
Overview of Persistent Pain in Older Adults

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With the shifting age demographics of the U.S. population, more psychologists will be asked to provide clinical services to older adults. Given the high prevalence of persistent pain in aging, in many cases this will mean providing empirically supported interventions for pain and the interference it creates. The purpose of this review is to provide a broad overview of the scope and impact of persistent pain in older people and to discuss mechanisms by which persistent geriatric pain can lead to suffering and disability. We consider the unique context of pain in older adulthood and review differences between older and younger people in terms of pain perception, the social network, beliefs about pain, pain-related coping, and adherence to pain medication. Finally, we discuss special issues affecting pain management in older adults, including dementia, polypharmacy, and barriers to accessing adequate pain care. This review also highlights a need for greater provider training in pain management to meet the needs of a changing U.S. population.

Keywords: pain, chronic pain, persistent pain, older adult

In the United States, there are now more than 40 million people over the age of 65, accounting for 14% of the total population. With the relative percentage of older adults continuing to grow at 1.5 times the average rate, those over 65 are expected to make up 20% of the total population by 2030, with the greatest increase in those over 80 years (U.S. Census Bureau, 2011). More than two thirds of older Americans suffer from multiple, chronic conditions, and treatment for these conditions makes up 66% of the U.S. health care budget (Centers for Disease Control and Prevention, 2013). It is essential that practicing clinicians have an understanding of the unique psychosocial context and medical challenges that face this growing population.

One such challenge is persistent pain. An estimated 60%–75% of people over the age of 65 report at least some persistent pain, and this rate is considerably higher for people who are in assisted living facilities or nursing homes (e.g., Ferrell, Ferrell, & Osterweil, 1990; Tsang et al., 2008). Consistent with a greater prevalence rate of chronic medical comorbidities in later adulthood, the most frequent pain complaints among older adults are osteoarthritic back pain, especially in the low back or neck (around 65%), musculoskeletal pain (around 40%), peripheral neuropathic pain (typically due to diabetes or postherpetic neuralgia, 35%), and chronic joint pain (15%–25%) (Denard et al., 2010; Donald & Foy, 2004; Mailis-Gagnon, Nicholson, Yegneswaran, & Zuroqski, 2008). Epidemiological surveys

suggest that the prevalence of pain increases with age, and women are generally more likely to report persistent pain than men (Tsang et al., 2008). Surveys of other large samples indicate that although pain prevalence increases with age, pain intensity may be highest during midlife (e.g., 45–65 years), when the incidence of severe pain peaks (Langley, 2011). Among older adults who report pain, most (60%) describe it as “moderate,” and about 25% describe it as “severe” (Langley, 2011).

Impact of Persistent Pain: Sleep, Activity, and Mood

In a state of persistent pain, older adults may limit what they do, either because activity exacerbates the pain (R. R. Martin, Hadjistavropoulos, & McCreary, 2005) or because they are afraid of reinjury or falling (Hübscher, Vogt, Schmidt, Fink, & Banzer, 2010; Vlaeyen & Crombez, 1999). Limiting physical activity because of pain is a natural strategy for certain acute pain conditions in which pain results from an injury that requires rest to heal. However, in the case of persistent pain, limiting activity may lead to a cycle of restriction, decreased participation, and greater disability (Jensen, Moore, Bockow, Ehde, & Engel, 2011). Aside from a reduction in social engagement and meaningful activities (e.g., Parkinson, Gibson, Robinson, & Byles, 2010), a decline in physical activity because of pain is also associated with weight gain and obesity in adults (Strine, Hootman, Chapman, Okoro, & Balluz, 2005), which can contribute to even greater pain, especially in the knees, hips, and lower back (Andersen, Crespo, Bartlett, Bathon, & Fontaine, 2003; McCarthy, Bigal, Katz, Derby, & Lipton, 2009).

Persistent pain may also lead to chronic problems in initiating and maintaining sleep. Older adults with severe, persistent pain are twice as likely to report difficulties in initiating sleep, in staying asleep, and with sleeping longer than usual (Chen, Hayman, Shmerling, Bean, & Leveille, 2011). This is especially the case for

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individuals who have pain at multiple sites (as older adults frequently do) and is true even after controlling for comorbid health conditions and anxiety (Chen et al., 2011). Consequently, as many as 42% of middle-aged and older adults with persistent pain experience chronic sleep deprivation (Artner et al., 2013). The relationship between pain-related sleep deprivation and physical inactivity may also be cyclical, since poor sleep leads to persistent fatigue in older adults (Valentine, Woods, McAuley, Dantzer, & Evans, 2011), and fatigue leads to decreases in physical activity and to greater disability (Lin et al., 2011).

