

Advancing the pain management in older adults agenda forward through the development of key research and education priorities: A Canadian perspective

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ABSTRACT

Background: The undermanagement of pain in older adults has been identified as a problem worldwide.

Aims: The purpose of this research is to identify priority areas in education and research for future development with the aim of improving pain management in older persons. In addition, barriers to addressing these priorities are identified.

Methods: This mixed methods study, based on a modified Delphi approach, included three distinct components: (1) a qualitative component using focus groups with key informants or experts in the field of pain management in older adults ($n = 17$), (2) a scoping review of the literature, and (3) a survey of ranked responses completed by the same key informants who attended the focus groups. Thematic analysis was used to identify the initial list of issues and descriptive statistics were used for ranking them.

Results: A number of concerns related to both education and research were frequently endorsed by participants. For education, they identified the need for more content in both undergraduate and continuing education programs related to documenting about pain; assessing pain, and learning about the complexities of pain. Research priorities included the need to explore successful practice models; costs of untreated pain; effects of mobility on pain; and patient preferences for pain management. Key barriers to addressing these barriers included lack of staff time and resources and unfamiliarity with pain assessment tools.

Conclusion: These findings highlight priority issues related to pain management in older adults from a nationwide perspective.

RÉSUMÉ

Contexte : La prise en charge insuffisante de la douleur chez les adultes plus âgés est considérée comme un problème partout dans le monde.

But : Le but de cette étude est de définir les priorités en matière d'éducation et de recherche pour l'avenir, dans le but d'améliorer la gestion de la douleur chez les personnes plus âgées. De plus, les barrières existantes pour aborder ces priorités sont répertoriées.

Méthodes : Cette étude à méthodologie mixte, fondée sur un processus Delphi modifié, comprenait trois composantes distinctes : (1) une composante qualitative ayant recours à des groupes de discussion réunissant des informateurs clés ou des experts du domaine de la gestion de la douleur chez les adultes plus âgés ($n = 17$); (2) une revue exploratoire de la littérature, et (3) un sondage comprenant des questions à réponses multiples hiérarchisées à laquelle ont répondu les mêmes informateurs qui avaient participé aux groupes de discussion. Une analyse thématique a ensuite été utilisée pour dresser la liste initiale de problèmes, qui ont ensuite été classés de manière hiérarchique à l'aide de statistiques descriptives.

Résultats : Certaines préoccupations liées à la fois à l'éducation et à la recherche ont souvent été mentionnées par les participants. Pour l'éducation, ils ont relevé le besoin d'inclure davantage de contenu portant sur la documentation de la douleur, l'évaluation de la douleur et l'apprentissage des complexités de la douleur, tant dans les programmes de premier cycle que dans les programmes d'éducation permanente. Les priorités de recherche comprenaient la nécessité d'étudier les modèles de pratique qui ont connu du succès; les coûts de la douleur non traitée; les effets de la mobilité sur la douleur ; et les préférences des patients en matière de gestion de la douleur. Les barrières clés pour aborder ces questions comprenaient : le manque de personnel, de temps et de ressources, ainsi que la méconnaissance des outils d'évaluation de la douleur.

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Conclusion : Ces résultats mettent en relief les questions prioritaires liées à la gestion de la douleur chez les adultes plus âgés, dans une perspective nationale.

Introduction

The population continues to age with those aged 80 and more, representing the fastest growing segment of the population.¹ In 2009 there were roughly 1.3 million people aged 80 or over, and this may increase to 3.3 million by 2036.¹ With this aging population, pain management associated with many chronic health conditions will likely become an important focus of care.² However, national attention needs to be focused on developing and evaluating innovative strategies to address pain management in this vulnerable population.

Numerous studies have shown that 30%–83% of older adults experience pain, with the highest rates in long term care (LTC).^{3–7} Patel et al. found that 71% of nursing home residents complained of pain.³ Despite these high rates of pain in older adults, pain is consistently undertreated.^{8–10} Untreated pain has both physical and psychological consequences, including weight loss, sleep disturbance, decreased functional abilities, deconditioning, increased falls, impaired mobility, depression, loneliness, anxiety, behavioral disturbance, and overall decreased quality of life.^{10–13} Hence, the problem of untreated pain warrants attention.

