

REVIEW

Testing a model for person-centred pain management: A systematic review and synthesis guided by the Fundamentals of Care framework

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Abstract

Aims: To test a model for person-centred pain management using qualitative evidence in the literature and refine it based on the results.

Design: A qualitative systematic review with thematic synthesis using the Fundamentals of Care framework.

Methods and Data Sources: A literature search in February 2021 in six scientific databases: CINAHL, PsycInfo, Pubmed, Scopus, Social Science Premium Collection and Web of Science, reported using ENTREQ and PRISMA. Quality assessment was performed for the individual studies. Thematic analysis and the GRADE-CERQual approach were used in the synthesis including the assessment of confidence in the evidence.

Results: The model was tested against the evidence in 15 studies appraised with moderate or high quality and found represented in the literature but needed to be expanded. A refined model with a moderate/high confidence level of evidence presents elements to be used in a holistic care process; The nurse is guided to establish a trusting relationship with the patient and enable communication to identify and meet pain management needs using pharmacological and non-pharmacological management. Nurse leaders are guided to support this process by providing the right contextual conditions.

Conclusions: The strengths of the confidence level in the refined model, and that it is represented from the nurse and patient perspectives in nursing research across countries and cultures, support our recommendation for empirical evaluation.

Implications for the Profession and/or Patient Care: The model links the knowledge of pain management elements from individual studies together into actions to be performed in clinical practice. It also outlines the organizational support needed to make

this happen. Nurses and nursing leaders are suggested to test the model to implement person-centred pain management in clinical practice.

Patient or Public Contribution: No patient or public contribution.

Impact: *What Problem Did the Study Address?* There is a need to transfer available evidence of person-centred pain management into practice to relieve the patient from pain. *What Were the Main Findings?* Person-centred pain management is of high priority for patients and nurses around the world and can be performed in a holistic care process including patient–nurse trust and communication, supported by contextual conditions to deliver timely pharmacological and non-pharmacological pain management addressing the patient's physical, psychosocial and relational care needs. *Where and on Whom will the Research Have an Impact?* The model is to be tested and evaluated in clinical practice to guide the providers to relieve the patient from pain.

Reporting Method: Relevant EQUATOR guidelines were used to report the study: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses Statement.

KEYWORDS

acute pain, fundamentals of care, nursing care, nursing leadership, pain management, person-centred care, person-centred fundamental care, qualitative synthesis, surgical care, systematic review

1 | INTRODUCTION

Well-managed pain relieves the patient from suffering and enables the meeting of fundamental care needs, such as mobilization. Poorly managed pain has serious consequences for both patient and organization, including adverse events and prolonged care (Sharma et al., 2020). Managing pain has been of high interest for many years and is argued to be a fundamental human right (Brennan et al., 2016). Still, unmanaged pain challenges providers and patients in surgical care contexts worldwide (Schug et al., 2020). Since pain encompasses a sensory and an emotional experience, its management is multidimensional, requiring individualization and will be improved if the patient is an active partner (Raja et al., 2020). This approach to care is recognized in person-centred fundamental care (PCFC) as guided by the Fundamentals of Care (FoC) framework, argued useful to end missed nursing care (Kitson et al., 2013, 2019). To contribute to the quest to relieve patients of pain, this study adopts the approach of PCFC to test and refine a model for person-centred pain management (PCPM) for use in surgical acute care (Avallin et al., 2018).

1.1 | Background

Acute abdominal pain (AAP) is a common reason for the patient to seek hospital care, and research has reported a need to improve pain management (Schug et al., 2020). Pain management is a fundamental care need, and the FoC framework guides nurses and nursing leaders to meet these care needs of the patient (Kitson, 2018). The framework outlines what is involved in the delivery of safe, effective,

What does this paper contribute to the wider global community?

- Knowledge about the holistic care process of person-centred fundamental care for pain management.
- A model to implement person-centred pain management relieving the patient from pain.
- An example of application of the Fundamentals of Care framework to use theory in practice.

high-quality fundamental care and emphasizes (1) the importance of a trusting patient-provider relationship, (2) the integration of care meeting the patient's physical and psychosocial care needs and the relationship recognizing those needs and (3) the care context's support of the patient-provider relationship and the integration of care (Feo et al., 2018; Kitson, 2018; Kitson et al., 2013).

To address the fundamental care need of pain management, a model for PCPM has been proposed (Avallin et al., 2018). The model promotes pain management as a holistic care process, where the relationship-based integration of the specific physical, psychosocial and relational elements of pain management is enabled by key contextual factors, described in three steps. (1) A trustful relationship where the provider is guided to establish a trusting relationship with the patient by showing competence and willingness to care, being mindful in interactions, making eye contact, sharing knowledge and acting upon it. (2) Communication to share knowledge, where the provider is guided to reach an understanding with the patient

regarding pain and pain management by asking about the pain, the pain experience, and the need for pain management, listening to the patient, meeting the need for information and confirming mutual understanding. (3) Individualized analgesics, where the provider is guided to administer individualized analgesics based on the pain assessment, reassess the pain and then repeat steps 1–3. The organizational culture is described as essential to support the providers in performing pain management in accordance with the model, steps 1–3, just as the organizational culture is also previously described to affect care outcomes (Dewing & McCormack, 2017; Feo et al., 2018; Jangland et al., 2018).

Based on data from one hospital, the model for PCPM was developed from only the patient perspective. It needs to be tested against the nurse perspective and a broader context, in order to be applicable in other hospitals and countries. We set out to collect empirical qualitative evidence in the scientific literature, to test and refine the model, using the FoC framework to present the results to be useful for nursing practice.

2 | THE STUDY

2.1 | Aim and research questions

The aim was to test the model for PCPM using qualitative evidence in the literature and refine it based on the results.

2.1.1 | Research questions

1. How are the components of pain management in the surgical acute care context described in relation to the model for PCPM including (1) trustful relationship, (2) communication to share knowledge, (3) individualized analgesics, (4) organizational culture and (5) other components not represented in the model?
2. What refinements can be suggested to the model?

2.2 | METHODS

2.2.1 | Design

A systematic review of qualitative studies was performed using deductive thematic synthesis. The review was guided by the Swedish Agency for Health Technology Assessment and Assessment of Social Services (2016). It was reported in accordance with the Enhancing Transparency in Reporting the Synthesis of Qualitative Research statement, using: the Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement (Appendix S1; Page et al., 2021; Tong et al., 2012). The study inclusion process is presented in Figure 1. Thematic synthesis was chosen to stay close to the data in the extraction phase and to synthesize data into the predefined themes in a structured and transparent way.

This is to minimize researcher bias due to preunderstanding of the model, before advancing the findings to new evidence (Thomas & Harden, 2008). The FoC framework was used to develop the model being tested (Avallin et al., 2018), as well as in the refined model to guide the holistic care process of PCFC for pain management (Feo et al., 2018; Kitson, 2018; Kitson et al., 2013).

2.2.2 | Literature search

The search was pre-planned with a comprehensive strategy to find all available studies within the research criteria. A librarian specialized in systematic search participated to increase the quality of the search in accordance with the PRISMA statement (Page et al., 2021). The SPICE framework guided the search terms (Booth, 2006) and a scoping exercise was performed to test alternative search strings, resulting in the selection of the following search terms (*):

1. *Setting*: Emergency departments and hospital wards: *acute pain.
2. *Perspective*: The patient with AAP: *adult.
3. *Intervention*: Pain management: *pain management*, *pain measurement*, *pain treatment*, *pain control*, *pain assessment*, *pain scale.
4. *Comparison*: None.
5. *Evaluation*: Well managed pain: *well managed pain*, *well treated pain*, *well-managed pain*, *welltreated pain*, *well-treated pain*, *treated well*, *pain relief.