Problems with mood, including risk for clinically significant depression, are also important consequences of persistent pain in older people. However, the literature on pain and depression in older people is complex and nuanced. Rates of major depression are estimated at 19%–28% in samples of older adults with persistent pain (Gleicher, Croxford, Hochman, & Hawker, 2011; Rosemann et al., 2007), compared with 2%–4% in the older population in general (Lum et al., 2012). Persistent pain is a strong predictor of depressive severity, comparable with other significant risk factors such as social isolation (Rosemann et al., 2007). A number of recent studies have also demonstrated that persistent pain is associated with the presence of suicidal ideation in older people (Almeida et al., 2012; Tektonidou, Dasgupta, & Ward, 2011). The relationship between pain and depression may also be cyclical, with increases in pain predicting increases in depression, and vice versa (Chou, 2007).

By way of understanding predictors of depression, studies examining the differences between older adults with pain who are depressed and older adults with pain who are not report that depressed older adults experience

greater rates of social isolation (marked by few close friends or contacts; Rosemann et al., 2007), lower income combined with multiple medical comorbidities (Tektonidou et al., 2011), a prior history of depression (Burns et al., 2012; Koenig, 1997), current or past substance abuse (e.g., binge drinking; Tektonidou et al., 2011), higher levels of pain severity (Lavin & Park, 2011), and chronically negative interactions with family members (Chou, 2007). Unfortunately, access to quality mental health care is a very serious problem for older adults in general (Szczerbińska, Hirdes, & Zyckowska, 2012), and almost half of those with depressed mood and persistent pain will receive either inadequate or no mental health care whatsoever (Gleicher et al., 2011).

However, in discussing the relationship between pain and depression in the later years of life, it is also important to acknowledge the remarkable resilience of the older population. Although the majority of older adults with major depression also report persistent pain (Unützer, Ferrell, Lin, & Marmon, 2004), the inverse is not true—the majority of older adults with persistent pain do not report significant depression. Corran, Farrell, Helme, and Gibson (1997) reported that 75% of older adults seen in a multidisciplinary pain center demonstrated either “good pain control” (marked by low levels of depression and functional impairment) or “positive adaptation” to pain (marked by high levels of pain but also low levels of depression and low functional impact). In a follow-up study, more than half of older patients assessed in an outpatient pain clinic reported low levels of pain, depression, and functional impairment (Cook & Chastain, 2001). These observations are also supported by prevalence data taken from large-scale community samples, which suggest that more than 70% of older adults with persistent pain do not experience clinically significant levels of depression (e.g., Gleicher et al., 2011; Rosemann et al., 2007). Although not specifically addressing depression, recent work also suggests that a small but significant subset of older individuals report pain without any pain-related interference at all (38%; Jordan, Sim, Moore, Bernard, & Richardson, 2012).

The above statements are not meant to deny the fact that there is a significant group of older individuals who struggle with low mood in the context of persistent pain. To summarize the evidence, it seems that approximately one in four older adults with persistent pain is at risk for depression, and for these individuals the consequences of low mood include very serious outcomes such as poorer physical function, disability, social isolation, and suicidal ideation (Lavin & Park, 2011; Tektonidou et al., 2011). It is also true that for older adults with pain, somatic symptoms and depressive symptoms overlap considerably (e.g., Parmelee, Harralson, McPherron, & Schumacher, 2013), which complicates diagnosis by traditional self-report measures. This underscores the need for a complete intake interview, including a family report, a full clinical interview, and assessment measures validated in older populations.



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Age Differences in the Pain Experience

In the past several decades, there has been a sixfold increase in the number of publications in the area of pain and aging (Gagliese, 2009). Much of this effort has sought to establish and evaluate differences in the pain experience between younger and older adults. Although a full review of aging differences in pain is beyond the scope of this article, we broadly address four key areas in which differences between younger and older adults with pain have been described: pain perception, pain beliefs and attitudes, pain-related coping, and social support.

