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Postoperative Pain Measurement and Documentation in an Outpatient Clinic

A Descriptive Literature Review

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Abstract
The literature review purpose aimed at conducting a literature review on postoperative pain measurement and documentation in outpatient clinic settings. The study further aimed at utilizing the literature review in advancing postoperative pain measurements and documentation in a surgical outpatient clinic. The study was guided by the following research questions; what studies have been conducted on postoperative pain measurements, what studies have been conducted on postoperative pain documentation in an outpatient clinic, and what are the outcomes of the studies. The study adopted a descriptive literature review method in answering the research questions chosen due to its capacity in investigating broad research questions. Also, this design-maintained is suitable when the focus of the subject of the work in early scientific development is located. The broad scope of a descriptive literature review allowed for the inclusion of research with different levels of evidence and of not research-based texts The descriptive review was considered a tool to enter decision-makers, practice, or research accurate and transparent means of identifying both practical and policy-relevant questions

The study retrieved 356 potentially eligible articles, 32 met the criteria for inclusion, and 24 provided data for extraction. Each review was evaluated on aggregate providing evidence on the questions. For the eight excluded, the quality of the reviews varied, and the reporting often lacked sufficient methodological detail for quality assessment. The data in the eight studies excluded was not suitable for extraction. The study results revealed that pain scales are significant medical tools applied in assessing postoperative pain after outpatient surgery. The results also revealed that most outpatient healthcare facilities encountered insufficient documentation of patient information concerning pain management. The results also noted that most nurses relied on non-reliable oral reporting, which suffered a higher limitation of forgetfulness, thereby limiting data sharing among clinicians. The study concluded that the healthcare providers, and nurses within outpatient healthcare facilities have a significant role in implementing proper patient documentation among postoperative patients. The study recommends mitigating the nurses' workload by employing adequate nurses to enhance time allocation and proper pain documentation in outpatient clinical healthcare. Nurses should rely on evidence-based practice techniques in collecting patient data rather than non-reliable mechanisms such as oral reporting to eliminate data limitations associated with forgetfulness and limited data sharing.

Keywords
Postoperative pain; pain Measurement; Documentation; Outpatient Clinic Pain Management; Pain Assessment; Pain documentation

CONTENTS

1 INTRODUCTION

This thesis is part of the Satakunta University of Applied Sciences (SAMK) Bachelor's Degree Programme in Nursing. The proposed topic chosen consisted of conducting a literature review related to our academic interests and professional projects with the surgical outpatient clinic. Our initial questioning was based on pain, whatever the underlying pathology. Indeed, we wanted to explore the impact of this pain on the daily lives of people who suffered from it and understand why it remained insufficiently relieved. Following an initial review of the literature, we were led to take a more specific interest. Subsequently, a meeting held with a pain specialist nurse in one of the surgical outpatient clinics led us to make a more specific interest. The topic is interested more on postoperative pain measurement and documentation with an emphasis on the nurse's decision-making process. The researched topic is extensively crucial in the nursing profession in terms of providing guidelines, and evidence-based quality cares to patients who are suffering from postoperative pain.

Pain is the most common phenomenon that everybody experiences. The suffering of pain causes the person to undergo burden and toils, it significantly changes the physical and psychological well-being of the patient. The untimely management of pain leads to consequences of chronic pain in further lives. Pain should be treated and mitigated as quickly as possible (Wells et al., 2021).

This allows us to hypothesize that the phenomenon of pain is central to the support that nurses, can offer to people suffering from illness and various medical conditions. Moreover, this is a current issue because: "Estimates suggest that 20% of adults suffer from pain globally and 10% are newly diagnosed with chronic pain each year" (Goldberg & McGee, 2011, p.1). Population over the age of 70 are the group most likely to have their pain untreated (Denny & Guido, 2012). These figures allow us to assume that any nurse will be inevitably and invariably confronted with the patients' symptoms associated with the illness and condition, especially postoperative pain.

Globally, approximately 235 million people have surgery each year throughout the world, which means that millions of people are affected by persistent postoperative

pain (Rawal, 2016, pp. 160-171). Furthermore, 40-60% of the patients who underwent surgical operations experience considerable acute postoperative pain (Plato, 2020, p. 13). Therefore, pain in the postoperative context is an important issue (Rawal, 2016, pp. 160-171) since it causes many consequences. Non-relieved pain is harmful physiological stress (Plato, 2020, p. 13) generating an increase in heart rate and blood pressure, delayed gastric emptying (DGE), endocortical imbalances, and a decrease in respiratory capacity (Loscalzo et al., 2018, p. 65; Uchida et al., 2017, pp. 1166; Noorani, 2016, p. 2; Kelkar, 2015, pp. 599-605). The resulting immobility of pain promotes the appearance of deep vein thrombosis and pulmonary embolism (Harsoor, 2011, p. 101).

Psychological repercussions are possible, such as an increase in anxiety, the appearance of sleep disorders, fatigue, agitation, irritability, aggression, and, above all, the presence of suffering and emotional distress (Rampes et al., 2019, p. 273). People with high postoperative pain are also more likely to have delirium (Zhou et al., 2021, p. 2). All these complications will have the ultimate consequence of unnecessarily prolonging the duration of the "patients returning to the hospitals after surgery" (Tolvi et al., 2020, p. 2) and even the risk of developing chronic postsurgical pain (CPSP) (Park et al., 2020, p. 2). Given all the repercussions of poor or inadequately relieved postoperative pain, it is essential to ensure effective management of pain. However, effective management underlies a regular assessment of pain (Wells et al., 2008, p. 34). This assessment is usually devolved to nurses.

In Finland, the national pain society usually executes its mandate in supporting the patients' pain needs such as acute pain, chronic pain, cancer pain, and pain during the end of life (Nevantaus, 2017). The opioid prescription remains the cornerstone of postoperative pain management in Finland. Oxycodone remains the most used opioid in Finland for acute postoperative pain management (Kuusniemi 2019). However, in the study by Heikkilä et al. (2016) found a significant discrepancy in pain documentation among nurses on various wards. The report claims that the quality of postoperative pain documentation falls short of acceptable standards and that there is a need for improvement which must be covered by facilitating education and training regarding pain management. There is also amongst physicians and nurses revealed that an inadequate pain assessment is one of the hindrances to effective pain management.

An ethnographic study by Bach, et al (2018) conducted in two gynecological units within a large Scandinavian university hospital reveals that pain management among the patient was heavily influenced by the health beliefs and the routine actions of the patient, and the existing guidelines they have in the hospitals were found to be ineffective among nurses. Thus, they concluded that there is the utmost need to develop modified practice-oriented postoperative pain management that can integrate the patient experience. In the research conducted (Fager & Jonsdottir, 2019) in an emergency department of Lunds University in Southern Sweden, it was found that 73.2 percent of nurses received pain training, but that knowledge alone was not enough to reduce pain in the patients. As a result of this study, they reflected that the nurse's pain assessment should be guided by the patient's experience to avoid undertreatment of pain.

Considering these issues, the role of health care providers is crucial in terms of addressing postoperative pain. Firstly, the pain assessment should be thoroughly and carefully conducted with an emphasis on relieving the patient’s pain. Secondly, each pain assessment tool should be determined in conjunction with the patient so that the expected outcome can be achieved. At the same time, the pain scale should be relevant, and the patients also need to be aware of that measuring scale so that the results are well documented (Wells et al., 2012). Nurses have a key role to function as patients’ advocates, making sure that they receive effective pain management.

2 PURPOSES, AIMS, AND RESEARCH QUESTIONS

The surgical procedures impose greater challenges on medical practitioners regarding the most appropriate mechanisms for controlling postoperative pain. The study's purpose at conducting a literature review on postoperative pain measurement and documentation in outpatient clinic settings. The study further aimed at utilizing the literature review in advancing postoperative pain measurements and documentation in a surgical outpatient setting.

The study was guided by the following research questions: -

i. What studies have been conducted on postoperative pain measurements?
ii. What studies have been conducted on postoperative pain documentation in an outpatient clinic?
iii. What are the outcomes of the studies?

3 KEY CONCEPTS

3.1 Definition of pain

The International Association for the Study of Pain (IASP) defines pain as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage” (Malik, 2020, pp. 2-3). Pain is unpleasant; however, it is important to understand different types of pain and how they differ in nature. Pain is the most common phenomenon that everybody experiences. The suffering of pain causes the person to undergo burden and toils, it significantly changes the physical and psychological well-being of the patient. Its untimely management leads to consequences of chronic pain further in life. Pain should be treated and mitigated as quickly as possible. Most individuals seek medical services because of pain, which has been identified as the most prevalent reason (Ahern et al., 2019, p. 3; Wells et al., 2008, p.1332; Loscalzo et al., 2018, pp. 2237). Pain is a subjective, complex, and multi-dimensional phenomenon that cannot be assessed objectively. Due to this reason, it is essential to conduct pain evaluation frequently using a standard format of assessment. After each intervention, pain re-evaluation is integral to see how effective it was and whether it should be changed (Dale & Bjørnsen, 2015, pp. 1-5).

3.2 Pain management and assessment

In 1988 the WHO set out competencies in pain management which include knowledge, attitude, monitoring, and manual and intellectual skills (WHO, 1988). This manual of concepts has become the gold standard and it is what serves as the basis for nursing assessment and care of patients in pain. McCaffery & Pasero (1999) defined pain assessment as a series of processes where an extensive exploration is done to find out the triggering factors of pain and its relative negative impact on the body. Moreover, Hughes (2008) pain assessment should be defined as a comprehensive clinical practice of describing pain and its associated disability.