Pain management is particularly difficult to assess and treat in those older adults who have cognitive impairments.^{14,15} Residents with cognitive impairments are at risk for experiencing needless pain and suffering that can compromise their remaining abilities and result in declining quality of life. Horgas and Tsai¹⁶ used a correlational study to examine the use of analgesics in a sample of 339 residents from four nursing homes. They found that residents with cognitive impairment were prescribed and administered significantly less analgesic medication compared to cognitively intact elderly. Mezinskis et al. found that, in a chart review of 307 residents with cognitive impairment from 14 LTC facilities, fewer medications were ordered for residents with greater impairment.¹⁷ In addition, they found that the probability of receiving a pro re nata (prn or as needed) pain medication was significantly lower among residents with greater impairment in their ability to (1) make themselves understood and (2) understand others; the probability of receiving pain medication decreased with increasing levels of impairment. These findings are congruent with other research^{11,18,19} indicating that residents with cognitive impairments are particularly vulnerable to untreated pain and suffering.

It is believed that the problem of pain undertreatment in seniors with cognitive impairments is mainly due to challenges in the assessment of pain in this population.^{20–23} Indeed, pain assessment has proven to be a very difficult task for health care workers, largely as a result of the dementia-related impaired ability to communicate the subjective state of pain. As a result, the assessment of pain in older adults with cognitive impairment has become a topic of concern for both health care workers and researchers, which is evidenced by the emergence of a number of pain assessment tools for older adults in the literature over the past decade as well as systematic reviews of these tools.^{11,20,24,25}

Clinician beliefs and attitudes about pain also play a role in how decisions are made about treatment options for older adults. For example, research has indicated that opioid medications are underutilized in seniors, particularly those with cognitive impairment.^{22,26,27} In a cross-sectional study with a sample of 92 residents in LTC, Allen et al. found that seniors who spent more time in verbal interaction with others were given more opioid medication ($r = 0.22$, $P = 0.03$).²⁶ The contention that both nurses and physicians are reluctant to use opioids in LTC residents was supported, especially for those residents with cognitive impairment who were deemed nonpalliative.²² For example, a registered nurse said,²² “We tend to focus too much on pain control for palliation as opposed to just everyday clients ... certainly nobody wants to die in pain but nobody wants to live in pain either.” Weissman and Matson found a widespread fear of treating pain without understanding the exact cause of pain, along with concern about overmedication and drug toxicity, especially for those seniors with cognitive impairment.²⁸ Other barriers to effective pain management in LTC have been identified in the literature, including poor documentation, lack of interdisciplinary collaboration, poor nurse–physician communication, poor knowledge transfer, limited time, and resident and family knowledge and attitudes.^{29–31} The most commonly reported barrier is the lack of knowledge among care providers.^{7–9,12,16,18,22} Although a great deal of work has been conducted over the past couple of decades focusing on improving pain management in older adults, both nationally and internationally, pain practices illustrate that more work is still needed. In response to this need, a group of national leaders in pain management in older adults developed a national network of researchers and educators with the goal of

establishing a national agenda to advance research and education for pain management in older adults.

Hence, the purpose of this study was to engage key stakeholders to develop a list of priority areas for future research and education to improve pain management in older adults. At the same time, we sought to identify barriers that needed to be addressed to meet these priority areas.

Methods

A mixed methods design based on a modified Delphi approach was used for this study to promote group problem solving in an iterative process of problem definition, discussion, and feedback. Delphi methodology has been used previously to assist with priority setting in health care^{32,33} and is particularly appropriate when the face-to-face exchange of ideas is difficult and when scarcity of time and distances inhibit frequency of meetings.³⁴ This study included three distinct components: a (1) qualitative component using focus groups with key informants or experts in the field of pain management in older adults, (2) review of the literature, and (3) survey of ranked responses completed by the same key informants who attended the focus groups. Each of these elements is described below.

Qualitative component

We used purposive sampling with key informants from across Canada who were deemed experts in the field of pain management in older adults, based on record of publications and presentations on the topic of interest. We sought individuals from across Canada and from diverse backgrounds, (e.g., decision makers, researchers, health care workers, educators), disciplines (e.g., nurse, physician, psychologists, pharmacist, etc.), and settings of care (e.g., acute care, chronic pain clinic, long-term care, home care), including those who were members of the Canadian Pain Society with an interest in older people with pain. A formal letter was e-mailed to an initial list of 25 experts, requesting their participation in the study.

We held two focus groups with the key informants: one group who had expertise in pain education related to older adults ($n = 8$) and a second group with expertise in research about pain in older adults ($n = 9$). Both focus groups were facilitated by a trained moderator who guided the discussion (interview guide available upon request). Questions were asked about their perceptions of gaps in education or research (depending on their area of expertise) related to managing pain in older adults and barriers to addressing these gaps.

