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KNOWLEDGE AND ATTITUDES OF NURSES TOWARDS PAIN MANAGEMENT AMONG THE ELDERLY: A case study of registered nurses from the local healthcare centers, Kokkola

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The purpose of the study was to describe the level of knowledge and attitudes of registered nurses working in health care centre wards in charge of the elderly patients. In order to achieve that, the registered nurses’ level of knowledge and attitudes towards pain management was investigated and the factors that affect their decision making process concerning pain management explored.

The research was conducted via quantitative descriptive research; there were 56 (n) nurse respondents representing 70% of the total sample from the two nursing institutions involved in the research. A closed-ended questionnaire with 25 questions was used as a tool for data collection after piloting. Data was analyzed by descriptive statistics from SPPS version 19. Ethical considerations in research were taken into consideration in all phases of the research that its acknowledgement was needed.

Three research questions were addressed in order to deal with the research purpose. The questions addressed the nurses’ level of knowledge and attitudes, pain assessment and factors influencing the nurses’ level of knowledge and attitudes in regards to pain management. It emerged that the nurses’ level of knowledge and attitudes was satisfactory but more focus should be based on pain assessment as it is the core foundation of managing pain. Work experience, reading of articles or journals and its practical application, occupational status and having had previous experiences in pain management were attributed to the nurses’ level of knowledge and attitudes towards pain management.

Nursing institutions should be responsible for enhancement and development of their employees. They should develop institutional guidelines based on their patients needs. However, nurses should be on the forefront in ensuring that their knowledge needs are met. Reading evidence-based articles or journals and applying the knowledge gained can assist in achieving this.

Keywords

Elderly, nurses’ attitudes, nurses’ knowledge, pain and pain management.
CONCEPT DEFINITIONS

ANOVA  Analysis Of Variance
EFIC   Europe Against Pain
DSHS   Department of State and Health Services
IASP   International Association for the Study of Pain
JYTA   Jokilaaksojen YteisToiminta-Alue
NKASRP Nurses Knowledge and Attitudes Survey Regarding Pain
WHO    World Health Organization
ABSTRACT

CONCEPT DEFINITIONS

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1 INTRODUCTION

According to the Finnish statistical data on population projection, the number of individuals aged 65 years and above is expected to rise in the near future. The percentage for the year 2010 stood at 18% and is expected to be 29% by the year 2060. It is known that pain is very common among patients residing in homes for the elderly and approximately up to 80% suffer as a result of it (Zwakhalen, Hamers, Peijnenburg & Berger 2007).

Effective pain management is important to all individuals suffering from pain whether acute or chronic irrespective of their age, race or gender. The main reason for this has been lack of adequate knowledge and attitudes from the nurses as indicated by previous literature. Ineffective pain management affects the lives of those involved negatively in different ways. However, this research focused on the registered nurses’ knowledge and attitudes towards the elderly population. Nurses are in a better position as compared to other professionals in healthcare to effectively manage pain due to their close relationship with patients. Knowledge of pain combined with positive attitudes is the key to successful pain management.

In nursing career, practical placements expose student nurses to a range of experiences that affect the quality of life of patients in different ways. After an exposure to the suffering of the older clients due to untreated pain in practical placements, the researcher took an initiative aimed at establishing the actual cause of the problem by conducting a research. The research topic targets all the registered nurses involved with the care of hospitalized elderly patients. It is also quite evident that not much of the research has been conducted on this specific topic in Finland as the vigorous search for related materials on the topic was not successful.

The purpose of the study was to describe the level of knowledge and attitudes of registered nurses working in healthcare center wards in charge of the elderly patients. Therefore, the goals were; to find out the registered nurses’ level of knowledge and attitudes towards pain management and highlight the factors that may affect their decision making process in managing pain. It is hoped that the results will not only benefit the nursing staff and their patients but also other healthcare professionals in general.
2 THEORETICAL BACKGROUND ON PAIN

2.1 Pain and pain management

“Pain is defined as, an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage” (IASP 2010). It can be further defined as, “whatever the patient says it is, and it exists whenever the patient says it does” (Lilley, Collins, Harrington & Snyder 2011, 152). Both definitions are quite related in the sense that one confirms the other. By saying “whatever the patient says it is, and it exists whenever the patient says it does”, Lilley et al., concurs with IASPs’ definition; “described in terms of such damage”. On the classification of pain, it can be carried out by its onslaught and the time it takes once it has occurred hence describing it as either acute, chronic or breakthrough. Acute pain is rapid but diminishes under treatment. Chronic pain lasts longer for between three to six months and cannot be easily treated. (Lilley et al. 2011, 152.) According to Maryland Board of Nursing, a third classification is breakthrough pain defined by Lilley et al. 2011, 157 as pain that develops during the time that the first dose has been provided and the second dose is yet to be administered.

Pain management is the alleviation of pain or a reduction in pain to a level that is acceptable to the client. It includes two basic types of nursing interventions: pharmacologic and non pharmacologic. Misconceptions and biases can affect pain management. These may involve attitudes of the nurse or the client as well as knowledge deficits. In addition, effective pain management is an important aspect of nursing care to promote healing, prevent complications, reduce suffering and prevent the development of incurable pain states. (Berman et al., 2008, 1187-1205.)

Pain alleviation is of great significance in patient care (Galbraith, Bullock, Manias, Hunt & Richards 2007). In European countries, pain has been considered as outstanding difficulty. Notwithstanding the fact that acute pain presents as a symptom of an illness, it becomes a major healthcare related issue due to its persistence and continuity hence a disease in itself. (EFIC 2009; WHO 2007.)

Considering pain as a problem in its own way, it should be accorded top preference due to its overly presentation as a symptom. Health and the healing process are affected by physiological as well as psychological factors brought about by the occurrence of pain. In a life-threatening situation caused by pain, urgent measures as well as swift actions taken by different professionals involved is important. Pain not only affects an individual but its
impact is also felt in the community at large, its reduction should therefore be considered as an objective to healing. The patients’ quality of life is enhanced by preventing bad feelings. This is aided by the nurses’ good communication skills while dealing with the patients. (Berman et al. 2008; WHO 2007.)

According to Maryland Board of Nursing, apart from the fact that pain entirely affects an individual physiologically, it also affect in other ways such as; spiritually, emotionally and in psychosocial related aspects. As a nurse, the purpose of pain management will always remain the same over life and that is to point out the different aspects brought about by pain. Also, it is important to ensure that strategies employed in controlling pain yields the least unwanted effects possible as compared to its utmost therapeutic effects. (Maryland Board of Nursing 2011.)

2.2 Pain in the elderly

The word elderly can be used in similar definition as geriatric and can be defined as a person aged 65 years and above. According to the American Pain Society (2009) however, a clear definition on the following key words; “geriatric”, “older person”, “elderly” or “ageing” has not been well established. According to the statistical figures worldwide, the population of those aged 65 years and above is expected to be 20% in 2020 from the 12% in 2000. Though exact figures have not been reported by statistics Finland, it shows that an increase in the population of old people is expected to rise. In general, it means that the population of those aged 65 years and above is increasing at a faster rate. (Lilley et al. 2011, 40-41.)

According to a study by Marzinski (1991) conducted in the nursing homes, the prevalence of elderly people in pain was 70% and those with constant pain was 34% while 66% suffered from intermittent pain. Also, Higgins et al. (2004) recorded a prevalence of 80% of elderly residents with pain. Even though the prevalence as witnessed by the studies by Marzinski (1991) and Higgins et al. (2004) shows that more individuals suffer from pain, only 15% of them were provided with some form of analgesia within a period of 24 hours. (Mann & Carr 2009, 146.)
Therefore, it is important for nurses to acquire the required skills and knowledge in managing pain efficaciously due to the increasing number of elderly individuals as indicated by the statistics. (Mann & Carr 2009, 146).

As compared to other age groups, pain management among the elderly patients is insufficient and not carried out on a daily routine hence lack of proper efficacy (Celia 2000). Therefore, as a geriatric nurse, avoiding pain or minimizing suffering is an important task that can be attained by carefully and explicitly assessing and treating pain (Varcarolis, Carson & Shoemaker 2006). Pain management among the elderly is different from other age groups and detailed techniques should be applied according to the different types of pain involved (WHO 2007). It makes it almost impossible for the nurses to achieve the expected output in managing pain with lack of knowledge and positive attitudes.

Assessment and treatment of pain by nurses should be carried out in a holistic manner considering the physiological effects of pain on the mind, body, spirit and social interactions. A number of factors such as those acquired scientifically, theoretically and from the clinical environments help nurses in forming the groundwork of the knowledge needed to achieve a holistic view of nursing care in pain management. (Berman et al. 2008, 1187.)

2.3 Nurses’ role in pain management

Different individuals making up to a multi-professional team are involved either directly or indirectly in the management of pain among different age-groups. Nurses, however have been found to spend more time with patients suffering from pain and as a result a close relationship with them. Nurses are considered to be the most important players in pain management as compared to other multi-disciplinary team members involved. This is because they help to relive pain and improve comfort by; identifying those in pain, frequently assessing pain, offering treatment options, documentation and follow-up to discover if pain management strategies used are beneficial. They also assist in the provision of spiritual, emotional and individualized help to their patients. In difficult situations nurses help to co-ordinate the care by referring patients to doctors or
professionals who specialize in pain management. (Birchenall & Adams 2011, 145; WHO 2007.)