Measurement of pain is accomplished using the specific pain assessment tool. It is an imperative and legitimate means for the proper management of pain. The tool assists health care practitioners in determining the quantity and quality of one or more variables of a patient's pain experience. Therefore, to monitor the continued efficacy of analgesic medication, pain assessments should be taken on a continuous and regular basis. The pain assessment tools are the means that communicate the patient's pain intensity and severity. The number of pain-assessing tools available is enormous (Breivik et al., 2008).

Uni-dimensional tools measure a single dimension of the pain experience, e.g., the intensity of pain following acute pain or the degree of pain relief after the pain intervention. An example of a uni-dimensional tool includes the verbal descriptor scale (VDS), which utilizes terms such as none, mild, moderate, severe, and excruciating or agonizing (Figure 1). They can also be transformed into numerical ratings as well as a visual or graphical representation for simpler comparison, which is called the visual analogue scale (VAS) (Myles et al., 2017, p. 424). Multidimensional tools measure not only the intensity of pain but rather help to explore and describe the pain and its consequences. For example, a brief pain inventory, or McGill pain questionnaire (ANZA, 2015).

After surgery, it is crucial to utilize the many pain scales that are available to assess the patients' level of discomfort. All patients should have their pain measured, and the

results should be monitored regularly. A verbal rating scale (VRS) or numerical rating scale (NRS) can be used to evaluate the patient's subjective experience if they can communicate (Figure 2). Since everyone experiences pain differently, using the pain scale correctly should be a guidance for pain management. The patient's cognitive level is one of the most important factors in deciding on the pain scale. A verbal rating scale with four or five points is the most effective suggested scale (VRS). The numerical rating scale (NRS) is a subjective assessment of pain that ranges from “no pain at all” to “the strongest possible pain”.

The visual analog scale (VAS), which has a segment that is 100 mm long and endpoints that are fixed similarly to a numerical scale, is the most well-known of the pain scales (Figure 3). Using a pain wedge up to 50 cm long, with the VAS indicated with a colored triangle to make the scale easier to view, may be more convenient for a surgical patient. Measuring pain in postoperative patients both at rest and when moving is crucial. When the patient is at rest, they might not feel any pain at all, but any movement of the body—getting out of bed, walking, coughing, taking a deep breath, etc.—can heighten their degree of discomfort. The patient's reported level of pain needs to be balanced against their ability to function and the degree of pain relief attained by therapy; for instance, an increase in opioid dose may not always follow a particular measurement result (Kontinen & Hamunen, 2015 & Hoitotyön tutkimussäätiö, 2013). Below down represents the different pain assessment tools for measuring pain levels.

Figure 1. Wong-Baker Faces Verbal Descriptive Scale adopted from McCaffery, et al. (1989).

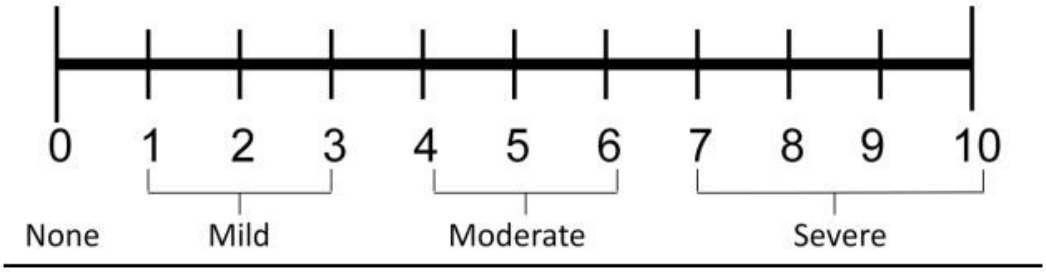

Figure 2. The Numeric Pain Rating Scale adopted from McCaffery, et al. (1989).

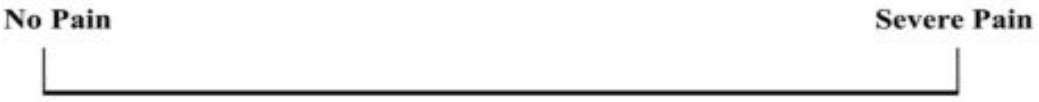

Figure 3. Visual Analog Scale (VAS) adopted from McCaffery, et al. (1989).

The foremost step in managing acute post-operative pain is to measure pain quality and severity depending on the surgery and patient-specific variables. The implementation of a multimodal pain treatment approach, which combines many therapy modalities to provide greater pain relief, is advised throughout treatment. In addition, a single method's negative effects, particularly those brought on by opioid medications, are lessened. All professional teams working together in the perioperative care setting are accountable for treating acute pain. The acute pain treatment working group can assist in raising treatment quality and lowering expenses in acute pain services. The proper assessment of pain during the perioperative phase who are at risk or predisposed to developing severe postoperative pain and pain chronicity even before surgery. The development of individualized, evidence-based pain management plans helps in addressing each patient's unique suffering (Kontinen & Hamunen, 2015).

3.3 Pain medication

Post-operative management is best managed when then pain assessment or pain measurement is done based on individual needs. Based upon it, the pain management should be of a multimodal analgesic approach. Multimodal analgesia focuses on

reducing the use of opioids through the use of non-opioid analgesics that have different mechanisms of action. It is based on the patient and the types of surgery that the patient has undergone. Its approaches primarily emphasize improving and reducing pain, minimizing the chronicity of pain that could develop post-surgery, and reducing the consumption of opioids to a larger extent (Jenny, et al., 2020). The recent implication of enhanced recovery after surgery (ERAS) in postoperative pain management is the gold standard as they have been proven to decrease surgical complications and thereby enhance recovery at its best (Joshi & Kehlet, 2019).

3.3.1 Opioids

Opioids are chemical substances that primarily work by acting on opioid receptors which are found in the central and peripheral nervous system and gastrointestinal tract. The opioids are classified based on their potency or strength; mild, medium, and strong opioids. The availability of opioids is administered as i.v, i.m. p.o. Opioids are widely used in most major surgeries for short-term use. However, the use of opioids is not limited to post-operative pain, it is also widely used in cancer pain, acute pain, and chronic pain as well. Due to its addictive nature, opioid tolerance, and imposition of death to overdose, the prescription and use of opioids are statutory. Doctors prescribe various available forms of opioids in the patient medication list as per their requirements. Therefore, the nurses play an important role in assessing the pain and determining what mode could be more beneficial to the patient (Hoikka, Laurila, Lehtomäki & Walman 2013; Kontinen & Hamunen, 2015.)

Whenever Non-steroidal anti-inflammatory drugs (NSAIDs) do not help with the pain then weak opioids such as Codeine and Tramadol are used. Sometimes, when the pain is still not relieved even with the maximum dose, a strong form of opioid is used. The only moderate opioids are Buprenorphine. The strong form of opioids is morphine, oxycodone, methadone, and fentanyl. Oxycodone is one of the most widely used in Finland for the treatment of postoperative pain. The administration of opioids has several common side effects such as nausea, vomiting, constipation, dizziness, and drowsiness. One of the rarest side effects is respiratory distress. Therefore, the pain

measurement before and after should be assessed accordingly (Kontinen & Hamunen, 2015.)

There are also other methods to effectively manage pain such as patient-controlled analgesia (PCA). It is a way to relief the pain by the patient controlling the amount of pain medication. It applies to those patients who are oriented and can understand what is being instructed. The most used drugs in patient-controlled analgesia (PCA) range from weak opioids to strong opioids. It is contraindicated among those groups who are elderly but cannot do it on their own, the groups are drug abusers, patients with chronic kidney disease, liver failure, and chronic obstructive pulmonary disease (COPD). Whenever PCA is being used, continuous monitoring of the patient's pain level, consciousness level, vital signs, respiratory distress, urinary output, nausea, vomiting, and allergic reactions. The accurate documentation of the PCA injections as well as any side effects should be documented (Kontinen & Hamunen, 2015.)

3.3.2 Epidural pain medication

Epidural anesthesia is one of the pain-relieving methods by administering pain medication into the epidural space of the spinal cord where a flexible catheter is used. It stops the pain signals from the spine to the brain thus, temporarily helping in relieving pain. The use of epidural pain is primarily used for those patients who have undergone major surgeries. Surgically operated require continuous treatment for up to 2-3 days following surgery. The dose is adjusted based on the patient's pain level. The nurses need to assess for the pain assessment, its side effects which include loss of sensation in the extremities, temporarily losing of bladder functions, low blood pressure, headache, dizziness, shortness of breathing, blood clots or hematoma, skin rashes or any other allergic reactions (Terveyskylä, 2022.)

3.3.3 Non-steroidal anti-inflammatory drugs (NSAIDs)

NSAIDs are commonly used as the essential components of multimodal analgesia. Multimodal analgesia refers to the balanced use of a combination of various groups of

pain medication for relieving pain. Its constituents the use of pharmacologic agents such as acetaminophen, non-steroidal anti-inflammatory drugs (NSAIDs), opioids, adjuvant medications such as anticonvulsants, N-methyl D-aspartate (NMDA) antagonists, alpha 2 agonists, local anesthetics as well as procedural interventions such as spinal, epidurals, peripheral nerve blocks (Kontinen & Hamunen, 2015.)

