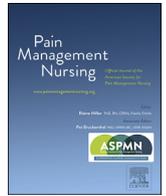




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Original Article

Facilitators, Barriers, and Solutions in Pain Management for Older Adults with Dementia

Alícia Minaya-Freire, PhD(c), MSc, RN ^{*,†}, Anna Ramon-Aribau, PhD [†],
 Gemma Pou-Pujol, RN ^{*}, Meritxell Fajula-Bonet, RN [‡],
 Mireia Subirana-Casacuberta, PhD, FEANS, MSN, RN ^{*,†}

^{*} University Hospital of Vic, Vic Hospital Consortium (HUV-CHV), Barcelona, Spain

[†] Research Group on Methodology, Methods, Models and Health and Social Outcomes (M3O), Centre for Health and Social Care Research (CESS), University of Vic-Central University of Catalonia (UVIC-UCC), Barcelona, Spain

[‡] Primary Care Center of Ripoll, Ripoll, Girona, Spain

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ABSTRACT

Background: Although qualitative studies have been conducted to identify barriers and facilitators that influence the pain management of older adults with dementia, as far as we know, only a very recent study (Andrews et al., 2019) has used participatory action research (PAR) as a methodology for studying pain management. It allows nurses to examine and improve their practice based on their realities and within their context.

Aim: To reflect on nursing practice and identify facilitators and barriers in the management of pain in older adults with dementia and to propose actions for improvement.

Design: We used qualitative participatory action research.

Participants/Settings: Ten nurses from the geriatric acute care unit of a university hospital in Spain were recruited through convenience sampling.

Methods: Data were generated through a written questionnaire and three focus groups.

Results: One of the main facilitators the participants identified was professional experience. The main barriers they identified were lack of knowledge and skills and lack of time. The participants proposed two main improvements: (1) a training program consisting of three courses (pain evaluation and management, dementia and pain, and pharmacology) and (2) the creation of a specific register for nurses to record patients' pain.

Conclusions: Involving nurses directly in research on their practices can result in precise proposals for improvements based on their needs and oriented toward improving the quality of care. Moreover, our results confirm previous findings in other countries.

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People over 60 years old account for almost 13% of the world's total population. An estimated 46.8 million people live with dementia worldwide, and their numbers are expected to increase (World Alzheimer Report, 2015). Increased life expectancy leads to an increase in age-related disorders, such as pain. It is estimated that in Spain, the prevalence of chronic pain in older people is 25%–75% for people living in the community and 83%–93% for people

living in nursing homes (Sáez López et al., 2015). It is difficult to estimate the prevalence of pain in older people with dementia, as they are often excluded from studies due to the difficulty of both assessing and treating pain in these patients. In addition, the few studies that exist are conducted with institutionalized patients. Patients admitted to an acute-care hospital—and especially those admitted to an Acute Geriatric Unit (AGU)—are rarely studied.

The assessment of pain in people with dementia is complex, because it is conditioned by the patient's ability to recognize and express pain (Álvaro González, 2010) and because it often manifests itself through behavioral changes that professionals may misinterpret or fail to identify as indicators of pain (Karlsson et al., 2015). Pain can trigger or increase neuropsychiatric symptoms such as

Address correspondence to Anna Ramon-Aribau, PhD, Centre for Health and Social Care Research (CESS), University of Vic-Central University of Catalonia (UVIC-UCC), C. Sagrada Família, 7, 08500, Vic, Barcelona, Spain.

E-mail address: anna.ramon@uvic.cat (A. Ramon-Aribau).

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agitation, restlessness, and depression (Regier & Gitlin, 2018) that are more associated with dementia than the presence of pain. Consequently, treatment focuses on behavioral control rather than pain management (Gilmire-Bykovskiy & Bowers, 2013; Kovach, et al., 2000; Regier & Gitlin, 2018). In addition, these patients often have multiple pathologies and are polymedicated, a situation that conditions the treatment because of possible side effects and drug interactions (Eiche & Schache, 2016; Sáez López et al., 2015).

Nurses play a key role in pain management, including detection, monitoring, record-keeping, treatment through pharmacological and nonpharmacological methods, monitoring the results of interventions, and anticipating possible side effects (Montoro-Lorite & Canalias-Reverter, 2015; Registered Nurses Association of Ontario, 2013).

