and beliefs based on their previous experience and prior learning history when information are ambiguous. Turk et al. maintain that the meaning and significance of the problems including the perceptions of appropriate treatment are determined by these beliefs. They further add that if we accept the premise that pain is a complex, subjective phenomenon that is uniquely experienced by each person, then knowledge about idiosyncratic beliefs, appraisals, and coping repertoires becomes critical for optimal treatment planning and for accurately evaluating treatment outcome.

Patients' attitudes, beliefs, and expectancies about their plight, themselves, their coping resources, and their healthcare system, as different studies consistently demonstrate, affect their reports of pain, activity, disability, and response to treatment (Jensen et al. 1994 pp. 301-309).

According to Spiegel (1983 pp. 341-345) beliefs about pain is an important cognitive factor that influences on overall pain experience. He states that clinicians working with chronic pain patients are aware that patients having similar pain histories and reports of pain may differ greatly in their beliefs about their pain. Maladaptive coping, exacerbation of pain, increased suffering, and greater disability might be led by certain beliefs. Spiegel mention that people who believe that their pain is likely to persist may be quite passive in their coping efforts and fail to use cognitive or behavioral strategies to cope with pain. Williams (1991 pp.185-190) find in a study that people with chronic pain who consider their pain an unexplainable mystery may minimize their own abilities to control or decrease pain, and be less likely to rate their coping strategies as effective in controlling and decreasing pain. The study shows that a person's cognitions such as beliefs, appraisals, expectancies regarding the consequences of an event and his or her ability to deal with it, are hypothesized to affect functioning in two ways – by directly influencing mood and indirectly influencing coping efforts. Physiological activity associated with pain such as muscle tension and production of endogenous opioids may be affected by those influences. The presence of pain may change the way people process pain-related and other information (Flor et al. 1985 pp.354-364).

Beliefs about controllability is another. There are many laboratory studies demonstrating that controllability of aversive stimulation reduces its impact (Jensen et al. 1991 p.431). Conversely, there is evidence that the explicit expectation of uncontrollable pain stimulation may cause subsequent nociceptive input to be perceived as more intense (Leventhal et al. 1979 p.263). People with chronic pain typically perceive a lack of personal control, which probably relates to their ongoing but unsuccessful efforts to control their pain. A large proportion of chronic pain patients appear to believe that they have limited ability to exert control over their pain. Such negative, maladaptive appraisals about the situation and their personal efficacy may reinforce the experience of demoralization, inactivity, and over-reaction to nociceptive stimulation commonly observed in chronic pain patients (Turk et al. 1988 p. 223). People' beliefs about the extent to which

they can control their pain are associated with various other outcome variables including medication use, activity levels, and psychological functioning (Jensen et al. 1991 p.434).

Self-efficacy also determines on pain experience. It is closely related to the sense of control over aversive stimulation. It is a personal conviction that one can successfully execute a course of action or perform required behaviors to produce a desired outcome in a given situation. It has massive role to play for therapeutic change. According to Bandura (1997 pp.191-215) if a person has sufficient motivation to engage in a behavior, the person's self-efficacy beliefs are what determine which activities to initiate, the amount of effort expended, and extent of persistence in the face of obstacles and aversive experiences. Four sources of information regarding one's capabilities determine efficacy judgement; they are: one's own past performance at the task or similar tasks; the performance accomplishments of others who are perceived to be similar to oneself; verbal persuasion by others that one is capable; and perception of one's own state of physiological arousal, which is in turn partly determined by prior efficacy estimation (Bandura 1997 pp.191-215). Litt (1988 pp.149-160) reported that low self-efficacy ratings regarding pain control are related to low pain tolerance, and that they are better predictors of tolerance than are objective levels of noxious stimuli. This phenomenon is common among chronic patients.

Cognitive errors is a common factor among many that leading to magnified pain experience. A cognitive error is a negatively distorted belief about oneself or one's situation. A number of investigators, in addition to specific self-efficacy believers, have suggested that a common set of "cognitive errors" affect perceptions of pain, affective distress, and disability (Smith et al.1990 p.377). Specific cognitive errors and distortions are linked consistently to depression, self-reported pain severity, and disability in chronic pain patients as is the case with self-efficacy (DeGood et al. 2001 pp.320-341). According to Smith et al. (1990 p.389) such negative thoughts may have several consequences such as it appears to predict long-term adjustment to chronic pain, it may mediate a portion of the relationship between disease severity and adjustment, and it may uniquely contribute over and above other cognitive factors to the prediction of adjustment.

Coping mechanisms and pain experience are also closely related. Smith et al. (1990 pp.377-389) view that self-regulation of pain and its impact depend on peoples' specific ways of dealing with pain, adjusting to pain, and reducing or minimizing distress caused by pain – in other words, their coping strategies. According to them, coping involves spontaneously employed purposeful and intentional acts, which can be evaluated in terms of overt and covert behaviors. Overt behavioral coping strategies include rest, use of relaxation techniques, or medication, while covert coping strategies include various means of distracting oneself from pain, reassuring oneself that the pain will diminish, seeking information, and problem solving. It is believed that coping strategies help to change both the perception of pain intensity and the ability to manage/tolerate pain and to continue everyday activities. Smith et al. suggest that one needs to consider the coping mechanisms or strengths a patient has as it differs from person to person despite having identical diagnosis.

A number of studies have demonstrated that the ratings of pain intensity decreases and tolerance for pain increases if individuals are instructed in the use of adaptive coping strategies (Fernandez & Turk, 1989). According to Heyneman et al. (1990 pp. 63-77), the most important factor in poor coping is the presence of catastrophizing, rather than differences in the nature of specific adaptive coping strategies. Turk et al. (1994 p.1348) concluded that “what appears to distinguish low from high pain tolerant individuals are their cognitive processing, catastrophizing thoughts and feelings that precede, accompany, and follow aversive stimulation.”

7.1.4 Affective factors: Anxiety, depression and anger

Merskey et al. (1986 p.225) view pain as a subjective, private experience that is constituted by sensory and affective properties. It is a sensation in a part or parts of the body which is always unpleasant and therefore also an emotional experience. They maintain that even though the affective components of pain include many different emotions, they are primarily negative in quality such as: anxiety, depression and anger. These are commonly noticed among chronic pain patients.

The association between anxiety and pain is well known. According to Spielberger (1966 pp.3-21,) anxiety are two types. The *State anxiety* which is a transitory emotional

state that varies in intensity and fluctuates over time and is associated with threatening anticipatory circumstances, and *trait anxiety*, that is a stable personality disposition that is said to predict state anxiety, meaning it helps to predict people to react in a highly anxious manner in stressful situations. Spielberger (1993 pp.33-48) in his study found that state anxiety trait remained stable in surgical patients before and after surgery, but those patients with high trait anxiety scores reacted in a highly anxious manner just before operation. Numerous studies have shown that both state and trait anxiety are positively correlated with the degree of pain experienced in acute and chronic settings (Thomas et al. 1995, Seers 1997).

Anxiety is an affective state that is influenced by appraisal processes. According to Epicurus, a stoic philosopher “There is nothing either bad or good but thinking makes it so.” There are number of studies that show an intimate relationship between affective state and cognitive-interpretive processes whereby thinking affects mood and mood influences appraisals and ultimately the experience of pain. Study by Vlaeyen et al. (2000 pp. 317-332) show that threat of intense pain captures attention and it is difficult to disengage from. In that case even low intensity nociception becomes less bearable. The study explain that a set of extremely negative thoughts and arousal of fears – fears of inciting more pain, injury, and the future impact- might be initiated by the experience of pain. Vlaeyen et al. (1999 pp.287-304) demonstrate that fear of pain and anticipation of pain are cognitive-perceptual processes that are not driven exclusively by the actual sensory experience of pain and can exert a significant impact on the level of function and pain tolerance. Asmundson et al. (1995 p.777) suggested that fear of pain, driven by the anticipation of pain rather than the sensory experience of pain, is a strong negative reinforcement for the persistence of avoidance behavior and the functional disability.

Depression, like anxiety, is also seen as a common feature of chronic pain (Tyrer, 2002 p. 57). After reviewing a large body of literature, Banks & Kerns (1996 pp.95-110) concluded that from 30% to 50% of chronic pain patients suffer from depression. In the majority of cases, depression appears to be patients’ reaction to their plight. Okifuji & Colleagues (2000 pp.212) found that patients’ appraisals of the impact of the pain on their lives and of their ability to exert any control over their pain and lives mediated the pain–depression relationship. That is, those patients who believed that they could continue to

function despite their pain, and that they could maintain some control despite their pain, did not become depressed.