Nurses are answerable and liable in assuring that all the patients suffering from pain are attended to, both in assessment and treatment of pain in accordance with the current evidence-based nursing practices. They act as coordinators between the patients and doctors. Hence, the best results in the process of managing pain will be attained and the required level of care offered. Therefore, nurses should be able to convey information in a manner that enables proper understanding. (Maryland Board of Nursing 2011; WHO 2007.) However, this will be achieved only if the nurse has the required level of knowledge as discussed below.
3 KNOWLEDGE OF PAIN AND ITS MANAGEMENT

3.1 Nurses’ knowledge and attitudes in pain management among the elderly

In general terms, “knowledge can be defined as familiarity, awareness or understanding gained through experience or study. On the other hand, the elderly refers to being past middle age and approaching old age”. Attitudes is defined as “the way a person views something or tends to behave towards it, often in an evaluative way”. (The free dictionary 2010). Both knowledge and attitudes affects the nurses’ ability to effectively manage pain. In managing pain, the objectives should be aimed at reducing pain to a reasonable point and assuring that one’s ability to function and to lead a comfortable life is sustained or enhanced (Jablonski & Ersek 2009).

In nursing, nurses obtain their knowledge in different ways. According to history; some of the means are; traditions, authority, trial and error methods, borrowed knowledge from nursing related fields, personal experience, being a role model as well as a tutor or instructor, perception, thinking and research. In addition, the knowledge and training of those individuals qualified in the provision of healthcare services can be referred to as clinical expertise. It can be influenced by the time spent by nurses in their field of work, up-to-date knowledge on research and clinical-based information as well as academic training attained during the study period. (Burns & Grove 2009, 10-11.) According to Craig & Smith (2007) and Sackett, Straus, Richardson, Rosenberg & Haynes (2000), the nurses’ knowledge provides them with the ability to make decisions regarding clinical issues in dispatching the best care possible.

3.1.1 Personal knowledge and attitudes

The scope of nursing is comprised of knowledge-based features possessed by individuals involved in nursing care. This knowledge is achieved by; appraising one’s attitudes, values, beliefs, culture related issues and the control of own making as an individual. All the components previously stated, have an impact on the assessment, evaluation and understanding the qualities of patients in pain. These qualities possessed by patients include; patients’ own declaration, conduct, physical reaction to pain and their expression of pain. Nurses act as barriers to successful pain management in different ways namely;
previous personal exposure to pain, self-management of pain by means of pharmacological and non-pharmacological strategies and ones’ family or close relatives past or exposure to pain relieving measures or even those that interferes with ones’ state of mind. (Maryland Board of Nursing 2011.)

3.1.2 Knowledge in regards to pain

Apart from personal knowledge and attitudes required of a nurse as an ingredient to their profession as explained above, nurses are required to possess knowledge regarding pain itself. It is of great benefit for the nurses to effectively plan nursing activities so as to ensure that pain is fully managed according to its subjective occurrence. Personal traits can affect the performance of a nurse in a number of ways such as; inability to assess pain, evaluate or report patients’ pain efficaciously and non-subjectively. Furthermore, lack of sufficient knowledge concerning pain management consequently affects on the nurses’ ability to realize the need to look up for extra materials on the latest issues on effective assessment and management of pain. (Maryland Board of Nursing 2011.)

The other field of pain management that the nurse should be fully aware of is concerning the use of pharmacological and non-pharmacological means. In this case, the nurse should have the knowledge on the use of pharmacological means such as; opioids, non-opioids and adjuvant drug treatments or remedies. Indeed, knowledge on the above mentioned pharmacological means should include; non-therapeutic/unwanted effects caused by medications, the process of medication interactions as well as the doses to be administered as they relate with certain causes of pain. In addition, nurses should be aware of the fact that the use of placebos is not recommended in establishing the presence or absence of pain nor as a treatment option. (Lilley et al., 2011; Maryland board of nursing 2011.)

Nurses should also have knowledge on the use of non-pharmacological approaches such as; the use of hot and cold mechanisms, acupuncture, massages and breathing measures among others in pain management. In addition to the areas of pain management required of a nurse, knowledge on the existing standards of pain management as well as the already established recommendations is considered to be vital. Furthermore, nurses should learn to distinguish between endurance, physical and psychological reliance, withdrawal and
pseudo addiction as a result of patients using or having used certain drugs. (Maryland Board of Nursing 2011.)

3.1.3 Knowledge on the standard of care

After discussing about the nurses’ own/personal knowledge and attitudes and knowledge about pain itself, their knowledge concerning the standard of care is also important. In the process of assessing and managing pain, nurses should be able to employ the nursing practices based on the standard of care adequately and continuously. These comprise of; firstly, nurses should be able to admit and agree to the patients’ pain and establish the most probable cause of pain. (Maryland Board of Nursing 2011.)

“Nursing Standards of Care” pertain to professional nursing activities that are demonstrated by the nurse through the nursing process. These involve assessment, diagnosis, outcome identification, planning, implementation, and evaluation. The nursing process is the foundation of clinical decision making and encompasses all significant action taken by nurses in providing care to all consumers. (DSHS 2004.)

Secondly, assessment of pain should be done frequently and continuously reporting on its progress. This is done by use of pain measurement scales taking into account the fact that there are obstacles that occur during the process of pain management. Some of the obstacles are; individualistic, cultural and even organizational issues. Thirdly, nurses must learn ways to communicate the patients’ pain towards other professionals involved in the patient care. This includes but not limited to creating a care plan that will ensure a successful pain management process that incorporates the patient, the relatives and those involved in the care. (Maryland Board of Nursing 2011.)

After reporting and establishing a care plan to guide on the pain management process, nurses should embark on the implementation process on the different approaches to be used. This is achieved by; treating some of the side effects caused by certain medications for example nausea and vomiting and constipation among others. In addition to treatment of side-effects, providing education to the patient and their next of kin is very important, the educational aspects include; ways that they can participate in the process of pain management, consequences that might occur as a result of ineffectively managing pain,
conquering the obstacles towards successful pain management and last but not least, teaching them about the care planned in managing pain and the anticipated results from the care plan. (Maryland Board of Nursing 2011.)

After implementation, the most important and last process of any nursing care plan is evaluation and it involves appraisal on the approaches used and the treatment applied. Still under the standard of care, documentation and communication of the nursing interventions applied in pain management as stipulated in the nursing process. Finally, as an advocate, the nurse has to encourage and support the patient together with the relatives so to ensure that successful or best results are achieved from the pain management process. (Maryland Board of Nursing 2011.)

3.2 Pain assessment in the elderly

“Adequate analgesia requires a holistic, comprehensive and individualized patient assessment with specific attention to the type, intensity and characteristics of the pain” (Lilley et al. 2011). Due to the subjectivity of pain as illustrated by its definition, nurses need to be able to help those in pain to convey the message that they are indeed in pain so as to enable implementation of successful treatment options.

By assessing pain, nurses are able to establish the source of pain and its consequences. Hence providing effective methods of managing pain and measuring the outcome of the strategies applied. Pain is assessed based on its location, intensity, quality, its occurrence and the time it lasts, matters that have an impact on pain as well the impacts that pain itself causes on an individual. (Birchenall & Adams 2011, 146.) WHO (2007) concurs with same idea that pain should be assessed in its totality, total pain in this case refers to the consideration of pain as not only a bodily discomfort but as a social, spiritual and emotional discomfort described by Berman et al. 2008, 1187 as a holistic view.

The regularity of assessing pain is based on the nursing environment in question. According to the Pain Society/Royal College of Anaesthetics (2003) for example, pain assessment in some of its acute care setting is being assessed routinely and has been referred to as the fifth vital sign. The other four major vital signs are; blood pressure, pulse, respirations and temperature (Alexander, Fawcett & Runciman 2000, 859). Nurses are in a better position of establishing the existence of pain. This can be achieved by conducting
pain assessment due to the fact that not all those suffering from pain are willing to openly disclose it unless asked to. (Berman et al. 2008, 1187.)

Firstly, nurses need to have sufficient knowledge regarding pain assessment in order to effectively manage pain. This is achieved by using standardized and suitable pain assessment instruments that are considered reliable and valid. It allows the patients to fully involve themselves in the process. This is because the above mentioned factors; the use of suitable and reliable pain assessment instruments are important during the assessment phase. Since some patients are unable to communicate their pain to the nurse in charge, the use of standardized instruments in measuring pain is considered very important as it encompasses the monitoring of patients’ actions with the presence or absence of physiological parameters. (Maryland Board of Nursing 2011.)

Physiologic signs such as tachycardia, hypertension, diaphoresis and pallor are non-specific to pain and may be an indicator of another, unrelated physiologic problem. For patients in pain, these physiologic signs may be present for a short period of time or not at all. Sole reliance on these physiologic signs to assess pain may be inappropriate. (Maryland Board of Nursing 2011.)