In this research, we place value on the knowledge, experience, and opinions of nurses. We asked nurses to adopt a critical perspective so that they could propose improvements adapted to their context and to the resources available.

A range of studies have examined what facilitates pain management. Some authors indicate that the stability of the team and collaboration within the team and are important facilitators. The stability of the team allows greater knowledge of patients' conditions and routines, facilitates the detection of changes, and ensures the continuity of care (De Witt Jansen et al., 2017a; Karlsson et al., 2015; Monroe et al., 2015). Positive relationships among professionals motivate knowledge-sharing and lead to better patient outcomes and greater job satisfaction for professionals (De Witt Jansen, et al., 2017a,b).

Other research describes the barriers that make it difficult to manage pain optimally. These barriers are related to the patient (difficulty assessing pain in patients with cognitive impairment, dementia, or reluctance to take medications due to side effects) or to the organizational system of health facilities, especially in the acute setting, where lack of time, the number of patients per unit, and shift work hinder the pain management process. The patient in the acute-care hospital is cared for by many different people during the day, which limits the continuity of care and the establishment of trust (often necessary for a patient to report pain) (Coker et al., 2010, 2008; Karlsson et al., 2015; Lichtner et al., 2016; Monroe et al., 2015).

Another set of studies examines barriers related to professionals and their expectations regarding pain. Surgical patients are expected to have pain, and their pain tends to be treated as a matter of routine and almost always exclusively with pharmacological methods (Gilmire-Bykovskiy & Bowers, 2013; Lichtner et al., 2016). But nonsurgical patients might not be examined or treated for pain. Another factor is that nurses receive little training in dementia, which can also affect how they manage pain in patients with dementia (De Witt Jansen et al., 2017a,b).

Although qualitative studies have been conducted to identify barriers and facilitators that influence the pain management of older adults with dementia, as far as we know, only a very recent study (Andrews et al., 2019) has used participatory action research (PAR) as a methodology for studying pain management. PAR is a collective, self-reflexive form of research that enables understanding and improvement of practice based on real situations experienced by participants and advocates that those being researched should be actively involved (Baum, Macdougall, & Smith, 2006). In this case, it allows nurses to examine and improve their practice based on their realities and within their context. The fact that the nurses propose the actions makes it likely that they can be carried out more easily (Abad, Delgado, & Cabrero, 2010; Bush et al., 2017).

The purpose of this study was to identify facilitators, barriers, and possible improvements in the pain management of older

patients with dementia who were cared for in an AGU in Spain by involving nurses in research, with the aim of proposing actions for improvement.

Method

Design

Qualitative PAR, according to a model introduced by Kemmis & McTaggart (1988, 2000), consists of cycles within a spiral. It includes four stages: reconnaissance, planning, enacting the plan and observing how it works, and reflection. This article describes the results of the first two stages. PAR starts from the premise that people are able to learn, change, and transform their world, and that to do so, they must participate actively. Other research shows that participating in decision-making about changes can promote teamwork (Abad et al., 2010; Bush et al., 2017; Freire, 2012; Kemmis & McTaggart, 1988, 2000).

PAR allows participants to reflect on their own practice. It also makes it possible to address the problem under study through improvements proposed by the people who are directly involved (Kemmis & McTaggart, 1988, 2000). Furthermore, it is more likely that nurses will adopt new practices more easily when they have helped design them. Finally, PAR improves the relationships among participating members so that they can share their experiences, beliefs, and knowledge (Abad et al., 2010; Bush et al., 2017).

Setting and Sample

The study population consisted of nurses at the AGU of a university hospital in the province of Barcelona (Spain) who had at least 1 year of experience as a nurse in the hospital. The AGU is a specialized geriatric patient care unit that was launched in 2013 and includes all patients presented at least one of the following situations: aged ≥ 85 years, cognitive impairment, advanced chronic conditions, or who are institutionalized. It consists of 24 beds and a staff of 18 nurses divided into three shifts, and a ratio of one nurse for 12 patients. Although there were a few younger patients with dementia at the unit, the average age was 88 years.