According to Turk et al. (1995 pp.93-101) there is a strong direct association between depression and degree of pain severity among older (age 70 and over) but not younger patients. Bair et al. (2003 p.45) found that older adults with chronic pain are far more likely to be depressed than those without pain. According to Roseman et al. (2007 pp.415-422) osteoarthritis pain is strongly associated with depression symptoms and poor perceived health, and the strongest predictor of depression in an osteoarthritis cohort was perceived pain (Bookwala et al. (2003 p.844). Studies show that these effects seem also to carry over into treatments applied for pain: more days of activity limitation and poor mental health were strongly associated with a decreased odd of analgesic or anti-inflammatory use (Dominick et al. 2004 p.326). Chronic pain may thus not worsen with advancing age, but continues to negatively impact older individuals' functioning, mental health, and use of treatments.

Studies show that the association between depression and pain with advancing age is very strong, although the nature of relationship is not always clear. For instance, it is not always clear whether depression causes pain, pain causes depression, or there is a bidirectional effect. As described above, degree of pain is more strongly associated with depression in older than younger adults, which challenges the preconception that older adults might show less mental health effects from pain. In age-related pain conditions, pain negatively impacts depression and increases health service utilization (Mossey et al. 2004 pp.335-348). Among older adults with pain, depression, or both, those with depression combined with pain were more likely to show new functional limitations and to have higher total healthcare expenditures, with no decrease in this association with age (Emptage et al. 2005 pp. 468-474). According to Kennewick et al. (2004 pp.9-22) among elderly nursing home residents, many of whom have significant functional impairments, pain is strongly associated with depression.

When people experience the prolonged stress of chronic pain and feel that nothing they do helps, they may stop striving to achieve goals and come to believe that they have no control over events in their lives. In other words, they learn a sense of hopelessness. Depression has been found to be a common feature of chronic pain, and is characterized by

withdrawal, lethargy, and feelings of worthlessness (Tyler 2002 pp.57-69). Learned helplessness-inability to effect change in spite of repeated efforts- is a major component of depression (Beck 2006 p.28). The psychological state of uncontrollability or helplessness is therefore a key feature of anxiety, depression, and pain. There are many studies that support the link between perceived control, anxiety and painful or adverse event (Mandler 1972, Miler et al.1989). Psychological techniques aimed at enhancing personal control and reducing the sense of hopelessness are a basic feature of an effective approach to pain control.

Kerns et al. (1994 pp.57-68) found that a significant proportion of variances in measures of pain intensity, perceived interference, and reported frequency of pain behaviors are triggered by the internalization of angry feelings. Anger has been widely observed in patients with chronic pain. Burns et al. (2008 pp. 259-279) found that frustrations related to persistence of symptoms, limited information on etiology, and repeated treatment failures along with anger toward employers, insurance companies, the healthcare system, family members, and themselves, all contribute to the general dysphoric mood of patients.

7.1.5 Personality and psychological factors

A major emphasis of psychosomatic care in recent times has been the search for specific personality factors that predispose people to develop chronic pain. Studies have attempted to identify a specific “migraine-personality,” an “RA” personality, and a more general “pain-prone personality” (Blumer et al. 1985 pp.381-406), even though the findings have been highly challenged. The study shows that people develop idiosyncratic ways of interpreting information and coping with stress on the basis of their prior experiences. According to Weisberg et al. (1999 pp.56-73) there is no question that these unique patterns will have an effect on their perceptions of and responses to the presence of pain. They maintain that people with high levels of anxiety sensitivity (AS) may be especially hyper vigilant to pain as well as other noxious sensations. According to Okifuji et al. (1999 p.227) selective attention directed towards threatening information like bodily sensations leads to greater arousal; because of this attentional process those with high AS may be primed such that minor painful stimuli may be amplified.

According to Flor et al. (1992 pp.452-460) psychological and social factors may act indirectly on pain and disability by reducing physical activity, and consequently reducing muscle flexibility, muscle tone, strength, and physical endurance. Several studies have suggested that psychological factors may also have a direct effect on physiological parameters associated more directly with the production or exacerbation of nociception. Flor et al. also maintain that cognitive interpretations and affective arousal may directly affect physiology by increasing sympathetic nervous system arousal, endogenous opioid (endorphin) production, and elevated levels of muscle tension.

Strong psychological reactions are generated by the circumstances that are perceived as potentially threatening to safety or comfort. For example, Rimm & Litvak (1969 p.181) demonstrated that subjects exhibited physiological arousal by simply thinking about a painful stimulus. Jamner et al.(1987 pp.417-430) show that in patients with recurrent migraine headaches simply processing words describing migraine headaches can increase skin conductance. According to Ciccone et al. (1984 p.1339) excessive sympathetic arousal and maladaptive behaviors can be immediate precursors of muscle hypertonicity, hyperactivity, and persistence; these in turn may be the proximate causes of chronic muscle spasm and pain. The study also adds that it is common for persons in pain to exaggerate or amplify the significance of their problem and needlessly “turn on” their sympathetic nervous systems.

It is important to acknowledge the impact of fear on pain. Patients may choose to minimize their pain because of needle phobia/fear of injection or concerns about taking opioids, for example. According to Trijsburg et al. (1992 pp.335-347), victims of needle phobia are at high risk of morbidity and death because they have a tendency to avoid health care at all cost. Trijsburg et al. maintain that even though the use of sedatives, local anesthetic cream such as EMLA or skin coolant before injections or venipuncture is helpful in reducing pain, such measures however are not helpful in removing the phobias because it is the site of needle that produces distress. As per their arguments, more effective solutions are provided through psychological interventions in the form of cognitive behavior therapy.

It is equally significant to understand the role of meaning in experience of pain. People attach meaning to their pain, and evidence suggests that such meaning may influence the

ways individual tolerate pain. The meaning associated with pain and suffering may dramatically affect the intensity and quality of the individual experience of pain (Veronica 2002 p.112). In a study involving 148 hospital inpatients, Copp (1974 pp. 491ff.) assessed personal meanings of pain. The result showed that more than half saw pain as a challenge, something to fight and conquer, to promote self-searching and increasing understanding of others, and a quarter saw pain as a weakness or punishment. These sociocultural meaning influence attitude towards pain and resultant behavior.

Veronica (2002 pp.112-124) argue that whether the pain is acute or chronic, it is closely related to the meaning the patient attaches to the pain and hence how they will cope with it. She gives different examples. The pain of child birth is severe and acute but the woman knows it is self-limiting. This case is almost the opposite to chronic pain of an advanced cancer, a disease that the person knows will probably lead to his death. Similarly, in case of post-operative pain, which is both severe and acute, the patient knows, assuming the operation is successful, that eventually it goes away in due course and he will have a better quality of life. Again contrast to that with the chronic pain of osteoarthritis which the patient knows will not go away and is caused by disease that, while not life threatening, is progressive and disabling. This is how psychological factors play a major role in the patient's perception of pain. Many patients, according to the study, adapt to chronic pain and just live with it as part of their everyday routine; they still feel the pain, but they do not show it in the same way that a person shows an acute sudden pain.

So, pain perception cannot be explained simply in terms of intensity of stimulus, rather it draws or should draw our attention to the complex interplay between physiological and psychological factors. An awareness of the pertinence of psychosocial factors in the experience and expression of pain is very useful to health care professional because it provides them with potential insights and explanations for understanding reactions and behavior to pain. (Melzack &Wall 1988 p.225)

7.2 Beliefs and myths about pain and pain management in geriatric care

Working with elderly patients in pain may not only challenge the skills of clinicians, but also frustrate their ideals and expectations about their work. Improving pain treatment in older adults is not simply a matter of prescribing the right treatment for the disease and the patient, but also of addressing the psychological barriers that clinicians and patients both face in their attempts to deal with pain. (Goodwin et al.1999 p.973)

Goodwin et al. further maintain that the primary difficulty with treating pain in older adults is not the lack of evidence-based treatments, since many exist, but rather the beliefs, expectations, and patterns of behaviors around chronic pain that impair use of potentially effective treatments.

7.2.1 Beliefs

Beliefs are very important in patients' readiness and capacity to self-manage pain and in how providers approach patients with pain (Hadjistavropoulos et al. 2007 p. 223). It is a common experience that patients often express beliefs about pain that may surprise providers. In a survey of older adults, about one-quarter expressed the belief that nothing could be done with osteoarthritis, and many were fatalistic about the cause and course of the disease and nihilistic about its treatment (Goodwin et al. 1999 pp.907).

Research found that the contrasts between patients' beliefs and expectations compared to those of primary care providers are significant. The layers of difference are shown in Parsons et al. (2007 pp.8-16) study. According to the study, the research providers first focused mainly on biomedical causes of pain, while patients focused on the subjective experience of pain. Second, patients expected straightforward communication about their pain, but often did not receive it during medical appointments. However, the providers find it very important to receive a physical exam regardless of the pain complaint. Third, patients stressed the importance of being trusted by their providers, noting that previous providers had frequently dismissed them as malingerers. Patients considered referral made for tests by providers as a sign that their problems were taken seriously by providers. Fourth, while patients reported that education about pain was important, they felt that

it was generally impractical, vague, or unclear, and providers felt that there was insufficient time to educate patients.