Secondly, in addition to the use of standardized instruments for measuring pain, the nurse should be able to differentiate between the different types of pain as earlier on discussed; acute, chronic and breakthrough pain. Thirdly, nurses dealing with pain management issues should be well acquainted with the knowledge on the different causes of pain, for example; those with neurological origin, muscular, skeletal and visceral among others. Lastly on the understanding of pain as a nurse, the process of measuring pain should be designed to meet the personal needs of the patient. These entails; experiences that the patient has had with pain, the techniques used by the patient to communicate pain, cultural factors affecting pain and also the techniques used by the patient to manage pain. (Maryland Board of Nursing 2011.)

In reference to the elderly, bodily and cognitive deterioration interferes with their ability to effectively communicate their pain to the nurse. The nurses should therefore be able to select the right pain measurement tools in order to meet the needs of such patients. The elderly should be provided with adequate time to respond to the pain assessment tools used, the tools should also be sufficiently visible to allow them respond in a manner that best describes their pain level (Lilley et al. 2011, 167-168).
3.3 Challenges of pain management process

It is true that effective pain management strategies have not been achieved due to various challenges involved. Some of the reasons involved are; knowledge deficits, personal principles and feelings affecting ones’ own ability to assess, decision making and the use of evidence-based information in managing pain, poor consideration of pain and pain management as important at a personalized as well organizational status. Nurses’ lack of sufficient knowledge in the field of pain management has always been reported. Therefore, healthcare personnel should well educated on pain management so as to enable implementation of effective pain management strategies. (Seers, Watt-Watson & Bucknall 2006.)

Achieving successful pain management strategies is complicated; this is because different techniques needed, can only be fulfilled by a combination of skills from different professionals. Each individual involved in pain management should be able to perform according to the comprehension of their duties and skills thus a better co-operation. Comprehension forms the basis of appraising and obeying other peoples’ input in the management of complicated issues especially those experiencing continuous pain. (Seers et al. 2006.)

The challenge for pain management is about needs: we need to care about it; we need to take responsibility for it; we need to know about it; we need to know what to do, and do it competently; and we need to collect evidence to show how we are doing. That way a partnership with the person in pain can be developed to meet their needs for pain management. (Seers et al. 2006.)

The use of evidence based information alone by nurses is inadequate to affect change on pain management. This is because a variety of other nurse characteristics and conduct affect the pain management process in different ways. They include; educational requirements of the nursing profession as well as the years of working experience, knowledge based on certain situations and values and opinions possessed by the nurses themselves. Notwithstanding the nurses’ internal characteristics, there are external features that also influence the nurses’ ability to manage pain. This consists of; patients’ condition and complications associated with it, appearance of the surroundings, employee assets as well as relationships developed by health professionals, patients and their relatives as they interact. All the effects related to pain management stated may cause misconceptions that
will eventually affect on the nurses’ ability to make informed decisions on patient care. (Seers et al. 2006.)

Even though challenges do exist, there is hope that a breakthrough in pain management is achievable. This is supported by availability of reliable research information and that majority of nurses and other clinicians are dedicated to pain reduction. Responsible nursing organizations will however have to come up with proper legislations regarding pain management. This will be developed by the responsible institution as a “risk management strategy” only if healthcare professionals are not willing to devote themselves to managing pain. (Seers et al. 2006.)
4 PREVIOUS RESEARCHES

In regards to the research articles, the keywords used include; elderly, pain, pain management, nurses’ knowledge and nurses’ attitudes. The library databases used were; Elsevier, Science direct, Pubmed, Ovid, EBSCO and CINAHL. The research criteria used was limited to the keywords above and the duration was between 2005 to the current articles. Five articles have been used in the research after thorough assessment and consideration by the researcher and more details given in APPENDIX 3. The articles were chosen according to their relevance with the research topic. Unfortunately, none of the research articles chosen was published in Finland as none could be found apart from one conducted by Salanterä (1999) about Finnish nurses’ attitudes to pain in children and not the elderly. Other articles that have not been included in the appendices were used in development of the theoretical part of the research.

Zwakhalen, Hamers, Peijnenburg and Berger (2007) carried out a research about nursing staff knowledge and beliefs about pain in elderly nursing home residents with dementia. The main objective of the research was to find out the knowledge and beliefs that nurses had pertaining to different characteristics of pain among the elderly patients with dementia. Moreover, the dissimilarity between educational level and work experience in relation to the beliefs about pain were studied. This cross-sectional study collected data from 123 members of staff from psycho geriatric wards in two nursing homes in the Netherlands. After the analysis of data using descriptive statistics, it was found out that despite the fact that nurses lacked enough knowledge regarding the assessment and treatment of pain, they were contented about it. Nurses had insufficient knowledge concerning pain treatment strategies including medications and their level of education had an impact on their knowledge and beliefs about pain among the elderly patients. (Zwakhalen et al. 2007.)

A survey research was conducted by Yu and Petrini (2007) about Chinese nurses’ current knowledge of pain in older people. Its aim was to find out the degree of Chinese nurses’ knowledge of pain and its management in the elderly at that particular time. The target group were (n=621) registered nurses from three hospitals and data was collected through questionnaires. Surveyed nurses were found to lack substantial knowledge concerning pain and pain management among the elderly. On the other hand, educational background, work status and the attendance of extra classes on pain management did not make any substantial
disparity. Different hospitals settings and clinical areas of expertise showed a substantial disparity amongst the nurses’ knowledge. On the contrary, age and working experience produced a substantial outcome in terms of managing pain. (Yu & Petrini 2007.)

A descriptive correlational research study about nursing students’ knowledge and attitudes concerning pain management was carried out by Plaisance and Logan (2006). The aim of the study was to investigate the knowledge and attitudes of nursing students towards pain management. The participants were (n=313) nursing students from baccalaureate and associate degree nursing programs in Louisiana. According to the results, more than half of the students were at that moment employed in health care fields. The most important finding was that even though there has been improvement in nursing field and on pain management itself, nursing students still had a knowledge deficit in managing pain hence ineffective management of pain. On the questions on case studies, students assumed their own assessment to be the patients’ subjective assessment on pain and this may result in poor pain management. (Plaisance & Logan 2006.)

Bernandi, Catania, Lambert, Tridello and Luzzani (2007) carried out a study concerning knowledge and attitudes of Italian oncology nurses in regards to cancer pain management as well as to establish the factors that foretell nurses’ knowledge in managing pain. This descriptive survey composed of 287 nurses from 21 oncology wards that participated in the study. In accordance with the results, more than 50% of the nurses working in the oncology wards underrated patients’ pain hence their inability to treat pain in the right way. On the nurses’ knowledge of pain management, it was found out that nurses evaluated themselves wrongly on their ability to manage pain. It was later on concluded that oncology patients’ pain treatment process is hindered by lack of substantial knowledge and unfounded opinions by the nurses. (Bernandi, Catania, Lambert, Tridello & Luzzani 2007.)

According to the study by Lui, So and Fong (2008) about nurses (n=143) employed in the medical units in Hong Kong, their level of knowledge and attitudes in addition to the features that impact on their knowledge as well as their attitudes towards pain management were explored. The study recognized the fact that since nurses played a major role in ensuring that pain is managed efficaciously, it is imperative that they be optimistic and posses concrete understanding concerning pain management. The results showed that nurses have insufficient knowledge and attitudes of pain management strategies. It was
also found out that conflicts among the nurses’ attitudes and the reality at work exists. As for the level of education, there was no substantial relationship with the knowledge and attitudes of nurses in regards to management of pain. (Lui, So & Fong 2008.)
The purpose of the study was to describe the level of knowledge and attitudes of registered nurses working in health care centre wards in charge of the elderly patients. The goal was therefore to find out the registered nurses’ level of knowledge and attitudes towards pain management and to highlight the factors that may affect their decision making process in managing pain. This is intended to help towards the achievement of effective management of pain among the elderly by strengthening the nurses’ level of knowledge and attitudes. The research questions were addressed as follows:

I. What level of knowledge and attitudes do nurses have concerning pain management among the elderly?
II. To what extent do nurses measure pain?
III. What factors affect the nurses’ knowledge and attitudes towards pain management?
6 RESEARCH IMPLEMENTATION

6.1 Quantitative descriptive research

The use of a descriptive form of quantitative research method was settled upon by the researcher as it enables the study and the explanation of occurrence in daily practice. The nursing discipline uses descriptive research design in order to create theoretical information, establish the cause of certain problems, guide in decision making or to ascertain the issues practiced by those in the same state as those under the study. Descriptive research method gives detailed information regarding the features of participants or the environment involved depending on the topic deduced from a certain field of study. A descriptive research study aids in the description of any connections exhibited by the variables used. (Houser 2008, 325.)

In addition, quantitative descriptive research enables the interpretation of data in a numerical way by providing answers to the research questions. It also enables the use of closed-ended questionnaires that allows for the objective feedback of the respondents. (Gerrish & Lacey 2006, 155-163.) Quantitative research focuses on establishing the relationships that exist between the dependent variables and the independent variables in the research study (Polit & Beck 2008, 61). According to Salanterä (1999), the use of questionnaires enables one to describe data in an elaborate way as well as with exact information from an extensive group of people without necessarily disclosing their identity.