Participant Recruitment

We used convenience sampling, inviting all of the nurses from the AGU to participate in the study, with the goal of achieving a sample diverse in age, professional experience, and shift. The first contact with potential participants was made via institutional email. The email described the study, its objectives, and the nature of participation and invited the recipient to participate voluntarily. During recruitment, the principal investigator (PI) visited the AGU on different days of the week and at different times to answer questions and encourage the nurses to participate in the study. The final sample consisted of the 10 nurses who agreed to participate.

Data Collection

In phase 1, the goal was to reflect on nursing practice about pain management for older adults with dementia to identify facilitators and barriers. We devised a written questionnaire with open-ended questions and sent it via email to the participants. The questionnaire contained sociodemographic items (age, sex, experience at the center and unit, shift, additional training in geriatrics, pain, and dementia) and questions about how participants managed pain in patients with dementia (Table 1). Our objective in using the questionnaire was to understand nurses' views of the facilitators and barriers to pain management. The fact that the questions were

Table 1
Questionnaire With Open-Ended Questions, Phase I

1. Can you explain how you communicate with patients with dementia about pain? Do you introduce yourself? What do you say? Do you use the patient's name? What language or words do you use to ask them about pain? Is it different from the language you use with people without dementia? What do you ask the patient about pain? What do you explain about pain? How long do you think the conversation lasts?
2. Do you introduce yourself to the family and caregivers? What do you ask them about their family member's pain? What information do you give them about their family member's pain?
3. What things do you do for your patients' pain? Is it enough? Do you always do the same things for each patient, or do you individualize your actions based on the patient and/or the situation? Do you follow a protocol? How do you decide which actions to take?
4. What is your role in managing pain within the team? Do you think the staff works as a team to manage patients' pain? Do you think nurses and physicians work as a team? Do you think nurses from different shifts work as a team? Do you think nurses and nursing assistants work as a team? On what or whom does the ability to work as a team depend? What information about pain do you share (either orally or in writing) with other staff members?
Do you feel valued within the team in relation to the treatment of pain?

open-ended enabled us to observe what language participants used to write about pain. An additional objective was to provoke individual reflection on the subject. We analyzed the responses and prepared an initial report describing the themes that emerged from the questionnaires. Next we carried out a discussion group to explore and clarify the different points of view and get a deeper sense of participants' knowledge, individually and collectively, by observing interactions among participants. The guide for the discussion group was developed from the answers to the questionnaire (Table 2). Nine of the 10 participants attended the phase 1 discussion group.

Our goal in phase 2 was to have the nurses propose ideas for how to improve pain management in older adults with dementia. For this phase, we conducted two additional discussion groups. In Phase 2, we did not use a discussion guide because the conversation was designed to be more open-ended and participant-directed. Six participants attended the first discussion group of phase 2 (the rest were unable to attend). The session began with the review and approval of the consensus document from phase 1, in which the facilitators and barriers emerging from the questionnaires were detailed. The participants were divided into two work groups to study the document and propose actions they thought could improve pain management for these patients. Later, the two groups discussed their work together and reached a consensus on the actions that should be carried out. The research team collected the proposals in a document that it sent back to all participants by email. The nurses who had not been able to attend gave their opinions about the decisions made by their colleagues. Since some disagreement ensued, we decided to hold another focus group in order to arrive at a greater consensus. This session had the same structure as the previous one. It was attended by six participants (three who had attended the previous session and three who had not).

The discussion groups of the two phases were moderated by the PI (Ph.D. student and postgraduate in geriatrics), who was a nurse at the hospital. Two observers took notes on nonverbal communication and interactions between the participants. The discussion groups were held at meeting rooms in the hospital to facilitate attendance (since the participants lived in different areas around the county).

Table 2
Prompts for First Focus Group, Phase I

1. Do you think we professionals attach enough importance to pain, especially in patients with dementia? Is it important to you?
2. What other aspects do you consider important when you are introducing yourself to/meeting the patient and the family?
3. How do you identify pain in a person with dementia? Are there factors that make it difficult to know if a patient with dementia has pain? What do you do to overcome these obstacles?
4. What interventions are performed to manage pain? Do they need to be individualized or protocolized? Do you think it's important to inform/educate the family? Is pain evaluated and managed correctly?
5. What is teamwork for you? Who should be part of the team responsible for pain management? Do staff members work as a team?
6. What do you think about record-keeping for pain? Describe your experiences when you tell other team members about a patient's pain.
7. What other aspects make pain management difficult?