Beliefs about medications is also worth considering. Oral medications, either prescription or non-prescription, are the most common treatments recommended for older adults with pain, yet they are often described by patients as the least preferred treatments. According to Sale (2006 p.272) patients consistently report taking less medication than recommended, and adhering to analgesics differently than to other medications. Numerous factors predict adherence to medications, and involve a patient's implicit cost-benefit analysis of prognosis, effectiveness, risks, and social appropriateness, as well as other cultural and contextual issues (Carr 2001 p.56 & Horne 1998 p.86).

Another study found that older patients with chronic pain and their healthcare providers often had opposing attitudes and goals; providers were focused on diagnosis and treatments, while patients sought to be understood as individuals and to address quality of life, and struggled to have their pain concerns legitimized (Frantsve et al. 2007 pp.25-35).

Birdwell et al. (1991 p.83) mention that it would not be surprising that those experiencing pain and those observing or hearing about it would have different interpretations of it, but the trend towards providers' more optimistic beliefs about treatment success is noteworthy and important. They further add that there may also be gender effects in providers' beliefs about patients' pain: in a study of pain in primary care, female patients found it more difficult to communicate with men physicians about pain, and providers seemed to interpret men's pain symptoms more seriously than women's.

7.2.2 Myths

A higher focus on treating pain in older patients is needed due to an increase in the number of older patients. According to D'Arcy (2009 p.38) addressing the myths and concerns of the older patient can help decrease the potential for undertreating pain in this particularly vulnerable population. It is also important to know that an older patient might choose not to report pain for several reasons. For example, if the older patient has cancer, increasing pain may signal a progression of the disease that is not the expected or wanted outcome. For other patients, the cost of tests and medications may be too prohibitive for

them to consider reporting the pain. Still others may not like the way pain medications make them feel. For example, patients may stop pain medication without telling their doctor because the medication makes them feel “fuzzy-headed”; they would rather experience pain than be unable to think clearly. (D'Arcy 2009 p.55)

There are a number of myths about pain and aging. The most common myth states that pain is a normal part of aging. The apparently high prevalence of pain complaints among older adults often leads to the conclusion that pain caused by normal aging. According to Brattberg et al. (1997 pp.109), it is very common that many providers approach pain as if it were inevitable as patients get older, advising patients to “get used to it.” The research findings show that while the prevalence of chronic pain complaints may be high in older populations, it is not consistently higher with advancing age. It further adds that pain is not so a normal part of aging, although older patients do have a higher number of painful comorbidities, such as diabetic neuropathies, osteoarthritis, fractures and injuries from falls, compression fractures from osteoporosis, and impaired circulation. There are, of course, older patients who do not have pain or painful conditions. Brattberg et al. threaten that because older patients may not access health care for their pain needs, they are highly likely to be overlooked in the larger picture of the older patient population. Regarding the pain and aging, a meta-analysis of differences in pain perception with advancing age found that the highest prevalence of chronic pain occurred at about age 65, after which there was a slight decline with advancing age, even beyond age 85 (Gibson et al.1995 p. 111). Other research about the epidemiology of pain across the lifespan have found that the frequency of chronic pain either declines with age (Helme et al.2001) or demonstrates no strong association with age (Brattberg et al. 1997).

With advancing age, clinically many types of pain complaints occur less commonly, such as headache, abdominal pain, and chest pain (Gallagher et al.2000 pp.40 ff.), and population-based studies show a lower prevalence of low back, neck, and face pain, as well as migraine or severe headache, among older compared to younger adults (Centers for Disease Control &Prevention, United States, 2006).

These studies illustrate that pain is not an inevitable consequence of aging, and that for many types of pain and in many circumstances; older adults report less chronic pain than

their younger counterparts do. The evidence refutes preconceptions that most of the pain associated with advanced age is inevitable. While certain types of pain, especially osteoarthritis, increase in prevalence, there is little evidence that the symptoms of pain in general become more common with age. So, it is crucial for a nurse to be careful about the stereotypical thinking in consideration with the amount of truth on it and the vulnerability of making erroneous judgement. (Gibson et al.1995 p.112-118)

Similarly, pain worsen, as people get older is another widely held myth. According to the studies examining the beliefs of patients about aging and pain, both patients and clinicians often express the expectation that pain is more intense and intractable among older compared to younger adults. For instance, older (over 70 years) compared with younger patients were more likely to believe that people should expect to live with pain as they get older (Appelt et al. 2007 pp.184-190). The belief that aging is associated with greater susceptibility to and suffering from pain is expressed by patients of all ages (Keller et al.1989 pp.247-255). According to Busse (1985 p.213) with advancing age shows that there is enormous heterogeneity in how older adults report and are affected by similar medical complaints. More than one-quarter of patients with osteoarthritis expressed the belief that this disease always gets worse with increasing age (Hill et al. 2006 pp.796 ff.).

Research shows that pain sensation does not necessarily decrease as patient's age. For example, diabetes can lead to diabetic neuropathies in a stocking-glove distribution (feet and hands), where nerves are damaged by years of high blood sugar levels. The older patient's ability to maintain a steady gait and balance can be affected by neuropathies and other conditions. (Centers for Disease Control &Prevention, United States 2006)

Older adults get used to living with pain is another widely held myth. Physicians who advise older patients living with pain to "get used to it" tacitly suggest that this technique might work, and that older people can acclimate to the experience of pain. There is some evidence that nociception changes with advancing age (Gibbson et al. 2004 p.229) which might be interpreted to suggest that older adults suffer less for the same amount of tissue pathology. The findings described above about how older adults may cope with pain better than younger adults do (Rustoen et al. 2005 p.513) could imply that pain has less of

an effect on the elderly. It also could be that patients may talk themselves as if they had indeed gotten used to living with pain, or that their pain tolerance had increased over time (Sale et al.2008 p.335). The study clarifies adding that if older adults became used to living with pain, or if pain became a normal part of aging, one would expect that the associated deleterious consequences would become mitigated with age.

But research also suggests that people do not respond physiologically or behaviorally to pain with advancing age, there is some evidence that older adults complain less about pain than their younger counterparts. Older adults are often reticent about pain, or reluctant to label a sensation as painful. (Young et al.2004 pp.279-285).

Other research has found that older adults minimize and underreport pain. Older adults with pain commonly express stoical beliefs about pain, such as that it is better endured than treated (Gignac et al. 2006 pp.905-912). This difference in expression may promote the myth of how older adults get used to living with pain, since in complaining less they appear hardened to it.

Additionally, older adults seek medical treatment, as the primary way of dealing with pain is yet another myth. From one perspective, medical treatments for pain could be seen as a success as healthcare professionals, including allopathic, complementary, and alternative providers, perceive their treatments to be first-line, primary mechanisms to relieve pain. Health care professional conceptualize pain as a medical problem, recommend treatments to patients that are considered evidence-based, and generally believe in the efficacy of their recommendations, and the older patients too have great trust on that. But the matching does not always work as unfortunately, pain could be heightened by different cognitive, social and psychological factors. A closer examination of health services data regarding chronic pain in older adults shows that this expectation about the treatment of pain in medical settings is inaccurate and overly optimistic.

According to Briggs et al. (1999 p.1154) overall existing service provision for chronic pain in older adults is not adequate as pain is often not treated or undertreated, and when it is treated the outcomes are only marginally successful despite the enthusiasm about and evidence for many medical treatments for pain. Research also shows that that individuals

in pain who described less adherence to pain medications and made fewer visits to the doctor reported better quality of life. It certainly does not mean taking medications or seeking medical care impairs quality of life, but as Brigg et al. state while there is considerable selection bias around the use of health-care for pain, such findings challenge providers' expectations that their prescriptions, when followed, lead to improved patient outcomes.

There is yet another widely held belief in the society that older patients tolerate opioid medications. Older patients can tolerate opioid medications, but the process of medication initiation and dosing needs to be carefully considered and monitored (AGS 2002). According to Lazer et al. (2005 p. 1893), the recommendation is to start low and go slow, reducing the normal opioid doses by 25% to 50% for older patients. Because older patients may be more sensitive to adverse drug reactions, opioid medications should be started with careful monitoring on a trial basis, to see if they are effective in relieving pain. If the medication is effective and adverse effects are not significant, a pain relief regimen that includes opioids can be very beneficial for the patient. According to American Pain Society (2008) placebos should never be used to determine whether the patient's pain is real, or to replace pain medication. Using placebos destroys the patient's trust in the health care provider and has moral and legal implications for practice. Trying a placebo, which might be considered a "safer" option, will only result in untreated and undertreated pain.

Furthermore, there is another generally held belief in each society that cognitively impaired patients do not experience pain, which is nothing but another example of myth. Cognitive impairment also impedes perception of a sensation as pain. Research shows that the cognitively impaired patient experiences pain along the same pain pathways as other patients. However, the difference in this regard could be that the cognitively impaired individual may not identify the sensation as pain. The difficulty to assess pain among these patients adds complexity to the already complex situation. Fortunately, there are now a number of pain assessment tools designed for cognitively impaired or nonverbal patients that rely on pain behaviors. Using one of these tools consistently would be a great help to the caregiver for determining whether the patient is in pain and if so, trigger administration of pain medication. (D'Arcy 2009 p.29)

According to D'Arcy (2009 p.53) these beliefs have more than academic importance, because the values that patients and providers hold about pain and its treatments, and their expectations about these, determine health service use, clinical decisions, and self-management. He further adds that examining these preconceptions empirically show that few of them are true, and suggests further that they stem from oversimplified, stereotyped, and anachronistic notions.