6.2 Data collection

The research targeted all registered nurses working in the local healthcare centre of Kokkola (APPENDIX 2) and those under the JYTA-area (APPENDIX 2) namely: Toholampi, Tunkkari and Kannus. The target population was 80 nurses but only 60 managed to respond. Four questionnaires were however discarded to partial information/incomplete data and only 56 questionnaires made it for analysis. The target population (n=80) consisted of registered nurses working as either part-time or full-time nurses. The respondents (n=56) represents 70% of the total participants in this particular study.
The questionnaire on ‘‘Knowledge and Attitudes Survey Regarding Pain’’ tool developed by McCaffery & Ferrell (2008) was modified by the researcher in order to fit the study. After producing an English version for the research, the translation to Finnish were prepared by a language teacher and was checked twice by the researcher together with the instructor to minimize translation of errors of nursing related words. The questionnaire consisted of three parts with a total amount of 25 closed-ended questions; the first part consisted of personal information while the second and third part comprised of questions testing on the nurses’ knowledge and attitudes. The second part consisted of multiple choice questions while the third and last part consisted of True/false questions.

A pilot study was carried out by the researcher using two questionnaires (n=2) in English (APPENDIX 1) and Finnish (APPENDIX 1). Conducting a pilot study through questionnaires towards a small number of people identical to the target population enables identification of wrongly interpreted questions or minor errors that might have been left unnoticed (Gerrish & Lacey 2006, 26). Data was collected within a period of two weeks and nurse managers acted as contact persons between the registered nurses and researcher. The answered questionnaires were submitted via nurse managers in sealed envelopes to ensure privacy. Instructions for answering the questionnaires were included on the cover letter (APPENDIX 1) attached to all questionnaires.

6.3 Data analysis

Questions are never the same, this is because more often than not, they test on different issues on an individuals’ knowledge. The fact that nurses may lack knowledge on a certain field of pain management does not mean that they are unqualified in taking of patients suffering from pain. Therefore, development of weights was made in order to ensure equal distribution of scores on data depending on the different scores achieved by nurses. This was done to allow fair representation of participants in the study.
Table 1 above shows the weights carried by different questions as shown in the questionnaires (APPENDIX 1). The order was between 0.5-1.0, 0.5 representing the weight of a question whose effect on knowledge of pain was considered low and on the other hand 1.0 was the highest weight. The questions represented above are only those that tested on the nurses’ level of knowledge and attitudes as later shown in Table 3. The weights were developed by the researcher after consultation with the existing literatures on pain management. This was done in order to establish a way of assessing the questions under investigation as advised by the statistics lecturer.

The need to assess both knowledge and attitudes concurrently is due to the fact that according to the nurses’ knowledge and attitudes survey (NKASRP) developed by McCaffery and Ferrell (2008) “Regarding the analysis of data: We have found that it is most helpful to avoid distinguishing items as measuring either knowledge or attitudes. Many items such as one measuring incidence of addiction really measures both knowledge and attitude about addiction”. The researchers therefore recommend that data analysis should be done by calculating the percentage of total scores and also those of individual questions. (McCaffery & Ferrell 2008.) The researcher however, analyzed the data by calculating the percentage of total as well as some individual scores according to the different weights shown in Table 1 above.

In order to achieve the above recommendation by McCaffery & Ferrell (2008), the researcher used Statistical Package for Social Sciences (SPSS 19) as a means of data analysis. Statistical analysis is necessary in the analysis of quantitative data as it helps in describing the data, exploring relationships, testing hypothesis, predicting outcomes and generally answering the research questions (Polit 2010, 4). According to Polit (2010), descriptive statistics enables data to be described and summarized in a way that allows easy understanding with the help of averages and percentages.

<table>
<thead>
<tr>
<th>Question</th>
<th>12</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>22</th>
<th>23</th>
<th>24</th>
<th>25</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Points</td>
<td>0.8</td>
<td>0.8</td>
<td>1.0</td>
<td>1.0</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.6</td>
<td>1.0</td>
<td>0.5</td>
<td>1.0</td>
<td>9.5</td>
</tr>
<tr>
<td>Weights (%)</td>
<td>8.4</td>
<td>8.4</td>
<td>10.5</td>
<td>10.5</td>
<td>5.3</td>
<td>5.3</td>
<td>5.3</td>
<td>5.3</td>
<td>8.4</td>
<td>6.3</td>
<td>10.5</td>
<td>5.3</td>
<td>10.5</td>
<td>100</td>
</tr>
</tbody>
</table>
After collecting the answered questionnaires (n=60), the researcher validated all of them against the given instructions, it was during the validation process that four (n=4) questionnaires were rejected. All the data that were considered relevant for analysis by researcher were (n=56), representing 70% of the total sample. Raw data were coded as necessary and entered into SPSS 19. Coding is the use of numbers to represent a given variable written in words, thus enabling mathematical interpretation of data (Polit 2010, 4; Polit & Beck 2008, 67).

Data analysis was carried out by using descriptive statistics. This included the analysis of demographic data as well as total scores answered correctly from the NKASRP questionnaire. Frequencies and percentages were used on the description of data. On the establishment of factors influencing the nurses’ level of knowledge and attitudes towards pain management, one-way analysis of variance (ANOVA) was used. The use of one-way ANOVA enables the comparability of means in case of more than three independent variables (Polit 2010, 166). In presentation of the results regarding the nurses’ level of knowledge and attitudes, the F-tests and the Significance value indicated as Sig. on the tables 5,6,7 and 8 were used in coming up with the results. The reliability of the results is then decided upon in cases where the F-test value is higher than its significance (Sig.) value. The significance value is normally considered statistically significant if it is less than 0.05 (p=<0.05) (Polit 2010, 162). The inability to achieve the level of statistical significance stated could be attributed to small number of respondents in the research. However, this does not mean that the independent variables did not have any effect on the dependent variable under investigation.

6.4 Ethical consideration

The fundamental principle to ethics while carrying out any form of research, is to maintain due respect among the participants irrespective of their personalities. Considering the use of a questionnaire as data collection, the use of personal, biographical and demographic information is inevitable; the results were used only for the intended research purpose. (Gerrish & Lacey 2006, 32-36.) The use of closed-ended questionnaires in itself enables relative anonymity as the participants do not have direct contact with the researcher (Carter & Thomas 1997, 50). The process of data collection started immediately after the
researcher was issued with written permissions (APPENDIX 2) by the two responsible administrative institutions involved with the research.

A cover letter was attached with the questionnaire (APPENDIX 1); the cover letter stipulated that the respondent’s right to privacy was protected by handling the data with utmost confidentiality and anonymity and voluntary participation. (Neale 2009, 40.) Informed consent was achieved by the respondents’ willingness to participate in the study with the return of the answered questionnaires in a sealed envelope (n=56). (Gerrish & Lacey 2006, 380.)

The researcher promoted the respondent’s anonymity by issuing all the respondents with questionnaires through the nurse manager with a sealable envelope. All the answered questionnaires were returned in a sealed envelope. Confidentiality was ensured as only the researcher had access to the answered questionnaires. The data was then stored electronically in SPSS (version 19) as in that way, not even ones’ writings could be identified. The original questionnaires were disposed by using a paper shredder.

On the issue of reliability, the articles that have been used on this thesis were not only up to date but also related to the research topic in almost all the research aspects that have been addressed. Furthermore, the researcher focused on the use of latest scientific articles that not only addressed the research topic but also specific segments that address the research topic in general. The original authors (McCaferry & Ferrell) of the questionnaire have also established the reliability of the questionnaire.

As mentioned earlier by the researcher, about pain and its management, an organization known as EFIC has declared pain as a major healthcare problem in Europe and Finland is one of the countries. The researcher took an initiative of inquiring from the nurse manager in one of the wards about the importance of pain management. The nurse manager approved the topic as being important and it will help the nursing staff in general to realize their current position in terms of knowledge and attitudes concerning their ability to manage pain. Eventually, patients’ wellbeing will be enhanced. These were the various factors that led the researcher to an informed decision on the topic of the study.
7 FINDINGS OF THE RESEARCH

7.1 Background information of the research process

The background information consisted of; age, working experience, occupational status, the use of pain assessment tools, previous experience in pain management among the elderly, attendance of courses on pain management within the last one year, reading of pain related articles/journals and its practical application at work and finally personal experience with pain and its effect on pain management process.

Data was collected from two different nursing organizations that were namely, Kokkola healthcare centre wards (APPENDIX 2) and three different healthcare centre wards beneath the umbrella of JYTA area (APPENDIX 2). Data collection lasted for a period of two weeks and 56 nurses out of 80 nurses responded to the questionnaires representing 70% of the total sample (n=80). Among the respondents in this study, full-time workers were n=49 (87.5%) while part-time workers were only n=7 (12.5%). All the data on the demographic features were highlighted in Table 2 below after analysis via descriptive statistics.