We scheduled the discussion groups using the Doodle online scheduling platform. We set the minimum number of participants at five. The meetings lasted 90 minutes (as agreed ahead of time with participants). The discussion groups were audiorecorded. After each session, the moderator and observers met to share their perceptions, identify problems, and plan improvements for the next session.

Data Analysis

The recordings were transcribed verbatim by the PI who recognized the voices of the participants. Next, the observers reviewed the transcripts. We conducted a narrative analysis of the recordings. Qualitative analysis was structured in three phases: (1) detailed and thorough reading of the data, (2) mixed coding (thematic and open) of the data, and (3) regrouping the codes into subcategories, to be assigned a label with a broader level of meaning. Once elaborated, the subcategories were grouped into categories with a broader level of abstraction and from which the central themes of the study emerge (Miles & Huberman, 1994).

We focused on describing and analyzing the participants' explicit statements, while keeping in mind the theoretical framework and the study objectives. We wrote a report for each phase, and these were approved by the participants. Some example quotes to have been provided for each theme to guarantee scientific rigor (Lincoln et al., 2011).

Ethical Considerations

Our study received approval from the Clinical Research Ethics Committee of the Osona Foundation for Health Research and Education. Participants signed an informed consent form for their voluntary participation in the study, including being recorded. To maintain confidentiality, we substituted each participant's name with a numerical code in the documents and meeting transcripts. It was not possible to offer the participants anonymity because of the participatory nature of the discussion groups.

Results

All participants were women, and they had an average age of 37.6 years (± 10). They had been working at the hospital for an average of 15 (± 11.2) years, including 3.8 (± 1.3) years in the AGU. Four participants worked the night shift, two participants worked the afternoon shift, and four participants covered both morning and afternoon shifts. Three had training in geriatrics; one in geriatrics and pain; one in dementia; one in geriatrics, pain and dementia; and four had no specialized training in any of these areas. [Table S1 of Supplementary Material](#) shows the topics identified, with some examples from the questionnaire and discussion groups not described in the text.

Facilitators

Adaptation of Pain Assessment to the Patient's Condition

The participants reported that when they asked patients about pain, they used nonverbal language to signal parts of the body, to enable the patient to more easily understand the question:

"When I ask if they are in pain, I point to the part of the body I'm referring to" (NurseAGU07).

They also reported trying to adopt a pleasant tone of voice to facilitate a calm environment in which the patient feels comfortable answering: "In these patients I always try to maintain a soft tone of voice because it helps them relax if they're anxious or really disoriented. And that way I'm able to do the assessment properly" (NurseAGU10).

Professional Experience

According to the most senior participants, experience was a facilitator, since in handling a given situation they could draw on the outcomes they had observed in situations in the past. For example, they reported that experience helped in deciding whether to use drugs or nonpharmacological measures.

For example, in those [patients with a fractured] femur, if we have it [morphine chloride] there conditionally... but of course we have the anti-inflammatory Nolotil. That same morphine you have to give it earlier, first thing, because after the acetaminophen, when the patient is agitated, the morphine isn't going [to do anything]. And it works, but it's a matter of doing [things over time]. (NurseAGU02).

In other words, the participant pointed out that a less experienced nurse might follow the protocol of beginning with acetaminophen and moving up the scale of drug strength, as necessary, to Nolotil, followed by morphine. The more experienced nurse, on the other hand, knows that with this kind of patient, the pain is so intense that morphine should be given immediately.

The Support and Collaboration of the Primary Caregiver

The participants considered the primary caregiver to be a source of information about the patient's pain and a good source of support for managing it. They reported that the caregiver was the person most familiar with the patient and his or her symptoms: "They more than anyone know the patient and know how they usually behave" (NurseAGU03).

For that reason, participants consulted with the primary caregiver when they had doubts about the presence of pain and asked them to collaborate in detecting pain:

I tell them [the caregivers] that, in the event that they see that [the patient] is uneasy or that they're in pain, to let me know so that I can give them analgesia, since they're by their side more and therefore they can detect pain faster. (NurseAGU04).