The following search string was used:

'(((Pain Management[MeSH Terms] OR Pain Measurement[MeSH Terms]) OR (Pain management*[Title/Abstract] OR Pain treatment*[Title/Abstract] OR Pain control*[Title/Abstract] OR Pain Measurement*[Title/Abstract] OR Pain Assessment*[Title/Abstract] OR Pain Scale*[Title/Abstract] OR Well managed pain[Title/Abstract] OR (pain[Title/Abstract] AND (well managed[Title/Abstract] OR managed well[Title/Abstract] OR well treated[Title/Abstract] OR treated well[Title/Abstract]))) OR Well-managed pain[Title/Abstract] OR Well treated pain[Title/Abstract] OR Welltreated pain[Title/Abstract])) AND ((Acute Pain[MeSH Terms]) OR (Acute pain*[Title/Abstract])) AND (("2000/01/01"[Date - Publication]: "3000"[Date - Publication]))'.

The search was performed in February 2021 in six scientific databases: CINAHL, PsycInfo, Pubmed, Scopus, Social Science Premium Collection and Web of Science. A bibliographic check of the reference lists of the included studies was performed at full-text screening.

2.2.3 | Inclusion criteria

Population

Patients ≥18 years old with acute (including postoperative) abdominal pain. Studies including patients with AAP grouped with patients

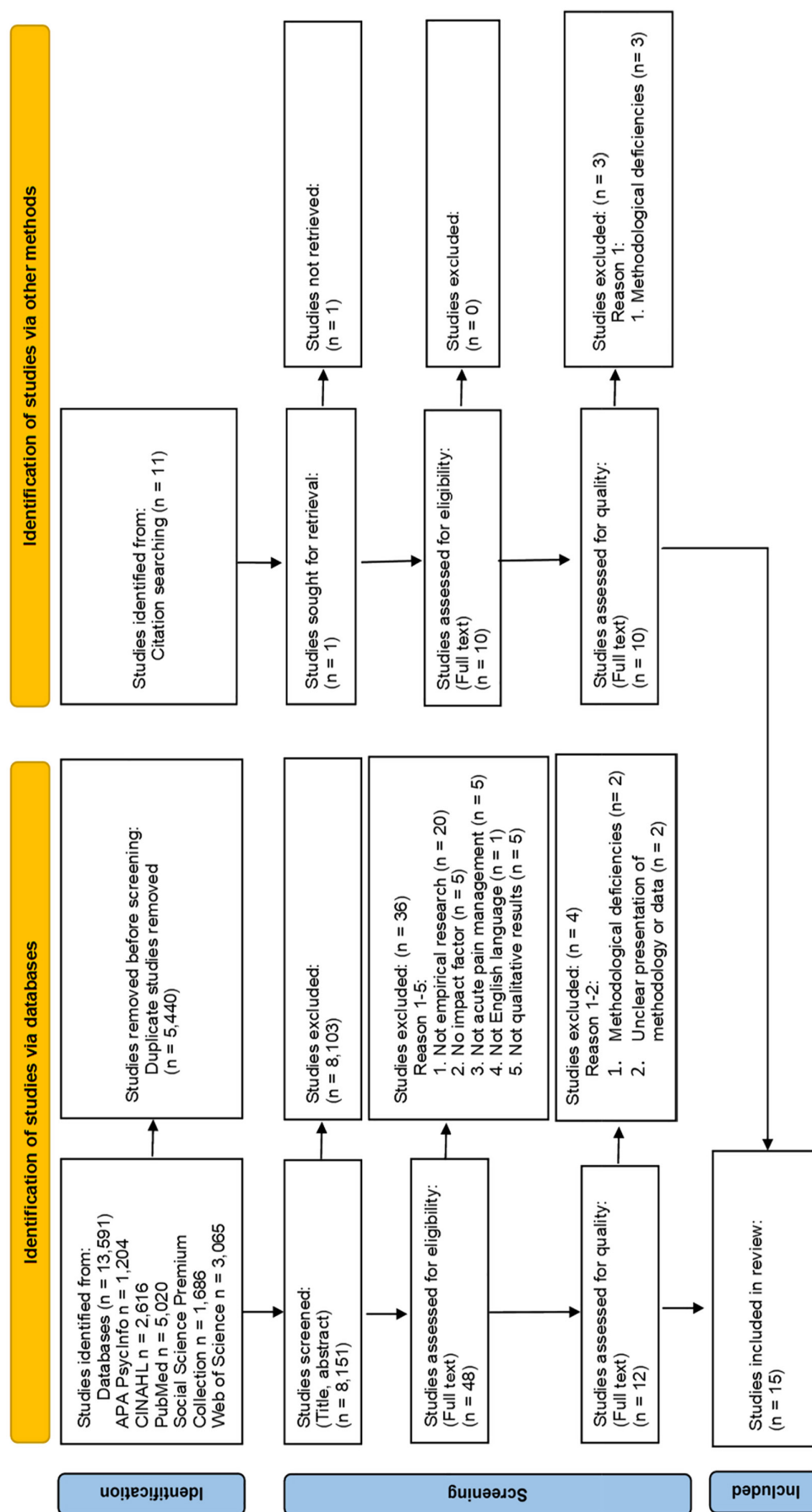


FIGURE 1 Process of identification of studies to include in the synthesis, including reasons for exclusions. The report is in accordance with the PRISMA 2020 statement. From Page et al. (2021). [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/jocn.16770)]

with acute pain for other reasons were included because of the number of studies grouping patients in that way ($n=14/15$).

Phenomenon of interest

Patient and provider perspectives on pain management for acute or post-operative abdominal pain.

Type of context

The acute care context, that is emergency department or surgical ward. Studies including wards with mixed surgical/orthopaedic/medical affiliation were included.

Types of study

Empirical studies, published in a peer-reviewed scientific journal with impact factor in 2001–2021, in the English language, with a qualitative methodology. Mixed-method studies were included, using only qualitative results. The years were selected based on the increased interest in person-centred care and PCFC in the last two decades.

2.2.4 | Study screening method

Studies found through the database searches and bibliographic checking were evaluated for inclusion at three levels, in cases of uncertainty tending towards inclusion. Initially, title and abstract screening were performed, followed by full-text screening (TA). As a check of consistency at the first two levels, a subset of articles was assessed by the review team (TA, EJ). At full-text screening, the included studies were independently appraised for quality by the review team (TA, EJ). Consensus discussions were performed at all levels (TA, EJ). Figure 1 presents the inclusion process and reasons for exclusion.

2.2.5 | Quality appraisal

Individual studies

Quality appraisal of the 22 studies included after the full-text screening of studies retrieved from the database searches and bibliographic checking, was performed independently by two members of the research team (TA, EJ) and discussed until consensus. The quality appraisal was performed using the tool 'Appraising studies with qualitative methodology' based on GRADE by the Swedish Agency for Health Technology Assessment and Assessment of Social Services (2016).

The studies were assessed at two levels. (1) Categorization of any methodological deficiencies as 'Minor', 'Moderate' or 'Major', by assessing; consistency between study methodology and theory/philosophical grounding, selection of participants, methods for collecting data and analysis, researcher reflexivity and validation of the results, researcher qualifications and preunderstanding, and relevance, coherence and adequacy of the results. (2) Study quality was categorized as 'Low', 'Medium', or 'High', by assessing; the presentation

of setting, research question, sampling process, data collection method, transcribing process and method of analysis, the awareness of methodology, systematic stringent presentation of data, the interpretation is based on the data, discussion of the trustworthiness and dependability of the interpretations, previous research on the topic and clinical implications.

Studies assessed as being of low quality ($n=7$) were excluded at this level (Swedish Agency for Health Technology Assessment and Assessment of Social Services, 2016). Reasons for exclusion were methodological deficiencies ($n=4$) or unclear presentation of methodology or data ($n=3$). Appendix S2 presents the excluded studies. The remaining 15 studies, assessed as being of medium ($n=13$) or high ($n=2$) quality, were included in the synthesis and presented in the results (Table 2).