Data from the focus groups were recorded and analyzed using qualitative description methods. Important concepts that emerged from the data were labeled, categorized, and coded.^{35,36} Initial coding of each focus group was done independently by two individuals to foster credibility and dependability. Any discrepancies were reviewed by the investigators and discussed until consensus was reached.

Scoping review of the literature

We conducted a scoping review using established methods^{37,38} to summarize the literature on priorities about education and research related to pain management in older adults from an international perspective to inform gaps in the existing research. Our goal was to explore and map all relevant literature on a broad topic and identify recurring themes, using rigorous and transparent methods to comprehensively search for all relevant literature and to analyze and interpret the data. As such, the criteria for exclusion and inclusion were not based on the quality of the studies but on relevance.

We searched Medline, CINAHL, Cochrane (including DARE), OVID SP, Web of Science, Ageline, and EMBASE using applicable Mesh headings and free text keywords (see Table 1). The journals yielding the greatest number of relevant articles—*Pain Research and Management*, *Pain Medicine*, and *Journal of Symptom and Pain Management*—were hand searched from January 2000 to January 2017.

Papers included in the synthesis were those that met the following criteria: all English-language papers including primary studies, literature and policy reviews, reports, editorials, essays, commentaries, and descriptive accounts published from January 2000 to January 2017.

Two members of the research team independently reviewed the abstracts and the articles using an iterative process of searching the literature, refining the search strategy, and reviewing articles for study inclusion.^{37,38}

Table 1. Keywords used in literature search.

| | | | |
|---------------|-------------------|--------------------------------------|----------------------|
| Older adult | Pain management | Nursing home | Education |
| Over 65 | Pain intervention | Community | Educational gaps |
| Aged | Pain assessment | Retirement home | Needs |
| Senior | Pain relief | Long-term care facility ^a | Priorities |
| Elderly | Pain medication | Long-term care home | Educate ^a |
| Resident | | Long-term care setting | Guidelines |
| Older persons | | | Research |
| Geriatric | | | Systematic review |
| | | | Study |
| | | | Scoping review |

Table 2. Ranked list of educational priorities related to pain management in older adults.

| Educational priority | Ranked score (n) ^a |
|--|-------------------------------|
| 1. Effective and appropriate documentation of pain | 23 (7) |
| 2. Appropriate pain assessment strategies | 17 (6) |
| 3. Pain treatment for persons with dementia | 17 (6) |
| 4. Lack of postsecondary courses specific to pain management | 17 (4) |
| 5. Recognizing the complexities of pain | 16 (5) |
| 6. Lack of follow-up regarding efficacy of medication | 14 (6) |
| 7. Recognizing clinical signs of pain | 14 (4) |
| 8. Belief that it is normal for older adults to experience pain | 11 (3) |
| 9. Deficits in continued education | 10 (3) |
| 10. Lack of guidance regarding proper administration of pro re nata pain medications | 10 (3) |
| 11. Lack of funds to educate the public and create lobby groups | 7 (3) |
| 12. Fear of client overdose or adverse drug events | 6 (2) |
| 13. Pharmacological management of pain | 5 (2) |
| 14. Pharmacological treatments in relation to comorbidities | 5 (2) |
| 15. Including pain management and assessment under palliative care | 4 (1) |
| 16. Lack of public resources regarding pain education | 2 (1) |
| 17. Influence of traditions or beliefs on pain management | 1 (1) |
| 18. Psychosocial impacts of pain | 1 (1) |
| 19. Fear of repercussions from regulatory bodies | 0 (0) |
| 20. Lack of education resources available to the public | 0 (0) |
| 21. Role of nutrition in pain | 0 (0) |

^an indicates number of key informants who ranked item as one of their top 5 choices. Possible range of scores: 0–60.

The following inclusion criteria were used: reference to educational or research issues or priorities related to older adults (defined as age 65 and older). Evidence above indicates that pain management is especially challenging when caring for older adults with cognitive impairments. However, we did not find it necessary to include cognitively impaired in our inclusion criteria because our goal was to capture the entire population of older adults.

Two members independently reviewed each paper and extracted data using Excel. We used a combination of descriptive tables, narrative syntheses,³⁹ and team discussions during the data extraction process. To analyze the data extracted from the literature, we used a combination of tabular summaries and qualitative content analysis. The research team met to discuss the results of the aggregate data from each of the categories (priorities) within our data extraction tool.

