Zeitschrift für Neuropsychologie, 23 (4), 2012, 237 – 246

Übersichtsartikel

Pain Assessment and Treatment Challenges in Patients with Dementia[1]

Bettina S. Husebo[1], Miriam Kunz[2], Wilco P. Achterberg[3], Frank Lobbezoo[4], Judith Kappesser[5], Catalina Tudose[6], Liv Inger Strand[1], and Stefan Lautenbacher[2]

[1]Department of Public Health and Primary Health Care, University of Bergen, Bergen, and Center for Age-Related Medicine, University Hospital, Stavanger, Norway;
[2]Physiological Psychology, Otto Friedrich University Bamberg, Bamberg, Germany;
[3]EMGO Institute, VU Medical Centre, Department of Nursing Home Medicine, Amsterdam, The Netherlands;
[4]Department of Oral Kinesiology, Academic Centre for Dentistry Amsterdam (ACTA), University of Amsterdam and VU University Amsterdam, MOVE Research Institute Amsterdam, Amsterdam, The Netherlands;
[5]Department of Clinical Psychology, Justus-Liebig-University, Giessen, Germany;
[6]Department of Neurology, Neurosurgery and Psychiatry, University of Medicine and Pharmacy „Carol Davila", Bucharest, Romania

Abstract: Pain is likely to be equally prevalent in people with dementia, however, only a small minority are prescribed regular analgesics. This is a key issue since untreated pain leads to reduced quality of life and increases the likelihood of emergence of behavioural and psychological symptoms such as agitation. Better assessment and treatment of pain in this fragile patient group are therefore mandatory. In this context, we reviewed the literature on pain and dementia and summarised the best available evidence regarding the frequency of pain and pain diagnosis. Unfortunately, hardly any randomized, controlled studies of pain treatment efficacy in patients with dementia are available, with the consequence that most pain treatment recommendations are not based on the highest level of evidence.

Keywords: dementia, pain, pain assessment, pain treatment, pain assessment instrument, nursing homes

Herausforderungen bei der Erfassung und Behandlung von Schmerzen bei Patienten mit demenzieller Erkrankung

Zusammenfassung: Schmerz ist bei Personen mit Demenz wahrscheinlich ebenso häufig wie sonst, jedoch werden nur wenigen Patienten Analgetika verschrieben. Das ist ein zentrales Problem, weil unbehandelte Schmerzen die Entwicklung von Verhaltensstörungen und psychischen Symptomen wie Agitiertheit begünstigen. Eine bessere Messung und Behandlung von Schmerzen bei diesen besonders gebrechlichen Personen ist daher dringend geboten. In diesem Zusammenhang haben wir die Literatur gesichtet und die bestmögliche Evidenz zur Prävalenz von Schmerzen und das Vorgehen in der Schmerzdiagnostik zusammengestellt. Leider gibt es bislang kaum Studien mit randomisiertem Kontrollgruppendesign, so dass die meisten Empfehlungen zur Schmerzbehandlung bei Demenz nicht höchstes Evidenzniveau aufweisen.

Schlüsselwörter: Demenz, Schmerz, Schmerzmessung, Schmerztherapie, Schmerzmessinstrumente, Alten- und Pflegeheime

Introduction

Untreated chronic pain is a devastating symptom in older people with moderate to severe dementia who are unable to explain their suffering (Scherder et al., 2009). Persistent

[1] This article is a modified version of the article „Pain in patients with dementia: An overview of pain assessment and treatment challenges" that will be printed in the Journal of Norsk Epidemiologi.

DOI 10.1024/1016-264X/a000078

pain has been associated with a progressive decline of functional and mental capacity (Moriatry, McGuire & Finn, 2011), social interaction (Lin, Lin, Shyu & Hua, 2011), quality of life (Cipher & Clifford, 2004; Cordner, Blass, Rabins & Black, 2010; Jakobsson & Hallberg, 2002), appetite (Bosley, Weiner, Rudy & Granieri, 2004) and sleep disturbances (Giron et al., 2002); and increased behavioural disturbances including agitation, depression and anxiety (Husebo, Ballard & Aarsland, 2011). Moreover, pain causes immense stress for the patient and their formal and informal care givers (Buffum & Haberfelde, 2007) and increases health care costs (Ferrell & Griffith, 1994).

In the last decades, clinicians and scientists have started to conduct research on the prevalence (Takai, Yamamoto-Mitani, Okamoto, Koyama & Honda, 2010), assessment (Hadjistavropoulos et al., 2007; Herr, 2011) and treatment of pain in older people with cognitive impairment and the consequences of undetected and untreated pain (AGS Panel, 1998; 2009; Ferrell, 1991; Gloth, 2011). Such issues include the development of observational and behavioural pain assessment instruments, pain treatment recommendations, and staff educational programs. Although these are necessary and central investments, one of the most pressing matters for mentally impaired individuals is the affective analgesic treatment of pain.

Compared to community-dwelling older adults who experience daily pain in 35 % to 48 % of the cases, nursing home patients with dementia are described to be in daily pain in around 45 % to even up to 80 % of the cases (z. B. Husebo et al. 2008, Leong & Nuo, 2007, Zwakhalen, Koopmans, Geels, Berger & Hamers, 2009). Numerous prevalence studies give a description of the undertreatment of pain in these settings. There are several explanations for insufficient management of pain in patients with mental impairment. Today, the evidence base is still limited with regard to the balancing act between under- and over-treatment of pain in dementia and guides for treatment decisions. The type and dosage of analgesics are still based on clinical judgment of older adults without dementia. Although efficacy studies of analgesics in nursing home patients with dementia are challenging, these trials are possible and tremendously necessary.