Barriers

Cognitive Impairment

According to the participants, the patient's difficulty in expressing and describing pain was an important barrier that forced them to evaluate these patients differently from patients without dementia:

In cases of dementia patients it's difficult for me to ask the question about pain and to be answered correctly. Often we have to rely on their facial expression. The conversation can be tricky to follow when they have moments when they disconnect or they don't understand what they're being asked. (NurseAGU06).

Patient's Institutionalization Decreases the Family's Collaboration in Pain Management

The participants reported that when patients became institutionalized, family members disengaged from providing care and therefore from managing pain.

If they're in a nursing home, the family doesn't want to know anything about it anymore. [They tell you], "Well, ok, just do it, just do it [whatever is necessary for managing the pain]; we're going out to get a coffee." (NurseAGU08).

Pain is Not Considered the Fifth Constant

When we asked participants if they thought professionals gave sufficient importance to pain, they answered affirmatively. However, as the discussion went on, they confirmed that pain was not considered the fifth constant (alongside the four vital signs of blood pressure, heart rate, temperature, and respiratory rate), because the subjectivity of the symptom made it less credible than other parameters that can be measured, like blood pressure or temperature: "We consider pain to be very important, but in our records we don't consider it to be the fifth constant. We don't give it the importance we give to blood pressure" (NurseAGU02).

Lack of Time and Work Overload

According to the participants, lack of time and work overload conditioned the way they evaluated pain and applied non-pharmacological interventions: "I think the conversation [for evaluating pain] doesn't last more than 3 minutes. Probably for lack of time and perhaps it's not given the necessary importance" (NurseAGU05).

The participants reported an under-recording of pain intensity and of pain management care due to lack of time: "I think that we also lack time... You don't have enough time to be able to see the patients and then be able to record everything" (NurseAGU01).

Lack of Knowledge or Skills

The participants reported a lack of training in dementia and pain. They also believed that this lack of knowledge or skills negatively affected the care they provided to patients. To the question of whether they were trained in dementia, one of the participants replied:

In dementia we are light years away, and during the night [shift] even more. We're doing it really badly [with] confusional syndrome. And we're doing a really bad job, we're doing a bad job in the AGU. I don't want to even think about the other places [other units of the hospital]. (NurseAGU02).

There is also little knowledge about multimodal analgesia and the action of some pain management drugs:

Nursing, sometimes we're not up to the task because, for example, there is a patient who, according to the type of chronic pain, takes Neurontin... and takes acetaminophen and that acetaminophen is coadjuvant with the other treatment. So it's decided: No, it's ok! [He's not in pain]. We won't give [the acetaminophen] to

him. And it's the nurse who decides it and... that's totally incorrect (NurseAGU02).

In other words, according to this participant, some nurses aren't aware that they should administer the coadjuvant drug even if the patient isn't currently showing signs of pain.

Lack of knowledge also limits the information that the nurse provides to patients and caregivers and conditions the use of nonpharmacological interventions for pain management.

Instability and Lack of Communication within the Team

The participants reported that pain management should be multidisciplinary and that communication and consensus are key for teamwork. Some participants thought that the care team (nurse and nursing assistant) worked together successfully in general, but that the degree of cooperation depended on each professional, and on the degree of trust and communication between team members: "I think that we work pretty much as a team, even though in some professionals the lack of communication interferes in this teamwork and keeps it from being effective and efficient" (NurseAGU06).

The participants reported differences between shifts, because the morning shift was the only shift to hold multidisciplinary team meetings, during which the team set shared objectives: "I've never been to a meeting at night" (NurseAGU09).

Proposals for Change

In Phase 2, the nurses reviewed the facilitators and barriers that emerged from Phase 1 and proposed possible solutions, on which they worked together until reaching the maximum degree of consensus. Some of these solutions depended on the management of the center, such as lack of time and low nurse/patient ratios. For now, we set aside the proposals requiring large-scale restructuring and the expenditure of significant resources and instead focus on those that are better fitted to the available logistical and financial resources.

Training Plan

The nurses proposed a training plan that would improve their skills in pain management and decrease the variability in the practice of different nurses based on their needs. Specifically, after discussing various possibilities, they proposed three courses: pain evaluation and management, dementia and pain, and pharmacology. The following are some of the comments that they made during the discussion:

We would like to know a little bit about, for example, [type of] pain, location, the difference between acute abdomen and another strong pain [in the abdomen] and all of that. (NurseAGU09).