Next, we compared focus group findings with findings from the scoping review to explore overlap between the two areas and where findings were identified in only one component (focus group vs. scoping review; see Figures 1 and 2). If a new item emerged from the scoping review that was not present in the focus group findings, we included it only if it was endorsed by three or more sources because our goal was to develop highly endorsed or key priorities, rather than a comprehensive list that has been developed previously.⁴⁰

Table 3. Ranked list of research priorities related to pain management in older adults.

| Research priority | Ranked score (n) ^a |
|--|-------------------------------|
| 1. Understand the practice models of settings where pain management is successful | 20 (7) |
| 2. Costs of untreated pain in long-term care and other sectors | 19 (6) |
| 3. The effect of daily activities/mobility on pain management in long-term care residents | 18 (6) |
| 4. Understand patient preferences for pain management | 17 (5) |
| 5. Cost/benefit analysis of prevention vs. treatment of pain in older adults | 15 (6) |
| 6. Examine how to overcome research implementation barriers so that pain management strategies are sustainable | 14 (5) |
| 7. Cost/benefit of doing pain assessments | 14 (4) |
| 8. Compare the outcomes of pharmacological vs. nonpharmacological (e.g., behavioral therapy, exercise) interventions on pain management | 13 (3) |
| 9. Cost/benefit analysis of pharmacological vs. nonpharmacological interventions for pain management | 12 (3) |
| 10. Understand staff experiences working with older adults and pain management | 9 (4) |
| 11. Determine the effect of social engagement and recreational/leisure activities on pain management | 8 (3) |
| 12. Understand the factors that affect prescribers in accepting pain assessment information from the health care team | 7 (6) |
| 13. Understand what regulatory compliance items can be replaced with more effective pain management and other strategies in the LTC settings | 7 (2) |
| 14. Develop pain management protocol | 6 (2) |
| 15. Understand the percentage of persons with undertreated pain on a regional basis | 1 (1) |
| 16. Assess the readiness of public stakeholder to advocate for pain management in older adults | 0 (0) |
| 17. Develop tools to assess quality of prescribing pain medications | 0 (0) |

^an indicates number of key informants out of possible 12 who ranked item as one of their top 5 choices. Possible range of scores: 0–60.

Delphi survey

Based on the findings from the focus groups and scoping review, a comprehensive list was developed of the educational and research priorities identified within the context of the Canadian health care system. This list was input into an online survey and each key informant was sent an e-mail with a link to the survey and asked to complete it online. Of the priority lists for both education and research, key informants were asked to rank order their top five choices, with 1 indicating most important. For each barrier listed, key informants were asked to rank order their top three choices in the same manner. A reminder e-mail was sent two weeks after the original message to improve response rates.³³

All completed surveys were analyzed using descriptive statistics. For each item, we weighted each ranking so that the highest rank, 1, received the highest score, 5. This scoring allowed us to calculate a ranked score for each research/education

Table 4. Ranked list of barriers to address research or educational priority.

| Barrier to address research or educational priority | Ranked score (n) ^a |
|---|-------------------------------|
| 1. Lack of staff time in performing pain assessments, treatments, evaluation (time to do the intervention) | 22 (11) |
| 2. Lack of resources to implement new pain management practices or interventions (e.g., staff time, change champion, dedicated time) | 23 (7) |
| 3. Unfamiliarity with tools designed to assess pain in seniors with dementia | 24 (5) |
| 4. Lack of communication and/or acceptance of pain assessment/pain management strategies between members of the interprofessional team | 25 (4) |
| 5. Difficulty of implementing research within current culture of care | 26 (4) |
| 6. Lack of continuity of care | 27 (5) |
| 7. Difficulty in changing current practices in community, hospital, and long-term care | 28 (3) |
| 8. Lack of time for proper pain management documentation | 29 (4) |
| 9. Lack of staff education on pain management | 30 (3) |
| 10. Lack of tools to assess the quality of prescribing pain medications | 31 (0) |
| 11. Lack of communication and/or acceptance of pain assessment and treatment information between personal support worker and registered staff in long-term care | 32 (0) |
| 12. Overcome the stigma of pain or opiophobia in older adults and their families | 0 (0) |

^an indicates number of key informants out of possible 12 who ranked item as one of their top 5 choices. Possible range of scores: 0–36.

priority by summing each score from each key informant together. For each section (research and education priorities), scores had a possible range of 0–60, because there were 12 key informants and each item had a possible score of 0–5 (see Tables 2 and 3). Likewise, the barrier section had a possible range of 0–36, because each barrier had a possible score of 0–3 (see Table 4). We also calculated the frequency with which each item was endorsed by each of the key informants, with a possible range of 0–12 for each item.