In this review, we provide an overview about the frequency of pain in in patients with dementia, about adequate strategies to assess pain in this patients group as well as about benefit and harm related to the use of analgesics. We will also briefly present current pain assessment tools and treatment recommendations.

Pain in elderly individuals with and without dementia

The American Geriatric Society (AGS) Panel on Persistent Pain in Older Persons defined persistent pain as "an unpleasant, sensory and emotional experience that continues for a prolonged period of time that may or may not be associated with a recognizable disease process" (AGS Panel, 1998). The definition is based on the declaration by the International Association for the Study of Pain (IASP), who underlines that the most exact and trustworthy verification of the assessment of pain is the patient's self-report, depending on the patient's memory, verbal capacity, expectations and emotions. Given that self-report of pain is often no longer available in elderly individuals with dementia (due to the decline in cognitive functioning), the AGS Panel underlined the wide variability and complexity of assessing pain and physical disabilities in this patient group (AGS Panel, 2002). A comprehensive, disease-specific, individual assessment of the patients' typical pain behavior is recommended, using a validated pain assessment tool as a prerequisite for appropriate pain treatment.

Pain prevalence in individuals with and without dementia

Between 45 % to 83 % of the patients living in nursing homes experience acute or chronic pain, particularly those with moderate to severe dementia. Most of them (about 94 %) suffer from persistent pain (3–6 months or more; Miro et al., 2007), often located in the musculoskeletal system (Grimby et al., 1999). Chronic *musculoskeletal pain* affects over 100 million people in Europe and is by far the most common limiting factor on activities of the ageing population. Musculoskeletal pain increases the risk of reduced mobility, disability and muscle weakness, and reduces the health-related quality of life (Woolf et al., 2004). In older people, chronic pain is often experienced in major joints, the back, legs and feet, and it is reported more often than visceral pain and headaches (Helme & Gibson, 2001). Chronic pain is mostly nociceptive, around 10 % is neuropathic, and 1 of 3 patients is believed to suffer from a combination of neuropathic and nociceptive pain.

But pain problems are not only movement related. About 40 % of elderly individuals experience pain in internal organs, head and skin, which is more challenging to quantify (Husebo et al., 2008). Elderly patients *with visceral painful conditions* are far more likely than younger adults to present atypical pain responses (Helme & Gibson, 2001). Peptic ulcers, intestinal obstruction, and peritonitis are other visceral conditions, often with reduced or absent abdominal complaints (Helme & Gibson, 2001), and about 45 % of older persons with appendicitis do not have typical lower-right quadrant pain as a presenting symptom, compared with 5 % of younger adults (Wroblewski & Mikulowski, 1991). Living in a nursing home, 53 % of the elderly are at risk of developing a pressure ulcer (Horn et al., 2002), and skin diseases found in 95 % of the patients were described as one of the most prevalent health problems (Black et al., 2006).

Pain in connection with *genito-urinary infections* is quite often described in elderly patients. Catheter -associated urinary tract infection is the most common nosocomial infection, accounting for more than one million cases every year in American hospitals and nursing homes (NHs; Tambyah & Maki, 2000).

A large-scale epidemiological study in The Netherlands has shown that *orofacial pain* has an increasing incidence rate with age in the general population, with incidence rates as high as 30.6 [15.1 – 55.8] for trigeminal neuralgia and 44.2 [24.7 – 73.4] for post-herpetic neuralgia in the general population (Koopman et al., 2009; Lobbezoo, Weijenberg & Scherder, 2011). In nursing homes in Austria, it was found that 28.9 % of the institutionalized elderly experienced acute *dental pain* during the preceding year, and that almost half of these individuals required dental treatment for their pain complaints (Gluhak, Arnetzl, Kirmeier, Jakse & Arnetzl, 2010). Our own data from 18 nursing homes in Norway suggest that 23 % of the individuals are judged to be in orofacial pain (unpublished data).

Assessment of pain in individuals with dementia

Given the high prevalence of pain in the elderly, proper assessment of pain by onlookers such as health care professionals or family members is a prerequisite for successful pain treatment. The task of appropriately judging a sufferer's pain is a very complex one due to pain being highly personal, private and subjective experience. Whenever older adults in pain also have severe cognitive impairment – which go along with lack of language and abstract thinking – the task of judging pain becomes even more complex. This is the case because one of the most important cues that judges rely on when assessing pain is the patient's verbal report and this cue is often missing in cognitively impaired patients (Kappesser, Williams & Prkachin, 2006). Accordingly, older adults with dementia, particularly those in advanced stages of dementia, are at a very high risk for being under-diagnosed and, consequently, under-treated. Against this background, immense effort has been invested in the development of behavioural pain assessment tools that do not rely on the individual's capacity to provide a self-report of pain (e. g. Herr, 2011; Herr, Bjoro & Decker, 2006; Zwakhalen, Hamers, Abu-Saad & Berger, 2006). These assessment tools are based on observations of the patients' typical behaviour that might be related to pain, such as vocalization (e. g. moaning), facial expression (e. g. grimacing), and body movements (e. g. defense). There is also strong evidence that some behaviours like agitation, pacing or resisting care are related to present pain problems. As stated above, a panel on Persistent Pain in Older Persons, convened by the American Geriatric Society (AGS Panel, 1998) has recommended a comprehensive disease-specific, individual assessment of the patients' typical pain behaviour using a validated pain assessment tool as a prerequisite for appropriate pain treatment. However, recommendations of the AGS Panel are based on experiences in older adults without dementia. This is of key importance because in dementia, symptoms attributed to neuropsychiatric disturbances may overlap with indicators of pain and thus, make interpretation quite challenging (Herr et al., 2006).