2.2.6 | The synthesis

To support the use of the research findings, overall confidence in the evidence was evaluated using GRADE-CERQual assessing the likelihood that the findings were a reasonable representation of the phenomenon of interest (Lewin et al., 2018). The findings were assessed in regard to 1–4;

1. Methodological limitations: the extent to which there were concerns about the design or conduct of the primary studies that contributed evidence to an individual review finding (Munthe-Kaas et al., 2018).
2. Coherence: an assessment of how clear and cogent (well-supported or compelling) the fit was between the data from the primary studies and review findings synthesizing those data (Colvin et al., 2018).
3. Adequacy: an overall determination of the degree of richness and quantity of data supporting each review finding (Glenton et al., 2018).
4. Relevance: the extent to which the body of evidence from the primary studies supported each review finding applicable to the context (perspective or population, phenomenon of interest, setting) specified in the review question (Noyes et al., 2018).

The evaluation was performed by one author (TA) and each step was discussed with the review team (TA, EJ) until consensus was reached. The evaluation is presented in the results, Table 2.

2.2.7 | Data analysis

The data extraction and synthesis were performed using the three stages (1–3) of thematic synthesis described by Thomas and Harden (2008): (1) Coding of text 'line-by-line', (2) Development of 'descriptive themes' and (3) Generation of 'analytical themes'. The first two stages were performed remaining close to the data in the primary studies, while the third stage 'went beyond' the primary

studies, to develop new knowledge. Stage 1 was performed to find all the data related to pain management in the results sections of the studies. In stage 2, these data were sorted into descriptive themes staying close to the data and presented in one of the four predefined themes from the model for PCPM, or in the additional theme for data not represented in the model. Concluding stage 2, the predefined themes from the model for PCPM (1–4) were compared to the data to test if fully represented in the literature. In stage 3, the descriptive themes were merged into analytical themes 'going beyond' the original data, labelled as elements supporting pain management for the patient. Stage 1 of the analysis was performed by TA and EJ individually. Stage 2 was discussed by TA and EJ until consensus was reached and confirmed by AM. Stage 3, including the evolution of the model, was discussed by the review team until consensus was reached. The coding scheme is exemplified in Table 1.

3 | RESULTS

3.1 | The included studies

The 15 studies meeting the inclusion criteria after screening and quality appraisal included nurse and patient perspectives across countries and cultures. Their methods were ethnography ($n=3$), hermeneutics ($n=1$), phenomenography ($n=1$), grounded theory ($n=1$), thematic analysis ($n=7$) or content analysis ($n=2$). Data were collected by observations ($n=6$), interviews ($n=11$) and focus group sessions ($n=3$), five studies used a combination of observations and interviews. The studies were performed in Australia ($n=3$), Ghana ($n=1$), Iran ($n=1$), Jordan ($n=4$), Norway ($n=1$), South Africa ($n=1$), Sweden ($n=1$), United Kingdom ($n=1$) and the United States of America ($n=2$), at surgical or mixed surgical/medical wards ($n=17$) and emergency departments ($n=3$) at 18 hospitals. Four studies did not report the number of wards included. The participants were adult (≥ 18 years) patients ($n=779$) or nurses ($n=262$). The patients' pain was described as related to surgery ($n=741$) or not related to surgery ($n=38$). The providers were described as registered nurses ($n=186$), nursing staff ($n=39$) or surgical nurses ($n=37$), working at emergency departments ($n=12$) or surgical or medical wards ($n=250$). The study's characteristics and assessed quality are presented in Table 2.

3.2 | The refined model for PCPM

Testing the original model against the literature resulted in confirmation of the model since the four predefined themes were found represented in the literature. The found elements of pain management not previously addressed in the model were used to clarify and expand the four themes. The test resulted in a refined model, encompassing elements to be used in a patient-provider collaboration in a nurse-led holistic care process and by the nurse leader to support this process (Figure 2). The results present the four themes

in the refined model. Each theme is presented with quotes from the original studies and a summary of the refinements.

The themes of the refined model (1–4):

Nurses are to

1. Establish and maintain a trusting relationship including the patient in the care team.
2. Enable communication to share knowledge in the care team.
3. Deliver timely pharmacological and non-pharmacological pain management.

Leaders are to

4. Provide organizational support enabling the nurse to meet the patient's need for pain management.

3.2.1 | Establish and maintain a trusting relationship including the patient in the care team

The evidence from the literature confirmed that the trusting relationship was essential for pain management, highlighted as a crucial component in the model for PCPM. This relationship was described as based on mutual understanding within the care team, that is providers, patient and relatives, regarding the cause, experience and management of pain (Aziato & Adejumo, 2015; Brown & McCormack, 2006; Dihle et al., 2006; Idvall et al., 2008; Lauzon Clabo, 2008; Rejeh et al., 2008; Shoqirat, 2014, 2015; Shoqirat et al., 2019, 2020; Smith et al., 2006). This was achieved when the nurses truly listened to the patient and trusted the experience (Dihle et al., 2006; Idvall et al., 2008; Rejeh et al., 2008; Shoqirat, 2014).

The opposite was counterproductive, as explained by a patient in a study from Sweden: 'I say, no one paid attention and took it seriously. They thought that I only had normal pain and that I was just whining. You shouldn't treat a person like that' (Idvall et al., 2008).

It was helpful for patients to know the cause of the pain and the planned pain management. This prevented concern about having a poor diagnosis or not getting pain relief to make the pain bearable. The nurses also acknowledged such information as essential, as stated by a nurse in a study from Norway: 'It is important to give patients information before the operation to relieve their worries about pain: ... just to know before the operation, that you will get good pain relief, I really think that is very important' (Dihle et al., 2006).

The nurses' behaviours affected the patient's pain experience, where acting professional and caring was found to be beneficial (Aziato & Adejumo, 2015; Idvall et al., 2008; Shoqirat et al., 2020; Smith et al., 2015). As described by a patient in a study from Jordan: 'I was in pain, but her (the nurse) assuring body language made me feel less stressed' (Shoqirat et al., 2020). This was also underlined by a nurse in a study from Iran: 'I try to have a good relationship with them (patient) about pain and suffer, listen to them carefully, and do

TABLE 1 Example from the coding scheme for the individual studies included in the systematic review. Each study results were coded according to the predefined themes from the model of person-centred pain management (1–4) and one theme for data not represented in the model (5).

Predefined themes (1–5) including guiding description from the model for person- centred pain management	Stage 1a: Line-by-line coding (original study)	Stage 1b: Quote from the original study representing the line	Stage 2: Descriptive themes	Stage 3: Analytical themes
Theme 4: Organizational culture, including guidance, provider behaviours, and actions supporting well managed pain	Pain cues were often not prioritized highly and were considered unimportant compared with other activities. Examples of prioritized activities included the completion of medication rounds, the performance of vital sign observations, and the completion of wound dressings (Manias et al., 2005). Nurses' attentiveness to patients' signs of pain (Dihle et al., 2006)	'The nurse has changed the flask over and put the old one in the bin. She is speaking to the patient and she is just telling the patient that he has a PCA pump and he is to press the button when he is in pain, and she is asking him to rate his pain. She is asking for the pain scale from 0 to 10, and he is saying 7 on rest, and 15 of 10 when he moved. And she just laughed and said, "Are you pressing the button?"' 'Another nurse (No. 9) asked a patient if the analgesic given relieved the pain, to which the patient responded it worked when lying quiet, but when moving it was painful. The nurse then offered more analgesic, and when the patient hesitated to take it, the nurse motivated him and gave some more, which resulted in improved pain alleviation'	The nurse is attentive to patient signs of pain	Nurses prioritizing pain management
	Interruptions of team members fragment pain management practices (Brown & McCormack, 2006). Nurses' responses to interruptions when carrying out activities relating to pain (Manias et al., 2002)	'Senior nurses were most likely to be interrupted, but all levels of staff experienced interruptions. As medicine rounds constituted the primary period of time nursing staff allotted for pain assessment and analgesic administration, interruptions at this time could have a significant impact on pain management.' 'Interruptions often related to other tasks that needed to be performed on time, such as administering antibiotics, answering or making telephone calls, assisting nursing students with patient care (for example, supervising drug administration and wound dressings), and searching for equipment. When nurses responded to these interruptions, they were often unable to attend to the immediate analgesic and comfort needs of patients'	The nurse not responding to interruptions while managing pain	

TABLE 2 Characteristics and assessed quality of the studies included in the synthesis.

