

Pain assessment tools for older adults with dementia in long-term care facilities: a systematic review

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Objective

- Document pain assessment tools used primarily for older adults in long-term care (LTC) facilities and compare self-report and observer-rated tools

Methods

- A literature search was conducted in Ovid MEDLINE (1946 to June 2016 Week 1), Embase Classic & Embase (1947 to 2016 Week 24), Cochrane Central Register of Controlled Trials (May 2016) and PsycInfo (1806 to June 2016 Week 2)
- Articles were included if there was any mention of a standardized assessment tool, such as a developed questionnaire, used in an LTC facility for older adults with dementia

Results

- Six of the documented tools were self-report scales, while the other 18 were observer-rated
- Self-report assessment tools typically feature fewer items
- PACSLAC is one of the first of its kind to comprehensively inquire about the domains of important verbal behaviours as recommended by the American Geriatric Society
 - Its length may be a hindrance for clinical applicability, ultimately leading to shortened tools such as PACSLAC-II and PACSLAC-D
 - These shortened tools have been proven to retain positive psychometric properties and the ability to differentiate between pain and nonpain states

Study	Population Size	Patient Characteristics	Pain Measurement Tools	Assessor	Assessment Period	Study Conclusion
Ahn et al 2015	71,227 participants	Nursing home residents Mean Age = 85 years 73.6% female 52.5% severely cognitively impaired	Numeric Rating Scale (NRS) Verbal Descriptor Scale (VDS) Minimum Data Set-Pain Behaviour Scale (MDS-PBS)	36,880 participants self-reported pain using NRS or VDS 34,347 cases evaluated by nurses for participants who could not articulate pain using MDS-PBS)	Once for 5 days	Assessing pain can improve pain management and reduce risk for aggressive behaviour
Barry et al 2015	42 participants	Dementia care home residents Mean Age = 82.1 years 57.1% female 85.7% moderate or severe dementia	VDS	Self-reported during interview Missing information was collected from nurse/care assistant interview	Once during an interview	There exists conflicting pain reports – assessment of pain continues to remain a challenging area
Brown 2010	189 participants	Continuing-care facility residents 33.9% over 90 years of age 70.1% female 76.3% non-Alzheimer dementia	Resident Assessment Instrument (RAI)	Observational assessor	Once	RAI is useful to identify patterns but insufficient for pain management purposes; other tools must be employed
Cervo et al 2012	215 participants	Long-term care facility residents Mean Age = 84.9 years 47.9% female 49.8% severe dementia	Certified Nursing Assistant Pain Assessment Tool (CPAT)	Certified nursing assistant	Two to three times per week for patients experiencing pain	CPAT may be useful for evaluating effects of pain treatment, as well as reduce falls and decrease use of antipsychotic medication
Chan et al 2014	124 participants	Long-term care facility residents Mean Age = 83.94 years 71% female	Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC) PACSLAC-II	Trained research assistant and second staff	Once	The revised PACSLAC II differentiates between pain and nonpain states
Cheung & Choi 2008	50 participants	Dementia care facility residents Mean Age = 82.9 years 72% female	PACSLAC	Researcher and caregiver	Once	PACSLAC has good inter-rater reliability when it is used by caregivers
Cohen-Mansfield 2008	153 participants	Nursing home residents Mean Age = 88 years 82% female	Functional Pain Scale Present Pain Intensity (PPI) VDS Global Pain Assessment (GPA) Pain Assessment for the Dementing Elderly (PADE) Pain Assessment in Non-communicative Elderly (PAINE) Pain Assessment in Advanced Dementia (PAINAD) Checklist for Nonverbal Pain Indicators (CNPI) Observational Pain Behaviour Assessment Instrument (OPBAI)	Functional Pain Scale, PPI, VDS and GPA are self-reported PADE, PAINE, CNPI and OPBAI reported by nursing staff members	Once for self-reported tools Twice for observational ratings – during resting position and movement	Each tool is consistent in pain assessment, with higher correlation