Self-Report of Pain

As stated before, the validity of self-report ratings might be questionable in patients with dementia, given the decline in language ability across the course of dementia. However, self-report might still be an appropriate method for pain assessment in the early stages of dementia, when the patients is still able to recognize and verbalize pain (Corbett et al., 2012). Nevertheless, a study which aimed to assess the performance of self-assessment scales (the verbal, visual, and faces pain scales) found that only 61 % of 129 demented patients demonstrated comprehension of at least one scale (Pautex et al., 2006). Comprehension was defined as the ability to explain the scale use and correctly indicate positions for no pain and extreme pain on two separate occasions. Future research is needed to include and test the patients' self-report abilities, and clinicians and researchers should be careful to use a scale that suits the individual.

The Facial Expression

In the last 35 years, more than 35 pain assessment instruments for older persons with dementia have been developed, tested, and reviewed in the literature. Most of these instruments are based on the idea that the patients' acute or chronic pain experience is communicated by changes in facial expression, vocalization, and body movements (see Figure 1). Especially the *facial expression* seems to be one of the most promising non-verbal pain indicator, given that items relating to the facial expression are included in all 35 pain assessment instruments. Interestingly, one of the first instruments developed that tries to assess non-verbal behavior is the Facial Action Coding System (FACS) that focusses exclusively on facial expressions (Ekman & Friesen, 1978). The FACS is based on anatomical analysis of visible facial movements which are categorized as Action Units. Using the FACS, it has been shown that there is a small subset of facial actions that occur in the context of pain (e. g. narrowing the eye aperture, contraction of the eyebrows; Prkachin, 1992) and that patients with dementia show the same types of facial responses as non-demented elderly individuals (Kunz, Scharmann, Hemmeter, Schepelmann & Lautenbacher, 2007). These findings are very promising, given that they clearly suggest that the face seems to specifically encode the experience of pain and that this specific encoding does not change in the course of dementia. However, FACS-coding is very time-consuming,

(video recordings are usually analyzed frame-by-frame) and thus, not suitable in clinical care settings.

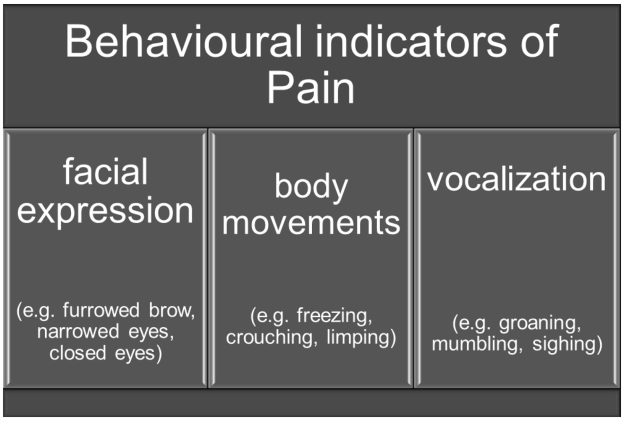

Figure 1. Overview of those behavioural categories that are believed to be indicative of the presence of pain. These categories are included in most of the observational pain behaviour rating scales that have been developed to assess pain in patients with dementia.

Pain behaviour rating scales

Observational pain behaviour rating scales have mostly been developed based literature review and interviews with nursing staff, and – as stated before – include observational items related to facial expressions, vocalization, and body movements (see Figure 1) (Cohen-Mansfield, 2006). Most of these items are assessed by frequency, intensity, or presence and absence by the rater. The different observational scales differ to a certain extent with regard to the types of items included, the interpretation of the total pain intensity, the scoring method, and instructions for staff training. In addition, different scoring systems of presumed pain intensity make the use of the scales challenging and sometimes only suitable for research purposes.

Usually, these observational scales are filled out when the patient is at rest (after some minutes of observation), but sometimes the patients are observed during daily life activities (ADL). Recent findings clearly suggest that observation of the patient at rest may not disclose the pain, especially chronic pain conditions, and it is now recommended that movement-related pain are better disclosed during ADL activities. This idea has already been incorporated into at least four pain behaviour rating scales and these scales include instructions for spontaneous or guided movements during the pain observation process (Lefebvre-Chapiro, 2001; Snow et al., 2004; Husebo, Strand, Moe-Nilssen, Husebo & Ljunggren, 2010; Nygaard & Jarland, 2006).

Most of these scales are easy to use, but require training and time for proper administration. In the last years, doctors, nurses, and other caregivers have been involved in the validation processes. Although results are promising, future studies are needed to define the most appropriate pain behaviour items which are able to discriminate between pain behaviour and behaviours related to other aspects of unmet needs.

In the Netherlands, the recently developed guideline "chronic pain in vulnerable elderly" (Herkenning en behandeling van chronische pijn bij kwetsbare ouderen, Verenso 2011) identified several instruments that are available in Dutch. Based on psychometric properties and feasibility, three are recommended: PACSLAC-D (a shortened version of the Pain Assessment Checklist for Seniors with limited Ability To Communicate; Fuchs-Lacelle & Hadistavropoulos, 2004), PAINAD (The Pain Assessment in Advanced Dementia; Warden, Hurley & Volicer, 2003) and Doloplus (Lefebvre-Chapiro, 2001).