Non-steroidal anti-inflammatory drugs (NSAIDs) are the commonest choice of drugs used that are widely used to minimize pain preoperatively, intraoperatively, or post-operatively. The group of NSAIDs works primarily by inhibiting the cyclooxygenase (COX) enzyme which interferes with the inflammatory response by blocking the release of prostaglandins. The COX inhibitors are either selective or non-selective based on the inhibition of COX-1 and COX-2. COX-1 is found in the gastrointestinal tract, kidneys, and platelets and its function are more concentrated on regulating normal physiological functions. When the non- selective COX-1 inhibitors like aspirin, ibuprofen, diclofenac, ketorolac, and naproxen are used, the side effects such as gastric bleeding or aggravate ulcers, acute renal failure, decrease in platelet aggregation. Therefore, the use of non-selective COX-1 should be used cautiously. While on the other hand, selective COX-2 inhibitors like celecoxib, rofecoxib, and meloxicam. The side effects associated with selective COX-2 inhibitors are mostly related to cardiovascular effects. Therefore, as a nurse, it is crucial to monitor the possible side effects that may be related to the use of NSAIDS and should identify the risk group of patients such as respiratory failure, liver dysfunction, renal failure, cardiovascular problems, or any allergies related to it (Sherman, et al., 2020).

3.3.4 Pain documentation

The pain documentation provides information regarding patients' health, their reactions to disease, and the care they receive. Ultimately, the proper assessment of pain, documentation, and its management help to improve the quality of care for the patient (Rafati et al., 2016, pp. 36-40.) The improper and insufficient pain measurement and documentation cause failure in providing pain management. Nursing documentation aids in the continuum of treatment and serves as a significant medium

of interaction between doctors and nurses. In other words, it acts as a mirror to the treatment process. (Heikkilä, et al., 2016, pp. 78-87.)

In Finland, patient health information or documents, are documented in the national archive as outlined in Section 6 of the Act on Electronic Processing of Social and Health Care Customer Information (784/2021). The entries may be made by different persons participating in the patient's treatment or related tasks (Finlex, 2022).

The nursing documentation should be such that it is easily visible, accessible, and easy to use during treatment. One of the studies conducted in Finland resulted that the nursing staff having difficulty finding the ones they need information on the medical record system. From the same study, it is recommended that the documentation and recording should be simpler and clearer as well as made nationally uniform throughout Finland. Even though there have happened several developmental workshops regarding these issues, the goals are yet not been achieved due to varying ways of doing documentation (Junttila & Nykänen, 2012, p. 20-21.)

The documentation in nursing is incomplete and unsystematic. There is the inadequate use of a pain scale and the patient's verbal description of the pain is not documented as required. Thus, making it more difficult to provide efficient treatment. The study also reflected the significant role of management in the particular ward in properly training the staff regarding documentation (Grommi, 2015, p. 37.)

Hoitotyön tutkimusäätiö (2013, pp. 20-23), highlights that to have proper documentation regarding pain, nurses need to cover a few key indicators such as the types of pain medication and the name of the prescriber, the signature of the staff who have done the entry with the current date, how the pain management has been implemented, documentation of any extraordinary that has come across during that time, what kind of pain management has been done and the reasons behind that implementation, the allergies with any pain medication or any other medication, the side-effects that should be taken into consideration when implementing certain pain medication, patient unwillingness to take pain medicine, regularly updating the pain situation of the patient during the working shift of the particular staffs.

The competence of pain management includes knowledge, attitude, monitoring, and manual and intellectual skills (WHO, 1988). To bring uniformity in the process of post-operative pain documentation, the nurses need to follow eight different recommendations as described by Hoitotyön tutkimusäätiö (2013, pp. 8-23) which includes 1. Proper patient guidance for pain management. 2. Identifying the patient's pain and recognizing the possible fears and related questions and previous experiences. 3. Patients' pain assessment using different pain scale measures. 4. Implementation of pain medication. 5. Implications of other non-pharmacological methods. 6. Monitoring patients' level of pain as well as the possible side effects of the pain medication following pain management. 7. Assuring the quality of pain management by ensuring proper staff training and inclusion of multidisciplinary, and patient safety.

Also, the Finnish Society of Anaesthesiologists and the Finnish Pain Research Society have developed recommendations that could be used explicitly in the Finnish health system. It has defined its minimum requirements for postoperative pain documentation and pain management. Those are 1. The pain level and its intensity were measured using only valid pain scales such as the numerical rating scale (NRS), and visual analog scale (VAS). The documentation should be done once in every shift and if the patient has persistent pain as required interventions, then the documentation should be based upon the requirement. 2. Documentation of used pain management methods which includes the use of PCA, the types of medication that are being used, the current infusion rates, or any changes that have been made. The requirement of additional pain medications and when about it is required. 3. Side-effects from pain medication. It includes every documentation of side-effects that the patients encounter after receiving pain medication. If patients have been under opioids, then documentation regarding sedation, nausea, and vomiting should be done. If epidural and spinal analgesics are used then documentation of orientation state, blood pressure, respiration, and examination of sensation of lower extremities should be done. Depending upon the type of anesthesia used the symptoms need to be assessed and documented (Grommi, 2015, pp. 11-14; Liljamo & Kinnunen, 2020, pp. 122-125.)

3.4 Outpatient clinics

According to Snedaker and Rima (2014) “ambulatory clinics are sometimes named as outpatient clinics or ambulatory centers” (p. 279). In an outpatient clinic, patients are briefly treated for various kinds of medical ailments which include numerous diagnostic test services and treatment services. It does not require any hospital stay of the patients. Surgical outpatient clinic in Western Finland compromises of treating the adult group of patients having orthopedic diseases, urological diseases, gastrointestinal ailments, injuries, and malformations and their reformation by plastic surgery, vascular disease, and its related surgery.

3.5 Clinical reasoning

Clinical reasoning is defined as “the cognitive processes and strategies used to understand the significance of patient data, as well as to identify and diagnose patient problems” (Forsberg, et al., 2014, p. 538). For Simmons, et al. (2003), “Clinical reasoning guides the nurse in assessing, assimilating, retrieving, and/or discarding components of information to make decisions about patient care” (p. 702). This introduces the concept of decision-making. The study relied on Simmons et al. (2003, p. 703), who proposed that the decision-making process or clinical decision-making involves an outcome. The results are a reflection on health information, leading to a decision. In the rest of this work, the study applied the two concepts together because our thinking focused both on the indicators influencing clinical reasoning, but also on the resulting clinical decisions.

3.6 Finnish National Nursing Documentation model

The patient care information is usually stored in an electronic patient record system. Finland uses predefined key structure data elements in the electronic patient records in describing healthcare and care data refined during the nursing process phases (Kinnunen et al., 2021). The predefined data structures involve identifying patient data, service providers, service events, service entities, and psychological measures

(Kinnunen et al., 2021). The other structures include issues related to general health, key structured data elements in nursing, capabilities, tests, examinations, interventions, medication arrangements, follow-up care, and consent.

The key structured data elements in nursing include nursing diagnosis, nursing intervention, nursing outcomes, nursing intensity, and nursing discharge summary (Kinnunen et al., 2021). The nursing diagnosis entails documenting the challenges and issues surrounding patient care. Based on the attained data, the nurses, in conjunction with patients, assess and determine the patient care needs. The nursing intervention entails entering patient care into patient records (Kinnunen et al., 2021). The nursing outcomes aim to describe patient condition changes following the implementation of crucial intervention measures.

The nursing intensity focused on stating the patient's dependency on nurses' work input. The documentation of patient care and implementation plans based on the Finnish Classification of Nursing Diagnoses and Finnish Classification of Nurse Interventions provides an ideal background for assessing the patient's nursing intensity (Kinnunen et al., 2021). The nursing discharge summary provides clear instructions for patient care following the end of care and key implementations in care follow-up. The discharge summary comprises the nursing notes and the ideal purpose in enhancing care continuity and attainment of patient safety (Kinnunen et al., 2021). The discharge summary further provides patient data concerning their care and progress, which enhances self-care.

The pilot project for Finnish nursing documentation started during the year (2005-2008). To bring uniformity and to make the nursing documentation process standardized in all the facets of health care in Finland, the Ministry of Social Affairs and Health and the National Institute of Health and Welfare developed a tool known as the Finnish nursing documentation model. This model is constructed relying on the decision-making process and the use of standardized nursing terminology derived from scientific evidence. The model has been updated several times. The newest version updated in 2021 is the Finnish Care Classification (FinCC 4.0). Following the specific structure as determined by the Finnish Care Classification (FinCC). It includes the phases of the nursing process for the documentation of the daily activities of

nursing work. The key components covered in the nursing process are nursing diagnosis, nursing interventions, nursing outcomes, nursing intensity, and nursing discharge summary. The FinCC includes the Finnish Care Classification of Nursing Diagnoses (FiCND 4.0), the Finnish Care Classification of Nursing Interventions (FiCNI 4.0), and the Finnish Care Classification of Nursing Outcomes (FiCNO 1.0) (THL, 2021, pp. 21.)

Both in outpatient and inpatient units of primary health care and specialized health care, the Finnish Care Classification of Nursing Diagnoses (FiCND 4.0), and the Finnish Care Classification of Nursing Interventions (FiCNI 4.0) are extensively used for documenting patient care. There are altogether 17 components in the newest version for both the FiCND and FiCNI. Each component has a specific number of main categories and subcategories. FiCND has 157 main categories and 98 subcategories, while FiCNI has 257 main categories and 120 subcategories. No changes have been made to the Finnish Care Classification of Nursing Outcomes (FiCNO). In FiCND, 57 new codes, 84 updates, and 47 deletions have been made to its main categories and subcategories. Similarly, in FiCNI 198 new codes, 180 updates, and 163 deletions have been made. (THL, 2021, pp. 10.)