7.3 Ethics in pain management

According to Farber et al. (1996 p.348) illness affects moral behavior; illnesses can cause people to behave in an immoral fashion unless allowances are made for the illness. Mental health problems such as schizophrenia, anorexia nervosa and alcoholism all pose the risk for the sufferer of un-wittingly transgressing moral norms in both mild (e.g. talking to oneself) and major (e.g. self-harm) ways. Pain can also cause people to become morally weak due to its overriding nature. It is more likely if the pain is chronic; it might lead to failure to interact appropriately with others; it can generate the anger or weaken the drive to seek remedies for the pain. We need to support our patients in any way that helps them ease their pain as health professionals. It could be possible, for instance, that we strongly advocate the legalization of cannabis regardless of the effect these actions might have on your professional status and credibility. (Farber et al.1996 p.348)

However, there is other side on the issue. As health professionals, we should discourage our patients/clients from breaking the law. We need to be abided by the law as we have a wider responsibility to the public and society as a whole and to your profession. Smoking cannabis, for example, can give rise to other health problems, such as respiratory and mental illnesses. Patients with illness are usually morally vulnerable and consequently may make decisions that they would regret if they were not in pain. (Farber et al.1996 p.359)

7.3.1 Religion, deontology, utilitarianism, rights and duties

In any society, religion is an integral part of ethical experience. Pain experience may be directly influenced by religious beliefs. Farber et al. (1996 p.355) maintain that the way

people respond to pain is frequently used as a judgement on their ability to lead a proper moral life. For centuries endurance of pain and suffering, for example, has been seen as a Christian ideal because Christ was crucified and suffered. The study views that pain is considered as means to gain closer spiritual identification with a God or the Gods in the Judeo-Christian faiths like many other forms of religious belief, such as mysticism, shamanism, Taoism and Hinduism. Pain is considered serving as a punishment for sin, a cure for disease, a weapon against the body and its desires, or a means by which the ego may be transcended and spiritual sickness healed, a way to get closer to God. By advocating care of those suffering as moral ideals, religious philosophy balances these beliefs. Farber et al. argue that one of the moral problems we face and which religion offers an answer for is; who or what decides what is right or wrong? There are a number of ways to answer this.

Similarly, deontology like religion also has noticeable influence on pain management. Deontology is essentially a rules-based system of ethics that advocates for values of obligation or duty and the rightness of act. This philosophy argues that only by fulfilling your obligations to another through your actions towards them can you be ethically correct. As long as you act correctly, the consequences of your action on the individual or yourself have no relevance to the ethical morality of this position. This philosophy is a particularly useful to use when health professionals cannot be sure of the outcome, be it in treating geriatric chronic pain. (Lisson 1987 p.653)

Utilitarianism is another school of thought worth considering. This philosophy argues that one needs to identify everyone who would be affected by the action and its consequences, determine whether they benefit from the action or are disadvantaged by the action, determine the extent to which they are advantaged or disadvantaged, and finally sum up all the positives and negatives before taking any decision. It encourages choosing the option that produces the maximum amount of common good. Utilitarianism invites the use of individual reason and judgement, giving some autonomy in choice of actions. However, it is argued that one needs to apply utilitarianism carefully in practice, as it is not simply a matter of maximizing pleasure and benefit for those on whom the actions will bear but of weighing up the consequences of doing this as well. Concerned authorities and professional individuals are seen implementing this school of

thought too especially due to lack of resources and especially a massive aging population. Practicing utilitarianism is like performing moral calculus that sounds inhuman and morally complex. (Beauchamp 2008 pp.188-194)

Decisions about treatment is also found being made based on economy. Quality adjusted life year (QALY) calculations, which is used by the National Institute for Health and Clinical Excellence (NICE) in the UK, is an example. It uses this calculation to make judgements about the best effective treatments. It forms the basis of real clinical decision-making. It asks the questions such as how many years extra life will the treatment provide this patient, what will the quality of those extra years be, how expensive this treatment is. The role of nurses are too very pivotal in this entire process as they are closest to the patients. (Herring 2006 p.531)

Rights and duties of health care professionals also has an important connection in pain management. It includes the themes such as doing the 'right thing' for those in need, respect for the person, justice and equality, and helping and minimizing harm during care process. In 1995, the American Pain Society called for the adoption of pain as the "fifth vital sign." This was followed, in 1998, by the Veterans Health Administration developing a National Pain Management Strategy and, in 2001, by JCAHO developing pain management standards, which included the right to appropriate assessment and management of pain. These initiatives culminated in the Global Day against Pain (October 11, 2004) during which the World Health Organization, the IASP and the European Federation of IASP Chapters declared that "the relief of pain should be a human right." The concept of pain relief as a human right is derived from the United Nation's 1966 International Covenant on Economic, Social and Cultural Rights "right to the highest attainable standard of health" (ICESCR:1966).

Considering keys from the relevant literatures, the common objectives of the proponents of this right to pain relief is to improve relief of all forms of pain to permit optimal quality of life and productivity, include a right to pain relief in constitutions, enact statutory requirements for education of health professionals about pain relief, and promote opioid deregulation and affordability. However, an important question here is how far we are able to do this for elderly patients with chronic pain conditions. Do we really see the match between these principles and our pain management interventions?

7.3.2 Bioethics

Bioethics has influences in pain management. The principles of bioethics are developed in response to addressing ethically complex issues of who should decide health care problems, the patient/client, patient's guardian or the health professional. Considering adults who are mentally competent and conscious, they take decisions. However, for those who are critically ill must rely on the knowledge, judgement, skills, experiences and decisions of a wide range of health professionals. This kind of situation puts them at the mercy of the actions of the professionals. (Beauchamp 2008 p.187)

According to Lisson (1987 p.649) "pain is dehumanizing; the severer the pain, the more it overshadows the patient's intelligence. Pain destroys autonomy: the patient is afraid to make the slightest movement. All choices are focused on either relieving the present pain or preventing greater future pain." There are four bioethical principles that have been put forward as a way to act that prevents abuse of this power: autonomy, beneficence, no maleficence, and justice (Beauchamp & Childress 2008).

Autonomy is about respect for the decision-making capacity of an autonomous person. Someone who has abilities of self-governance such as understanding, reasoning, deliberating, managing and independent choosing is considered as an autonomous person. However, health professionals need to be careful about whether autonomy has the same impact on the ability of someone in pain to make an autonomous decision. It could be very much possible that the person in pain has lost or diminished his autonomy of self-governance, and that drives him to take actions he might not otherwise take. It could be such as desiring health professionals to remove their pain by whatever means available even if it is not the most appropriate choice for them. (Beauchamp & Childress 2008)

However, there could be times when competent people, for instance, may refuse analgesia. There might be a number of reasons behind this. It is likely that they are worried about obscuring their intellectual and emotional awareness or may be concerned about avoiding the side effects of the drug such as nausea or constipation. It is also possible that either they have fears about addiction or they do not trust health professionals or they may wish to prove to themselves their psychological or spiritual hardiness. (Farber et al. 1996 p.354)

Farber et al. (1996 p.357) argue that whether or not we as health professionals agree with these motives is largely depends whether we are able to respect their autonomy as the choice they have made is a deliberate one. They maintain further that autonomy focuses on self-determination and liberty as long as this does not interfere with the rights of others. It in other words means that if an individual prefers to experience pain and this harms no one else then patients should be allowed to make this choice. However, they add that health professionals must be fully cognizant of the facts in order to make their choice. It is likely that any of them could make a decision out of ignorance. If someone has made a decision based on misconceptions, we should act to inform them of this even if they then decide to ignore this new information. Role of nurses is very important all along.

Beneficence is another bioethical principle, which means doing well to others is particularly important where someone is incapable of making an autonomous decision or has a limited capability to do so. A beneficence-centered approach to pain would apply where someone is unable to make a decision for himself or herself perhaps because of severe illness or cognitive impairment. It could be also that the patient's wishes are unknown due to critical conditions. It is very common among elderly patients. In this case, a surrogate decision is made or has to be made. Knowledge and experience of nurses will be significant in this situation. The surrogate decision should be guided by the person's well-being. (Lisson 1987 p.651)

However, it should not be based on firm rules but should be individualized according to what is known about the person's beliefs and desires, argue Farber et al. (1996 p.356). It, in other words, means suggestively the involvement of those who know the person. It should not necessarily mean only people family, friends, relatives and care givers. It could be anyone who could support for the patient situation. According to the code of beneficence, given that no agreement is made between the various interested parties, there is a need to seek help and advice from judicial body. One can go to this process primarily because it is impossible to know in advance someone's desires, perhaps because of the emergency nature of the situation. Everybody know that most people would ordinarily want to receive treatment that would restore health or ease suffering. However, in some situation this is simply impossible to achieve. Nursing role is paramount.