In Norway, a recently developed observational tool, the MOBID-2 (The Mobilization–Observation–Behaviour–-Intensity–Dementia) Pain Scale (Husebo et al., 2007; Husebo, Strand, Moe-Nilssen, Husebo & Ljunggren, 2009; Husebo et al., 2010) is used in nursing home settings. Assessment of pain intensity is based on the patient's immediate pain behaviour (vocalization, facial expression, and body movements) in connection with standardized, guided movements of different body parts, and pain behaviour related to internal organs. The total MOBID-2 score (0–10) is derived from caregivers in a clinical bedside situation during morning care. Psychometric property studies have indicated high to excellent reliability and validity, and the assessment tool has been found feasible to use in clinical practice (Husebo et al., 2007, 2009, 2010; Husebo, Ballard, Sandvik, Nilsen & Aarsland, 2011).

Limitations of existing instruments

Taking together, a valid outcome measure of pain is the prerequisites for trials of pain treatment and assessment of potential analgesic side effects. In the last years, the development of single instruments is derivative of other instruments, including different aspects of pain behaviour and pain intensity, location and duration of pain, pain observed at rest or during movements, and self-report if still possible. Evaluations of the most promising observational pain assessment scales in patients with dementia indicate that although a number of tools demonstrate some promising potential, the validity of those scales is still not satisfactory (Villanueva, 2003). A further limitation is that some instruments are not validated in English or only validated for one language. In addition, hardly any information is available on how to assess orofacial and/or dental pain (Lobbezoo et al., 2011). This is of key importance, because impaired chewing, infections, and pain in the mouth may result in chronic malnutrition, poorer physical activity and more suffering.

Another concern is related to the scoring system. Most instruments add up the number of observed behaviours to present a total score. This means that a high number of behaviours indicate more pain. However, a patient may be

in severe pain although it is manifested only in a few items, for instance in connection with moving a leg or an arm, and the rest of the body is pain free. Some patients with for instance Parkinson disease or a severely reduced condition would not be able to express enough behaviour to be judged to be in pain. Others, such as patients with Huntington's chorea, may express too much, even when there is no pain.

Treatment recommendations for individuals with dementia

Pharmacological management of chronic pain in older persons may be challenging. In 2009, the AGS Panel revised their previous recommendations on Pain Management in Older Adults with support of the American Pain Society and the American Academy of Pain Medicine. The new guidelines include key approaches for safer opioid prescribing in older adults. However, the current treatment recommendation guidelines, which aim to update the evidence base of the 2002 Guideline, are not yet evidence based and do not consider pain treatment in patients with severe dementia, who often are excluded from randomized clinical trials and pain treatment studies (Corbett et al., 2012).

Although pharmacological treatment with analgesics is the most common form of pain treatment in older individuals, the use of non-pharmacological and alternative treatment should also be considered, especially under the aspect of potentially less adverse events (Ballard, Smith, Husebo, Aarsland & Corbett, 2011).

Prevalence studies of analgesic drug use in dementia

Traditionally, medications with analgesic effects are classified into three groups: periphery analgesics, such as acetaminophen, non-steroidal anti-inflammatory drugs (NSAIDs), and opioid agents. Adjuvant medication (such as antidepressants, antiepileptic, hypnotics, anxiolytics, antipsychotics, and steroids) supports analgesic effects, but research results are only available for patients without mental impairment. Even when pain is assessed and recognized, pain management often falls short of prescription recommendations. This seems to be a worldwide challenge, documented by studies from The Netherlands (e. g. Achterberg, Pot, Scherder & Ribbe, 2007), Belgium (e. g. Elseviers, Vander Stichele & Van Bortel, 2010), England (e. g. Closs, Barr & Briggs, 2004), Norway (e. g. Nygaard & Jarland, 2005), Sweden (e. g. Hutt et al., 2006), United States (e. g. Won et al., 2003) or China (Tse, Pun & Benzie, 2005). A study of 21,380 people living in nursing homes in 13 US states identified persistent pain in 49 % of those studied (Won et al., 2003). Yet, 24 % of those with persistent pain received no analgesics, and less than half of the medications were prescribed as standing orders. Acetaminophen was the most frequently prescribed analgesic and often at doses < 1300 mg/day.

A study on the knowledge and beliefs of nurses caring for older adults with dementia in a nursing home setting found that a large number of the professionals thought patients should only receive analgesics ''when necessary'' rather than on a fixed schedule (Cramer, Galer, Mendelson & Thomson, 2000). However, deficits or misbelieves about the care of older adults can affect all clinicians, not just nurses.

Better cognition has been associated with a greater likelihood of receiving an analgesic other than acetaminophen. In a study of 551 nursing home residents in North Carolina, 56 % of the individuals with severe cognitive impairment received pain medications, compared with 80 % of the cognitively intact cohort ($P < .001$); despite a similar rate of pain-related conditions in both groups (Richards & Scott, 2002). Notably, cognitively impaired persons were more likely to be given ''as needed'' pain medications while their peers had regularly scheduled analgesics. ''As needed'' drug regimens are particularly inappropriate for individuals with moderate-to-severe cognitive impairment who are unable to verbally communicate the need for pain relief.