In terms of training [in dementia], the type of dementia... what you can expect from this type of patient. If they're in the first stage of dementia they're a person who's very autonomous, but if they have GDS5, what can I expect of them? (NurseAGU06).

The participants' proposal included three face-to-face courses held during the work day and taught by expert nurses and a pharmacist (in the case of the pharmacology course). The participants wanted courses focused on knowledge that they could apply in their daily practice: "Pharmacology shouldn't be taught by geriatricians.... [We need the] vision of a pharmacist.... Maybe in other places they use a different array [of drugs] and we're limited here by a lack of training" (NurseAGU02).

Pain Register

The participants also proposed the creation of a pain management register within the patient's chart (after the courses were conducted) to encourage the recording of nursing interventions for

pain and continuity of care. According to the participants, lack of time made it difficult to document pain. They therefore suggested the creation of a specific pain management register where they could record their comprehensive pain assessment quickly and easily (currently only pain intensity is recorded). They thought this change would foster planning and continuity. The hospital has an electronic nurse care registration system that allows incorporation of validated scales and tests. The objective of the creation of the specific registry is to integrate in a single register all the information related to the integral assessment of pain.

A specific [pain] register. I would design it so that you specify the type of pain more... and especially the location (NurseAGU06).

It should be something simple. And if it's individual [that is, recorded for certain patients, as deemed necessary by the nurses, rather than required for all patients], we should be able to enter it if it's very important and everyone should be able to see it. (NurseAGU07).

Discussion

Our participants identified professional experience as a facilitator in the treatment of pain, as did [Monroe et al. \(2015\)](#). The participants with more years of clinical practice showed less reluctance to administer opioids and reported intervening more to improve the patient's comfort. The use of nonpharmacological therapies was related to learning from what had and had not worked in the past. This finding is in line with [Benner \(2014\)](#)'s assertion that knowledge accumulates over time and is developed through experiential learning, reasoning, and reflection about concrete situations that arise during practice.

The participants expressed difficulty in assessing pain in people with dementia, due to a lack of knowledge about dementia and its main symptoms and how it affects the patient's ability to recognize and express pain. They also linked variability in the application of drug treatment and comfort care to the lack of awareness of the actions of various drugs (especially adjuvants), to a lack of training in nonpharmacological therapies, and to a fear of administering opioids. The fact that patients and caregivers often lacked education in pain management was also associated with a lack of training in professionals.

This finding coincides with that of several authors, who find that lack of training is a barrier to effective pain management for patients with dementia. [Lichtner et al. \(2016\)](#) report that nurses lack training in dementia and pain management because of institutions' lack of resources and because nurses must usually seek training in their personal time. [De Witt Jansen et al. \(2017a,b\)](#) highlight the necessity for continuing education with the goal of improving knowledge and practical skills for assessing and treating pain, based in the needs of professionals. They propose using case studies and mentoring by more experienced nurses in a face-to-face format (not e-learning). [Keen et al. \(2017\)](#) show that a short, specific educational program adapted to the needs of nurses can be an effective way to improve their knowledge of and attitudes about pain management. In our study, nurses have had the opportunity to identify their training needs for improving their practice and propose a training plan tailored to their priorities.

Our participants reported that they did not have sufficient time to assess and record pain appropriately, to apply non-pharmacological treatments, or to educate patients and caregivers about pain. They linked their lack of time to the number of patients cared for by each nurse and to their work routines. [Lichtner et al. \(2016\)](#), [Dowding et al. \(2016\)](#), and [Manias \(2012\)](#) report similar results with nurses working with patients with dementia in acute-care hospitals. In these studies, nurses explained that the time available for evaluating pain was insufficient and the division of

work into shifts meant that the patient didn't always report his or her pain to the same nurse. Nurse-patient ratios affect quality of care and patient safety (Aiken, Clarke, & Sloane, 2002).

The nurses who participated in our study proposed a training plan adapted to their own needs and not imposed by hospital management, as usually happens when training is offered to nurses. They also proposed the creation of a pain register that would facilitate the recording of the comprehensive pain assessment and care plan. This measure would address the under-recording and disorganized recording reported by other authors (Lichtner et al., 2016).