Results

Characteristics of the sample

Of those invited, 17 key informants participated in a focus group for a response rate of 68% (see Figure 3). The majority of participants were female ($n = 11$; 65%). Almost half of the participants were practitioners ($n = 8$; 47%), including nurses, physicians, psychologists, pharmacists; 41% ($n = 7$) were researchers; and 12% ($n = 2$) were decision makers, including a clinical manager and director of a professional organization. There was representation from across Canada; 53% ($n = 9$) from Ontario, 24% ($n = 4$) from Saskatchewan, and 6% ($n = 1$) from each of British Columbia, Quebec, and Nova Scotia. One other participant was from the United States.

Focus groups

Twenty-nine priority issues were identified through the focus groups, 13 related to education and 15 related to research. The education priorities aligned with seven main categories: (1) addressing education deficits (at both the prelicensure and continuing education levels); (2) recognizing gaps or areas that need improvement in appropriate medication administration, documentation, and follow-up; (3) acknowledging the fear factor regarding opioid use; (4) addressing false beliefs and misconceptions regarding pain in older adults; (5) recognizing differences in cultural practices; (6) addressing gaps within the interprofessional team; and (7) raising public awareness regarding the impact of pain on older adults.

The research priorities focused on four key areas: (1) understanding the current context of care and patient

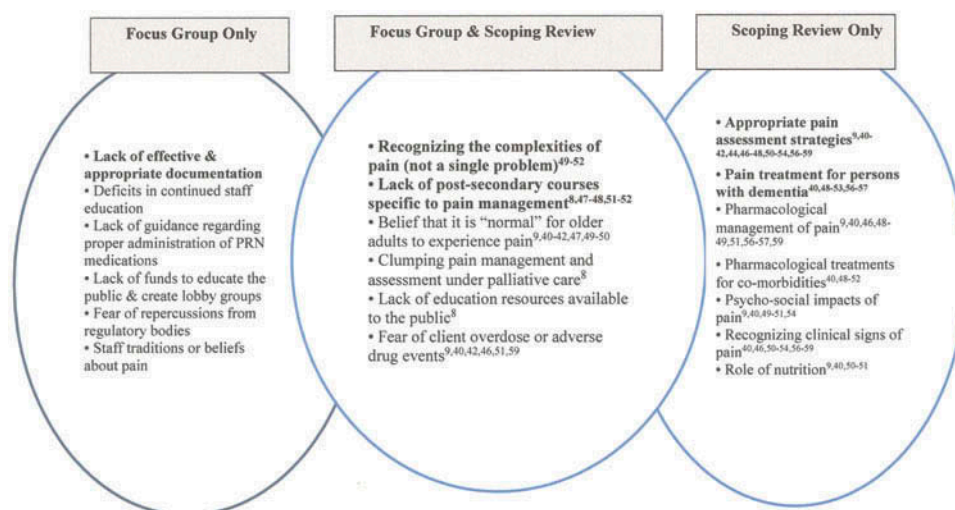


Figure 1. Educational priorities derived from focus groups and scoping review.

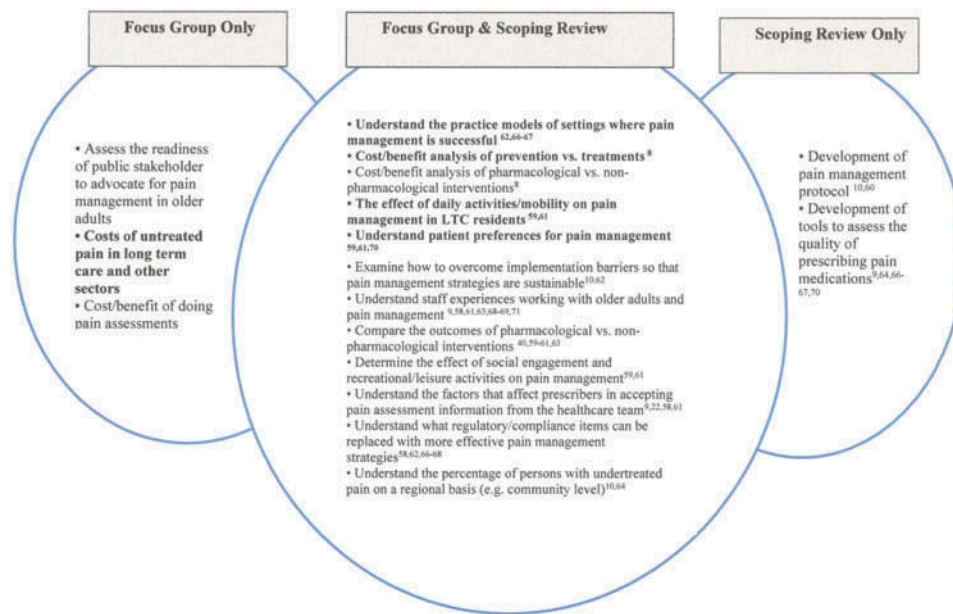


Figure 2. Research priorities derived from groups and scoping review.