But time is changing. Recently, increasing awareness of pain management in patients with dementia has been reported in the Swedish National Study of Aging and Care – Kungsholmen (Haasum, Fastbom, Fratiglioni, Kåreholt & Johnell, 2011). The study analyzed use of analgesics and psychotropics in 2610 participants aged > 65 years and found that 46 % of the patients with dementia used at least one analgesic drug compared with 25 % of those without dementia. Persons with dementia reported pain less frequently, but the prevalence of pain-related diagnoses was similar compared to persons without dementia. In this study, persons with dementia had higher probability of use of paracetamol (acetaminophen) and psychotropics, whereas there were no significant differences in use of any analgesic, opioids, and NSAIDs compared to those without mental impairment. These results are supported by another study which compared the use of central nervous system drugs and analgesics among 546 people aged 85 years and older, with and without dementia living at home or institutions in Sweden and Finland (Lovheim et al., 2008). A significantly higher proportion of patients with dementia used paracetamol, antipsychotics, antidepressant and anxiolytics. No differences were found for opioids. These findings are very promising; since they clearly suggest that the research findings of the last decades – which reported an under-treatment of pain in dementia – have already impacted the clinical practice and have led to an intensification of pain management in this frail patient group.

The Development of a European Solution

The authors of this article represent members of the COST[2]-Action 1005 (Pain Assessment in Patients with Impaired Cognition, especially in Dementia). COST-Action 1005 consists of basic and clinical scientists in pharmacy, dementia, pain, nursing and palliative care with members from Belgium, Cyprus, Denmark, France, Germany, Israel, Italy, Norway, Romania, Spain, Switzerland, The Netherlands, United Kingdom, and Australia (http://www.cost-td1005.net). It is the task of this mostly European group to take into consideration all those behavioral pain assessment scales that have been developed and based on these scales to develop a comprehensive and internationally agreed-on assessment toolkit of pain in older individuals with cognitive impairments (especially dementia). This toolkit should target the various subtypes of dementia and various aspects of pain, including pain diagnostics, cognitive examination and guidelines for proper assessment. Validation of this toolkit requires joint action of both basic and clinical sciences. Only hereby, the urgently needed improvement of pain management in dementia can be achieved.

Conclusion

Advanced age is associated with increased prevalence of pain and of dementia. Given that the ability to report about pain depends on the patient's memory, expectation, and insight; patients with dementia (who are often limited in these aspects) are at high risk for being underdiagnosed and untreated for pain. Pain that goes unnoticed may contribute to increasing behavioural disturbances in patients with dementia; like agitation and aggression. International recommendations to assess and treat pain have been published and an impressive number of pain behaviour rating scales have been developed and tested. However, the validity of these scales is still unsatisfactory. It is, moreover, an alarming fact that patients with dementia are still excluded from high quality RCT trials of pain treatment in dementia. This underlines high needs of research as well as excellent implementation concepts for pain assessment and pain treatment in elderly individuals with dementia.

Acknowledgement

We acknowledge financing from the COST program (European Cooperation in the field of Scientific and Technical Research) for COST TD 1005.

[2] COST is the acronym for "European Cooperation in the Field of Scientific and Technical Research"; which is an inter-governmental framework for fostering collaboration between researchers in Europe.

References

Achterberg, W. P., Pot, A. M., Scherder, E. J. & Ribbe, M. W. (2007). Pain in the nursing home: Assessment and treatment on different types of care wards. *Journal of Pain and Symptom Management, 34,* 480–487.

AGS Panel. (2009). Pharmacological Management of Persistent Pain in Older Persons. *Journal of American Geriatric Society, 57*, 1331–1366.

AGS Panel. (1998). The management of chronic pain in older persons. *Journal of American Geriatric Society, 46,* 635–651.

AGS Panel. (2002). The management of persistent pain in older persons. *Journal of the American Geriatric Society, 50,* 205–224.

Ballard, C., Smith, J., Husebo, B. S., Aarsland, D. & Corbett, A. (2011). The role of pain treatment in managing the behavioural and psychological symptoms of dementia (BPSD). *International Journal of Palliative Nursing, 17,* 420–423.

Black, B. S., Finucane, T., Baker, A., Loreck, D., Blass, D., Fogarty, L. et al. (2006). Health problems and correlates of pain in nursing home residents with advanced dementia. *Alzheimer Disease and Associated Disorders, 20,* 283–290.

Bosley, B. N., Weiner, D. K., Rudy, T. E. & Granieri, E. (2004). Is chronic nonmalignant pain associated with decreased appetite in older adults? Preliminary evidence. *Journal of the American Geriatric Society, 52,* 247–251.

Buffum, M. D. & Haberfelde, M. (2007). Moving to new settings: Pilot study of families' perceptions of professional caregivers' pain management in persons with dementia. *Journal of Rehabilitation and Research Development, 44,* 295–303.

Cipher, D. J. & Clifford, R. A. (2004). Dementia, pain, depression, behavioral disturbances, and ADLs: toward a comprehensive conceptualization of quality of life in long-term care. *International Journal of Geriatric Psychiatry, 19,* 741–748.

Closs, S. J., Barr, B. & Briggs, M. (2004). Cognitive status and analgesic provision in nursing home residents. *British Journal of General Practice, 54,* 919–921.

Cohen-Mansfield, J. (2006). Pain Assessment in Noncommunicative Elderly Persons – PAINE. *Clinical Journal of Pain*, *22,* 569–575.

Corbett, A., Husebo, B. S., Malcangio, M., Staniland, A., Cohen-Mansfield, J., Aarsland, D. et al. (2012). Assessment and treatment of pain in people with dementia Assessment, diagnosis and treatment of pain in people with dementia. *Nature Reviews Neurology*, *8,* 264–274.

Cordner, Z., Blass, D. M., Rabins, P. V. & Black, B. S. (2010). Quality of Life in Nursing Home Residents with Advanced Dementia. *Journal of the American Geriatric Society, 58,* 2394–2400.