In the latest version FinCC 4.0, the component pain management has 15 nursing diagnoses, and eight main categories with 23 concrete subcategories of nursing interventions in FiCNI. The additional new component of non-pharmacological management of pain is added with 11 interventions. The category for assessment of the effects pf non-pharmacological management of pain as well as assessment of the intensity of pain at rest and assessment of the intensity of pain during mobility. The expert groups emphasis that the idea is to remove the lack of documentation skills in nursing whose ultimate goal is to provide quality care and to promote the safety of patients (Liljamo & Kinnunen, 2020, pp. 125.)

Since the literature review mainly concerns “post-operative pain”, so the component of “Pain Management” stood as a hallmark for nurses to work with accurate documentation. According to FinCC 4.0, nursing diagnosis for pain is made based on the acute pain relying on the types of surgery performed. Then, the goal of care is set. The objective of care is always to deduce the pain level of patients by the use of a pain

rating scale. Following the second step, interventions are planned which are solely based on the needs of the patients. In pain management, planned interventions could be assessing the duration of pain, types of pain, the intensity of pain at rest, during mobility, monitoring of vitals for any fluctuations due to pain, infusion of pain medication which could be nonsteroidal anti-inflammatory drug (NSAIDs) to epidural to patient-controlled analgesics. Planning to incorporate non-pharmacological pain management if requires. Following this step, the execution phase or the implementation of interventions are carried out respectively. Finally, when the interventions are implemented, the outcomes are evaluated whether the set goals of care for the patients are achieved or not. The situation of the nursing outcomes is usually documented as improved or stabilized or deteriorated. If the outcomes are different and it requires further explanation, then it could be done using nurses' free text (THL, 2021, pp. 38.)

4 RESEARCH DESIGN

4.1 Method

The following is a description of the selected research design and the data collection process. In addition, the quality assessment, and the quality of the included full texts as well as the data extraction and analysis are discussed.

The descriptive literature review was used as a research design to answer the research question chosen because it served to investigate broad research questions (Grant & Booth, 2009, p. 97). Also, this design-maintained suitability when the focus of the subject of the work was in an early scientific development location. The broad scope of a descriptive literature review allowed for the inclusion of research with different levels of evidence and of not research-based texts (McDaniel Peters & Wood, 2017, p. 3221). Accordingly, the study considered grey literature and expert opinions, or, for example, comments in a mapping review were also included (Booth, et al., 2016, pp. 120). The chosen research design aimed at the nature and scope of the current to

categorize the existing evidence base for a research question and identify research gaps. In addition, recommendations for further reviews or primary research were given. The descriptive review was considered a tool to enter decision-makers, practice, or research accurate and transparent means of identifying both practical and policy-relevant questions (Grant & Booth, 2009. pp. 97-98).

4.2 Literature retrieval

A general preliminary search in different databases was carried out to get an initial overview of the topic of this bachelor thesis and to obtain the available literature. A thorough literature search was used to answer the research question after receiving research approval. The online databases Public Medical Literature Online (PubMed), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Institute for Scientific Information (ISI) Web of Knowledge, and the Cochrane Database of Systematic Reviews. In addition, a check of reference lists to identify relevant studies for the literature review was undertaken.

4.2.1 Search strategy

The following English keywords were used for the search strategy based on the defined as the research question underlying this work: conduct our search in electronic databases using the keywords, either singly or in pairs. The keywords used were “pain”, “pain measurement”, “pain management”, “pain assessment”, “pain evaluation”, “pain documentation”, “pain scales”, “pain relief”, “outpatient”, “ambulatory clinics, “nursing interventions”, “postoperative pain”, “acute surgical pain”, “pain assessing or measuring methods or techniques”. The Librarian of SAMK assisted with the literature search.

4.2.2 Inclusion and exclusion criteria

The review applied a rigorous step in identifying the relevant studies for the literature review. The review conducted study searches from PubMed search and the university

library websites. The study used the keywords “pain management and assessment,” “pain documentation,” and “outpatient surgical center” while searching for crucial evidence. Based on the search, the study identified 356 articles. The review further performed an inclusion and exclusion strategy to determine the most relevant materials for inclusion in the literature review.

Inclusion criteria

- Articles that are available in English
- Articles qualitative and quantitative
- Peer-reviewed articles
- Articles that are limited to the outpatient setting
- Articles that focus on postoperative pain management
- Articles that focus on postoperative documentation

Exclusion criteria

- Duplications of articles
- Non-English articles are excluded
- Articles that do not meet the inclusion criteria

Based on the inclusion and exclusion assessment, only potentially 356 relevant articles met the study requirements. The review further analyzed the articles based on the abstracts to ascertain their crucial information in resolving the research questions. Only 32 out of 356 articles held the information required to determine the identified research questions. Eight of the 32 articles were excluded because they did not provide suitable data for extraction. They varied in methods, length, and details of reporting. For example, two of these were reviews of previously published literature reviews. One article focused on the interactions between cultural background, the healthcare environment, and postoperative pain experience. One article excluded, for example, was an attempt to build conceptual models on pain management mobile applications.

4.2.3 Retrieval of the studies

The study extracted relevant data from 24 scholarly articles identified from the PubMed and SAMK library websites. The sources met the study criteria for inclusion and provided relevant data about postoperative pain assessment and documentation in a surgical outpatient center. The content analysis technique was primarily carried out to analyze various textual descriptions as well as data that are present in the selected research articles. Content analysis is a suitable research technique for "making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use," (Krippendorff, 2018, p. 18). When analyzing the data, all selected studies were read concerning the research questions and tabulated after the following criteria: Year of publication/author/country; the aim of the study; design; sample and setting; main results; quality criteria; in addition, the assessment was carried out using the framework in the following evaluation criteria as seen in the Appendix 1 below.

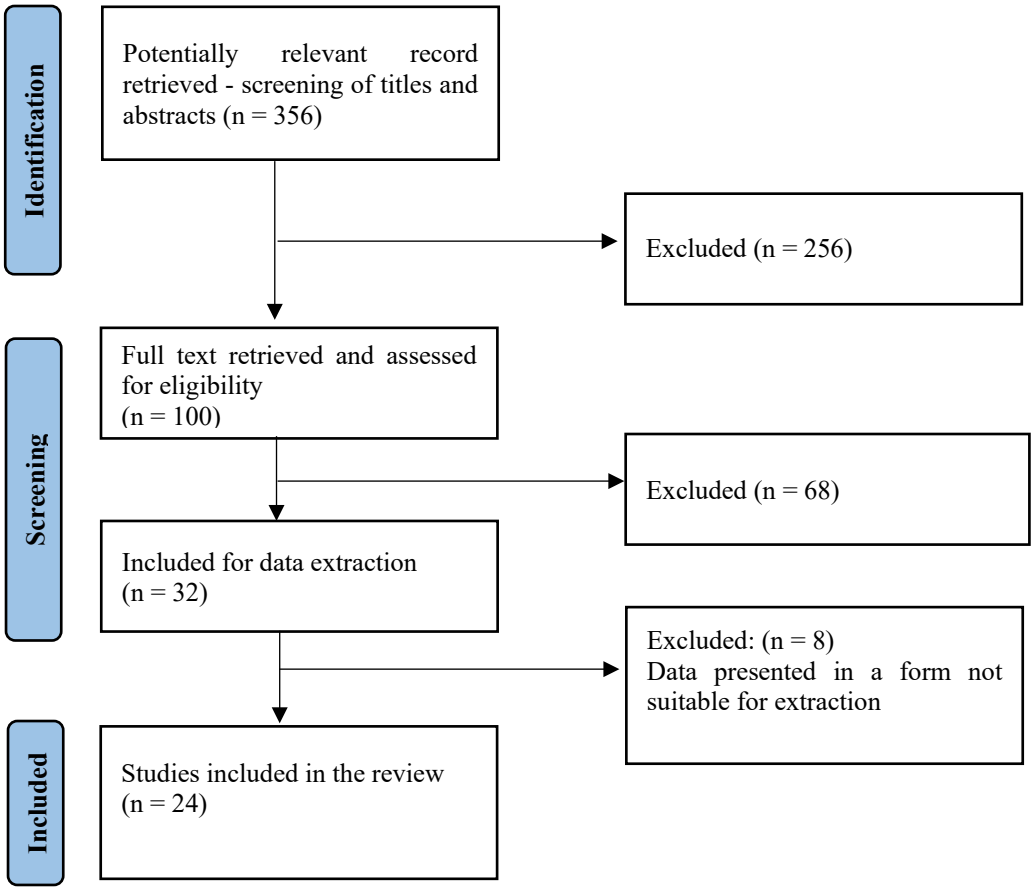

Figure 4. Prisma flow chart showing the screening process of study selection (Website of Prisma-statement).

4.2.4 Evaluation criteria

The quality assessment of the selected publications was carried out depending on the study design or type of publication using the assessment tools of the Joanna Briggs Institute. These assessment tools were used to critically assess the trustworthiness, relevance, and results of the publications (JBI, 2020, pp. 1-6). The decision to use these assessment tools is to enable that uniform conditions could be created for the critical assessment and comparable quality of the included full texts. The qualitative research studies maintained a high quality due to their credibility, dependability, and conformability. The findings of the studies are plausible and trustworthy since an alignment existed between the theories, research questions, data collection, and analysis process. The studies were also dependable as they provided sufficient data

which other research could also provide upon following the same criteria. The studies further demonstrated a clear relationship between the data and findings.

4.2.5 Ethical considerations

Our literature review's ethical considerations strictly adhered to the principles and guidelines of the Finnish National Board on Research Integrity (TENK). The guidelines discussed the conduct of ethical research for ensuring good scientific practice. TENK (2012) stipulated the rules of good scientific practice related to the entire research process so that quality assurance takes place in all steps (p. 30). Understanding four principles were key to this literature review process: the review understood that reliability and credibility are the bedrock responsible conduct of research (University of Helsinki, n.d.).