Title		Author publication year country	Aim	Setting participants	Methods of data collection analysis	Assessed quality
Studies with nurse perspective						
1	Determining factors that have an impact upon effective evidence-based pain management with older people, following colorectal surgery: an ethnographic study	Brown, D. McCormack, B. 2006 United Kingdom	To examine pain management practices with older people admitted to the colorectal unit of an acute hospital trust	Hospital ($n = 1$)/colorectal wards ($n = 2$) Patients ($n = 7$) undergoing colorectal surgery Nursing staff at the wards ($n = 39$)	Ethnography/mixed method Observations, interviews (and questionnaires that were not included in the review) Thematic analysis	Moderate
2	The gap between saying and doing in post-operative pain management	Dihle, A. Bjølseth, G. Helseth, S. 2006 Norway	To understand how nurses contribute to post-operative pain management in a surgical setting and to identify barriers to achieving optimal post-operative pain alleviation	Hospital ($n = 2$)/surgical wards ($n = 3$) Registered nurses at the wards ($n = 9$)	Hermeneutics/descriptive Observations and in-depth interviews Hermeneutic analysis	High
3	Strategies in assessing post-operative pain—A South African study	Klopper, H. Andersson, H. Minkinen, M. Ohlsson, C. Sjöström, B. 2006 South Africa	To describe strategies used in post-operative pain assessment among a group of nurses in South Africa	Hospital ($n = 1$)/surgical unit ($n = 1$) Patients in pain ($n = 36$) undergoing elective general surgery ($n = 9$), orthopaedic surgery ($n = 6$), gynaecological surgery ($n = 6$), vascular surgery ($n = 3$), plastic surgery ($n = 6$) or trauma-related surgery ($n = 6$) Surgical nurses ($n = 12$) at the units	Phenomenography/mixed method Interviews Phenomenographic analysis	Moderate
4	An ethnography of pain assessment and the role of social context on two post-operative units	Lauzon Clabo, L.M. 2008 United States of America	To examine nursing pain assessment practice across two units	Hospital ($n = 1$)/surgical unit ($n = 2$) Registered nurses ($n = 23$)	Ethnography/descriptive Participant observation, individual interviews and focus groups Ethnographic analysis	Moderate
5	Nurses' strategies for managing pain in the post-operative setting	Manias, E. Bucknall, T. Botti, M. 2005 Australia	To determine how nurses managed patients' pain in the post-operative acute care setting. The specific aim was to examine the effect of time and context on the nurses' pain management strategies	Hospital ($n = 1$)/surgical units ($n = 2$) Patients ($n = 312$) undergoing gastrointestinal, ophthalmic, cardiac, respiratory, vascular, renal, gynaecological or musculoskeletal surgery Registered nurses ($n = 52$) at the units	Not stated/ single-group, non-comparative design Observations, interviews Thematic analysis using the computer software package NVIVO	Moderate
6	Observation of pain assessment and management—the complexities of clinical practice	Manias, E. Botti, M. Bucknall, T. 2002 Australia	To investigate the effectiveness of the observation method in exploring nurse-patient interactions for pain assessment and management in hospitalized postsurgical patients, and to identify barriers that surround nursing pain management decisions	Hospital ($n = 1$)/ surgical unit ($n = 1$) Registered nurses ($n = 12$) at the unit	Not stated/ observational Observations Thematic analysis using the computer software package NVIVO	Moderate

TABLE 2 (Continued)

Title	Author publication year country	Aim	Setting participants	Methods of data collection analysis	Assessed quality
7	Barriers to and facilitators of post-operative pain management in Iranian nursing: A qualitative research study	Rejeh, N. Ahmadi, F. Mohammadi, E. Anoosheh, M. Kazemnejad, A. 2008 Iran	To determine Iranian nurses' perceptions of the barriers and facilitators influencing their management of post-operative pain	Hospital (n = 3)/surgical wards (n not stated) Registered nurses (n = 26) at the wards	Not stated/qualitative Interviews Content analysis Moderate
8	'We are nurses, they are doctors': Barriers to nurses' roles in pain management following surgery in Jordan	Shoqirat, N. 2015 Jordan	To explore barriers to nurses' roles in pain management following surgery in Jordan	Hospital (n = 1)/surgical wards (n = 2) Registered nurses (n = 25)	Not stated/qualitative focus groups Thematic analysis using the computer software package NVIVO Moderate
9	Barriers to nursing pain management in the emergency department: A qualitative study	Shoqirat, N. Mahasneh, D. Singh, C. Al-Sagarat, A. Y. Habashneh, S. 2019 Jordan	To uncover and understand nurses' perspective of barriers to pain management in the emergency department	Hospital (n = 1)/emergency department (n = 1) Registered nurses (n = 12) at the emergency department	Not stated/exploratory qualitative design Interviews Thematic analysis using the computer software package NVIVO Moderate
Studies with patient perspective					
10	An ethnographic exploration of post-operative pain experiences among Ghanaian surgical patients	Aziato, L. Oluyinka, A. 2015 Ghana	This study focused on patients' experiences of post-operative pain (POP) and factors that affected POP	Hospital (n = 2)/surgical units (n not stated) Patients (n = 13) undergoing surgery	Ethnography/qualitative Interviews Thematic analysis using the computer software package, NVIVO Moderate
11	Perspectives of Swedish patients on post-operative pain management	Idvall, E. Bergqvist, A. Silverhjelm, J. Unosson, M. 2008 Sweden	To describe the perspectives of surgical patients towards post-operative pain management during their hospital stay	Hospital (n = 1)/surgical and orthopaedic wards (n not stated) Patients (n = 30) from orthopaedic wards undergoing surgery involving various cancer (n = 3), abdominal (n = 12) or skeletal (n = 15) procedures	Not stated/qualitative, descriptive approach Interview Content analysis Moderate
12	Patients' decision-making strategies for managing post-operative pain	Manias, E. Botti, M. Bucknall, T. 2006 Australia	To investigate the strategies used by patients to bring about pain management decisions in the post-operative setting	Hospital (n = 1)/surgical units (n = 2) Patients (n = 312) undergoing gastrointestinal, ophthalmic, cardiac, respiratory, vascular, renal, gynaecological or musculoskeletal surgery Registered nurses (n = 52) at the units	Not stated/single-group, non-comparative design Observations Thematic analysis using the computer software package NVIVO Moderate

(Continues)

TABLE 2 (Continued)

Title	Author publication year country	Aim	Setting participants	Methods of data collection analysis	Assessed quality
13 'Sleepless nights and sore operation site': Patients' experiences of nursing pain management after surgery in Jordan	Shoqirat, N. 2014 Jordan	This study explores patients' experiences of nursing pain management in Jordan and identifies contributing factors	Hospital (n = 1)/surgical wards (n = 2) Patients (n = 31) who underwent surgeries including wound debridement, appendectomy, haemorrhoidectomy, lumpectomy or cholecystectomy	Not stated/qualitative explorative Focus group Thematic analysis using the computer software package NVIVO	Moderate
14 Factors influencing patients' experiences of pain management in the emergency department	Shoqirat, N. Mahasneh, D. Khresheh, R. Singh, C. Al-Momani, M. M. Al- Kalaldeh, M. 2020 Jordan	To explore the factors influencing patients' pain management in a Jordanian emergency department	Hospital (n = 1)/emergency department (n = 1) Patients (n = 15) with musculoskeletal pain (n = 7), pain related to systemic illnesses such as cancer (n = 3), or pain related to appendicitis and gallbladder stone (n = 5)	Not stated/explorative qualitative design Interviews Thematic analysis	Moderate
15 Patient perspectives of acute pain management in the era of the opioid epidemic	Smith, R. J. Rhodes, K. Paciotti, B. Kelly, S. Perrone, J. Meisel, Z. F. 2015 United States of America	To uncover patient perspectives and attitudes related to pain management in an emergency department setting	Hospital (n = 1)/emergency department (n = 1) Patients (n = 23) presenting with acute pain related to fracture (n = 5), renal colic (n = 5) or musculoskeletal back injury (n = 5)	Not stated/qualitative Interviews Grounded theory using the computer software package NVIVO	High