Cramer, G. W., Galer, B. S., Mendelson, M. A. & Thomson, G. D. (2000). A drug use evaluation of selected opioid and non-opioid analgesics in the nursing facility setting. *Journal of the American Geriatric Society*, *48,* 398–404.

Ekman, P. & Friesen, W. V. (1978). *Facial action coding system: Investigator's guide.* Palo Alto, California: Consulting Psychologists Press.

Elseviers, M. M., Vander Stichele, R. R. & Van Bortel, L. (2010). Drug utilization in Belgian nursing homes: impact of residents' and institutional characteristics. *Pharmacoepidemiology and Drug Safety, 190,* 1041–1048.

Ferrell, B. A. (1991). Pain Management in Elderly People. *Journal of the American Geriatric Society, 39,* 64–73.

Ferrell, B. R. & Griffith, H. (1994). Cost Issues Related to Pain Management – Report from the Cancer Pain Panel of the Agency for Health-Care Policy and Research. *Journal of Pain and Symptom Management, 9,* 221–234.

Fuchs-Lacelle, S. & Hadjistavropoulos, T. (2004). Development and preliminary validation of pain assessment checklist for seniors with limited ability to communicate (PACSLAC). *Pain Management Nursing*, 5, 37–49.

Giron, M. S. T., Forsell, Y., Bernsten, C., Thorslund, M., Winblad, B. & Fastbom, J. (2002). Sleep problems in a very old population: Drug use and clinical correlates. *Journals of Gerontology A-Biological Science and Medical Science, 57,* 236–240.

Gloth, F. M. (2011). Pharmacological Management of Persistent Pain in Older Persons: Focus on Opioids and Nonopioids. *Journal of Pain, 12,* 14–20.

Gluhak, C., Arnetzl, G. V., Kirmeier, R., Jakse, N. & Arnetzl, G. (2010). Oral status among seniors in nine nursing homes in Styria, Austria. *Gerontology*, *27,* 47–52.

Grimby, C., Fastbom, J., Forsell, Y., Thorslund, M., Claesson, C.B. & Winblad, B. (1999). Musculoskeletal pain and analgesic therapy in a very old population. *Archives of Gerontology and Geriatrics, 29,* 29–43.

Haasum, Y., Fastbom, J., Fratiglioni, L., Kåreholt, I. & Johnell, K. (2011). Pain Treatment in Elderly Persons With and Without Dementia A Population-Based Study of Institutionalized and Home-Dwelling Elderly. *Drugs and Aging, 28,* 283–293.

Hadjistavropoulos, T., Herr, K., Turk, D. C., Fine, P. G., Dworkin, R. H., Helme, R. et al. (2007). An interdisciplinary expert consensus statement on assessment of pain in older persons. *Clinical Journal of Pain*, *23,* S1-S43.

Helme, R. D. & Gibson, S. J. (2001).The epidemiology of pain in elderly people. *Clinics in Geriatric Medicine*, *17,* 417–431.

Herkenning en behandeling van pijn bij kwetsbare ouderen (Richtlijn Pijn). Verenso, 2011. http://www.anesthesiologie.nl/uploads/108/1193/Def_RL_Pijn_bij_Kwetsbare_Ouderen_2011.pdf

Herr, K., Bjoro, K. & Decker, S. (2006). Tools for assessment of pain in nonverbal older adults with dementia: A state-of-the-science review. *Journal of Pain and Symptom Management, 31,* 170–192.

Herr, K. (2011). Pain Assessment Strategies in Older Patients. *Journal of Pain, 12,* 3–13.

Horn, S. D., Bender, S. A., Bergstrom, N., Cook, A. S., Ferguson, M. L., Rimmasch, H. L. et al. (2002). Description of the National Pressure Ulcer Long-Term Care Study. *Journal of the American Geriatric Society*, *50,* 1816–1825.

Husebo, B. S., Ballard, C. & Aarsland, D. (2011). Pain treatment of agitation in patients with dementia: a systematic review. *International Journal of Geriatric Psychiatry*, *26,* 1012–1028.

Husebo, B. S., Ballard, C., Sandvik, R., Nilsen, O. B. & Aarsland, D. (2011). Efficacy of treating pain to reduce behavioural disturbances in residents of nursing homes with dementia: cluster randomised clinical trial. *British Medical Journal*, *343,* 1–10.

Husebo, B. S., Strand, L. I., Moe-Nilssen, R., Husebo, S.B., Snow, A.L. & Ljunggren, A.E. (2007). Mobilization-Observation-Behavior- Intensity-Dementia Pain Scale (MOBID): Development and Validation of a Nurse-Administered Pain Assessment Tool for Use in Dementia. *Journal of Pain and Symptom Management, 34,* 67–80.

Husebo, B. S., Strand, L. I., Moe-Nilssen, R., Husebo, S.B. & Ljunggren, A.E. (2009). Pain behaviour and pain intensity in older persons with severe dementia: reliability of the MOBID Pain Scale by video uptake. *Scandinavian Journal of Caring Sciences*, *24,* 380–391.

Husebo, B. S., Strand, L. I., Moe-Nilssen, R., Husebo, S.B. & Ljunggren, A.E. (2010). Pain in older persons with severe dementia. Psychometric properties of the Mobilization-Observation-Behaviour-Intensity-Dementia (MOBID-2) Pain Scale in a clinical setting. *Scandinavian Journal of Caring Sciences, 24,* 380–391.