We understood the need to be mindful while creating the research report and then communicating those things with supervisor/s with clients (Taylor, 2019, pp. 1-2). The review also understood the significance of presenting original and using proper citations while presenting other people's work (Park, 2004, pp. 291-292). The review further understood the ethical responsibility associated with data misrepresentation which means the incomplete and inadequate reporting of results in a way that could mislead the reader. Misrepresentation offense further comprises irresponsible reporting of statistically relevant findings, suppressing results that oppose or offset the initial hypothesis, and deceptively presenting data by selecting metrics and figures (Harvey, 2020, pp. 245-255).

5 RESULTS

5.1 Studies conducted of postoperative pain measurements

The review applied a total of ten articles identified in presenting the studies concerning postoperative pain measurements. The review presented the study findings based on the selected main themes. The initial theme focused on grouping the studies which demonstrated the application of visual analog and numerical rating scales in measuring pain the postoperative outpatient surgical centers. In all studies (Choi et al., 2021, p. 895; Hämäläinen et al., 2019; Myles et al., 2017, p. 424; Rantala et al., 2012; Ross et al., 2017, p. 1688; Tharakan & Faber, 2015, p. 180; Vazquez et al., 2018, p. 1; Vrancken et al., 2018) reveal that medical experts have adopted the visual analogue scale (VAS) and the 11-point numerical rating scale (NRS) in assessing the pain intensity among adult patients. The pain measurement tools performed a fundamental role in monitoring the patient outcomes and the effectiveness of the adopted treatment mechanisms in relieving pain.

Indeed, in-depth analysis from the Pisanty Clinic following the completion of the surgical procedure reveals that the medical experts measured the significant signs for the third and fourth time as patients remained in the recovery room for an hour. The medical experts also issued the patients with an 11-point visual analogue scale (VAS) applied to measure subjective pain (Vazquez et al., (2018, p. 3). Similarly, Vrancken et al. (2018) added the average pain intensity on an 11-point rating scale to measure pain levels (0 = no pain, 10 = worse pain) and an NRS value ranging between four and five to represent moderate postoperative pain. The NRS five above signified severe pain. The results demonstrate how postoperative surgical outpatient facilities rely on the visual analogue scale and numerical range scale while measuring the postoperative pain among patients vising the facilities.

The review also classified the study results based on the opioid assessment screening tools and monitoring programs. As acknowledged by Charipova et al. (2020, p. 2) and Guan et al. (2020, p. 2) some medical practitioners in the United States of America and China apply opioid assessment screening tools and monitoring programs to assess

pain levels among most patients undergoing ambulatory surgery. Medical facilities use opioid assessment screening tools and monitoring programs to predict patient pain levels and suitability in using opioids to control pain as a mechanism for reducing opioid drug abuse among outpatient surgery patients.

The review further classified the study findings using the five-point verbal descriptive scale theme. The theme aimed to assess how medical practitioners rely on the five-point verbal descriptive scale while assessing pain levels among ambulatory surgery patients. Harrison et al. (2020, p. 469) and Tharakan & Faber (2015 p. 180), reveals that the mechanism allows patients to present a retrospective verbal report of pain based on a numeric scale between 0-10.

Using the five-point verbal descriptive scale in the United Kingdom, the study results show that the mean pain rating among the patients ranged from 3.97 to 10. 17.6% of the patients participating in the study reported experiencing pain intensity above seven. 7.8% of the patients expressed their intention of not experiencing any pain (Harrison et al., 2020, p. 470). A positive correlation existed between the patient's pain levels and anesthetic doses. Consequently, only patients experiencing severe pain received an anesthetic dosage.

5.2 Studies conducted on postoperative pain documentation in the outpatient clinic

Main themes	Sub-themes
The pain documentation process enhances better communication between clinicians and patients	Restrictive regulations
Insufficient documentation of patient information concerning pain management rampant in the healthcare facilities insufficient	Telehealth and pain documentation
Irregular pain documentation	

Postoperative pain management documentation failure to meet the required standards	

Eleven of the 24 articles selected provided a great description of the pain documentation in the outpatient clinic. The pain documentation process enhances better communication between clinicians and patients After grouping the findings based on key themes, the initial theme reveals that the pain documentation process enhances effective communication between clinicians and patients, resulting in improved recovery (Brima et al., 2021, p. 2; Heikkilä, Peltonen & Salanterä, 2016, p. 78). Through nursing documentation, the medical experts maintained effective communication with the patients and accurate records concerning their conditions (Brima et al., 2021, p. 2). Nursing documentation also enhances the implementation of evidence-based healthcare decision-making within the facilities and better clinical practices (Brima et al., 2021, p. 2). Thus, maintaining an effective communication pattern remains integral in enhancing adequate pain documentation in outpatient clinics.

5.2.1 Insufficient documentation of patient information

The results also revealed that most healthcare facilities encounter insufficient documentation of patient information concerning pain management. The insufficient pain documentation in outpatient healthcare facilities is due to missing, insufficient, and unclear clinical data; the documents portray incorrect patient data identifiers and poorly filled care plans (Brima et al., 2021, p. 2; Heikkilä, Peltonen & Salanterä, 2016, p. 78; Liljamo & Kinnunen, 2020). The nurses also heavily relied on non-reliable oral reporting, which suffers a higher limitation of forgetfulness, limiting data sharing among the clinicians. Unless hospital facilities adopt unified and sufficient pain documentation, they will continue registering massive flaws in pain management.

5.2.2 Postoperative pain management documentation failure to meet the required standards

The study also identified a theme in the postoperative pain management documentation failure to meet the required standards, which enhances patient satisfaction. Heikkilä, Peltonen & Salanterä (2016, p. 83), Jafra & Mitra (2018, p. 621) and Shoqirat et al. (2020, p. 279) point out that most of the documentation goals remained non-specific, broad, non-measurable, and lacked a reliable timeframe hence failure to meet patient satisfaction. As a result, most nurses maintained limited, vague, and incomplete documentation of postoperative pain management. The lack of adequate information sharing and communication between the patient and the clinicians contributes to the severity of pain, triggering patient dissatisfaction.

5.2.3 Irregular pain documentation

The review also identified findings categorized under the theme of irregular pain documentation. Collectively, Heikkilä, Peltonen & Salanterä (2016, p. 83), Kurniawati, Indracahyani & Yatnikasari (2019, p. 89) and Ross et al. (2017, p. 1688) acknowledged that irregular documentation of pain also existed in the medical facilities based on the surgical operation duration. The nurses failed to maintain proper pain documentation due to the intense nursing workload and limited time. The outpatient facilities lacked proper documentation facilities following the completion of a pain assessment. The nurses usually rely on non-standardized approaches such as memory while formulating key decisions, which would trigger poor decisions. Consequently, the documentation process within the outpatient facility remained unclear, characterized by poorly designed electronic or paper flow sheets. Poor workflow during the postoperative pain reassessment at the outpatient facilities also triggered redundancy and inefficiencies in the documentation.

5.2.4 Restrictive regulations

The review also identified a theme of the imposition of federal government regulations, which complicates activities in ambulatory care. Elisa et al. (2021, p. 628), Noble (2021, p. 40), and Ubaidi (2019) identify the need for ambulatory care to initiate a partnership with other consultants, such as pharmacists, to improve the documentation process during the postoperative pain reassessment process. Implementing enhanced recovery programs at the outpatient care facilities facilitated the documentation process and enhanced the utility of evidence-based interventions. The program enhanced the effective documentation process and the implementation of an evidence-based approach, which resulted in a reduction in postoperative pain reporting among patients. As a result, simplifying the federal regulations will provide an effective environment for ambulatory care to maintain proper pain documentation by partnering with various organizations and adopting effective programs.

5.2.5 Telehealth and pain documentation

In the findings, the review identified the significance of adopting telehealth among the staff in maintaining the postoperative pain levels reported by patients in ambulatory medical centers. Houser et al. (2022) and Provenzano et al. (2020, p. 579) reveal that ambulatory surgery centers receive a workload of surgical cases despite the low healthcare staff. To enhance patient interactions, the medical facilities maintained patient interactions through telehealth medicine as a contingent plan to assist patients with chronic pain. Telehealth allowed the nurses to interact with the patients through audio and video real-time communication facilitating the capture of the patient data. Thus, nurses applied telehealth information to improve the quality of healthcare services quality and enhance patient satisfaction.

5.3 Outcomes of the studies

A similarity exists in adopting the visual analogue and numerical rating scales in assessing pain intensity among postoperative adult patients. Choi et al. (2021, p. 895), Hämäläinen et al. (2019), Myles et al. (2017, p. 424), Rantala et al. (2012), Ross et al. (2017, p. 1688), Tharakan & Faber (2015, p. 180), Vazquez et al. (2018, p. 1) and Vrancken et al. (2018) acknowledged in widely using the visual analogue scale and numerical rating scales in assessing the pain levels. The VAS pain scores of 30, 70, and 100 showed mild, moderate, and severe pain intensity upper limits. In contrast, the numerical pain scale adopted an 11-point numerical rating in assessing pain intensity among adult patients. Other studies applied opioid assessment screening tools and monitoring programs while measuring pain levels in outpatient clinics (Charipova et al., 2020, p. 2; Guan et al., 2020, p. 2). The five-point verbal descriptive scale was also evident in assessing pain levels among postoperative patients (Harrison et al., 2020, p. 469; Tharakan & Faber, 2015, p. 180). Due to the wide adoption of visual analogue scales and numerical pain scale and their effectiveness in measuring pain intensity, the study recommends their wide adoption in outpatient care facilities in assessing pain.