Differences in the Perception of Pain

Aging is associated with significant changes in the structure, function, and chemistry of the regions of the nervous system, and these changes are believed to impact the perception of pain. In the peripheral nervous system, the density of unmyelinated fibers may decrease considerably with age (Verdú, Ceballos, Vilches, & Navarro, 2000), which is associated with a slowing of nerve conduction (Alder & Nacimiento, 1988). There is also evidence from animal models that aging is associated with a marked reduction in the functional integrity of sensory neurons (e.g., Khalil, Ralevic, Bassirat, Dusting, & Helme, 1994; Matsuda, 1995). Changes in parts of the brain that are essential to pain perception also occur with normal aging, most notably, with loss of brain volume in the prefrontal cortex and the hippocampus (Farrell, 2012). These aging-related changes likely interact with brain alterations that appear to be caused by persistent pain, such as a reduction in the volume of the thalamus that is associated with pain duration (Rodríguez-Raecke, Niemeier, Ihle, Ruether, &

May, 2009). Fortunately, these changes may be reversible with successful treatment of the pain condition (Gwilym, Filippini, Douaud, Carr, & Tracey, 2010). Age-related differences in pain perception may also be due to reduced functioning of endogenous pain modulatory mechanisms, particularly with dopaminergic neurons in the basal ganglia (Cole, Farrell, Gibson, & Egan, 2010).

Because pain sensations are processed by multiple nervous system components that do not age uniformly (Farrell, 2012), the clinical implications of nervous system aging are not entirely clear. In the past, studies have highlighted an increase in the pain threshold for older adults across most experimental stimuli, leading to the conclusion that older adults are “less sensitive” to pain (Gibson & Farrell, 2004). However, there is also good evidence that older people may be less tolerant of pain once it begins and that they experience pain for longer periods of time after tissue injury (Farrell, 2012). Further, pain sensitivity may depend on the experimental stimulus—although older adults may be less sensitive to painful heat stimuli (Lautenbacher, Kunz, Strate, Nielsen, & Arendt-Nielsen, 2005; Quiton et al., 2007), they appear to have a greater sensitivity to painful mechanical pressure (Cole et al., 2010). These mixed findings highlight the fact that the pain experience in older people cannot be summarized simply as an “increase” or “decrease” in sensitivity to pain. Pain perception for older people depends on the kind of stimulus, its duration, and a range of heterogeneous individual characteristics. Taken together, the literature on nociception and aging suggests that although there are clear age-related changes in structures that process pain, there is no good evidence that older adults have a blunted response to the kinds of painful stimuli present in chronic painful conditions.

Differences in Perceptions and Attitudes Regarding Pain

Much literature suggests that people interpret health-related symptoms within the context of their life stage and overall physical health (Parmelee, 1997). There is evidence that older adults may exhibit a number of unique attitudes about health and disability that are relevant to their perception of pain. It is important to bear in mind that some of these beliefs are helpful, and others may serve as barriers to effective pain management.

First, data suggest that older adults may downplay specific symptoms in the context of other multiple medical comorbidities (Helme & Gibson, 1997). For example, an older adult with chronic obstructive pulmonary disease (COPD) may feel that osteoarthritic pain is not as impairing as shortness of breath. Older adults may also compare their experiences to those of more medically ill peers (Idler, 1993; Rakowski & Cryan, 1990) and thereby conclude that they are better off than others they know.

It has also been suggested that many older adults perceive pain and disability as “normal” or “expected” in aging. It is important to remember that pain severe enough to impact function is not a normal part of aging; this is a social expectation rather than a medical reality (e.g., Har-

kins, 1988; Sofaer et al., 2005). Regardless, this belief appears to be quite common, with 87% of respondents in one community sample endorsing statements that having more aches and pains was to be expected with increasing age (Sarkisian, Hays, & Mangione, 2002). The impact of this belief in older adults is complex and under-researched. On the one hand, most underlying conditions that cause persistent pain can be medically managed, and the belief that pain is normal is a high-risk one if it prevents an older adult from reporting pain or seeking appropriate care (Gagliese, 2009; Miaskowski, 2000). Older adults should never tolerate pain when relief is possible, and the belief that pain is “to be expected” may encourage them to do so (Miaskowski, 2000). On the other hand, it has been suggested that an attribution of pain as “age normative” may buffer psychological distress in that such an attribution means there is less emotional reactivity associated with pain and the limitations it brings (Williamson, 2000; Williamson & Schulz, 1992, 1995). There is also preliminary evidence that increasing age brings with it a greater tolerance for uncertainty (Le, 2008), which may also buffer distress via greater acceptance of the lack of clarity and clear fixes in persistent pain treatment.