Limitations

A qualitative study design means that results cannot be generalized. However, they reflect what happens in our context and can be useful for similar ones, and moreover could allow the identification of patterns that can be explored in depth in future studies. Another limitation is that our participants were not trained in cases discussion or in the evaluation of research results.

This lack of training could make it difficult to critically assess their practice as well as to discuss team clinical practice. Furthermore, far fewer nurses participated compared to the overall number of nurses taking care of patients in the unit under study. This low level of participation could be related to several reasons, such as a culture not focused on the need for nursing research, a lack of time to participate in research activities, the fact that the study took place outside the nurse's schedules, and the high workload in the different nursing shifts. These factors could also have influenced the study outcomes. On the other hand, this project did not have funding to contract a transcription service, and the research group was responsible for transcribing and analyzing the data, which may have introduced some bias in the results of the project. Although the fact that the PI conducted the focus group, analyzed data, and knew the nurses could be considered a bias, it is not a limitation because the PI has an extensive background in nursing research.

Conclusion

In our PAR, nurses identified the main facilitators and barriers in managing pain in older adults with dementia. As a solution, they proposed courses on pain evaluation and management, dementia and pain, and pharmacology. They also recommended the creation of a specific register for pain within the nursing chart for each patient.

Involving nurses directly in research on their practices can result in precise proposals for improvements, based on their needs and oriented toward improving the quality of care. Using the results of this analysis as a baseline, we are currently planning the third and fourth stages of the PAR, which include enacting and observing the actions proposed (courses and pain register) and evaluating these actions and the PAR process as a whole.

Managing pain in older adults with dementia in an AGU is complex. Our methodological approach (PAR) and the participants' proposals (specific training and a pain register) may be useful to professionals in similar units struggling with pain management in this population.