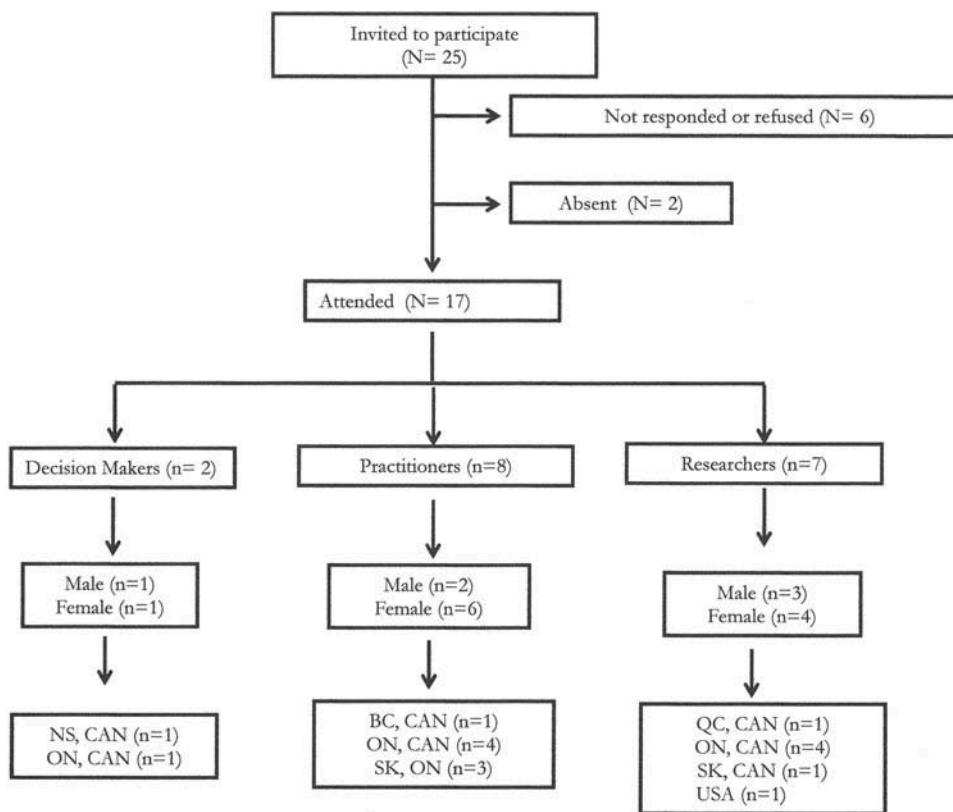


Figure 3. Description of focus group participants.

preferences in LTC to help develop successful pain management interventions; (2) examining nonpharmacological interventions (e.g., exercise, behavioral therapy, social engagement, leisure activities) to improve pain and quality of life; (3) examining costs versus

benefits of pain assessment and management approaches; and (4) exploring system-level issues that impact pain management at the resident level.

In terms of the barriers that need to be addressed to meet these priorities, the majority of discussion focused

on the lack of resources, time, and staff to fully implement pain management practices effectively. Other barriers included poor communication among staff members and lack of knowledge for staff about pain management.

Scoping review

An initial search through databases and grey literature yielded a total of 752 results. A PRISMA flowchart demonstrating the search and study process is presented in Figure 4. Literature was screened using the inclusion and exclusion criteria outlined above, which resulted in 694 papers being excluded; 292 papers were not educational or research or priority related and 402 papers did not pertain to older adults over 65. The full text of the remaining 58 papers were reviewed and assessed for eligibility and 40 papers were included in the final analysis.