Non-maleficence is the third bioethical principle that refers to avoiding harm or doing no harm. This principle forces health professionals to consider the consequences of any actions and to weigh up the results of doing nothing with the consequences of treatment. At times, this can be a very straightforward easy decision. In surgical care, the issues related to non-maleficence come more frequently. Decisions are sometimes hard to make for doctors. As an important member of health care team and also due to nurses' proximity with patients and their families, the role of nurses are too equally important in the overall process. (Farber et al. 1996 p.354)

Justice is the next bioethical principle that refers to the principle of fairly distributing the risk, burdens and benefits of decision-making. There are different dimensions regarding justice in health care. It means equal access to health care, which may mean that people with a greater need could be discriminated against. It could be interpreted that justice in health care should be given according to merit or contribution to society or effort to help oneself stay healthy or ability to pay. It might lead to a number of moral dilemmas. However, many agree that treatment should be based on need and not on other aspects of it. (Lisson 1987 p.653)

One solution to this possible dilemma from the health professional's point of view, according to theorists, is the doctrine of 'double effect'. The doctrine of double effect holds the view that if an intended good outcome also produces a bad side effect, this is ethically acceptable as long as this side effect was not intended. This applies whether or not the side effect is foreseeable or even likely to occur. Moral theorists argue that we have to ensure that certain conditions apply to ascertain whether the doctrine of double effect has been met. Those conditions include: the good outcome must be achieved independently of the bad one; the undesired outcome must not be the means of achieving the good outcome; the action must be appropriate; and the action must be proportional to the cause. (Beauchamp & Childress 2008 p.162)

In short, consideration of moral and ethical principles can be useful when it comes to deciding about the best way to organize pain management. During the 1990s, authors such as Davey & Popay (1993) and Phillips et al. (1994) suggested that health care could

be evaluated by considering criteria such as effectiveness, equity and efficiency, with recognizing the importance of the personal needs of individuals and humanity.

7.3.3 Pain management at the end of life

The majority of end-of-life care is currently provided in institutions, with more than two thirds of individuals dying in hospitals or nursing homes. In a large survey of surviving family members, more than 25% reported that their loved one received inadequate relief of pain in these settings (Teno et al. 2004 pp.88-93).

Adequate relief of pain at the end of life is an ethical imperative. Studies suggest that pain is the most distressing for many patients even though it may not be the most prevalent symptom during the final days or weeks of life. Pain not only exerts negative consequences on the patient, but also adversely affects the emotional well-being of family and friends at the bedside. To witness unrelieved pain during the final hours of life leaves long-lasting negative memories of the dying process that can hamper bereavement. (Kutner et al. 2007 p.227)

According to Kutner et al. (2007 p.229) palliative care strives to relieve suffering and improve the quality of life of those individuals with a life-threatening illness. The study views that commitment to early identification, thorough assessment, and effective treatment of pain are key components of palliative care, as is attention to other physical, psychosocial, and spiritual concerns. The goal is to affirm life by offering a support system to patients and families; it is to neither hasten nor prolong death.

Explaining the conditions further, Kutner et al. (2007 p.231) maintain that although most pain at end of life can be well-managed with available therapies, intractable pain or unmanageable adverse effects can occur that can lead to incredible suffering. There could be distressing symptoms of the patients that cannot be controlled by any of the usual available mediums. In these cases, palliative sedation may be considered. However, it should be understood that due to rapidly increasing disease burden, it is possible that pain is likely to escalate. At other times, pharmacokinetics of the opioids and other analgesics are altered by organ dysfunction associated with the dying process, leading to inadequate relief. This situation is very hard to witness as a health professional.

Regarding palliative sedation, there are a number of crucial steps that need consideration before actually implementing it. The nursing responsibility is huge during the whole process. Research shows that first, the team must be confident that all other reasonable options have been explored, the disease is irreversible, and that death would be expected in hours to days. Second, the patient and family should be carefully informed about the risks and benefits of sedation and they should agree with these plans. The entire team (physicians, nurses, respiratory therapy, chaplains, social workers, and others involved in the patient's care) must have the opportunity to discuss this option and agree as a team about the justification for the use of sedation and the details of the care to be provided. These generally complex cases are emotionally stressful. All involved can benefit from talking about the complex medical, ethical, and emotional issues they raise. (DeGriefs et al. 2007pp.67-85)

The general procedure tells that decisions about hydration and nutrition as well as resuscitation status (most centers require that the patient has do not resuscitate orders) should be made prior to initiating sedation. If the patient is awaiting the arrival of a family member from out of town sedation could be delayed. Light sedation may be used and reversed in some cases. Once the relative arrives, then restarted and increased once the patient and loved one have had time to say good-bye. Family members require emotional support to assist with their anticipatory and ongoing grief. The supportive role of nurses would greatly ease the acceptance process of the dear and near ones. It must be clearly mentioned that this therapy is not euthanasia, but is rather directed toward treatment of symptoms. (Hawryluck et al. 2002 p.121)

Coyle (2006 p.267) view that it may be very difficult to distinguish pain from other causes of suffering in dying patients. He points out that although the modern trend toward greater attention to pain is positive, there is frequently little attention to the role loss, burden, sadness, fear, isolation, and other existential concerns that can play at this time of life. At this point, it may become crucial to understand whether there is any difference between relief of pain and relief of suffering. One study asked hospice patients about suffering in an open-ended interview, revealing that in the views of the 100 patients included in this study, relief of pain and relief of suffering are not the same (Terry 2004 pp.604-607).

Another study of health care professionals revealed that suffering was viewed quite differently by chaplains, who defined this in spiritual terms, versus pain professionals, who placed existential issues in the context of pain (Strang et al. 2004 pp.241-250). Nurses need to encounter these tricky challenges with rational sensibilities.

Different studies show that the challenge for our health care system is to ensure that regardless of setting, pain management at end of life is provided by skilled professionals who understand the special needs of the dying. These skills include assessment of pain in those who might not be able to verbally describe their pain, awareness of pain syndromes common at end of life, as well as familiarity with the pharmacologic and non-pharmacological management of pain in the dying. Furthermore, clinicians must be aware of the role of suffering and existential distress, as well as management of intractable symptoms. The principles employed in treating other patients in pain should be applied to the dying as well. (Coyle 2006 pp.266-274)

It is found that non-pharmacologic therapies can be particularly useful during the final hours of life. Cognitive-behavioral techniques, physical measures, and education can be used as part of the multimodal treatment plan to reduce pain and suffering. Cognitive-behavioral techniques include guided imagery, meditation, hypnosis, music and art therapy, and other complementary therapies. Physical measures, including massage, reflexology, heat, and other techniques, can produce relaxation and relieve pain. The patient and caregivers' abilities to participate must be considered when selecting any of these therapies, including their fatigue level, interest, cognition, and other factors. Family caregivers who rate their self-efficacy, or their ability to care for their loved one, as high report much lower levels of strain, as well as decreased negative mood and increased positive mood. It is genuinely challenging nursing and other staff to meet the competence of these treatment options. (Kwekkeboom et al. 2008 pp.83-94)

7.4 Problems associated with pain assessment in older patients

One of the fundamental nursing activities related to pain management is the assessment of pain. It is crucial to explore the importance of pain assessment in a variety of pain situations. The principles of pain assessment in patients experiencing chronic pain has focused on the influences of the physiological, psychological and sociological aspects of chronic conditions, and the impact these have on the individual expression of pain.

7.4.1 Assumptions and misconceptions

Some of the reasons that make pain difficult to assess are based on the assumptions and misconceptions that both patients/clients and their families on one hand and health care professionals on the other hand may have regarding the assessment and treatment of patients with pain. Such misconceptions, according to Parsons & Preece (2010) include beliefs about who knows the most about the pain, people with similar conditions have identical pain threshold, patients' knowledge of clinicians' expectations of pain behaviors, attribution of cause, addiction, and placebos.

According to Parsons & Preece (2010 p.515), a common error is that patient, the person who is actually experiencing the pain, believes that the health care professional is an expert in their pain because they have a wide range of experience in caring for people with their particular problem. This is not always true. They mention that as experts in a particular area of health care such as cardiac pain or a particular type of surgery, they might have misplaced ideas about pain threshold and tolerance of the patients.