A range of findings existed concerning pain documentation in outpatient surgical centers. The initial outcome revealed that the pain documentation processes assisted nurses in maintaining effective communication with the patients aiding in recovery improvement (Brima et al., 2021, p. 2; Heikkilä, Peltonen & Salanterä, 2016, p. 78). The nurses also failed to maintain proper pain documentation due to intense nursing workload and limited time (Heikkilä, Peltonen & Salanterä, 2016, p. 83; Kurniawati, Indracahyani & Yatnikasari, 2019, p. 89; Ross et al., 2017, p. 1688). The study, therefore, recommends mitigating the nurses' workload by employing adequate nurses to enhance time allocation and proper pain documentation in outpatient clinical healthcare.

Insufficient pain documentation in the outpatient healthcare facilities also occurred due to insufficient and unclear clinical data; the documents portray incorrect patient data identifiers and poorly filled care plans, and nurses’ heavy reliance on non-reliable of oral reporting, which suffered a higher limitation due to forgetfulness and limited

data sharing (Brima et al., 2021, p. 2; Heikkilä, Peltonen & Salanterä, 2016, p. 78; Liljamo & Kinnunen, 2020). The lack of adequate information sharing and communication between the patient and the clinicians contribute to the severity of pain triggering patient dissatisfaction (Heikkilä, Peltonen & Salanterä, 2016, p. 83; Jafra & Mitra, 2018, p. 621; Shoqirat et al., 2020, p. 279). Therefore, the study recommends that healthcare professionals collect sufficient and clear clinical data using evidence-based practice tools to enhance sufficient pain documentation. Consequently, nurses should rely on evidence-based practice techniques in collecting patient data rather than non-reliable mechanisms such as oral reporting to eliminate data limitations associated with forgetfulness and limited data sharing.

Consequently, the documentation process within the outpatient facility remained unclear, characterized by poorly designed electronic or paper flow sheets. Poor workflow during the postoperative pain reassessment at the outpatient facilities also triggered redundancy and inefficiencies in documentation (Heikkilä, Peltonen & Salanterä, 2016, p. 83; Kurniawati, Indracahyani & Yatnikasari, 2019, p. 89; Ross et al., 2017, p. 1688). Thus, the study recommends that outpatient surgical centers adopt well-designed electronic or paper flows to eliminate redundancy and inefficiencies in the pain documentation processes. The imposition of federal government regulations complicates activities in ambulatory care (Elisa et al., 2021, p. 628; Noble, 2021, p. 40; Ubaidi, 2019). Hence, the study recommends reviewing policies that hinder the pain documentation process in outpatient surgical centers and implementing reviews that support adequate pain documentation.

Houser et al. (2022) and Provenzano et al. (2020, p. 579) reveal that ambulatory surgery centers receive a workload of surgical cases despite the low healthcare staff. To enhance patient interactions, the medical facilities maintained patient interactions through telehealth medicine as a contingent plan to assist patients with chronic pain. Thus, the study recommends that outpatient surgical centers continue adopting and implementing telehealth due to its magnificent benefits in improving care provision through patient interactions and documenting vital patient data.

6 DISCUSSION

The utilization of pain scales remains a unique medical tool in the assessment of postoperative pain and monitoring of treatment within outpatient surgical centers. Most studies noted that the medical experts within the outpatient surgical facilities utilized various pain scales and scores in assessing postoperative pain among patients (Guan et al., 2020, p. 2; Harrison et al., 2020; Myles et al., 2017, p. 428; Ross et al., 2017, p. 1688; Vazquez et al., 2018, p. 1; Vrancken et al. 2018). Interestingly, Myles et al. (2017, p. 428) noted that the VAS and NRS tools are incomplete the measure the overall pain experience among patients despite their wide application in postoperative pain measurement. This explains why the study suggested using minimal clinically important differences to attain the non-inferiority margins during clinical trials and understand the sample sizes. Vazquez et al. (2018, p. 1) revealed that integrating complex technologies aided in assessing and monitoring pain. Such actions will result in effective pain treatment and improved patient outcomes.

The study findings show that the increased postoperative pain documentation process significantly supports the provision of care continuity among patients. As Heikkilä, Peltonen & Salanterä (2016, p. 78) stated, the documentation process enhanced communication between clinicians and patients, resulting in improved recovery. Despite its benefits in enhancing postoperative pain improvements, other studies revealed that most outpatient surgical healthcare facilities encounter insufficient documentation of patient information concerning pain management ((Brima et al., 2021, p. 2; Heikkilä, Peltonen & Salanterä, 2016, p. 78). The poor documentation explains why most patients report experiencing worsening postoperative pain and fail to seek attention from the medical facilities. The facilities rely on non-reliable nursing oral reporting, which suffers a higher limitation of forgetfulness, thereby limiting data sharing among clinicians. Such nursing actions expose postoperative patients to severe health risks associated with drug abuse and addiction and increase the burden on healthcare facilities and society on treating other diseases triggered by analgesia addiction. As a mechanism for improving patient data documentation, nurses must consider utilizing reliable and evidence-based practice while reporting patient

information to enhance proper health services provision and improve patient satisfaction.

The literature review also revealed that the nursing shortage in outpatient surgical care facilities largely contributed to poor patient data documentation. Kurniawati, Indracahyani & Yatnikasari (2019, p. 89) revealed that the intense nursing workload and limited time contributed to poor documentation. More so, the ratio of patient to nurse inhibited the optimal patient data documentation (Kurniawati, Indracahyani & Yatnikasari, 2019, p 90). Therefore, recruiting more nurses within the outpatient health center facilities remains ideal for resolving the nursing shortage challenge. The recruitment of adequate nursing staff shall ensure that the workload for nurses on nurses on duty is within the required provisions, which further creates more time for practicing proper patient data documentation.

Similarly, Jafra & Mitra (2018, p. 621) revealed that outpatient surgical facilities experienced inadequate information sharing and communication between patients and clinicians. The inadequate nursing resource within the outpatient facilities explains why most patients received verbal commands concerning the appropriate mechanisms for controlling pain in the home-based care setting. The inappropriate verbal commands showcase why most patients reported experiencing severe postoperative pain.

As a result, outpatient facilities must focus on improving the nurse and patient ratio to enhance proper communication in postoperative pain and documentation. To achieve proper patient data documentation, outpatient surgical facilities must adopt a significant organizational structure that supports adequate information sharing between patients, clinicians, and nurses. For instance, the healthcare staff will learn on proper avenues to enhance effective communication, adequate data collection, and improved patient outcomes through training and team-building activities.

A range of limitations existed concerning the literature review conducted by the review. First, articles applied by the review in reviewing the literature suffered selection bias. The review should have reviewed literature from articles written in a non-English language and duplicated articles that would otherwise provide vital

information concerning postoperative pain measurement and documentation in outpatient clinical facilities. More so, the review applied their own judgments in selecting the articles that qualify for the study, which further creates room for selection bias on specific articles and secluding other articles without adequate examination. For future studies, the current study recommends the adoption of all data sets to attain more reliable information concerning postoperative pain measurement and documentation in outpatient surgical facilities.

The review also selected only twenty-four articles for the literature review process. As a result, the study literature review suffered a sample size limitation since the small sample size cannot adequately support the claims in arriving at the conclusions. Thus, to increase the reliability and eliminate the sample size limitation, implementing key judgment and experience remains integral during evaluating the quality of information. The literature review further suffered from bias as the review reviewed literature from two websites: PubMed and SAMK library. The availability of other resourceful websites would provide more articles with relevant information concerning postoperative pain measurement and documentation in outpatient health facilities.

7 CONCLUSION

The purpose of this literature review was to identify the adopted mechanisms in accessing postoperative pain and analyzing the patient information documentation at the outpatient clinic setup and initiate recommendations for the provision of effective pain management and assessment techniques at the outpatient clinic healthcare providers and suggestions for future study within the same area. The thesis aimed to conduct a descriptive literature review that gathered and analyzed significant results from the recent scientific evidence concerning postoperative pain measurement and documentation among adults at outpatient healthcare facilities.

The literature review also assessed the effectiveness of various pain measurement tools in controlling pain among the postoperative individuals receiving pain control

treatment at outpatient healthcare facilities. In summary, the reviewed studies supported the utilization of the visual analogue scale (VAS), virtual reality (VR) pain distraction tool, numeric rating scale value, enhanced recovery after surgery technique, and five-point verbal descriptive scale in measuring postoperative pain among adult patients visiting outpatient healthcare facilities. The literature review further demonstrates the pain documentation process enhanced better communication between the clinician and the patient. Insufficient and irregular documentation of patient information concerning pain management is rampant in healthcare facilities. The postoperative pain management documentation maintained in the healthcare facilities also failed to meet the required standards. Restrictive regulations also hindered the pain documentation process while the adoption of telehealth aided in maintaining pain documentation.