Ersek et al 2010	60 participants	Nursing home residents Mean Age = 89 years 88.1% female	CNPI PAINAD	Research assistant	Twice per each tool	The tools should be only one part of a multidimensional pain assessment program that includes multiple comprehensive screening tools
Fuchs-Lacelle et al 2008	173 participants	Long-term care unit residents Mean Age = 85.13 years 79% female	PACSLAC	Nursing staff	At least three times per week	PASLAC improves pain management and decreases nursing staff stress
Hadjistavropoulos et al 2008	152 participants	Long-term care home residents Mean Age = 86.31 years 70.6% women	Doloplus-II	Research nurse	Once a day	Doloplus-II is predictive of depression, dementia severity and delirium
Horgas et al 2007	40 participants	Long-term care facility residents Mean Age = 83 years 78% female	Non-Communicative Patient's Pain Assessment Instrument (NOPPAIN) NRS VDS	NOPPAIN completed by nursing students NRS and VDS verbally self-reported	Once	NOPPAIN shows promise to evaluate pain in those with mild to moderate dementia
Husebo et al 2014	352 participants	Nursing home residents Mean Age = 85.89 41.5% female	Mobilization-Observation-Behaviour-Intensity-Dementia-2 (MOBID-2)	Primary caregivers – usually licensed practical nurse	Once every two weeks	Patients receive better care regarding pain treatment
Jordan et al 2011	79 participants	Nursing home residents Mean age = 82 years 72% female 100% advanced dementia	PAINAD	Researcher or nurse	Three times	PAINAD is a sensitive tool for pain detection in people with advanced dementia, but has a high false positive rate
Kaasalainen et al 2013	338 participants	Long-term care home residents Mean Age = 82.8 years 64% female	PACSLAC Pain Assessment in the Communicatively Impaired (PACI) PPI NRS	PACSLAC and PACI completed by observational raters PPI and NRS verbally self-rated by demented participants	Twice in two weeks	PACSLAC and PACI vary as a function of participant's ability to verbally report pain (i.e. PPI & NRS)
Liu & Lai 2014	30 participants	Long-term care home residents	Chinese – Pain Assessment in Advanced Dementia (C-PAINAD)	Research assistant	Daily	PAINAD and other similar tools are important for pain management strategies
Mahoney & Peters 2008	112 participants	Nursing home residents Mean Age = 85.4 years 78% female 100% advanced dementia	Mahoney Pain Scale (MPS)	Nurses	Twice a day, during pleasant and aversive activity	MPS may be useful for assessing pain in dementia, documented as accurate and easy to use
Manias et al 2011	192 participants	Geriatric evaluation and management unit residents Mean Age = 80 years	Visual Analogue Scale (VAS) Faces Pain Scale-Revised (FPS-R) Short-Form McGill Pain Questionnaire (SF-MPQ) PAINAD Abbey Pain Scale VDS Functional Pain Scale	VAS, FPS-R, VDS and Functional Pain Scale completed by participant SF-MPQ, PAINAD and Abbey Pain Scale completed by a nurse	Twice within two hours	VAS and FPS-R affords better pain relief Observed-rated tools can be helpful for self-reported pain, to confirm assessment
Sandvik et al 2014	327 participants	Nursing home unit residents Mean Age = 85.80 years 80% female	MOBID-2	Caregiver	Once	MOBID-2 shows excellent reliability and sensitivity
Snow et al 2014	6 participants	Data not available	NOPPAIN	Nursing assistant	Once	NOPPAIN is an instrument to detect pain in nursing home patients with dementia
Tang et al 2016	12 participants	Nursing home residents Mean Age = 87 years 58% female	MOBID-2	Nursing home staff assistants	Once per five exercises	MOBID-2 in combination with medication reviews can be used as a tool for optimization of medication use
Villanueva et al 2003	65 participants	Long-term care facility residents Mean Age = 82 years 74% female	PADE	Certified nursing assistants or similarly trained caregivers	Daily for ten days, and two more assessments	PADE is a good tool to assess pain
Zwakhalen et al 2007	128 participants	Dementia care ward residents Mean Age = 82.4 years 78.1% women 47.7% severely cognitively impaired	Pain Assessment Checklist for Seniors with Limited Ability to Communicate – Dutch (PACSLAC-D) VAS	Observer	Three times	Availability of clinically useful tools has major implications for nursing practice and patient care
Zwakhalen et al 2012	22 participants	Nursing home residents Mean Age = 80 years 68% female	PACSLAC-D	Nurses	Twice a week for six weeks	PACSLAC-D was easy to use