Similarly, there is a tendency among health professionals to assume that people with a particular condition experience a uniform response to their pain or have pain threshold. This line of thinking ignores the diverse reaction often noticed because of variations in tolerance including behavioral and physiological responses to pain. Similarly, pain tolerance varies greatly between people and in one individual may vary over time. Factors that reduce tolerance include existence of a chronic pain, more than one source of pain, and

lack of sleep, high levels anxiety and a loss of control. We may see higher levels of tolerance when a person has low anxiety, good social and psychological support mechanisms and a high locus of control. As we can see many of these factors may be outside of the individual's control; however, often health care professionals form judgements about a patient or client or their families based on their toleration of pain. (Parsons& Preece 2010 p.518)

Furthermore, people often assume they should behave in a certain way when in pain. These beliefs are shaped by the need to seek help in the form of expressing overt pain behaviors but are often moderated by social norms; for example, men may display pain in a different way to women. Failure to comply with these norms may lead to a person's pain being perceived as false or to concealing pain from health professionals. (Parsons& Preece 2010 p.520)

Additionally, often patients/clients and their families may attribute different causes for their pain than health care professionals. This might arise if they have a particular anxiety such as that their pain is a sign of a bad prognosis, or because health care professionals may focus on one particular element, their surgical problem, for example, and not be aware that the patient may have other pain problems. (Parsons& Preece 2010 p.521)

Addiction is another factor that is worth considering. A very common concern among patients and clients but also among health professionals is related to the analgesia required for treating severe acute pain. Patients fear that they could become addicted if they take opioids, and health care professionals may read someone's pain behavior as being a demand for opioids to feed an addiction. This can be a particular problem if the patient's behavior is already viewed suspiciously: that is, their pain is believed to be less than is reported or is nonexistent. (Parsons& Preece 2010 p.523)

Sometimes nurses may encounter a morally tricky situation when a person in pain may be utilizing a method of controlling their pain that appears to have no basis in scientific evidence and yet they appear to be getting a benefit from this. This may be due to the placebo effect. Consequently, they may be using an inappropriate or even harmful method or may fail to seek help from an appropriate source. Some health professionals may also consider placebos as a useful method of dealing with pain where they do not believe the

person is in pain, or where they feel they cannot do anything else for the person in pain. Often this is justified because they are doing no harm; however, in the first example, they are in weak ethical territory because they are overriding the person's expression of their autonomy. In the second instance, either they may be denying the patient the opportunity to seek help from somewhere else or they may be offering false hope. (Parsons & Preece 2010 p.527)

7.4.2 Pain assessment in the cognitively impaired and for those who cannot communicate

Several excellent reviews thoroughly describe tools used to assess pain in cognitively impaired older adults, primarily those with dementia. However, investigators found the tool lacked validity and was challenging to use. Assessment in patients who are cognitively intact and able to verbalize can incorporate standard intensity tools such as the numeric rating scale (NRS), the verbal descriptor scale (VDS), the visual analogue scale (VAS), or the Brief Pain Inventory (BPI) for more comprehensive evaluation.

Although standardized instruments to measure pain at the end of life are needed, several principles can guide clinicians when patients are cognitively impaired and unable to report pain. Behaviors suggestive of pain should be evaluated, including the furrowed brow, guarding, or vocalizing on movement. Study suggests that one need to consider causes of pain, including the underlying disease and treatments, as well as new complications such as pressure ulcers, constipation, urinary retention, or infection. Asking family members or others who have known the patient if they observe changes in behaviors that might imply discomfort would be helpful. If any of these indicators suggest that the patient may be in pain, initiate an analgesic trial and reassess. Resolution of the behaviors provides suggestive evidence that pain exists. Regular administration of the analgesic should then be included in the treatment plan. (Herr et al. 2006 pp.44-52)

Properly assessing pain is the first step in the adequate treatment of pain. Having family input to determine what behaviors are related to pain is an important step in following current pain assessment guidelines for patients who cannot communicate. Behavioral scales allow for the pain assessment of vulnerable critically ill patients who are unable to self-report. Family participation is considered as an important component of pain assessment for those unable to self-report. (The American Society for Pain Management Nursing, 2017)

Study shows that family caregivers were able to provide rich descriptions of a number of behaviors they observed in their loved ones that were perceived to be relevant indicators of pain, such as muscle tension and key facial expressions and body movements. Several factors influenced how behaviors were interpreted by family, including personal medical beliefs and intimate knowledge of the patient's history. The pain behaviors determined by family caregivers can be quite useful, for example, in the pain assessment process of traumatic brain injury patients with an altered level of consciousness. Their input could also be helpful in further development of pain assessment tools. (The American Society for Pain Management Nursing, 2017)

There are few common pain behaviors as discussed by Arbour & Gelinas (2014 pp. 506-518) that could be helpful for nurses in order to assess the pain of those critically ill patients. Facial expression is one. According to them facial expressions that are believed to be relevant to patient pain are diverse. Expressions involving the eyes/eyebrow: tearing or eye weeping. Despite its high rating of relevance to pain, this behavior is sometimes hard to differentiate from other emotions. Brow lowering, an expression that involves lowering of the eyebrows, is also believed to be a sign of pain. Other facial behaviors that involve the eyes are eye opening, squinting/wincing, and moving the eyes under closed eyelids. Expressions involving the mouth: a curling or moving of the lips is also seen as a sign of pain. Flushing: a reddening of the patient's face is also as a sign of pain, which could be combined or not with other emotions. General facial expression, such as when you struggle and your facial expressions change. Body movement is another one, which may include fighting restraints, twitching or flinching, general agitation, and other. Fighting restraints indicate sign of pain could be when the patients resisted restraint by equipment, staff, or family members. Twitching or flinching indicate quick movements soon after a pain stimulus. General agitation involves violently moving the limbs (legs and hands). Other behaviors described as relevant to pain include lifting or turning the head and twisting or turning the body. Muscle tension is the third one. According to the study, family caregivers describe muscle tension in terms of a visible tension they could see without touching the patient's body. When the patient lifts up his shoulder a bit, and his head, we could see a contraction. Vocalization behaviors, if any, could be another one to look at during pain management especially on those patients who communicate naturally.

It should equally be understood that there are various factors that could affect family caregivers on understanding of patients' pain behaviors. Usually they are influenced by information they received from nurses and doctors, personal medical beliefs, and the personal history of the patient. (Arbour& Gelinas 2014 p. 517)

According to Arbour et al. (2014 pp.960-969), the factors hindering observation or interpretation of behaviors are diverse. Family related factors are one. It means that families did not often witness painful procedures or patient care because they were not present at the bedside at that time, because of either personal or staff preference. Family caregivers' lack of assessment knowledge is another factor. It signifies participants noted that they did not always have the medical knowledge to be able to assess for signs of pain even when they did observe painful stimuli thinking that they are not doctors, for example, to do that. The study shows that although clinical teams in pain assessment can use technological signals such as respirator alarms, these signals were not salient or interpretable to family caregivers. Medical related factors are the third one. It explains that medical equipment, illness-related factors, and sedatives limited the observation of pain behaviors by relatives. Interpreting behaviors are the fourth factor. There are conflicting understanding about pain and discomfort. For some family caregivers these words could be used interchangeably. However, others distinguished between the two terms, reporting some behaviors as being indicative of pain and others signaling that the patient was instead uncomfortable. The last or the fifth factor shown by the study is the consideration of pain behaviors as a positive sign. Patient pain behaviors are not perceived as entirely negative to relatives, because these behaviors represent signs of patient mobility and a positive prognosis. The study also suggests that during the evaluation process, it is usually undermined to assess the role of emotional reactions of the family caregivers as observation of pain behaviors coming from the critically ill patients. Study on emotional impact on family caregivers could be telling a lot about the patient's pain assessment.

7.5 Efficient non-pharmacological means of chronic pain control

There are a number of different approaches to facilitate adaptation and self-management of symptoms. The most common treatment approaches include insight-oriented therapies, behavioral treatments, and cognitive-behavioral therapy (CBT). In addition, several techniques based on these models have been efficacious (i.e., motivational interviewing, biofeedback, relaxation, guided imagery, hypnosis, and meditation) independently or as part of comprehensive rehabilitation. (Novy 2004 pp. 279-288)

Here is an overview of different approaches and techniques for the treatment of patients with chronic pain.

7.5.1 Cognitive behavioral therapy and group therapy

According to Watson (2002 p.367) by far the most effective psychological approach used in pain management utilizes cognitive behavioral therapy (CBT). He maintains that CBT seeks to influence patient's perception or appraisal of events and their behaviors by addressing their concerns at cognitive and behavioral levels. The cognitive aspect recognizes the importance of the individual's personal view of experience. The behavioral aspect emphasizes active performance based on strategies, such as graded practice, relaxation and relapse prevention training, to reduce pain. Even though CBT may result in a reduction in the frequency and intensity of pain, pain relief is not the primary goal; rather the aim is to help patients learn to live more effective and satisfying lives despite the presence of pain (Turk & Meichenbaum 1994 p.1337).