TABLE 2. Demographic features of the respondents

<table>
<thead>
<tr>
<th>Demographic features</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>56</td>
<td>24</td>
<td>61</td>
<td>43.84</td>
<td>9.851</td>
</tr>
<tr>
<td>Years of working experience</td>
<td>56</td>
<td>3 months</td>
<td>39.00</td>
<td>14.8973</td>
<td>9.86451</td>
</tr>
</tbody>
</table>

According to the table above, the minimum age of nurse respondents was 24 years old and the maximum was 61 years old while their mean age was recorded at 43 years old. Concerning the respondents’ years of working experience, the least number of years was a quarter of a year while the topmost was 39 years old and as a result a mean of 15 years old. Relevant information considered valid by the researcher was represented in the Table above. Only the information considered relevant by the researcher was tabled above.
7.2 Level of knowledge and attitudes of nurses

The level of knowledge and attitudes of nurses was established by the use of NKASRP questionnaire. The 13 questions represented in Table 1 were weighed according to points awarded to them. Then, the total scores were analyzed by the use of descriptive statistics.

<table>
<thead>
<tr>
<th>Description</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses’ Level Of Knowledge &amp; Attitudes towards pain management in the elderly</td>
<td>56</td>
<td>44.20</td>
<td>100.00</td>
<td>77.7286</td>
<td>11.83965</td>
</tr>
</tbody>
</table>

Table 3 represents the questions that tested on the level of knowledge and attitudes of nurses, lowest score was 44% and the highest score stood at 100% while the mean score was recorded at 78%.
7.3 Pain assessment

The feedback to this question was to explore the availability of usable pain assessment tools in the wards as well as its frequency in terms of its use.

TABLE 4. Availability of usable pain assessment tools and its prevalence

<table>
<thead>
<tr>
<th>Availability of usable pain assessment tools in the ward</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>8</td>
<td>14,3</td>
<td>8</td>
<td>16,7</td>
</tr>
<tr>
<td>Yes</td>
<td>48</td>
<td>85,7</td>
<td>37</td>
<td>77,1</td>
</tr>
<tr>
<td>Never</td>
<td>3</td>
<td>6,3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>56 (n)</td>
<td>100,0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency of assessing pain in the ward based on Yes respondents only</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Often</td>
<td>8</td>
<td>16,7</td>
</tr>
<tr>
<td>Rarely</td>
<td>37</td>
<td>77,1</td>
</tr>
<tr>
<td>Never</td>
<td>3</td>
<td>6,3</td>
</tr>
<tr>
<td>Total</td>
<td>48 (n)</td>
<td>100,0</td>
</tr>
</tbody>
</table>

In reference to table 4, it is evidenced that 85,7% of questioned nurses had access to a pain assessment tool. 16,7% of nurses having access to a pain assessment tool have been assessing pain often, 77,1% rarely and only 6,3% never used such a tool.
7.4 Factors influencing nurses’ knowledge and attitudes

These factors are presented in descending order according to their significance to the nurses’ level of knowledge and attitudes on pain management. “In analysis of variance, between-group variance (differences between groups) is contrasted to within-group variance (differences between people in the groups)” (Polit 2010, 139).

TABLE 5. The effect of working experience on the level of knowledge & attitudes of nurses

<table>
<thead>
<tr>
<th>Description</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>4647,780</td>
<td>29</td>
<td>160,268</td>
<td>1,361</td>
<td>.215</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3061,974</td>
<td>26</td>
<td>117,768</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7709,754</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to Table 5, working experience of the respondents (n=56) was found to affect on their level of knowledge and attitudes towards pain management among the elderly. This is evidenced by the F-test value of 1,361 and the Sig. value of 0.215 shown in Table 5.

TABLE 6. The effect of reading of journals or articles on pain and its practical application on the level of knowledge & attitudes of nurses

<table>
<thead>
<tr>
<th>Description</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>185,885</td>
<td>1</td>
<td>185,885</td>
<td>1,334</td>
<td>.253</td>
</tr>
<tr>
<td>Within Groups</td>
<td>7523,870</td>
<td>54</td>
<td>139,331</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7709,754</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It can be derived from Table 6 that the act of reading of journals or articles among nurses has an influence on the nurses’ level of knowledge and attitudes towards pain management.
among the elderly patients. This can be seen by the F-test value of 1.334 and Sig. value of 0.253 from the table above.

**TABLE 7.** The effect of occupational status on the level of knowledge & attitudes of nurses

<table>
<thead>
<tr>
<th>Description</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>97,202</td>
<td>1</td>
<td>97,202</td>
<td>0.690</td>
<td>0.410</td>
</tr>
<tr>
<td>Within Groups</td>
<td>7612,553</td>
<td>54</td>
<td>140,973</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7709,754</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7 shows the nurses’ level of knowledge and attitudes influence towards pain management in the elderly. Occupational status/work status is on this basis used to describe whether a nurse was working as either a part-time or full-time employee. However, the effect of occupational status/work status is not to the same extent as of those shown in Table 5 and 6, but better than in table 8. The F-test value equals 0.69 with a Sig. value of 0.41.

**TABLE 8.** The effect of having previous experience in pain management on the level of knowledge & attitudes of nurses

<table>
<thead>
<tr>
<th>Description</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>91,524</td>
<td>1</td>
<td>91,524</td>
<td>0.649</td>
<td>0.424</td>
</tr>
<tr>
<td>Within Groups</td>
<td>7618,230</td>
<td>54</td>
<td>141,078</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7709,754</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The nurses’ previous experiences have some influence on their level of knowledge and attitudes towards pain management based on the findings recorded in Table 8. This is evidenced by the F-test value of 0.649 against the Sig. value of 0.424.
8 DISCUSSIONS

8.1 Methodological considerations and limitations

The researcher used quantitative descriptive method of research in order to enable the description of data as sought by the purpose of this research. Questionnaires were used to enable data collection from a larger group of participants and within a short period of time as compared to other methods. The researcher carried out a pilot study in advance in order to crosscheck on the details of the questionnaire to avoid unnecessary errors and enhance reliability in this study.

The questionnaire used was modified from NKASRP developed by McCaffery and Ferrell (2008). However, the researcher felt that its reliability in this study might have been tampered during the process. This is because; other questions that were considered as unsuitable for this study were omitted. Furthermore, two nurses added more details in their response of the questionnaires. This revealed that they were willing to provide more information. Therefore, due to time limitation, the researcher considered these as limitations as qualitative type of research would have allowed respondents to freely present their views. Nevertheless, the questionnaire used is considered reliable in this study since it meets the purpose of the study conducted.

Descriptive statistics available in the SPSS 19 program was used in data analysis. Demographical data as well as the total scores on the NKASRP questionnaire were analyzed in form of frequencies and percentages. Analysis on the factors influencing the nurses’ level of knowledge and attitudes towards pain management was done by use of one-way ANOVA. Raw data were inputted by the researcher alone thus upholding privacy as well as anonymity.

However, the results cannot be generalized due to the limited number of respondents (n=56). Therefore, the researcher however considers this as a pilot study that as it gives an overall view of the situation under research. Even though, the number of respondents is considered limited, the sample was widely distributed from different healthcare centers within the region of Kokkola. The use of quantitative descriptive research was considered
as a good method that best suits the purpose of the study. This research sets a good pace considering that the researcher did not find any relevant article on this topic in Finland.

8.2 Discussion of the findings

The purpose of the study was to describe the level of knowledge and attitudes of registered nurses working in healthcare center wards in charge of the elderly patients in Kokkola area, Finland. The goal was to establish the registered nurses’ level of knowledge and attitudes towards pain management and to highlight the factors that affect their decision making process in managing pain. The result was to strengthen the nurses’ level of knowledge and attitudes and enhance their skills. This was achieved by looking at the knowledge gaps realized by the researcher after data analysis.

The purpose of the study was achieved via three sets of questions; firstly, the level of knowledge and attitudes of nurses in regards to pain management, secondly, the extent of pain assessment among nurses and lastly, the different factors affecting nurses’ level of knowledge and attitudes towards pain management. The findings to these questions are as discussed below.

Concerning the level of knowledge and attitudes of nurses, the nurses scored a mean of 78%. According to the general overview of the results, this demonstrates a satisfactory achievement from the nurse respondents. However, this is in contrary with the previous studies by Zwakhalen, Hamers, Peijnenburg & Berger (2007), Yu & Petrini (2007), Plaisance & Logan (2006), Bernandi, Catania, Lambert, Tridello & Luzzani (2007) and Lui, So & Fong (2008), discovered that nurses have insufficient knowledge on pain management. This could be attributed to the fact that the researcher did not find any article on the nurses’ knowledge and attitudes of pain management in Finland. Hence, this leads to inability to make a direct comparison to the situation in Finland.