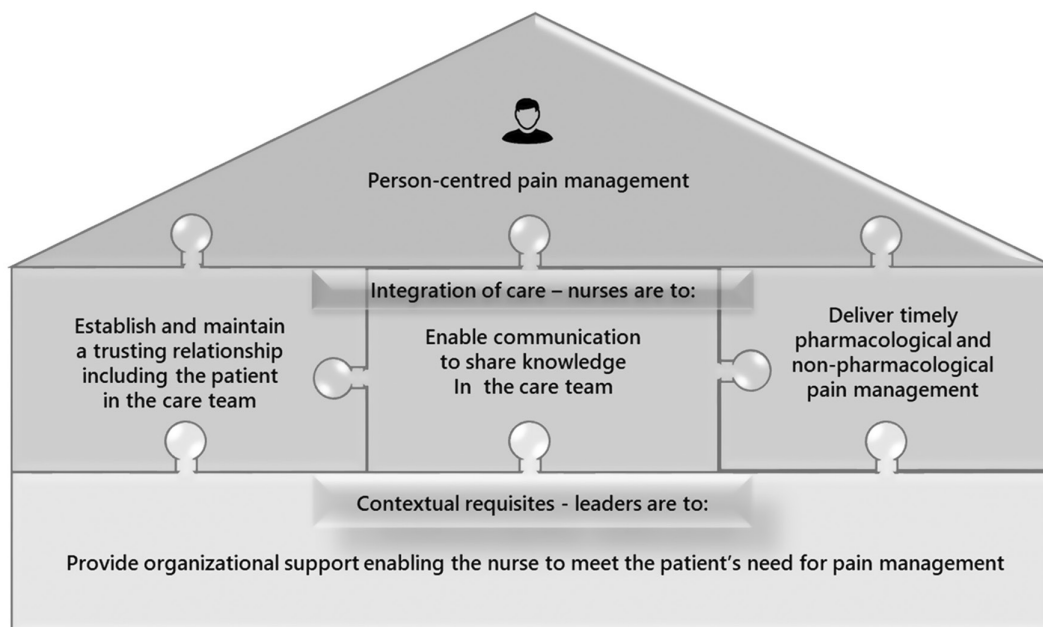


FIGURE 2 The refined model for person-centred pain management presents the elements to be used in patient-provider collaboration. This nurse-led holistic care process aims to establish a trusting relationship, to enable communication to identify and meet the patient's pain management needs, using pharmacological and non-pharmacological management. The nurse leaders are to support this process by providing the right contextual conditions.

as they wish for comfort and relieve, it gives a more sense of security (...)' (Rejeh et al., 2008).

Similar to the tested model, the relationship was described in the studies as being established through nurses acting in a professional and caring manner, listening to and believing the patient's experience. To maintain trust, nurses needed to inform the patient about the cause of the pain and the care plan, confirm the mutual understanding and act upon the care plan. The new model also includes expanded guidance on the importance of listening to and believing the patient experience and achieving a mutual understanding of the experience, cause and management of pain.

3.2.2 | Enable communication to share knowledge in the care team

The evidence from the literature confirmed that communication to share knowledge in the care team was essential for pain management, and a vital component in the model for PCPM. The communication between the patient and nurse was found to be essential for making informed choices regarding pain management. The patient should be informed and invited as an active partner to share questions and experiences (Aziato & Adejumo, 2015; Brown & McCormack, 2006; Dihle et al., 2006; Idvall et al., 2008; Manias et al., 2005, 2006; Shogirat, 2014; Shogirat et al., 2020; Smith et al., 2015). This could enhance compliance as was observed at a surgical ward in Australia: 'He (patient) replies, "No, because nothing seems to be working". She (nurse) looks at the medication chart, and says, "What about the aspirin you had the other day as a single dose? I can give you 3 of those.

That might help." He nods his head, agreeing that it is worth trying' (Manias et al., 2005).

Patients were found to need guidance to overcome challenges in telling nurses about their experiences and needs, such as reluctance due to fear of annoying nurses or becoming addicted to the analgesics, being embarrassed or in too much pain, or trusting the nurse to manage the pain regardless (Aziato & Adejumo, 2015; Brown & McCormack, 2006; Manias et al., 2006; Shogirat, 2014; Smith et al., 2015). The patients wanted nurses to create the opportunity for them to ask questions. When using direct questions, it was easier for patients to talk about pain and management (Dihle et al., 2006; Smith et al., 2015). The nurses also needed to overcome challenges related to patients being unable to communicate verbally due to, for example cognitive dysfunction or not understanding the language (Brown & McCormack, 2005; Manias et al., 2005). These obstacles could impede the mutual understanding and thereby the pain management, as observed in an English-speaking country for a patient who spoke and understood Italian: 'The nurse is saying to the patient, "Any dolore [pain in Italian]?" The patient replies, "Upset." ... The patient is saying she vomited, "Yellow, yellow early in the morning." The nurse: "It is very hard to decipher what she is saying"' (Manias et al., 2005).

Aligning with the tested model, communication enabling the nurse and patient to share their knowledge was described as required to manage the patient's pain. For this to happen, nurses needed to invite the patient to be an active partner by asking questions and encouraging them to share their experiences. Thereby obstacles like reluctance or inability to communicate were overcome. The new model also includes expanded guidance on the need for

nurses to enable communication by inviting and guiding patients to be active partners.

3.2.3 | Deliver timely pharmacological and non-pharmacological pain management

The continuous assessment of pain to guide pharmacological and non-pharmacological pain management, delivered to the patient when needed, was vital to pain management. Sharing knowledge in the care team about pain characteristics and response to treatment was essential for the delivery of timely pharmacological and non-pharmacological management. This was achieved by the nurses assessing and reassessing patient pain, and evaluating the treatment given (Brown & McCormack, 2006; Dihle et al., 2006; Klopper et al., 2006; Lauzon Clabo, 2008; Manias et al., 2002, 2005; Smith et al., 2015). The studies presented several assessment methods, all taking the patient experience into account, as emphasized by a nurse in South Africa: 'You ask the patient if he has pain, of the pain he has, you also ask them to rate it like they say to the patient, is it mild, is it moderate or intense, you ask the patient' (Klopper et al., 2006). Assessment after treatment was essential to evaluate the patient outcome, described by a patient in a study from the United States of America: 'After I'd been given my first dose of the morphine, it probably would have been a lot easier for the doctor to come in soon after I'd been given that medication. That way they can get some feedback on how well it's working' (Smith et al., 2015).

It was important that pharmacological and/or non-pharmacological pain management was delivered to the patient when needed and when the patient was receptive (Aziato & Adejumo, 2015; Brown & McCormack, 2006; Dihle et al., 2006; Idvall et al., 2008; Manias et al., 2005, 2006; Shoqirat, 2014; Shoqirat et al., 2020; Smith et al., 2015). It was also beneficial when nurses were aware of, acted upon, and informed patients of analgesic side effects, as observed at a surgical ward in Australia: 'Problem-solving also involved nurses administering an antiemetic or aperient to a patient before analgesic administration' (Manias et al., 2006).

Addiction or fear thereof could be a barrier to pain management (Brown & McCormack, 2006; Dihle et al., 2006; Manias et al., 2006; Shoqirat, 2014; Smith et al., 2015). Reluctance to use analgesics due to fear of addiction took precedence over other fundamental care needs such as sleep, as described by a patient in a study from Jordan: 'I did not sleep for three nights. I am scared that if I take more pain pills or sleep pills I will be addicted. I do not want to have another problem when leaving the hospital!' (Shoqirat, 2014). The results highlighted the importance of nurses being aware of, and informing patients of analgesic side effects, including addiction.

In the same way, as described in the tested model, delivering analgesics based upon assessment and reassessment was found essential in the studies. The new model also includes expanded guidance on the importance of timing in delivering the management and non-pharmacological treatment. It includes new guidance on informing

patients about, and managing, side effects of analgesics, including addiction.