Study shows that the efficacy of CBT in chronic pain is significantly more effective in reducing pain distress and negative coping strategies, and in improving positive coping strategies, perception of internal control and pain self-efficacy than an attention placebo or non-treatment control. The focus is to get patients to understand the relationships between their beliefs about pain, their feelings and their behaviors. It helps patients to identify unhelpful thoughts that lead to negative feelings such as anger, anxiety and depression, and to modify them. (Thomas et al, 1999 p.209)

Although CBT is established as an individual therapy, group CBT is very popular in many chronic pain management programs. The advantages of group therapy include more efficient allocation of professional resources and the value of support from others who have

similar problems. However, all group programs take account of the individual in the group, and goals for behavioral change are developed individually with each patient. (McCaffrey & Beebe 1989 p.219)

7.5.2 Relaxation, imagery, coping self-statements, maintenance of gains

Relaxation training helps effectively in comprehensive pain management programs. Chief benefits include the reduction of muscle tension and pain; a decrease in the fear associated with the anticipation of pain; and an increase in confidence in coping with pain (Watson 2002 p.219). While evaluating the efficacy of relaxation in adults with chronic pain reported that patients rated relaxation training more helpful than pharmacological treatments and counselling, but less helpful than physical therapy (McCaffrey & Beebe 1989 p.216). According to Linton (1982 p.173), relaxation is helpful because it reduces tension in patients with chronic pain.

Focusing on a pleasant image is a useful addition to relaxation. According to Turner & Keefe (1999 p.523), images can involve ourselves, the outside world and images of ourselves in the world. However, in the context of CBT strategies, images using multiple senses such as seeing, hearing and touching are likely to be most effective. As people with chronic pain frequently have imagery of the part of their body that hurts, the therapist can guide the patients through guided imagery to soothe the pain. For example, one can ask to his patient to imagine that the sun is acting as a heat pad to the painful part and soothing the pain away. It could help (Watson 2002 p.222).

Positive statements such as, I know that can cope with this, if I remain calm and relaxed, are very helpful in countering negative thoughts about pain. Coping self-statements need to be practiced over several weeks in order that they become part of repertoire of coping skills (Watson 2002 p.223).

Similarly, prevention of relapse or recurrence is important. To maintain positive benefits, the therapist works with patients to identify early signs of obstacles or high-risk situations and develop an action plan. Using role-play, the patient rehearses how to cope in such situations. (Watson 2002 p.226)

7.5.3 Biofeedback

Biofeedback is a self-regulatory technique. The assumption with regard to biofeedback treatment is that the level of pain is maintained or exacerbated by autonomic nervous system. The objective of biofeedback is to teach people to exert control over their physiological processes to assist in re-regulating the autonomic nervous system. Biofeedback has been used successfully to treat a number of chronic pain states such as headaches, back pain, chronic myofascial pain, TMDs, irritable bowel syndrome, and fibromyalgia, either as primary treatment or within the broader context of CBT integrated within rehabilitation programs. (Seers & Carroll 1998 pp.466-475)

Study shows that examples of prominent forms of biofeedback include electromyographic biofeedback, in which patients, for example with tension headaches, are provided with information feedback to them from the physiological recordings and taught to manipulate the tension in their frontalis muscle or other muscles, for example splenius capitis. Similarly, patients with migraine are provided with thermal feedback. They are instructed to warm their hands using visual or auditory temperature biofeedback cues. In addition, heart rate variability biofeedback demonstrated some preliminary results in relieving depression and pain and improving functioning in fibromyalgia patients. (Hassett et al. 2007 pp.1-10)

7.5.4 Meditation, hypnosis, and motivational interviewing

Meditation is an “intentional self-regulation of attention”, a systematic inner focus on particular aspects of inner and outer experience (Goleman et al. 1976 p.456). According to Astin et al. (2003 p.7) meditation was originally developed within a religious or spiritual context, and it was then held as the ultimate goal of spiritual growth, ending suffering, personal transformation, or transcendental experience. However, as a healthcare intervention, it has been taught effectively regardless of patients’ cultural or religious backgrounds.

The attention of medicine, psychology, and neurocognitive sciences has been captured by meditation. This is in part due to experienced meditators demonstrating reduced arousal to daily stress, better performance of tasks that require focused attention, and other health benefits. It is found that long-term meditation in Western practitioners showed increased

cortical thickness in areas related to somatosensory, auditory, visual, and interoceptive processing. Meditation may be useful for chronic pain patients due to the reciprocal relationship between stress and pain symptoms. (Lazar et al. 2005 pp.1893-1897)

Like meditation, hypnosis could be an important resort to deal with pain for many. Hypnosis is a natural state of aroused attentive focal concentration coupled with a relative suspension of peripheral awareness (Spiegel et al. 1997 p.128). The study maintain that there are three central components in hypnosis:(1) absorption, or the intense involvement in the central object of concentration; (2) dissociation, where experiences that would commonly be experienced consciously occur outside of conscious awareness; (3) suggestibility, in which persons are more likely to accept outside input without cognitive censoring or criticism.

Hypnosis is used as a treatment intervention for pain control at least since the 1850s. It is shown to be beneficial in relieving pain for people with headache, burn injury, arthritis, cancer, and chronic back pain (Patterson et al. 2003 pp.495-421). As with relaxation techniques, imagery, and biofeedback, hypnosis is rarely used alone in chronic pain although it has been used as a solo psychological model with some success with cancer patients. Practitioners often use it concurrently with other treatment interventions (Pinnel & Covino 2000 p.170).

Similarly, motivational interviewing is another tool used for pain control extensively. According to Kerns et al. (2004 p.357), motivational interviewing was initially developed for substance abusers, however, it has been later adapted to chronic pain patients. Clinicians can encourage transition to different stages of chronic pain management by providing motivational statements, listening with empathy, asking open-ended questions, providing feedback and affirmation, and handling resistance (Jensen et al. 2003 p.14).

Motivational interviewing is one means of fostering motivation for self-control. Success using various techniques will directly reinforce feelings of self-efficacy. Thus, it is of central importance to direct practice and attention to the usefulness of these methods in improving quality of life in people with chronic pain despite the presence of noxious symptoms that cannot be eliminated. (Bandura 1997 p. 210)

7.5.5 Elimination of provider discomfort, and understanding of values and expectancies about pain in aging

Many studies show that providers have difficulty communicating about lifestyle changes and other non-medical approaches to pain, and patients wish that they could learn more about topics, which their physicians often do not cover. According to Austrian et al. (2006 p.856) from a shared decision-making perspective, patient-provider interactions about pain show poor communication. It clearly shows that non-medical approaches to pain, effective communication and shared decision would greatly help in holistic pain management process.

The variety of values and expectancies about pain and pain treatments held by both patients and providers constitute significant barriers to effective care. Studies show that providers often value finding the right diagnosis and medical treatments, but older patients focus more on the subjective experience of pain and its effects on quality of life, and some patients have expressed that medical care from physicians is the last-resort option for dealing with pain. These points of mismatch between provider and patient perspectives usually interfere with effective provision of care, especially in the ability to communicate about what causes pain, how it will change over time, what effects it will have, and how one should treat it. Understanding of values and experiences about pain is so crucial for nurses and other clinicians in order to find out ways for effective pain management. Knowledge and experience from transcultural nursing, and group work habits could already help a lot. (Pinnel & Covino 2000 pp.170-194)

7.5.6 Finding solutions for associate conditions: Depression, sleep disorder and obesity

Pain appears to be associated with several hard-to-treat conditions in geriatric care. Three major conditions need to be looked at. One is depression. As discussed earlier pain and depression commonly occur together, and pain impedes improvements in depression. Study shows that depressed patients are a challenge even if they are not in pain, and depression interferes with patients' ability to self-manage medical problems, to initiate and sustain effective treatments, and to become activated. Late-life depression is also very hard to treat in primary care settings, with fewer than one-quarter of depressed older

adults showing a significant symptom reduction at 12 months. Given the close link between depression and pain, and the difficulty in separating out psychic from physical pain, it can be very challenging for providers to treat both simultaneously. Therefore, the management of depression should be thought of during attempted management of chronic pain among geriatric patients. (Unutzer et al. 2002 p.2836)

The other condition is sleep disorder. The high prevalence of sleep disturbance among older adults with chronic pain can confound or complicate their care. Wilcox et al. (2000 pp.1241-1251) argue that there is strong connection between sleep difficulties, pain, poorer self-rated health, poorer physical functioning, and depressive symptoms. Sound sleep management so could be a helping tool in chronic pain management in geriatric care.

Finally, the obesity. Obesity is found to be strongly associated with chronic pain among older adults compared to those with normal weight (BMI 18.5–24.9), older obese subjects (BMI 30–34.9) were twice as likely to report chronic pain, and severely obese (BMI \geq 35) were more than four times as likely. Despite the fact that weight management, like pain control, is easy to recommend but is hard to accomplish, nurses and other clinicians should consider it in their plan when treating elderly obese patients who are suffering from chronic pain. (McCarthy et al. 2008 pp.109-115)

It is important to know that while none of these conditions pain, depression, sleep problems, or obesity are difficult to manage in older adults, addressing them necessitates a broad biopsychosocial approach, consideration of the patients' beliefs and expectations, and education about pain, treatment and risks.