The scoping review validated seven out of 13 of the education priorities that were identified through the focus groups, as well as added seven more key priorities to our list (see Figure 1). The most highly endorsed education priorities were (1) the belief that it is normal for older adults to experience pain,^{9,40-45} (2) appropriate pain assessment strategies,^{40-43,45,47-53,55-58} (3) pharmacological management of pain,^{9,40,44,48-50,54-56,58}

(4) fear of client overdose or adverse drug events,^{9,40,42,48,50,58} (5) pain treatment for persons with dementia,^{40,44,45,50-53,55,56} (6) lack of postsecondary courses specific to pain management,^{40,43,49-51} and (7) recognizing clinical signs of pain.^{40,45,48,50-53,55-58}

For research priorities, 12 out of 15 of the priorities identified through the focus groups were supported by the scoping review results with the scoping review adding another two priorities to the list (see Figure 2). The most highly endorsed priorities were the need to (1) understand staff experiences working with older adults and pain management,^{9,57,59-63} (2) understand what regulatory/compliance items can be replaced with more effective pain management or other strategies in LTC,^{9,57,59-61,63} (3) compare outcomes of pharmacological versus nonpharmacological interventions on pain management,^{40,58-60,64} (4) understand the factors that affect prescribers in accepting pain assessment information from the health care team,^{9,22,57,59} and (5) develop tools to assess the quality of prescribing pain medications.^{7,9,65-67}

Delphi survey

The Delphi survey was completed by 71% ($n = 12$) of the focus group participants. Based on their responses, the following ranked education priorities received the

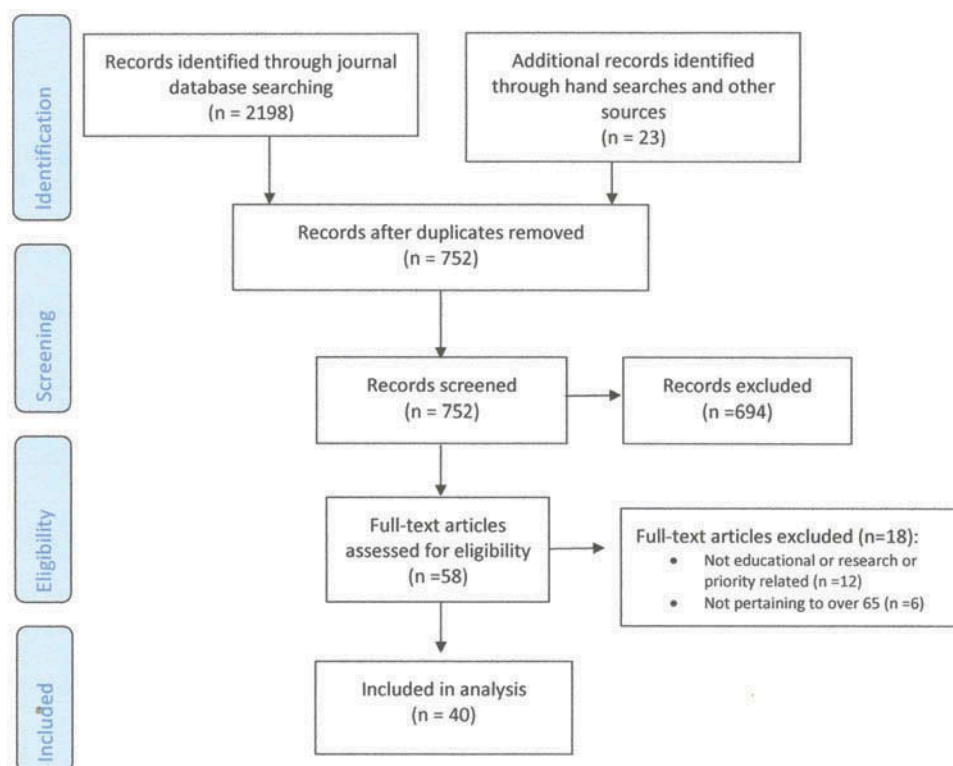


Figure 4. Flowchart illustrating search and selection.

highest endorsement: (1) effective and appropriate documentation of pain, (2) appropriate pain assessment strategies, (3) pain treatment for persons with dementia, (4) lack of postsecondary courses (at both the prelicensure and continuing education levels) specific to pain management, and (5) recognizing the complexities of pain. In terms of research priorities, the following five priorities received the highest ranked score: (1) understanding the practice models of settings where pain management is successful, (2) exploring the costs of untreated pain in LTC and other sectors, (3) examining the effect of daily activities/mobility on pain management in LTC residents, (4) understanding patient preferences for pain management, and (5) analyzing the costs/benefits of prevention versus treatment of pain in older adults. The top three barriers that were reported as impediments to these priorities were (1) lack of staff time in performing pain assessments, treatments, evaluation (time to do the intervention); (2) lack of resources to implement new pain management practices or interventions (e.g., change champion, dedicated time); and (3) unfamiliarity with tools designed to assess pain in older adults with dementia.

Discussion

These study findings highlight key priorities and related barriers to improving pain management in older adults in the areas of research and education that have been identified using a systematic approach. These findings can provide direction for future work and contribute to the development of a national agenda of key priorities in this field.