3.2.4 | Provide organizational support enabling the nurse to meet the patient's need for pain management

The evidence from the literature confirmed that organizational support was crucial to manage the patient's pain. Studies from several countries found a collaborating care team to be vital to pain management (Brown & McCormack, 2006; Dihle et al., 2006; Idvall et al., 2008; Lauzon Clabo, 2008; Manias et al., 2002, 2005; Rejeh et al., 2008; Shoqirat, 2015; Shoqirat et al., 2019, 2020). A nurse in Iran explained: 'It is very important to think and work as a team for pain management, it is very important for patients' comfort ... Our activities for pain management cannot be separated from others, because we work in a team, and our work quality for pain management depends on others' work' (Rejeh et al., 2008). Explicit roles and responsibilities, including nurse empowerment, enabled teamwork (Brown & McCormack, 2006; Lauzon Clabo, 2008; Manias et al., 2005; Rejeh et al., 2008; Shoqirat, 2015; Shoqirat et al., 2019). Hierarchy was described as preventing pain management: 'Some patients note that doctors do all the decisions about pain management and thus it is not surprising that they ignore nursing advice ... they [patients] ignore the pain management plan ... because we are nurses they are doctors' (Shoqirat, 2015).

A cooperating care team required the inclusion of the patient and relative so that they could understand and participate in care. It was also essential that they were willing to be guided in this cooperation. Situations where the patient or relative acted violently or disrespectfully towards nurses were described as hindering pain management (Shoqirat, 2015; Shoqirat et al., 2019, 2020; Smith et al., 2015), for instance by a nurse from Jordan: '... troubling and violent patients cause much confusion at ED ... sometimes you might make drug miscalculations because of the stress caused by patients shouting' (Shoqirat et al., 2019). Establishing routines for sharing knowledge in the care team were found to be essential, and a lack thereof was negative for pain management (Brown & McCormack, 2006; Dihle et al., 2006; Idvall et al., 2008; Smith et al., 2015). This was observed at a surgical ward in the United Kingdom: 'On a number of occasions, it took up to 2h to locate a doctor to prescribe analgesia, with considerable time squandered as all parties "cross"-communicated to achieve adequate prescriptions' (Brown & McCormack, 2006).

It was essential that nurses prioritized pain management was attentive to patients' signs of pain and did not react to interruptions (Brown & McCormack, 2006; Dihle et al., 2006; Manias et al., 2002, 2005; Rejeh et al., 2008). Otherwise, pain management could fail, as displayed at a surgical ward in Australia: 'Interruptions often related to other tasks that needed to be performed on time, such as administering antibiotics, answering or making telephone calls (...). When nurses responded to these interruptions, they were often unable to attend to the immediate analgesic and comfort needs of patients' (Manias et al., 2002).

Managing a patient's pain required that the nurse had the time, knowledge and skills thereof (Aziato & Adejumo, 2015; Brown & McCormack, 2006; Rejeh et al., 2008; Shoqirat, 2015; Shoqirat et al., 2019; Smith et al., 2015). As a nurse in a study from Iran explained: 'Well it depends on the level of one's professional knowledge and skills, and the ability to use them well for pain management' (Rejeh et al., 2008). The patients underlined the importance of the nurse being present and available; if they were not, this hindered patients from informing them of needs they experienced, as described by a patient in the United Kingdom: 'what's the point they cannot help you even when they ask you (...) the wee nurses are always so busy' (Brown & McCormack, 2006). This lack of time was also acknowledged as a barrier by the nurses, as described by a nurse in Iran: 'Sometimes lack of time means you cannot attend to patients in pain as quickly as you would like to, e.g. if several patients need your help at the same time' (Rejeh et al., 2008).

Similar to the tested model, the organizational culture guiding nurses' behaviour was confirmed as essential to pain management. The crucial well-functioning and competent care team was described as enabled by clear roles and responsibilities, as well as established routines and guidance on the when, who and how of pain management. Nurses also needed to have the time, knowledge and skills to manage pain as well as being attentive, caring and prioritizing pain management. The new model also includes expanded guidance on organizational support and on the nurses behaviour of prioritizing pain management. The new guidance includes routines, nurse qualifications and a well-functioning care team.

3.3 | Confidence in the findings

The assessment for the level of confidence in the evidence constituting the refined themes resulted in the refined model for PCPM obtained moderate/high confidence. The individual assessments for the four themes in the model are reported in Table 3.

4 | DISCUSSION

This systematic review and synthesis present a model to guide nurses and nursing leaders to deliver PCPM in acute surgical care. The model summarizes knowledge from patients and nurses across the globe on what is important to relieve pain and adds the theoretical knowledge from the FoC framework to perform PCFC. To achieve well-managed pain, the model guides a holistic combination of patient-nurse trust and communication, with contextual support to deliver timely pharmacological and non-pharmacological pain management, addressing the patient's physical, psychosocial and relational care needs.

The value of the trusting nurse-patient relationship involving the patient and relative in the care is evident (Aziato & Adejumo, 2015; Rejeh et al., 2008; Shoqirat, 2015; Shoqirat et al., 2019), as also described a key dimension in the FoC framework (Feo et al., 2017).

The relationship has repeatedly been confirmed as vital to successful care (Dewing & McCormack, 2017; Ekman et al., 2011; Kitson et al., 2019). However, our results revealed a need to give this dimension of care a higher priority in clinical practice for pain management. The relationship could be a barrier to pain management when mutual cooperation was absent (Brown & McCormack, 2006; Shoqirat et al., 2019). On the other hand, the relationship could in itself achieve well-managed pain, like when the patient found the pain acceptable due to trusting a competent and caring nurse (Shoqirat et al., 2020).

The results confirmed person-centredness in showing that including the patient and relative in the care team was beneficial for care outcomes (McCormack & McCance, 2017). Mutual understanding of the care plan was found essential to meet the need for pain management. If the plan was not known by the patient, this could lead to dissatisfaction or annoyance and even violent relatives and patients, counteractively leading to a delay in pain management (Shoqirat et al., 2019; Smith et al., 2015). Nurses described that patients and relatives sometimes had unrealistic expectations about pain management causing violent behaviour (Shoqirat, 2015). High workloads or fear of being harmed could prevent nurses from properly assessing pain or providing information or analgesics (Aziato & Adejumo, 2015; Rejeh et al., 2008; Shoqirat, 2015; Shoqirat et al., 2019). The findings indicate that the crucial patient-provider relationship is not always possible due to situations, where the patient or relative acts violently. Nurse and patient safety hence need to be addressed when organizing care, ensuring nurses have the time, knowledge and skills to manage threatening situations (Jakobsson et al., 2021; Shoqirat, 2015; Shoqirat et al., 2019, 2020; Smith et al., 2015).

Communication was found essential to include the patient and relative as active partners in the care team, confirming previous studies describing communication as essential for person-centred care meeting patient care needs (Britten et al., 2020; Tay & Hegney, 2010). Communication impacted pain management through simple actions like guiding the patient to overcome the reluctance to share information through direct questions (Dihle et al., 2006). Also, more complex solutions to challenges like language barriers were crucial (Manias et al., 2006; Smith et al., 2015). Hierarchy was found to impede communication within the care team, preventing patients from reporting to or asking nurses, and preventing nurses from reporting to or asking surgeons, due to feeling reluctance to 'disturb' or 'annoy' (Brown & McCormack, 2006; Lauzon Clabo, 2008; Rejeh et al., 2008; Shoqirat et al., 2019). This behaviour jeopardized patient safety, as also previously described (Tay & Hegney, 2010). Our results suggest organizational support to culture and routines for safe communication to happen systematically within the care team.

The results displayed the benefits of combining pharmacological and non-pharmacological management. This multidimensional management, personalized to the patient, is also previously withheld as a, still to be explored, key to relieve the patient from acute pain (Schug et al., 2020). The timed delivery of analgesics but also information was presented as essential to successful pain management in the

TABLE 3 Evidence profile of the findings. The level of confidence assessed accordingly to GRADE-CERQual. The assessment is presented for the four themes in the refined model for person-centred pain management.