7.5.7 Elimination of environmental constraints and keeping pain diaries

Studies show that there are several environmental barriers to effective pain management in older adults that may affect the use of treatments. According to Austria et al. (2005 p.15), time conflicts and transportation are barriers to using exercise and relaxation programs. Cost may hinder some older adults from using specific treatments for chronic pain (Lansbury 2000 pp.2-14). Over half of older adults taking analgesic medications have problems opening bottle caps (Blenkiron 1996 p.606). According to Wheeler (2006 p.354), cognitive impairments also make it more difficult for patients to self-manage pain.

These studies clearly suggest that environmental constraints play a significant role in pain management process, and the necessity of including them already in the care plan.

Some patients find it helpful to complete a pain diary. This is directed at charting the pain intensity using a numerical rating scale, recording activities of daily living and medications. These need to be filled in at the time to avoid distortion, but provide an estimate of how the patient functions in their normal environment. The use of a pain diary varies between patients and may become less reliable with time because of compliance/ act of obeying. Another challenge could be that it focuses the patient's attention more on the pain, and the limitations on life that the pain imposes. It also requires a level of literacy, comprehension and accuracy of record keeping, so may be unsuitable for some patients. Even though keeping pain dairies is very personal and comparisons across patients is not possible, it still gives some ideas and worth keeping. (Watson 2002 p.246)

7.5.8 Health literacy and education for nursing staff

A study at a community hospital, showed that patients on a unit with lower satisfaction scores were 52% more likely to report that education about pain management was inadequate, compared with only 36% of patients reporting inadequate education on a unit with higher satisfaction scores (Bozimowski et al. 2012 pp.186-193). The same study found that 67.2% of patients dissatisfied with pain management also reported inadequate patient education.

In a similar study at Mount Sinai Hospital, of the patients who rated their nurse "excellent" in all 3 categories— (1) frequently asked about pain; (2) cared about the answer; and (3) had excellent response time to complaints of pain—87% also rated their pain satisfaction as excellent; however, of the patients who rated only 1 of these categories as excellent, only 16% rated pain satisfaction as excellent (DuPree et al. 2009 pp.335-343).

Nurses are direct patient care providers and have the greatest opportunity to improve patient satisfaction with pain management. Barriers to effective pain management include lack of nursing knowledge on how to manage pain and adequate use of analgesics, when to assess pain, and misconceptions regarding opioids and addiction. Beside this, lack of idea about biopsychosocial perception of pain and pain management could even be a greater challenge for nurses today especially in chronic management of pain in geriatric

care when societies today are growing international and multicultural, and the knowledge and experience about transcultural nursing are not as solid as it is expected among nurses. (Innis et al. 2004 pp. 322-327)

A thorough pain assessment and consequent reassessment are considered important factors in improving patient satisfaction, as they give patients the sense that their nurse has genuine concern about their pain and is doing their best to decrease their level of pain (Bozimowski et al. 2012 p.193). Pain management satisfaction increases when patients report that their nurse frequently asked about their pain, cared about the answer, and had excellent response time to complaints of pain (Gordon et al. 2010 p.1172). Are the nurses trained sufficiently and the resources allocated appropriately to them in order to meet this end through the current curriculum? Probably no.

8. CONCLUSIONS

The study shows pain, especially chronic pain, has unique health implications based upon race and ethnicity, gender, age, and class. It is noticed that the primary difficulty with treating pain in older adults is not the lack of evidence-based treatments, since many exist, but rather the beliefs, expectations, and patterns of behaviors around chronic pain that impair use of potentially effective treatments.

The study establishes a notion that pain is a subjective perceptual event that is not merely dependent on the extent of tissue damage or organic dysfunction. Through reviewing different literatures, it maintains pain that persists over time should not be viewed as either solely physical or solely psychological. The understanding rather should be based on wide range of factors, such as meaning of the situation, attentional focus, mood, prior learning history, cultural background, environmental contingencies, social supports, and financial resources, among others because the intensity of pain reported and the responses to the perception of pain are influenced by all these factors.

The study underscores that pain profoundly affects morbidity, mortality, quality of life, and healthcare expenditures. The potential implications of poorly treated pain are devastating for the individual and the financial cost to society is staggering. It is therefore critically important from a public health perspective to ensure optimal pain management. Pain, especially chronic pain, has unique health implications based upon race and ethnicity, gender, age, class and ethnicity that are often overlooked. Overall, adequate pain relief is a human rights and social justice issue and there remains much more to do to improve the quality of pain care for all.

It is found that working with elderly patients in pain may not only challenge the skills of clinicians, but also frustrate their ideals and expectations about their work. Improving pain treatment in older adults is not simply a matter of prescribing the right treatment for the disease and the patient, but also of addressing the psychological barriers that clinicians and patients both face in their attempts to deal with pain.

The study illustrate a vivid analysis about different misconceptions of pain and aging such as that pain is not an inevitable consequence of aging, and that for many types of pain and in many circumstances older adults report less chronic pain than their younger counterparts. The evidence refutes preconceptions that most of the pain associated with advanced

age is inevitable. While certain types of pain, especially osteoarthritis, increase in prevalence, there is little evidence that the symptoms of pain in general become more common with age. The widespread belief that elderly patients experience less pain lacks scientific support.

The study concludes that pain perception cannot be described simply in terms of stimulus intensity. Instead, it should draw our attention to the complex interplay between physiological and psychological factors. The study found that an awareness of the pertinence of psychosocial factors in the experience and expression of pain is very useful to health care professional because it provides them with potential insights and explanations for understanding reactions and behavior to pain.

It figured out that even though the assessment of pain in others is notoriously difficult task, but it is one of the major professional responsibilities of the nurse. Older people form the population are most at risk of having their pain inadequately assessed. This group have a higher risk of complications due to unrelieved or under-treated pain and so they are particularly likely to benefit from effective pain management. All clinicians have the responsibility to learn how to assess pain in the cognitively impaired and how to employ effective pharmacologic and non-pharmacological treatments.

Be it by the nurses or other health professionals, the principles of pain assessment in patients experiencing chronic pain, should focus on the influences of the physiological, psychological and sociological aspects of chronic conditions, and the impact these have on the individual expression of pain. Some of the reasons that make pain difficult to assess are based on the assumptions and misconceptions that both patients/clients and their families on one hand and health care professionals on the other hand may have regarding the assessment and treatment of patients with pain.

As pain is a personal experience, self-reporting of pain is considered the best approach to pain assessment. However, undetected pain in this group of patients is a significant problem for a number of reasons. These include differences in reporting pain, disparity in the perception of pain between patients and caregivers, insufficient education and/or training for nursing staff, cognitive impairment and difficulties in measurement and non-use of pain assessment tools. In addition, psychological and cultural factors, such as fear, anxiety, depression, the implication of the traumatic event, loss of independence, feelings of

isolation, the quality of social support available, and family, will all affect reporting of pain and ultimately assessment and management.

Patient education is an integral part of the nursing profession. Patients who are educated about pain management are empowered to become actively involved in their treatment and care, which in turn improves patient satisfaction and outcomes. Educating health care staff about pain management improves patient satisfaction and results in better pain control.

Nurses are direct patient care providers and have the greatest opportunity to improve patient satisfaction with pain management. Nursing knowledge, experience about sociocultural, biological and psychological, cognitive, affective, and personality factors of patients exert substantial constructive influences in chronic pain perception and management in elderly care.

Non-pharmacological approach to chronic pain management is crucial. Biopsychosocial perspective of chronic pain treatment is quite helpful in overall process as it addresses not only the biological basis of symptoms but also incorporates the full range of social and psychological factors that have been shown to affect pain, distress, and disability. Focus is given on providing the patient with techniques to gain a sense of control over the effects of pain on his or her life, by modifying the affective, behavioral, cognitive, and sensory facets of the experience. Behavioral experiences help to show patients that they are capable of more than they assumed they were, thus increasing their sense of personal competence.

Let's hope that as science progresses in its understanding of the physiology of aging, medications can be tailored to fit the needs of the older patient population. More biopsychosocial approaches would be applied through transcultural knowledge and experience to ensure holistic care. Treating pain effectively, and thus preserving the patient's quality of life, can be a most gratifying clinical success.

8.1. Recommendations

Pain management is often undermanaged. All nurses need to enhance their knowledge regarding pain, especially in transcultural context. Enhanced knowledge about pain and care that is compassionate is likely to satisfy patients and lead to high quality and safe outcomes. More up to date competency-based learning is necessary to increase knowledge about pain and improve attitudes about managing pain.

In a climate where there is increasing attention regarding patient safety, inadequate pain assessment and treatment must also be viewed as a quality of care issue. The role of healthcare provider variability in pain management decision-making as well as healthcare system factors must be examined. Longitudinal and prospective studies examining the long-term effects of pain on overall health and well-being in an ethnically diverse as well as gender, age and class wise different population are necessary.

Appropriate cultural and linguistic interventions must be developed to ensure quality pain assessment and management such that racial and ethnic disparities in pain care are reduced and eliminated. Improvement of pain care in the underserved and most vulnerable populations is necessary in order to ensure that the quality of pain care will be improved for all.

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APPENDICE

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