As healthcare providers, nurses within outpatient healthcare facilities have a significant role in implementing proper patient documentation among postoperative patients. Most healthcare providers interacting with the visiting patients must gain more knowledge on effective documentation practices to enhance the adoption of evidence-based practice while formulating clinical decisions concerning the most effective treatment mechanism that would relieve pain among postoperative adult patients. The interventions hold an excellent opportunity to mitigate the addiction to analgesia in relieving pain

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APPENDIX 1

Table 1. Database search process

ARTICLE Authors / Date / Title	RESEARCH GOALS	MAIN RESULTS	IMPLICATION FOR PRACTICE
Brima, N., Sevdalis, N., Daoh, K., Deen, B., Kamara, T.B., Wurie, H., Davies, J., & Leather, A.J.M. 2021 Improving nursing documentation for surgical patients in a referral hospital in Freetown, Sierra Leon: protocol for assessing feasibility of a pilot multifaceted quality improvement hybrid type project.	The purpose of this qualitative project is to test the intervention to improve nursing documentation in the low-income nations' hospital facilities.	n= 240 Most participants revealed that the introduction and support of nursing clinical documentation in poor resource setting outpatient facilities aided in proper maintenance of postoperative patient pain data.	The provision of a training package among the nurses is integral in improving the quality of nursing documentation
Choi, M., Wang, L., Coroneos, C.J., Voineskos, S.H., & Paul, J. 2021	The study sought to compare codeine and NSAIDs effectiveness for postoperative pain in outpatient surgery.	n= 40, studies, 102 clinical trials, and 5116 patients Patients reported better pain scores at six hours following the administration of NSAIDs.	In order to achieve better pain scores, effective global assessments, and limited adverse effects among adults in the outpatient facilities, nurses should consider treating the postoperative pain with NSAIDs compared to codeine.

Managing postoperative pain in adult outpatients: a systematic review and meta-analysis comparing codeine with NSAIDs.		NSAIDs remained associated with a higher global assessment at six hours.	
Elisa, T.R., Kathyn, V.G., Bethany, S.M., Eric, C.S., & Kathie, H.L. 2021 Enhanced recovery program for outpatient female pelvic reconstructive surgery.	The purpose of the qualitative study aimed at comparing the patient outcomes before and after the implementation of an ERP for women undergoing outpatient pelvic reconstructive surgery	n=190 The introduction of intraoperative intravenous fluids resulted in a reduction of opioid use among the ERP patients.	As a way of improving pain scores among the postoperative patients, nurses should consider implementing an outpatient ERP for female reconstructive surgery which aids in mitigating the intraoperative and total MMEs, reduced procedural length, the decline in the administration of intravenous fluids, and decline in hospitalization costs without triggering changes in the postoperative pain scores.
Guan, Y., Wei, L., Liao, Q., Fang, Q., He, N., Han, C., Miao, C., Luo, G., Wang, H., Cheng, H., Guo, Q., & Cheng, Z. 2020 Pain management after ambulatory surgery: a prospective, multicenter, randomized, double-blinded parallel	The purpose of this qualitative study aimed at evaluating the efficiency and safety of nalbuphine compared to tramadol for the treatment of postoperative pain after ambulatory surgery.	n= 492 The patients reported moderate and severe pain after ambulatory surgery with a visual analogue (VAS) score > 3	In order to relieve patients from postoperative pain, nurses can prescribe the utility of nalbuphine drugs.

controlled trial comparing nalbuphine and tramadol.			
Myles. P.S., Myles, D.B., Galagher, W., Boyd, D., Chew, C., MacDonald, N., & Dennis, A. 2017 Measuring acute postoperative pain using the visual analogue scale: the minimal clinically important difference and patient acceptable symptom state.	The purpose of this qualitative study aimed at investigating what minimal change in score aimed at indicating a meaningful change in patient's pain status while using the visual analogue (VAS) score in assessing the pain intensity after surgery.	n=224 The patients recorded an improved VAS score during the initial and second interview sessions. The patients reported MCID of 9.9 for the pain VAS and a PASS of 33 following the adoption of triangulation of distribution and anchor-based methods.	The nurses should note that VAS and NRS tools are incomplete the measure the overall pain experience among patients despite their wide application in postoperative pain measurement. Nurses should consider using the MCID in identifying a difference in the patients experiencing improvements or deterioration during the pain status assessment.
Ross, A., Feider, L., Nahm, E., & Staggers, N. 2017 An outpatient performance improvement project: a baseline assessment of adherence to pain reassessment standards.	The project aimed at outlining various recommendation improvements for pain reassessment workflow and policies at a large military primary care clinic.	n=151 The EMR reviews demonstrated intensive compliance >90% in pain reassessment requirements. The pain documentation following reassessment also occurred within a mean time of 48.25 minutes. None of the patients achieved a full encounter of the clinical policies.	As a mechanism of improving pain relief, nurses should conduct proper patient documentation at the outpatient facilities following the completion of a pain assessment. Nurses should also increase their reliance on standardized approaches while formulating key decisions, concerning pain management and control.

Heikkiläsalenterä , K., Peltonen, L., & Salanterä, S. 2016 Postoperative pain documentation in a hospital setting: A topical review.	The purpose of this qualitative project aims at evaluating the published empirical studies concerning the postoperative pain documentation within a hospital setting.	n= 10 studies The nurses failed to record a minimum of 35% of the pain management process during the first postoperative patient interactions. The medical practitioners also failed to record at least 53.7% of the medical prescriptions issued to patients to mitigate pain during the postoperative surgical treatments.	The medical team should focus on minimizing the irregular documentation of pain in the medical facilities based on the surgical operation duration.
Noble, K.A. 2021 Put PEP in your step with a podiatric enhanced recovery after Surgery Protocol in the outpatient adult population: a best practice implementation project.	The goal of this implementation project was to improve postoperative outcomes in the Day Surgery Podiatric patient population with the implementation of an enhanced recovery after surgery (ERAS) protocol at a large urban health system in the north-eastern United States. Aimed to improve postoperative patient pain scores and reduce patient length of stay (LOS) with the implementation of the podiatric ERAS protocol (PEP).	This use of ERAS in the outpatient podiatric surgery population demonstrated excellence in compliance with best practice recommendations. The proactive multimodal approach of PEP revealed improvement in four measures of patient pain, with improvement from 83 to 100% of patients having a pain goal higher than their admission postoperative pain score. Patient pain goal greater than discharge pain score was also found but not sustained.	The use of ERAS in orthopaedic patients has an established empirical basis for use, demonstrating a reduction in both postoperative pain and LOS. This novel use of ERAS in a podiatric surgery outpatient population has similar findings but was not sustained in all audit criteria. PEP demonstrated promising reductions in postoperative pain and LOS; however, further implementation replication is needed to confirm this expansion of ERAS and the promising results.

		Baseline data collection established that 29% of podiatric patients had a LOS less than 90 min, which improved to 42% with PEP. This finding was also not sustained in the third cycle of audit data. Missing data may have influenced these results, reinforcing the need for further study.	
Houser, S. H., Flite, C. A., Foster, S. L., Hunt, T. J., Morey, A., Palmer, M. N., Peterson, J., Pope, R. D., & Sorensen, L. 2022 Patient clinical documentation in Telehealth Environment: Are we collecting appropriate and sufficient information for best practice?	This study aimed to assess the use of telehealth during the pandemic, the quality of clinical documentation in telehealth practice and to identify challenges and issues encountered with telehealth patient visits to develop a strategy for best practices for telehealth documentation and data management.	The top barriers to telehealth use by the healthcare professionals included patient challenges with telehealth services, such as inequities in quality of technology, lack of patient understanding, and lack of patient satisfaction; this was followed by frustration with constant updates of telehealth guidelines and procedures, understanding required telehealth documentation for reimbursement purposes, payer denial for telehealth visits, and legal and risk issues.	Findings from this study can assist government entities, policymakers, and healthcare organizations in developing and advocating best practices in telehealth usage and clinical documentation improvement strategies.

Provenzano, D. A., Sitzman, B. T., Florentino, S. A., & Buterbaugh, G. A. 2020 Clinical and economic strategies in outpatient medical care during the COVID-19 pandemic.	To provide insight into the evolution of outpatient medical care during the COVID-19 pandemic with a focus on the clinical and economic consequences.	COVID-19 pandemic has catapulted the importance of telehealth and rapidly advanced its utilization.	Medical facilities and practices that adopt new treatment, including technological advancements and staffing paradigms, will be able not only to survive but indeed flourish. Demand for medical and interventional pain care will eventually return.
Jafra, A., & Mitra1, S. 2018 Pain relief after ambulatory surgery: Progress over the last decade	To provide an overview of the current armamentarium of drugs and modalities available for effective management of patients undergoing day care surgeries and sheds light on newer modalities available.	Various studies show that among outpatients discharged, 30%–40% suffer from moderate-to-severe pain during first 48 h of surgery. Patients undergoing laparoscopic cholecystectomy (65% patients had moderate pain and 25% had severe pain), laparoscopic gynaecological procedures (only 60% patients had satisfactory pain relief), or cataract surgery shown significant pain postoperatively.	Advances in pain management for ambulatory surgery might include introduction of extended-action epidural morphine, iontophoretic, intranasal, transmucosal, and transdermal drug delivery systems and development of local anaesthetic encapsulated in lipophilic membranes which allow sustained release and prolonged action.