The literature recommends regular assessment of pain by using pain measurement instruments that are suitable for the group of patients under investigation. The institution involved can decide upon such instruments based on their guidelines. Therefore, it is important that nursing institutions develop their own guidelines for example those by Maryland Board of Nursing that was used by the researcher. However, the case in practice
is not as it should be, the results reveals that 14.3% of nurses reported that they did not have pain measuring instruments available for use in their wards. An amount of 48 nurses had usable pain assessment tools available in their ward but the regularity of use of pain assessment tools was inadequate. This is because based on the frequency, often, rarely and never using pain assessment tools, the response was 16.7% (n=8), 77.1% (n=37) and 6.3% (n=3) respectively. The literature suggests that pain assessment should be conducted on a daily basis and has even been referred as the fifth vital sign by Pain Society/Royal College of Anaesthetics (2003).

A considerable number of factors affected on the nurses’ level of knowledge and attitudes towards pain management. The factors included; working experience, reading of journals or articles on pain and its application to practice, occupational Status and lastly, their previous experience in pain management. The effects of working experience on nurses’ level of knowledge and attitudes have been identified by other researchers as Lui, So & Fong (2008) and Yu & Petrini (2007). The effect of occupational status (F=0.69) was slightly higher than the effect caused by nurses’ previous experience (0.649) but lower as compared to work experience (F=1.361) and the reading of journals or articles and its practical application (F=1.334). However, there was inconsistency with a previous research by Yu & Petrini (2007) on occupational status not having an effect on the nurses’ level of knowledge and attitudes.

There were some other factors that were not addressed on the results due to its insignificance influence on the nurses’ level of knowledge and attitudes. However, it may be useful for comparison purposes. They include; age, attendance of education courses on pain management and personal experience with pain. Attendance of educational classes on pain management was also analyzed based on the question; have you attended any educational classes on pain management among the elderly within the last one year? 89.3% of the nurses reported that they had not attended while only 10.7% had attended such classes. Nursing institutions are responsible in organizing such classes. Low attendance of nurses could be attributed to lack of commitment to deal with pain effectively. Besides that, lack of institutional guidelines on constant updating of knowledge could be responsible for that. Its lack of effect on the nurses’ level of knowledge and attitudes could be due to the fact that only a small number of nurses had been able to attend such
classes. However, the result on attendance of extra classes on pain management is coherent with that of a research by Yu & Petrini (2007).

8.3 Conclusions

It is quite clear from the current statistics that the percentage of the ageing population is not only increasing in Finland but also worldwide. Therefore, it is important for the nurses to equip themselves with the necessary knowledge, skills and positive attitudes. The need by relevant nursing institutions to develop pain management guidelines is inevitable. Additional classes on pain management can also be organized by the nursing institutions involved to help the nurses to update their knowledge on the latest issues.

This study indicates through its results that the level of knowledge and attitudes of nurses is satisfactory. However, the majority of nurses still do not consider the regularity of assessing pain important. Various factors were discovered to have an impact on the nurses’ level of knowledge and attitudes towards pain management. The factors were; working experience, reading of journals or articles and practical application of knowledge acquired, occupational status (part-time/full-time) and the nurses’ previous experiences on pain management.

Pain assessment is an important part of pain management process and as such nurses ought to be in the forefront. The suitability of pain assessment techniques for the elderly including those with cognitive deterioration should be identified and used. The use of evidence-based information should be a priority due to the challenges that nurses face during the implementation of pain management process. Nursing institutions should also equip their employees with the necessary knowledge by developing pain management guidelines based on their wards and offering additional educational classes to the nurses.

8.4 Implications to clinical practice and Suggestions for further development

The results obtained from this research provide an overview of the situation under investigations. Pain management should be a priority based on the relevance of the topic to the clinical practice. It is evidenced by the research that certain issues that pertains to pain management process have not been adhered to, as it should. The results of this study
should be taken into account so as to enhance the lives of those enduring the effect of inadequately managed pain.

This research acts as a reference point to the institutions of the same level as those involved in this research. In addition, nursing schools can also benefit from this research by determining the areas that need to be given more priority during the study period. It provides a review of the necessary features that relate to pain management process. As addressed by the results, even though the nurses’ level of knowledge and attitudes is considered satisfactory in this study. Low priority accorded to pain assessment still poses an effect on the whole process of pain management. Pain assessment should be recommended as in the literature since it forms the foundation of pain management.

It can be acknowledged that pain management is a nursing role and nurses spend more time with patients more than other professionals. Therefore, they should be equipped with the necessary knowledge to aid in the provision of services to the patients. Nurses should also be encouraged to develop the right professional attitudes to enhance their work and avoid problems. Hence, educating nurses on the importance of such issues and its effects to the patients are vital in this study.

The researcher used a questionnaire developed by McCaffery and Ferrell (2008) to assess knowledge and attitudes of nurses in general. However, if questions in this study were organized according to the different areas involved in pain management process, a deeper insight on the presence or deficiency of knowledge on a specific field could be well addressed. Moreover, the use of qualitative research methodology would be preferable as it provides for in-depth results.

In addition, the knowledge gap that exists between practice and theory can be solved by conducting a research of both parties. The comparison of the students’ as well as the nurses’ findings will probably create a breakthrough in the field of pain management. Further research can also be conducted to explore different pain assessment techniques that best fits the aged patients. In addition, special groups of old people such as those with cognitive problems as well as communication problems should also be well researched.
REFERENCES


WHO. Kumar N. 2007. WHO Normative Guidelines on Pain Management. Report of a Delphi Study to determine the need for guidelines and to identify the number and topics of guidelines that should be developed by WHO. Geneva.


Unit of Health Care and Social Services
Knowledge and attitudes of nurses towards pain management among the elderly: a case study of registered nurses from healthcare centers in Kokkola.

COVER LETTER

Dear respondent,

This is my sincere request for your participation in my thesis research. I am a 3rd year public health nursing student in Central Ostrobothnia University of applied sciences. Currently, I am writing my thesis which is about knowledge and attitudes of nurses towards pain management among the elderly: a case study of registered nurses from healthcare centers in JYTA area. The aim of the research is to strengthen nurses’ level of knowledge and attitudes towards achieving effective management of pain among the elderly. It is hoped that the results will not only benefit the nursing staff and their patients but also other healthcare professionals in general.

The research method used in this research is quantitative. There are 25 questions which will take approximately 10-15 minutes to answer. The answered questionnaires should be handed back to the nurse manager within 2 weeks. The results of the questionnaires will be handled with utmost confidentiality and anonymity. The completed thesis will be located in the library for public use. Your participation is voluntary; however your kind consideration in answering the questionnaires will be highly appreciated.

Thanks in advance

In case of any questions or more information please contact me on:
E-mail: christopher.kipkorir@cou.fi or Tutor teacher: Timo Kinnunen (timo.kinnunen@cou.fi)
Christopher Kipkorir

**Please indicate your response by marking [X] in the appropriate space given or by writing where necessary.**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Year of Birth</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Work experience as a registered nurse</td>
<td>years</td>
</tr>
<tr>
<td>3.</td>
<td>Occupational status</td>
<td>full-time [ ] part-time [ ]</td>
</tr>
<tr>
<td>4.</td>
<td>Do you have a usable pain measuring instruments available in your ward?</td>
<td>yes [ ] no [ ]</td>
</tr>
<tr>
<td>5.</td>
<td>Have you had earlier experience managing pain among elderly patients?</td>
<td>yes [ ] no [ ]</td>
</tr>
<tr>
<td>6.</td>
<td>Have you attended educational classes on pain management among the elderly patients within the last 1 year?</td>
<td>yes [ ] no [ ]</td>
</tr>
<tr>
<td>7.</td>
<td>Have you read a journal or article on pain?</td>
<td>yes [ ] no [ ]</td>
</tr>
<tr>
<td>8.</td>
<td>If you answered YES to question 7, have you applied the knowledge acquired practically?</td>
<td>yes [ ] no [ ]</td>
</tr>
<tr>
<td>9.</td>
<td>Have you had personal experience with pain?</td>
<td>yes [ ] no [ ]</td>
</tr>
<tr>
<td>10.</td>
<td>If you answered YES to question 9, was it acute or chronic pain?</td>
<td>acute [ ] chronic [ ]</td>
</tr>
<tr>
<td>11.</td>
<td>If you answered YES to question 9, has it affected the way you manage pain on elderly patients?</td>
<td>positively [ ] negatively [ ]</td>
</tr>
</tbody>
</table>
12. What is the most likely reason a patient with pain would request increased doses of pain medication?
   - The patient is experiencing increased pain
   - The patient is experiencing increases anxiety or depression
   - The patient is requesting more staff attention
   - The patient’s request are related to addiction

13. How often do you use pain measurement instruments in your ward?
   a. Often
   b. Always
   c. Rarely
   d. Never

14. The most accurate judge of the intensity of the patient’s pain is?
   a. The treating physician
   b. The patient’s primary nurse
   c. The patient
   d. The patient’s spouse or family

15. What is the recommended route of administration of opioid analgesics for patients with persistent cancer related pain?
   a. Intravenous
   b. Intramuscular
   c. Subcutaneous
   d. Oral
   e. Rectal

16. Analgesia for chronic cancer pain should be given:
   a. Around the clock on a fixed schedule
   b. Only when the patient asks for the medication
   c. Only when the nurse determines that the patient has pain
Christopher Kipkorir

Please indicate your response by marking [X] in the space given.