Husebo, B. S., Strand, L. I., Moe-Nilssen, R., Borgehusebo, S., Aarsland, D. & Ljunggren, A. E. (2008). Who suffers most? Dementia and pain in nursing home patients: A cross-sectional study. *Journal of the American Directors Association, 9,* 427–433.

Jakobsson, U. & Hallberg, I. R. (2002). Pain and quality of life among older people with rheumatoid arthritis and/or osteoarthritis: a literature review. *Journal of Clinical Nursing, 11,* 430–443.

Kappesser, J., Williams, A.C. & Prkachin, K.M. (2006). Testing two accounts of pain underestimation. *Pain*, *124,* 109–116.

Koopman, J. S., Dieleman, J. P., Huygen, F. J., de Mos, M., Martin, C.G. & Sturkenboom, M.C. (2009). Incidence of facial pain in the general population. *Pain*, *147,* 122–127.

Kunz, M., Scharmann, S., Hemmeter, U., Schepelmann, K. & Lautenbacher, S. (2007). The facial expression of pain in patients with dementia. *Pain*, *133,* 221–228.

Leong ,I. Y. & Nuo, T. H. (2007). Prevalence of pain in nursing home residents with different cognitive and communicative abilities. *Clinical Journal of Pain, 23,* 119–127.

Lefebvre-Chapiro, S. (2001). The Doloplus 2 scale – evaluating pain in the elderly. *European Journal of Palliative Care*, *8,* 191–194.

Lin, P. C., Lin, L. C., Shyu, Y. I. L. & Hua, M. S. (2011). Predictors of pain in nursing home residents with dementia: a cross-sectional study. *Journal of Clinical Nursing, 20,* 1849–1857.

Lobbezoo, F., Weijenberg, R. A. F. & Scherder, E. J. A. (2011). Topical Review: Orofacial Pain in Dementia Patients. A Diagnostic Challenge. *Journal of Orofacial Pain, 25,* 6–14.

Lovheim, H., Karlsson, S. & Gustafson, Y. (2008). The use of central nervous system drugs and analgesics among very old people with and without dementia. *Pharmacoepidemiology of Drug Safety, 17*, 912–918.

Miro, J., Paredes, S., Rull, M., Queral, R., Miralles, R., Nieto, R. et al. (2007). Pain in older adults: A prevalence study in the Mediterranean region of Catalonia. *European Journal of Pain*, *11,* 83–92.

Moriarty, O. M., McGuire, B. E. & Finn, D. P. (2011). The effect of pain on cognitive function: A review of clinical and preclinical research. *Progress in Neurobiology*, *93,* 385–404.

Nygaard, H. A. & Jarland, M. (2005). Are nursing home patients with dementia diagnosis at increased risk for inadequate pain treatment? *International Journal of Geriatric Psychiatry*, *20,* 730–737.

Nygaard, H. A. & Jarland, M. (2006). The Checklist of Nonverbal Pain Indicators (CNPI): testing of reliability and validity in Norwegian nursing homes. *Age and Ageing, 35,* 79–81.

Pautex, S., Michon, A., Guedira, M., Emond, H., Le Lous, P., Samaras, D. et al. (2006).Pain in severe dementia: self-assess-

ment or observational scales? *Journal of the American Geriatric Society*, *54,* 1040–1045.

Prkachin, K. M. (1992). The Consistency of Facial Expressions of Pain – A Comparison Across Modalities, *Pain, 51*, 297–306.

Richards, S. C. M. & Scott, D. L. (2002). Prescribed exercise in people with fibromyalgia: parallel group randomised controlled trial. *British Medical Journal, 325,* 185–187.

Scherder, E., Herr, K., Pickering, G., Gibson, S., Benedetti, F. & Lautenbacher, S. (2009). Pain in dementia. *Pain*, *145,* 276–768.

Snow, A. L., Weber, J. B., O'Malley, K. J., Cody, M., Beck, C., Bruera, E. et al. (2004). NOPPAIN: A nursing assistant-administered pain assessment instrument for use in dementia. *Dementia and Geriatric Cognitive Disorders*, *17,* 240–246.

Takai, Y., Yamamoto-Mitani, N., Okamoto, Y., Koyama, K. & Honda, A. (2010). Literature Review of Pain Prevalence Among Older Residents of Nursing Homes. *Pain Management Nursing*, *11,* 209–223.

Tambyah, P. A. & Maki, D. G. (2000). Catheter-associated urinary tract infection is rarely symptomatic – A prospective study of 1497 catheterized patients. *Archives of Internal Medicine*, *160,* 678–682.

Tse, M. M. Y., Pun, S. P. Y. & Benzie, I. F. F. (2005). Pain relief strategies used by older people with chronic pain: an exploratory survey for planning patient-centred intervention. *Journal of Clinical Nursing*, *14,* 315–320.

Villanueva, M. R. (2003). Pain assessment for the dementing elderly (PADE): Reliability and validity of a new measure. *Journal of the American Medical Directors Association, 4,* 1.–8.

Warden, V., Hurley, A. C. & Volicer, L. (2003). Development and psychometric evaluation of the Pain Assessment in Advanced Dementia (PAINAD) scale. *Journal of the American Medical Directors Association, 4,* 9–15.

Won, A. B., Lapane, K., Vallow, S., Schein, J., Morris, J.N. & Lipsitz, L.A. (2003). Persistent nonmalignant pain and analgesic prescribing practices in elderly nursing home residents. *Journal of the American Geriatric Society*, *51,* 193–194.

Woolf, A. D., Zeidler, H., Haglund, U., Carr, A.J., Chaussade, S., Cucinotta, D. et al. (2004). Musculoskeletal pain in Europe: its impact and a comparison of population and medical perceptions of treatment in eight European countries. *Annals of the Rheumatic Diseases*, *63,* 342–347.