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Supplementary Data

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References

- Abad, E., Delgado, P., & Cabrero, J. (2010). La investigación-acción-participativa. Una forma de investigar en la práctica enfermera. *Investigación y Educación En Enfermería*, 28(3), 464–474.
- Aiken, L. H., Clarke, S. P., & Sloane, D. M. (2002). Hospital staffing, organization, and quality of care: Cross-national findings. *Nursing Outlook*, 50(5), 187–194.
- Álvaro González, L. C. (2010). El neurólogo frente al dolor en la demencia. *Neurología*, 30(9), 574–585.
- Alzheimer's Disease International. (2015). *World Alzheimer Report 2015: The Global Impact of Dementia*. London.
- Andrews, S. M., Dipnall, J. F., Tichawangana, R., Hayes, K. J., Fitzgerald, J. A., Siddall, P., Poulos, C., & Cunningham, C. (2019). An Exploration of Pain Documentation for People Living with Dementia in Aged Care Services. *Pain Management Nursing*, 20(5), 475–481. <https://doi.org/10.1016/j.pmn.2019.01.004>.
- Baum, F., Macdougall, C., & Smith, D. (2006). Participatory action research. *Journal of Epidemiology and Community Health*, 60(10), 854–857.
- Benner, P. (2014). Cuidado, sabiduría clínica y ética en la práctica de la enfermería. In M. Raile (Ed.), *Modelos y teorías en enfermería* (8th ed., pp. 118–144). Barcelona: Elsevier.
- Bush, P. L., Pluye, P., Loignon, C., Granikov, V., Wright, M. T., Pelletier, J. F., ... Repchinsky, C. (2017). Organizational participatory research: A systematic mixed studies review exposing its extra benefits and the key factors associated with them. *Implementation Science*, 12, 119.
- Coker, E., Papaioannou, A., Kaasalainen, S., Dolovich, L., Turpie, I., & Taniguchi, A. (2010). Nurses' perceived barriers to optimal pain management in older adults on acute medical units. *Applied Nursing Research*, 23(3), 139–146.
- Coker, E., Papaioannou, A., Turpie, I., Dolovich, L., Kaasalainen, S., Taniguchi, A., & Burns, S. (2008). Pain management practices with older adults on acute medical units. *Perspectives*, 32(1), 5–12.
- De Witt Jansen, B., Brazil, K., Passmore, P., Buchanan, H., Maxwell, D., McIlfatrick, S. J., ... Parsons, C. (2017a). Nurses' experiences of pain management for people with advanced dementia approaching the end of life: a qualitative study. *Journal of Clinical Nursing*, 26(9–10), 1234–1244.
- De Witt Jansen, B., Brazil, K., Passmore, P., Buchanan, H., Maxwell, D., McIlfatrick, S. J., ... Parsons, C. (2017b). Exploring healthcare assistants' role and experience in pain assessment and management for people with advanced dementia towards the end of life: a qualitative study. *BMC Palliative Care*, 16(1), 6.
- Dowding, D., Lichtner, V., Allcock, N., Briggs, M., James, K., Keady, J., ... Closs, S. J. (2016). Using sense-making theory to aid understanding of the recognition, assessment and management of pain in patients with dementia in acute hospital settings. *International Journal of Nursing Studies*, 53, 152–162.
- Eiche, J., & Schache, F. (2016). Pain management in geriatric patients. *Deutsche Medizinische Wochenschrift*, 141(9), 635–641.
- Freire, P. (2012). *Pedagogía del Oprimido* (2nd ed.). Madrid: Siglo XXI de España Editores.
- Gilmore-Bykovskiy, A. L., & Bowers, B. J. (2013). Understanding nurses' decisions to treat pain in nursing home residents with dementia. *Research in Gerontological Nursing*, 6(2), 127–138.
- Karlsson, C. E., Ernst Bravell, M., Ek, K., & Bergh, I. (2015). Home healthcare teams' assessments of pain in care recipients living with dementia: A Swedish exploratory study. *International Journal of Older People Nursing*, 10(3), 190–200.
- Keen, A., McCrate, B., McLennon, S., Ellis, A., Wall, D., & Jones, S. (2017). Influencing nursing knowledge and attitudes to positively affect care of patients with persistent pain in the hospital setting. *Pain Management Nursing*, 18(3), 137–143.
- Kemmis, S., & McTaggart, R. (1988). *Cómo planificar la investigación-acción*. Barcelona: Laertes, D.L.
- Kemmis, S., & McTaggart, R. (2000). Participatory action research. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 567–605). California: Sage Publications.
- Kovach, C. R., Griffie, J., Muchka, S., Noonan, P. E., & Weissman, D. E. (2000). Nurses' perceptions of pain assessment and treatment in the cognitively impaired elderly: It's not a guessing game. *Clinical Nurse Specialist*, 14(5), 215–220.
- Lichtner, V., Dowding, D., Allcock, N., Keady, J., Sampson, E. L., Briggs, M., ... Closs, S. J. (2016). The assessment and management of pain in patients with dementia in hospital settings: A multi-case exploratory study from a decision making perspective. *BMC Health Services Research*, 16(1), 427.
- Lincoln, Y. S., Lynham, S., & Guba, E. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. In N. Denzin, & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (4th ed., pp. 97–129). Sage.

- Manias, E. (2012). Complexities of pain assessment and management in hospitalised older people: A qualitative observation and interview study. *International Journal of Nursing Studies*, 49(10), 1243–1254.
- Miles, M. B., & Huberman, A. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage.
- Monroe, T. B., Parish, A., & Mion, L. C. (2015). Decision factors nurses use to assess pain in nursing home residents with dementia. *Archives of Psychiatric Nursing*, 29(5), 316–320.
- Montoro-Lorite, M., & Canalias-Reverter, M. (2015). Dolor y demencia avanzada: Revisión bibliográfica. *Gerokomos*, 26(4), 142–147.
- Regier, N. G., & Gitlin, L. N. (2018). Dementia-related restlessness: Relationship to characteristics of persons with dementia and family caregivers. *International Journal of Geriatric Psychiatry*, 33(1), 185–192.
- Registered Nurses' Association of Ontario. (2013). *Assessment and Management of Pain (Third Edition). Clinical Best Practice Guideline, (December)*, 97-99. Retrieved from http://rnao.ca/sites/rnao-ca/files/AssessAndManagementOfPain_15_WEB-FINAL_DEC_2.pdf. (Accessed 28 February 2019).
- Sáez López, M. P., Sánchez Hernández, N., Jiménez Mola, S., Alonso García, N., & Valverde García, J. A. (2015). Valoración del dolor en el anciano. *Revista de la Sociedad Española del Dolor*, 22(6), 271–274.