Themes 1–4	Summary of review findings	Studies contributing to the review finding	Methodological limitations ^a	Coherence ^b	Adequacy ^c	Relevance ^d	Confidence in the evidence ^e	Explanation of CERQual- assessment
Theme 1: <i>Establish and maintain a trustful relationship including the patient in the care team</i>	The essential mutual understanding in the care team concerning pain cause, experience and management was achieved by the patient being heard and believed and informed about the cause of the pain and how it was to be managed	Aziato and Adejumo (2015), Brown and McCormack (2006), Dihle et al. (2006), Idvall et al. (2008), Lauzon Clabo (2008), Rejeh et al. (2008), Shojirat (2014), Shojirat et al. (2019, 2020), Smith et al. (2015)	Minor concerns Eight studies of moderate methodological quality and two of high methodological quality supported this review finding	No or very minor concerns	No or very minor concerns	No or very minor concerns	High	Confidence in this finding was judged to be high due to the fact that the minor concerns regarding methodological limitations were judged not to weaken the representation of the phenomenon
	The nurse behaviour beneficial for the patient experience encompassed being professional and caring	Aziato and Adejumo (2015), Idvall et al. (2008), Shojirat et al. (2020), Smith et al. (2015)	Minor concerns Four studies of moderate methodological quality and one of high methodological quality supported this review finding	No or very minor concerns	Minor concerns	Moderate concerns	Moderate	Confidence in this finding was judged to be moderate due to minor concerns regarding adequacy as a result of thin descriptions, and moderate concerns regarding relevance because only the patient perspective was represented. The minor concerns regarding methodological limitations were judged not to weaken the representation of the phenomenon

TABLE 3 (Continued)

Themes 1–4	Summary of review findings	Studies contributing to the review finding	Methodological limitations ^a	Coherence ^b	Adequacy ^c	Relevance ^d	Confidence in the evidence ^e	Explanation of CERQual- assessment
Theme 2: Enable communication to share knowledge in the care team	The team collaboration with the patient being an active partner was found to be essential to make an informed choice of pain treatment. This included the patient being informed and invited to participate in pain management by sharing questions and experiences as well as being guided to overcome reluctance or inability to communicate with the nurses	Aziato and Adejumo (2015), Brown and McCormack (2006), Dihle et al. (2006), Idvall et al. (2008), Manias et al. (2005, 2006), Shojirat (2014), Shojirat et al. (2020), Smith et al. (2015)	Minor concerns Nine studies of moderate methodological quality and two of high methodological quality supported this review finding	No or very minor concerns	No or very minor concerns	No or very minor concerns	High	Confidence in this finding was judged to be high due to the fact that the minor concerns regarding methodological limitations were judged not to weaken the representation of the phenomenon
Theme 3: Deliver timely pharmacological and non-pharmacological pain management	The shared knowledge in the care team concerning pain characteristics and response to treatment was achieved by the nurses assessing and reassessing the patient's pain and evaluating the treatment	Brown and McCormack (2006), Dihle et al. (2006), Klopper et al. (2006), Lauzon Clabo (2008), Manias et al. (2002, 2005), Smith et al. (2015)	Minor concerns Seven studies of moderate methodological quality and two of high methodological quality supported this review finding	No or very minor concerns	No or very minor concerns	No or very minor concerns	High	Confidence in this finding was judged to be high due to the fact that the minor concerns regarding methodological limitations were judged not to weaken the representation of the phenomenon
	The patient receiving individualized pharmacological and/or non-pharmacological pain treatment when needed was essential to pain management and included the nurses being aware of, acting upon, and informing about analgesic side effects, including addiction	Aziato and Adejumo (2015), Brown and McCormack (2006), Dihle et al. (2006), Idvall et al. (2008), Manias et al. (2005, 2006), Shojirat (2014), Shojirat et al. (2020), Smith et al. (2015)	Minor concerns Seven studies of moderate methodological quality and two of high methodological quality supported this review finding	No or very minor concerns	No or very minor concerns	No or very minor concerns	High	Confidence in this finding was judged to be high due to the fact that the minor concerns for methodological limitations were judged not to weaken the representation of the phenomenon

(Continues)

TABLE 3 (Continued)

Themes 1–4	Summary of review findings	Studies contributing to the review finding	Methodological limitations ^a	Coherence ^b	Adequacy ^c	Relevance ^d	Confidence in the evidence ^e	Explanation of CERQual- assessment
Theme 4: Provide organizational support enabling the nurse to meet the patient's need for pain management	The well-functioning care team comprised explicit roles and responsibilities for the team members, an empowered nurse role, and the nurses, patient and family collaborating in the care process	Brown and McCormack (2006), Dihle et al. (2006), Idvall et al. (2008), Lauzon Clabo (2008), Manias et al. (2002, 2005), Rejeh et al. (2008), Shojirat (2015), Shojirat et al. (2019, 2020)	Minor concerns Nine studies of moderate methodological quality and one with of methodological quality supported this review finding	No or very minor concerns	Minor concerns	No or very minor concerns	Moderate	Confidence in this finding was judged to be moderate due to thin descriptions of the role of the family. The minor concerns regarding methodological limitations were judged not to weaken the representation of the phenomenon
		Brown and McCormack (2006), Dihle et al. (2006), Manias et al. (2002, 2005), Rejeh et al. (2008)	Minor concerns Four studies of moderate methodological quality and one of high methodological quality supported this review finding	No or very minor concerns	No or very minor concerns	Moderate concerns	Moderate	Confidence in this finding was judged to be moderate due to only surgical wards being included. The minor concerns regarding methodological limitations were judged not to weaken the representation of the phenomenon
		Aziato and Adejumo (2015), Brown and McCormack (2006), Rejeh et al. (2008), Shojirat (2015), Shojirat et al. (2019), Smith et al. (2015)	Minor concerns Five studies of moderate methodological quality and one of high methodological quality supported this review finding	No or very minor concerns	Minor concerns	No or very minor concerns	Moderate	Confidence in this finding was judged to be moderate due to minor concerns regarding the quantity of data. The minor concerns regarding methodological limitations were judged not to weaken the representation of the phenomenon

TABLE 3 (Continued)

Themes 1–4	Summary of review findings	Studies contributing to the review finding	Methodological limitations ^a	Coherence ^b	Adequacy ^c	Relevance ^d	Confidence in the evidence ^e	Explanation of CERQual-assessment
	Mutual understanding within the care team about the pain experience and management was promoted by established routines for sharing knowledge	Brown and McCormack (2006), Smith et al. (2015), Dähle et al. (2006), Idvall et al. (2008)	Minor concerns Two studies of moderate methodological quality and two of high methodological quality supported this review finding	No or very minor concerns	No or very minor concerns	No or very minor concerns	High	Confidence in this finding was judged to be high due to the fact that the minor concerns regarding methodological limitations were judged not to weaken the representation of the phenomenon

^aMethodological limitations: The extent to which there are concerns about the design or conduct of the primary studies that contributed evidence to an individual review finding.

^bCoherence: An assessment of how clear and well-supported or compelling the fit is between the data from the primary studies and a review finding that synthesizes that data.

^cAdequacy of data: An overall determination of the degree of richness and quantity of data supporting a review finding.

^dRelevance: The extent to which the body of evidence from the primary studies supporting a review finding is applicable to the context (perspective or population, phenomenon of interest, setting) specified in the review question.

^eConfidence—High confidence: It is highly likely that the review finding is a reasonable representation of the phenomenon of interest. Low confidence: It is possible that the review finding is a reasonable representation of the phenomenon of interest. Very low confidence: It is not clear whether the review finding is a reasonable representation of the phenomenon of interest (Lewin et al., 2018).

results. Exemplified by the patient being unable to receive information about how to self-administer analgesics while disoriented due to severe pain (Idvall et al., 2008). Not to wait for analgesics is also previously described as crucial (Brown & McCormack, 2006). The timing of care is a challenge in daily practice due to tight schedules and many competing demands, however, delivering care meeting patients fundamental care needs remains crucial and must be prioritized (Ball et al., 2018).

The results confirmed that contextual factors have a large impact on the outcome of pain management. Previous research has reported on contextual factors that hinder high quality of care, such as nursing leaders focusing on medical care rather than on nursing care (Tegelberg et al., 2019), organizational barriers such as shortness of patient beds (Tegelberg et al., 2020), and constant demands for increased efficiency and productivity (Jangland et al., 2017). Based on our findings, contextual factors—including strong nursing leadership—are crucial to successful pain management.