Wroblewski, M. & Mikulowski, P. (1991). Peritonitis in Geriatric Inpatients. *Age and Ageing, 20,* 90–94.

Zwakhalen, S. M., Hamers, J. P., Abu-Saad, H. H. & Berger, M. P. (2006). Pain in elderly people with severe dementia: a systematic review of behavioural pain assessment tools. *BMC Geriatrics*, *6,* 3.

Zwakhalen, S. M., Koopmans, R. T., Geels, P. J., Berger, M. P. & Hamers, J. P. (2009). The prevalence of pain in nursing home residents with dementia measured using an observational pain scale. *European Journal of Pain*, *13,* 89–93.

Stefan Lautenbacher

University of Bamberg
Markusplatz 3
DE-96045 Bamberg
stefan.lautenbacher@uni-bamberg.de

CME-Fragen

1. Welche Faktoren erschweren maßgeblich die valide Schmerzerfassung bei Patienten mit demenziellen Erkrankungen?
   a. Die Patienten sind oft einsam und übertreiben daher ihre Schmerzangaben, um mehr Aufmerksamkeit vom Pflegepersonal zu bekommen.
   b. Die Patienten sind auf Grund ihrer kognitiven Einbußen, oft nicht mehr in der Lage über ihre Schmerzen zu berichten.
   c. Im Verlaufe der neuronalen Dgeneration kommt es zu Zelluntergang in Arealen, die maßgeblich an der Schmerzverarbeitung beteiligt sind. Dies hat zur Folge, dass Demenzpatienten Schmerzsignale aus der Körperperipherie fehlinterpretieren.
   d. Die Patienten fühlen sich oft hilflos und verschweigen das Vorhandensein von Schmerzen, um nicht noch bedürftiger zu erscheinen.
   e. Alle der oben genannten.

2. Wie sieht die mimische Schmerzreaktion bei Demenzpatienten (mit leichter bis mittelgradiger Demenz) aus?
   a. Genauso wie bei Gesunden.
   b. Vermindert.
   c. Gesteigert.
   d. Demenzpatienten reagieren oft mit Lachen auf Schmerz.
   e. Demenzpatienten zeigen nur wirre, unspezifische Mimikreaktionen bei Schmerzerleben.

3. Was ist bei der Schmerzerfassung mittels Beobachtungsskalen zu beachten?
   a. Patienten sollten während Ruhephasen und während aktiver Phasen beobachtet werden.
   b. Beobachter/Pflegepersonal sollten eine Schulung durchlaufen, bevor eine Beobachtungsskale zur Schmerzerfassung eingesetzt wird.
   c. Die Beobachtungsskale sollte folgende Bereiche umfassen: Mimischer Ausdruck, Körperhaltung und Vokalisation.
   d. Die eingesetzte Skala sollte validiert sein.
   e. Alle der oben genannten

4. Welche Art von Schmerzen kommt bei alten Menschen am häufigsten vor?
   a. Kopfschmerz?
   b. Neuropathische Schmerzen?
   c. Muskuloskelettale Schmerzen?
   d. Abdominale Schmerzen?
   e. Alle Schmerzarten kommen mit ähnlichen Häufigkeiten im Alter vor.

5. Welche Probleme traten of in der Schmerztherapie von Demenzpatienten auf?
   a. Demenzpatienten haben zumeist eine zu hohe Dosis an Schmerzmedikamenten verabreicht bekommen.
   b. Demenzpatienten wurden mit Schmerzmedikamenten, wie Paracetamol, ruhig gestellt.
   c. Geringere Dosen an Schmerzmedikamenten sind bei Demenzpatienten im Vergleich zu kognitiv Gesunden bereits ausreichend, da bei Demenzpatienten höhere Plazebowirkungen nachgewiesen werden konnten.
   d. Demenzpatienten haben zumeist deutlich weniger Schmerzmedikamente verabreicht bekommen im Vergleich zu kognitiv gesunden Personen.
   e. Schmerzmedikamente können nicht zusammen mit Antidementiva verabreicht werden, da die Schmerzmedikamnte die Wirkung der Antidementiva aufhebt.

Um Ihr CME-Zertifikat zu erhalten (mind. 3 richtige Antworten), schicken Sie bitte den ausgefüllten Fragebogen **mit einem frankierten Rückumschlag** bis zum 10.01.2013 an die nebenstehende Adresse. Später eintreffende Antworten können nicht berücksichtigt werden.

Herr Prof. Dr. Lutz Jäncke
Universität Zürich, Institut für Psychologie
Abteilung Neuropsychologie
Binzmühlestrasse 14
Postfach 25
CH-8050 Zürich

FORTBILDUNGSZERTIFIKAT

Die Ärztekammer Niedersachsen erkennt hiermit 1 Fortbildungspunkt an.

Stempel

Zeitschrift für
Neuropsychologie
4/2012

HUBER

Datum Unterschrift

Pain assessment and treatment challenges in patients with dementia

Die Antworten bitte deutlich ankreuzen!

	1	2	3	4	5
a.	☐	☐	☐	☐	☐
b.	☐	☐	☐	☐	☐
c.	☐	☐	☐	☐	☐
d.	☐	☐	☐	☐	☐
e.	☐	☐	☐	☐	☐

Ich versichere, alle Fragen ohne fremde Hilfe beantwortet zu haben.

Name

Berufsbezeichnung, Titel

Straße, Nr.

PLZ/Ort