These findings are consistent with previous work in this area, reporting that key educational needs related to pain management in older adults include pain assessment strategies, pharmacological and nonpharmacological treatments, and how to distinguish pain expression from other behaviors that are commonly observed in this population, particularly those who have dementia.⁴⁰ Key barriers to addressing these priorities include lack of staff time and resources available to them. These findings are consistent with the work of Stolee et al., who identified a list of factors in LTC hospitals that impact the effectiveness of continuing education programs, including a changing resident population, staff resistance to change, workforce educational background, management support, and available resources.⁶⁸ Future work is needed to address these key priority areas while being mindful of the barriers and constraints that impede successful changes in practice.

Our study identified lack of effective and appropriate documentation of pain as another key priority, which is paramount and often perceived to be a fairly

straightforward intervention to implement. However, the barriers that were identified to addressing this priority emphasize the complexity in changing practice, which relies on effective interdisciplinary communication to ensure timely follow-up with pain treatments to assess their effectiveness. Hence, a single education session is not likely to improve practice, which is well supported in the literature.^{69,70} On the other hand, more complex interventions appear to have an impact on improving pain management for older adults. For example, Long found that after an intensive training program and onsite consultation with the concomitant changes in policies, procedures, and documentation, professional and staff knowledge improved after 6 months, attitudes changed, and barriers were mitigated.⁷¹ With a comprehensive quality improvement pain plan in place, the findings suggest that education in pain management in long-term care and program changes that adopt best practices in pain can make a difference.

Clearly, research needs to focus on ways to address efficient assessment practices and interventions that staff are able to implement in timely manner, as well as strategies to educate staff that create less burden on staff time, given the lack of time and competing demands that LTC homes are currently facing. Wagner et al. suggest the use of interdisciplinary “huddles,” which enable teams to have short but frequent briefings, offering a mechanism for immediate learning in LTC homes.⁷² Evidence on the use of huddles in acute care shows that workplace culture, communication, collaboration, and staff satisfaction improves.⁷³

Finally, this study methodology provided a way to examine key priorities from an international perspective (scoping review), followed by the identification of additional priorities (focus groups) and overall ranking of these priorities (Delphi) with Canadian pain experts in the field of aging. In this manner, the priority setting of research and education priorities is ultimately grounded within the Canadian context. Given the emphasis on optimizing health care costs in the Canadian system, it is not surprising that two of our top research priorities focus on exploring costs of untreated pain or pain prevention. Costs related to pain management are also recognized as a priority in strategic initiatives in the United States,⁷⁴ Australia,⁷⁵ Norway,⁷⁶ Portugal,⁷⁷ and Wales.⁷⁸ The National Pain Awareness Campaign, led by the Canadian Pain Society (see 79), has likely influenced our study findings because the need to educate the public and create lobby groups was identified as a priority within the focus groups but not the internationally based scoping review. Moreover, the emphasis in Canada on

improving pain education,⁷⁹ at both the postsecondary (e.g., college, university) and continuing education levels was highlighted in our findings as a key priority. Lastly, the heavy regulation of long-term care homes in Canada was raised as a concern and related research priority in both the Canadian and U.S. literature.^{57,61,66,67,80}

Although this study used a small sample, triangulation of methods helped improve rigor. Akins et al. examined what constituted a sufficient number of Delphi survey participants to ensure stability of results.⁸¹ Results from their study indicate that the response characteristics of a small expert panel in a well-defined area are stable in light of augmented sampling.⁷⁹ Another limitation to this study could be its lack of generalizability to countries other than Canada because the sample used included only pain experts within Canada. Although the initial purpose of this initiative was to establish education and research priorities for Canada, the scoping review drew from global literature that identified priorities from other countries as well, thus adding merit to establishing these priorities for other countries as well. The ordering of those priorities based on input from key informants is Canadian, but the list of priorities that came from scoping review applies more broadly.

It is our intent that this study will advance education and research in the area of pain management in older adults forward by putting forward a call to action for government, educators, policymakers, and funders to dedicate resource to address priorities. The findings from this study argue for educational organizations that train health care providers in LTC to prioritize pain content in the curriculum specifically focused on pain and aging issues. In addition, there is a need for targeted funding calls to address pain and aging research priorities.

Conclusion

These findings highlight priority issues related to pain management in older adults from a nationwide perspective. This work can provide a basis on which to further develop curricula at both the undergraduate and continuing education levels as well as provide a basis for funding agencies and researchers alike to enrich the research agenda across Canada. In doing so, it is hoped that pain management is improved for older adults and unnecessary suffering is alleviated.

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