<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.</td>
<td>Vital signs are always reliable indicators of the intensity of a patient’s pain</td>
<td>true</td>
<td>false</td>
</tr>
<tr>
<td>18.</td>
<td>Patients who can be distracted from pain usually do not have severe pain</td>
<td>true</td>
<td>false</td>
</tr>
<tr>
<td>19.</td>
<td>Patients may sleep in spite of severe pain</td>
<td>true</td>
<td>false</td>
</tr>
<tr>
<td>20.</td>
<td>Respiratory depression rarely occurs in patients who have been receiving stable doses of opioids over a period of months</td>
<td>true</td>
<td>false</td>
</tr>
<tr>
<td>21.</td>
<td>Elderly patients cannot tolerate opioids for pain relief</td>
<td>true</td>
<td>false</td>
</tr>
<tr>
<td>22.</td>
<td>Combining analgesics that work by different mechanisms may result in better pain control with fewer side effects than using a single analgesic agent</td>
<td>true</td>
<td>false</td>
</tr>
<tr>
<td>23.</td>
<td>The use of placebo is important in determining if patient’s pain is real</td>
<td>true</td>
<td>false</td>
</tr>
<tr>
<td>24.</td>
<td>The patient should be advised to use non-pharmacological means alone rather than use pain medications</td>
<td>true</td>
<td>false</td>
</tr>
<tr>
<td>25.</td>
<td>Pain is part of ageing process</td>
<td>true</td>
<td>false</td>
</tr>
</tbody>
</table>

Thanks for your feedback!
Hyvinvoinnin ja kulttuurin yksikkö, Kokkola

Sairaanhoitajien osaaminen ja asennoituminen vanhusten kivunhoitoon.

SAATEKIRJE

Arvoisa sairaanhoitaja,


Kiitos etukäteen

Christopher Kipkorir
Terveydenhoitajaopiskelija, KPAMK

Jos teillä on kysytyävää tai haluatte lisätietoja, ottakaa ystävällisesti yhteyttä minuun sähköposti: christopher.kipkorir@cou.fi tai ohjaajaani Timo Kinnuseen, timo.kinnunen@cou.fi.
Christopher Kipkorir

**OHJE:** Merkitse vastauksesi ruutuun [X] tai kirjoita se avoimeen tilaan.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Syntymävuosi</td>
<td></td>
</tr>
<tr>
<td>2. Työkokemus sairaanhoitajana</td>
<td>vuotta</td>
</tr>
<tr>
<td>3. Työaika</td>
<td>kokoaikainen [ ] osa-aikainen [ ]</td>
</tr>
<tr>
<td>4. Onko osastollanne käytettävissä kipumittareita?</td>
<td>kyllä [ ] ei [ ]</td>
</tr>
<tr>
<td>5. Onko teillä aikaisempaa kokemusta ikääntyneiden kivun hoidosta?</td>
<td>kyllä [ ] ei [ ]</td>
</tr>
<tr>
<td>6. Oletteko ollut ikääntyneiden kivunhoidon täydennyskoulutuksessa viimeisen vuoden aikana?</td>
<td>kyllä [ ] ei [ ]</td>
</tr>
<tr>
<td>7. Oletteko perehtynyt hoitotieteellisiin artikkeleihin kivun hoidosta?</td>
<td>kyllä [ ] ei [ ]</td>
</tr>
<tr>
<td>8. Jos vastasit KYLLÄ kysymykseen 7, oletteko myös soveltanut kivunhoitotietoa käytännössä?</td>
<td>kyllä [ ] ei [ ]</td>
</tr>
<tr>
<td>9. Onko teillä henkilökohtaista kokemusta kivusta?</td>
<td>kyllä [ ] ei [ ]</td>
</tr>
<tr>
<td>10. Jos vastasit KYLLÄ kysymykseen 9, oliko kipu akuuttia vai kroonista?</td>
<td>akuuttia [ ] kroonista [ ]</td>
</tr>
<tr>
<td>11. Jos vastasit KYLLÄ kysymykseen 9, miten kokemus on vaikuttanut tapaan, jolla hoidat ikääntyneiden kipua?</td>
<td>positiivisesti [ ] negatiivisesti [ ]</td>
</tr>
</tbody>
</table>
### Christopher Kipkorir

**OHJE: Ympyröi mielestäsi oikea vastausvaihtoehto.**

| 12. Minkä takia yleensä potilas pyytää lisää kipulääkettä? |
|---|---|
| Potilas kokee lisääntynyttä kipua |
| Potilas kokee lisääntynyttä ahdistusta tai masennusta |
| Potilas vaatii enemmän henkilöstön huomiota |
| Potilaan vaatimuksiin liittyy riippuvuus kipulääkkeisiin |

| 13. Kuinka usein käytätte kipumittareita osastollanne? |
|---|---|
| a. aina |
| b. usein |
| c. harvoin |
| d. ei koskaan |

| 14. Tarkin potilaan kivun voimakkuuden arvioija on: |
|---|---|
| e. hoitava lääkäri |
| f. potilaan omasairaanhoitaja |
| g. potilas itse |
| h. farmaseutti |
| i. potilaan puoliso tai perheenjäsen |

| 15. Mikä on suositeltu opiaattien antotapa syöpään liittyvästä kivusta kärsivälle potilaalle? |
|---|---|
| f. i.v. |
| g. i.m. |
| h. s.c. |
| i. per os |
| j. per rectum |

| 16. Kipulääke pitkäaikaiseen syöpäkipuun pitäisi antaa: |
|---|---|
| d. ympäri vuorokauden kiinteän aikataulun mukaan |
| e. vain jos potilas pyytää lääkitystä |
| f. vain silloin, kun sairaanhoitaja päättää, että potilaalla on kipua |
OHJE: merkitse vastaukset ruutuun [X].

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>oikein</th>
<th>väärin</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Vitaaliset elintoininnot ovat aina luotettavia potilaan kivun voimakkuuden mittareita</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Potilailla, joiden huomio voidaan kääntää kivusta pois, ei ole yleensä kovaa kipua</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Potilaat saattavat nukkua kovasta kivusta huolimatta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Hengitysvajaus esiintyy harvoin potilailla, joille on annettu vakio-opiodiannokset useamman kuukauden aikana</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Ikääntyvät potilaat eivät siedä opioideja kivun hoitamisessa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Yhdistelmä eri mekanismeilla toimivista analgeeteista voivat tuottaa paremman kivunhoitotuloksen ja vähemmän sivuvaikutuksia kuin yksittäinen analgeetti</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Lumelääkkeen käyttö on tärkeää, kun määritellään, onko potilaan kipu todellista</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Potilasta pitäisi ohjata käyttämään eläkkeellisiä kivunhoitokeinoja yhdessä kipulääkkeiden kanssa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Kipu on osa vanhenemisprosessia</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Palauta kyselylomake suljettussa kirjekuoreessa osastonhoitajan huoneessa olevaan kirjekuoreen.

Kiitos!
KESKI-POHJANMAA AMMATTIKORKEAKOULU
MELLERSTA ÖSTERBOTTENS YRKESHÖGSKOLA

TUTKIMUSLUPA-ANOMUS

Organisaatio, jolle anomus on saatettava
KOKKOLA
TERVITISKERU

Vastuuhenkilö organisaatiossa
NAILELE TIKKAKOSKI - ALVAREZ

Tutkimushuvin anjojat
CHRISTOPHER KIPPERI

Osoite
TERVITISEN 1, 67200 KOKKOLA

Puhelin
044 656 82 1

Sähköpostiosoite
christopher.kipperi@campus

Tutkimuksen nimi
SINNAAANPOSTIJAISEN OSAAMINEN JA ATENKO-
TUMIEN VÄRITYSTEN KIVUNPOSTIOON

Tutkimuksen tarkoitus
Sennitteen ja jälkeisen sininpostiasen osta-
minaanpostien ja -postiin kivunpostioon.

Tutkimuksen kohderyhmä
SINAAANPOSTIAAT

Aineistojen keruu arvioitu ajankohta
21.2.20

Tutkimusmenetelmä
POÄÄRILLINEN TUTKIMUSJOHTO
TILAISTEILLINEN ÄLYTTYY

Tutkimussuunnitelma hyväksytty
12.9.20.10

Tutkimuksen ohjaaja
Timo Kinnunen, TIM

Lupa nyönnetään
paikka
KOKKOLA
aika
10.5.2011

Anomuksen mukaisesti
Muutosohdotuksin
Hylättä

Luvanvääntäjän allekirjoitus

LIITTEET
1. Tutkimussuunnitelma
2. Rysely haastattelumake
3. Muut liitteet, mitkä

Terveyden 1, 07200 KORKKOLA • Puh. (90) 825 4200 • Fax (90) 825 4310 • Info@cop.fi • www.cop.fi
KOKKOLAN KAUPUNKI
Terveyspalvelut
Viranhoitaja ja virka-asema
Tikkakoski-Alvarez Hannele
Hoitotyön johtaja

APPENDIX 2

VIRANHALTIJAPÄÄTÖS
Yleinen päätös
Päivämäärä / pykälä
10.05.2011 / § 9
13/01

Kipkorir Christopher, tutkimusluvann myöntäminen

AZY

Hyväksytään
Christopher Kipkorirille myönnetään tutkimusluupa aiheesta: Sairaanhoitajien osaaminen ja asennotuminen vanhusten kivunhoitoon. Tutkimus tukee terveyskeskukseen strategiaa. Tutkimussuunnitelma on liitteena.