Shoqirat, N., Mahasneh, D., Dardas, L., Singh, C., & Khresheh, R. 2019 Nursing documentation of postoperative pain management	The purpose of this study was to qualitatively analyse nursing documentation of pain management among postoperative patients in Jordan.	The analysis revealed that nurses' documentation of pain management was limited, vague, incomplete, and largely dependent on their subjective evaluation. Many of the documented goals were broad, not specific, not measurable, and with no time frame.	
Kurniawati, A., Indracahyani, A., & Yatnikasari, A. 2019 The analysis of Nursing Care Documentation in outpatient units.	The objective of this research is to identify the factors associated with non-optimal nursing care documentation in outpatient units	The outpatient units are divided into general outpatient department, children's outpatient department, mother's outpatient department, as well as dental and oral care outpatient department. The outpatient unit has some experts: 4 heads of nursing, 3 clinical instructors (CI), and 37 nurses.	The result of the cause root analysis provides several recommendations for arranging an effective, efficient, and accreditation-based documentation format for patients' assessment and resocializing policies and technical documentation and organizing the staff and time of implementing nursing care documentation in outpatient units.
Multanen, J., Ylinen, J., Karjalainen, T., Kautiainen, H., Repo, J.P., & Häkkinen, A.	The purpose of this study was to translate the original Boston Carpal	the cross-cultural adaptation required only minor modifications to the questions. both subscales of the	The present Finnish version of the Boston Carpal Tunnel Questionnaire is reliable and valid for the evaluation of

2019 Reliability and validity of the Finnish version of the Boston carpal tunnel questionnaire among surgically treated carpal tunnel syndrome patients.	tunnel Questionnaire into Finnish and validate its psychometric properties	Boston Carpal tunnel Questionnaire (symptom severity scale and functional status scale) correlated significantly with the Cts-6 and euroQol 5 dimensions, indicating good construct validity. the Cronbach's alpha was 0.93 for both the symptom severity scale and functional status scale, indicating high internal consistency. test–retest reliability was excellent, with an intraclass correlation coefficient greater than 0.8 for both scales. the coefficient of repeatability was 0.80 for the symptom severity scale and 0.68 for the functional status scale. We observed a floor effect in the functional status scale in 28% of participants.	symptom severity and functional status among surgically treated carpal tunnel syndrome patients.
Hämäläinen, J., Kvist, T., & Kankukunen, P. 2022	The aim of this study was to describe and explain patients' perceptions of acute pain assessment in the Emergency Department.	The study consisted of 114 ED patients. The mean age of the patients was 40.8 years, and 58.8% (n = 67) were female. Less than half of the	Despite the existence of guidelines, the assessment and treatment of pain is still inadequate, and it seems there is a lack of appropriate pain assessment in the ED. Acknowledging those factors that can increase the risk

Acute pain assessment inadequacy in the emergency department: patients' perspective.		participants (n = 43, 46.5%) were married. Regarding educational background, most had master's degrees (n = 39, 34.2%), some had vocational degrees (n = 34, 29.8%), comprehensive school (n = 18, 15.8%) or college (n = 14, 12.3%) degrees and a few had bachelor's degrees (n = 9, 7.9%). In addition, more than half (n = 60, 52.6%) of the respondents were employees in the working life. None of the patients had long-term painful illnesses. The average score based on the NRS to assess the intensity of pain perceived by the patients was 5.46 (standard deviation [SD] = 1.9)	for discrepancies in pain assessment is a necessary first step toward optimizing pain assessment and management in the ED. This study demonstrates how difficult and diverse it is to assess acute pain in the EDs. Patients with acute pain expect and deserve the utmost treatment. Acute pain management should include appropriate assessment together with the patient, and usually, resulting in a direct impact on patient pain management satisfaction.
Rantala, M., Kankkunen, P., Kvist, T., & Hartikainen, S. 2012	The aim of this study is to describe current post-operative pain management practices for patients with dementia and hip fracture in Finland.	Preferred methods in pain management among nursing staff were "specific pain management practices" (Factor 4) (mean 4.6±0.46), i.e. repositioning (100%), helping with daily activities (97%) and cold	There is a need for update training for nursing staff about using different pain scales according to the degree of cognitive impairment. Educational intervention is especially reasonable because a more common use of pain scales was significantly related to a belief that post-

Post-operative pain management practices in patients with dementia-the current situation in Finland.		applications (93%). The most common analgesic administration practices (mean 4.1±0.55) were providing pain medication prior to painful events (96%), prior to physical activity (94%) and regularly (96%). The agreement of opinion that the effects of analgesic were assessed and documented was 73%. Pain was seldom assessed by means of pain scales (31%).	operative pain management in this patient group was sufficient.
Vazquez, J.L., Lara, D.M., Lara, J.L.M., Miller, I., Wiederhold, M.D., & Wiederhold, B.K. (2018). Pain Distraction during Ambulatory Surgery: Virtual Reality and Mobile Devices. Cyber psychology behavior and social networking.	To compare the efficacy of traditional head-mounted displays (HMDs) versus portable VR devices.	Evaluated 44 outpatients in need of lipoma resection. Randomized into two groups—HMD versus mobile phone VR—participants navigated pain distraction virtual environments while undergoing surgery. Results indicate that the HMD group reported greater pain reduction than the Mobile group. Overall, this study points to the efficacy of nonpharmacological pain attenuation practices. Although both systems reduced pain during surgery,	The study does show that inexpensive solutions can work in surgical settings. More studies should be performed to identify the most effective VR pain distraction systems.

		the clinically validated VR environments seen in the HMD group were more effective.	
Tharakan, L., & Faber, P. 2015 Pain management in day case surgery	To discuss the currently available options and future perspectives of high-quality pain manage- ment facilitating rapid recovery and safe discharge of patients from day surgical units.	Day surgery encourages patients to mobilize soon after their surgery and empowers them to manage their own pain control. To achieve this, preoperative patient education and high-quality perioperative pain management including pain management after discharge are paramount. Analgesic techniques that do not increase the incidence of postoperative adverse outcomes, and are safe and cost-effective, facilitate early ambulation.	The financial benefits of day surgery over inpatient surgery are now well established. With increasing healthcare demands for more day-case procedures, multi-modal analgesic techniques in the perioperative period with good extension of analgesia into the postoperative discharge period are essential.
Charipova, K., Gress, K.L., Urits, I., Viswanath, O., & Kaye, A.D. 2020 Management of Patients with Chronic Pain in Ambulatory Surgery Centres.	To review the benefits of standard ERAS protocols augmented by integrating designated pain specialists into the ambulatory surgery team	Multimodal and multidisciplinary approach must be assessed in the context of the human and financial resources of a given institution and surgery centre but has been shown to improve the quality and safety of perioperative care effectively.	As the sheer number of patients undergoing ambulatory surgery increases, the number of patients who suffer from chronic pain conditions and those who struggle with substance use will increase. The management of these patients should include ERAS techniques that emphasize patient education and expectation management as well as the use of multimodal analgesia

			and regional anaesthesia. Further, ambulatory surgery centres should employ pain specialists trained in anaesthesia at ambulatory surgery centres to streamline the implementation of ERAS techniques.
Vrancken, D. et al. 2018 “Procedure-specific pain intensity four days after day surgery and the relationship with preoperative pain: A prospective cohort study,” Anesthesiology and Pain Medicine,	The aim of this study was firstly, to analyse the prevalence of acute postsurgical pain (APSP) after various types of day surgery on the fourth postoperative day, and secondly, to assess the predictive value of preoperative pain for the development of APSP after different types of surgical procedures	From a total of 1123 included patients, 182 patients experienced moderate pain (16.3%) and 136 patients experienced severe pain (12.1%) on the fourth postoperative day. A large procedure-specific variability in APSP was observed, with shoulder, anal and dental surgery associated with the highest pain levels. Overall, preoperative pain significantly predicted postoperative pain on the fourth day (OR 4.45). This predictive value showed a procedure-specific variation and was not noted after various well-defined procedures.	The prevalence of moderate to severe APSP was high four days after day surgery and showed a significant procedure- specific variation. Furthermore, there was a strong relationship between preoperative and postoperative pain, likewise characterized by a significant procedure-specific variation.

Harrison, R., Kuteesa, W., Kapila, A., Little, M., Gandhi, W., Ravindran, D., Reekum C.M., & Salomons, T.V. 2020 Pain-free day surgery? Evaluating pain and pain assessment during hysteroscopy.	To evaluate the incidence of pain during hysteroscopy, and the congruency of patient and clinician assessments of pain and hysteroscopy outcomes.	17.6% of patients reporting pain >7/10 and only 7.8% reporting no pain at all.	This indicates that patients are likely to experience pain during their procedure, and the descriptions provided to patients should reflect this. The results identified a disconnect between clinician and patient pain reports.
Liljamo, P. & Kinnunen, U-M. 2020 Development and Validation of Standardized Pain Management Documentation Studies in health technology and informatics	The aim of this study was to describe how patient pain management has been recorded using the nursing diagnoses and nursing interventions of a standardized terminology, the Finnish Care Classification, (FinCC), and how that terminology should be further developed.	The research data consisting of the different phases of the nursing process included 36 179 coded / structured nursing notes in total. Of all these coded nursing notes 2 139 (5.9%) were related to pain management. In the first phase of the nursing process, Care planning/determining need for care, 278 (7.4%) FiCND nursing diagnoses related to pain management were employed. The most frequently encountered nursing diagnoses were 'Chest pain' (27.3%), 'Acute pain' (23.0%) and 'Pain related to an	FinCC expert group is justified in their decision to improve the terminology to better support the recording of pain management, and to include a new component 'Pain management' in FinCC 4.0

		intervention (e.g., surgical operation)' (20.5%).	
Ubaidi, K. (2019) Safe medication management at ambulatory surgery centres.	To ensure that medication management programs at ambulatory surgery centres meet all regulatory and patient safety requirements	Postoperative pain management immediately after a procedure and after the patient is discharged has become more challenging because outpatient surgery is more common, and patients are presenting with more complicated health histories and comorbidities than ever before.	Ambulatory surgery centres require a comprehensive review of medication management programme on a periodic basis. Medication management requires the knowledge and expertise of nursing leaders to ensure that the programme is successful. Pharmacy consultants and hospital system pharmacists are excellent resources.