4.1 | Strengths and limitations

The systematic approach and inclusion of studies of high and medium quality from the nurse and patient perspectives from several countries, supported the review to be explicit, rigorous and reproducible (Owens, 2021). Although the search strategy was systematic and guided by an expert librarian, relevant studies may have been overlooked. However, studies from several countries and cultures were included, representing a range of contexts. Another strength of the synthesis was that quality appraisal was performed by two of the authors independently, using a validated appraisal tool (Swedish Agency for Health Technology Assessment and Assessment of Social Services, 2016). Furthermore, consensus discussions were performed throughout the entire process of choosing a search strategy, study screening, quality appraisal and data analysis (Owens, 2021). The strength of the confidence assessment was enhanced by the use of GRADE-CERQual (Lewin et al., 2018). A limitation of performing this assessment was that it was performed by one author independently (TA), however, discussed until consensus in the research team.

The range of methodologies used in the included studies could be considered a limitation of the synthesis. In order not to limit the results, we used thematic analysis remaining close to the results in each study when extracting the data. The synthesis of existing qualitative studies could be seen as essential to reach higher analytical goals and understanding a phenomenon across different countries and cultures. The method is used to enhance the transferability of results, to benefit more patients (Thomas & Harden, 2008). A strength of focusing the search on studies using qualitative methods was the rich data required to answer our research questions. The study applies the described strengths of qualitative synthesis to capture knowledge to improve patient care, by uncovering new understandings and helping build theory (Seers, 2015). The refined model for PCPM combines the strength of the scientific evidence

with a theoretical grounding in the FoC framework. This approach of linking theory to evidence and evidence to theory is argued to provide a solid review synthesis, to conclude what the literature shows (Owens, 2021).

5 | CONCLUSION

The refined model for PCPM links together the knowledge of pain management elements from nurse and patient perspectives across countries and cultures. Guided by the FoC framework, the model transforms this knowledge into actions and behaviours guiding practiced pain management. The holistic care process involves nurses to include the patient in the care through a trusting relationship, communicating to share knowledge and delivering timely pharmacological and non-pharmacological pain management. Leaders are guided to support this process. The confidence in the model encourages that it is tested and evaluated by nurses and nursing leaders in acute surgical care, to provide the patient with PCPM relieving the pain.

6 | RELEVANCE TO CLINICAL PRACTICE

The model links the knowledge of pain management elements from individual studies together into actions to be performed in clinical

practice. It also outlines the organizational support needed to make this happen. Nurses and nursing leaders are suggested to test the model to implement PCPM in clinical practice.

The model guides nurses to acknowledge the process of relationship-based integration of care, and leaders to provide organizational support enabling nurses to meet patients' pain management needs. By outlining the holistic process of actions to be performed by nurses, and contextual prerequisites to be secured by nursing leaders, our findings could be used as a comprehensive tool guiding the performance of PCPM, as presented in Figure 3. However, once applied, the model and its impact on patient care need to be evaluated. Future research to test the model empirically is suggested.

The clinical guidance of the model for PCPM was identified using the FoC framework (Feo et al., 2018; Kitson, 2018; Kitson et al., 2013). The results reaffirm the importance of the three dimensions in the FoC framework, the model reflecting the relationship-based integration of physical, psychosocial and relational fundamental care supported by the important contextual elements, related to pain management (Kitson, 2018). It has been identified that the framework does not sufficiently address the context in a manner of direct use for nurses (Mudd et al., 2020). The results confirm that this is an area to prioritize, showing that contextual factors are crucial to provide guidance and prerequisites needed to meet the fundamental care need of pain management.

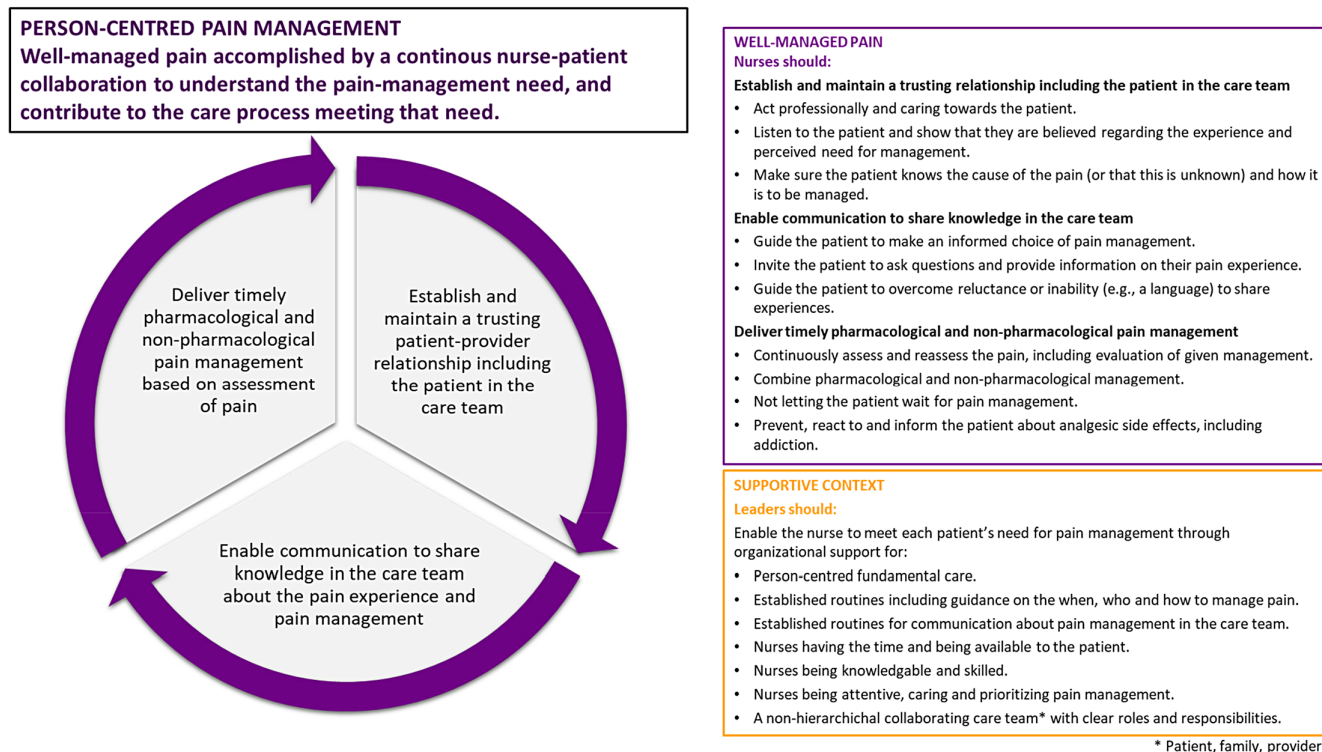


FIGURE 3 Person-centred pain management: The person-centred fundamental care process to accomplish well-managed pain includes a continuous nurse-patient collaboration to understand pain management needs and contribute to meeting those needs, with nursing leaders providing supporting contextual conditions. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/jocn.16770)]

AUTHOR CONTRIBUTIONS

Therese Avallin: Writing—original draft preparation/review and editing (lead), visualization (lead), validation (lead), methodology (lead), investigation (lead), formal analysis (lead), conceptualization (lead). Åsa Muntlin: Writing—review and editing (equal), visualization (equal), validation (equal), methodology (supporting), formal analysis (supporting), conceptualization (supporting). Alison Kitson: Writing—review and editing (equal), visualization (equal), validation (supporting), methodology (supporting), formal analysis (supporting), conceptualization (supporting). Eva Jangland: Writing—original draft preparation/review and editing (equal), visualization (equal), validation (lead), methodology (lead), investigation (equal), formal analysis (equal), conceptualization (lead).

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CONFLICT OF INTEREST STATEMENT

The authors have no conflict of interest to declare.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request. The data not provided are partly not in English language.

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SUPPORTING INFORMATION

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