Allekirjoitus

Hoitotyön johtaja
Tikkakoski-Alvarez Hannele

Oikaisuvaatimus-olkeus
Päätöksen tyytymätön voi tehdä kirjallisena oikaisuvaatimuksena. Oikaisuvaatimuksen saa tehdä se, johon päätös on kohdistettu tai jonka olkeuteen, voivollisuuteen tai etuu päätös välttämättä vaikuttaa (asianomainen) sekä kunnan jäsen.

Oikaisuvaatimus-viranomainen
Sosiaal- ja terveysautakunta

Oikaisuvaatimusaihke
Päätös on tehtävä 14 päivän kuluessa päätöksen liitoksiin vain. Kunnan jäsenen katsotaan saaneen päätöksenä tiedon kun pöydätkirja on asetettu yleisesti nähtäväksi. Asianomaisen katsotaan saaneen päätöksenä tiedon, jollei muuta näytellä, selitemmän päätän kuluttua kirjeen lähettämisestä, saanti/sanostukseen osoittamana aikana tai erilliseen liitoksiin liitettävään merkitymään aikana.

Oikaisuvaatimuksen sisältö ja
Päätöksen nähtäväksi assettaminen

Tiedonsiinto asiainosaiselle

Lähettety tiekone kirjeella
Annettu poistoon kuljetettavaksi, pvm / tiedonsiintaja

Päätös

Muilla tavoin, milen

Lisaatietoja

Liitteet

Sisälleen jakelu
KESKI-POHJANMAAN AMMATTIKORKEAKOULU
MELLERSTÄ ÖSTERBOTTENS YRKESHÖGSKOLA

TUTKIMUSLUPA-ANOMUS

Organisaatio, jolle anomus osaotetaan: JPPA-yht. peruskoulun liikelaitos

Vastuuhenkilö organisaatiossa: Reetta Hjelm

Tutkimushuvan anoi(t): CHRISTOPHER KILPÄRINK

Osoite: Tervasaari 1, 67200 KOROKOLA
Puhelin: 044-0605391
Sähköpostiosoite: christopher.kilpari@koulu

Tutkimuksen nimi: Saippuahoidijien öskäypää ja eienenpyynnön
Vanhusten Kirvunhoitojen

Tutkimuksen tarkoitus: Opinnäytettävän vahvistamassa saippuahoidijien
öskäypään ja niiden tarve Kirvun hoitolaista

Tutkimuksen kohderyhmä: Saippuahoidijat

Aineiston keruun arvoinut ajankohta: 2 viikosta, nein viikot 13 ja 14

Tutkimusmenetelmä: Määritelmiin. Tutkimus on tehty

Tutkimus suunnitelmasta hyväksytty: 12.12.2010

Tutkimuksen ohjaaja: Tero Kinnunen (Tero Kinnunen, T.K)

Lupa myönnetään
paikka: KOKKOLA
alika: 10.5.2011

anomuksen mukaisesti: □
muutonehdotuksin: □
hyväksytty: □

Luvannyöntäjän allekirjoitus: LENA ÖSTERLENDEN NYBACKA

LIITTEET: □ Tutkimus suunnittelua
□ Kysely/haastattelulomake
□ Muut liitteet, mitkä

Terveystie 1, 67200 KOROKOLA • Puh. (06) 823 4390 • Fax (06) 823 4390 • info@cop.fi • www.cop.fi
PÄÄTÖS

Tutkimuslupalopäätös

Päivämäärä / pykälä
10.05.2011 / § 14

KESKI-POHJANMAAN ERIKOISSAIRAANHOITO- JA PERUSPALVELUKUNTA

Jyvä-Peruspalveluilakelaitos (hallinto)

Viranhaltija ja virka-asema

Tarja Olkarinen-Nybacka

Peruspalvelujohtaja

Asia

Tutkimuslupa, Kiprorir Christopher: Sairaanhoitajan osaaminen ja asennoituminen vanhusten kivunhoitoon

Päätös ja sen perusteet

Terveydenhoitajaprospekti Christopher Kiprorir on anonut tutkimuslupaa Jyvan toimialueelle opinnäytetyöllään: "Sairaanhoitajan osaaminen ja asennoituminen vanhusten kivunhoitoon". Tutkimuksen tarkoitus on vahvistaa sairaanhoitajien osaamistason ja tietoa kivun hoidosta. Tutkimuksen ohjaajana on Timo Kinnunen.

Myönnän anoton tutkimusluvan Keski-Pohjanmaan ammattikorkeakoulun opiskelija Christopher Kiprorir.

Allekirjoitus

Peruspalvelujohtaja

Tutkimuslupa

Tutkimuslupan antaja

Tarja Olkarinen-Nybacka

Okaisuvaatimus-ohje

Päätökseen työkykyllä joudut käydä kirjallisen okaisuvaatimuksen. Okaisuvaatimuksen saa tehdä se, johon päätös on kohdistettu tai jonka oikeuteen, velvollisuuteen tai etuun päätyvät valitettavasti vaikuttava (okaisuvaatiminen) sekä kunnon jaksen.

Okaisuvaatimusviranomainen

Peruspalveluutakunta

Mariankatu 16-20 67200 KOKKOLA

Okaisuvaatimusala ja sen alakäsitys

Okaisuvaatimus on ollut 14 päivän kuluttua päätöksen tiedoitsusaannot. Kunnan jäsenten katsotaan saaneen päätöksen tiedon kun pyynnöt on asetettu yleisesti nähtävällä. Okaisuvaatimisen katsotaan saaneen päätöksen tiedon, jotta muuta näytä, seisteman päätään kuluiin kriitiset nähtävissä, saantiviraston osoittama aikana ja erilliseen tiedoitsusaanottokeskukseen merkittyä aikana.

Okaisuvaatimuksen asetaminen ja toimittaminen

Okaisuvaatimuksen on käytettävän vaatimuksen perustamiseen ja sen tekijän allekirjoittettava. Okaisuvaatimus on toimitettava okaisuvaatimusviranomaiselle ennen okaisuvaatimustajan päätystä.

Päätöksen nähdyväksi asettaminen

Päivämäärä 15.5.2011

Tiedoksiot ja asiainosaiset

X Lähetetty tiedoksi kirjeella

Anneltu postin kuljetettavaksi, pvm/tiedoksiantaja

X Luovutettu asiainosaiselle

Paikka, pvm

Tiedoksiantajan allekirjoitus ja virka-asema

X Muilla tavoin, miten sopitta

Lisätietoja

Liiitteet

Sisäinen jakelu

palvelujohtajat Hjelm ja Peltokorpi
## Name of author (s) and title of the research article

<table>
<thead>
<tr>
<th>Name of author (s) and title of the research article</th>
<th>Source</th>
<th>Research methods used</th>
<th>Target group</th>
<th>Main results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Plaisance &amp; Logan. Nursing students’ knowledge and attitudes regarding pain</td>
<td>Pain management nursing, vol 7, No 4 (December), 2006: pp 167-175</td>
<td>Descriptive correlational study</td>
<td>Associate degree and baccalaureate nursing students (n=313)</td>
<td>-Even though nursing and pain management has progressed, the knowledge of nursing students was seen to be inadequate hence their inability to successfully manage pain. -Nursing students were also found to assume their own assessment to be the patients’ subjective assessment on pain and this may result in poor pain management.</td>
</tr>
<tr>
<td>2. Yu &amp; Petrini. A survey of Chinese nurses’ current knowledge of pain in older people.</td>
<td>Journal of clinical nursing 16, 963-970, 2007</td>
<td>Quantitative research-questionnaire</td>
<td>Registered nurses (n=621)</td>
<td>-Surveyed nurses lack substantial knowledge concerning pain and pain management among the elderly. -As for educational background, work status and either or if one had been to further classes on pain management did not make any substantial disparity. -Different hospitals settings and clinical areas of expertise showed a substantial disparity amongst the nurses’ knowledge. -Age and working experience produced a substantial outcome in terms of managing pain.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>4.</td>
<td>Zwakhalen, Hamers, Peijnenburg and Berger. Nursing staff knowledge and beliefs about pain in elderly nursing home residents with dementia.</td>
<td>Pain Res Manage Vol 12 No 3 Autumn 2007</td>
<td>A cross-sectional study design - Questionnaires</td>
<td>Nurses (n=123)</td>
</tr>
<tr>
<td>5.</td>
<td>Lui, So and Fong. Knowledge and attitudes regarding pain management among nurses in Hong Kong medical units.</td>
<td>Journal of clinical nursing (2008) 17, 2014-2021</td>
<td>Quantitative research method and descriptive, cross-sectional study design.</td>
<td>Medical units nursing staff (n=143)</td>
</tr>
</tbody>
</table>