It is likely that older adults hold all of these beliefs to varying degrees—they may believe that some pain is “to be expected” in aging but that pain is also something worthy of medical assessment and treatment. This possibility is supported by data from one study in which 40% of older individuals said it was “definitely true” that having more aches and pains was to be expected with aging, but 94% also stated that it was “very” or “somewhat” important that someone with aches and pains should talk to a doctor about treating them (Sarkisian et al., 2002). In any case, we highlight that while older adults may see their pain as “normal,” this attribution should *never* be present in care providers, where it can interfere with effective pain assessment and management (Cowan, Fitzpatrick, Roberts, While, & Baldwin, 2003).

Differences in Coping With Pain

Age-related differences in coping have drawn much attention over the past 50 years, and a full discussion of this complex and controversial area (e.g., McCrae, 1989) is beyond the scope of this review. Generally speaking, research has suggested an increase in use of “adaptive” coping strategies across domains in later life (e.g., Aldwin, 1991; Diehl, Coyle, & Labouvie-Vief, 1996; Irion & Blanchard-Fields, 1987). More precisely, studies have shown that older adults draw on a smaller number of coping strategies but use them as effectively as or more effectively than younger adults (Aldwin, 1991; Meeks, Carstensen, Tamsky, Wright, & Pelligrini, 1989). Older adults also tend to use the same strategies for managing stressors across different life domains; that is, they “find what works” and employ it in multiple settings (Moos, Brennan, Schutte, & Moos, 2006).

Specific to pain, several studies have documented differences in coping across the life span, such as a greater use of emotion-focused coping strategies in older adults

with persistent pain (Watkins, Shifren, Park, & Morrell, 1999). One study (Sorkin, Rudy, Hanlon, Turk, & Stieg, 1990) found that younger people used twice as many “cognitive” strategies (e.g., imagery) for managing pain as did older adults. But findings are equivocal—in one community sample of 280 patients with persistent pain, age was negatively correlated with a variety of emotion- and problem-focused strategies (Lachapelle & Hadjistavropoulos, 2005), suggesting less frequent use of coping strategies across the board in older people. No significant relationship was found between age and use of pain coping strategies in a group of patients referred to a multidisciplinary pain management program (Keefe & Williams, 1990).

Based on the available evidence, it appears that when older adults are in pain, they (a) use a narrower range of pain-related coping strategies than do younger people (or, put another way, they “know what works” for them) and (b) use these strategies more consistently and to greater effect than do younger people (Meeks et al., 1989; Moos et al., 2006). There is some preliminary evidence that older adults use certain pain coping strategies (such as resting and pacing themselves) consistently, day after day, regardless of temporary flare-ups in pain, whereas younger adults may ramp up the frequency of their coping efforts as pain worsens (Molton et al., 2008).

Differences in Social Support and Life Context

Perhaps nowhere is the social context more important than among older adults, especially for those who live with pain and disability. Changes in social support network size and organization are among the best-documented effects in the aging literature, and there is good evidence that older adults report fewer friends and social supports than do younger people (e.g., Broese van Groenou, Hoogendijk & van Tilburg, 2013; Huxhold, Fiori & Windsor, 2013). However, data also suggest that in older adults, emotional well-being is more tied to having a few close friends or family members than to having a broad network of support (e.g., Fiori, Antonucci, & Akiyama, 2008; Huxhold, Fiori & Windsor, 2013). The smaller social support networks seen in older people may be the result of intentional “downsizing” on their part in which they reduce the energy spent on maintaining contact with peripheral social partners (e.g., Carstensen, Isaacowitz, & Charles, 1999; Lang, 2000). Socially, older adults appear to become quite selective and prefer to be with people who are like themselves, to whom they feel close, and who provide information that is consistent with their beliefs (S. L. Brown, Asher, & Cialdini, 2005). Through this process, older adults tend to keep the same number of close friends (Heylen, 2010). This process of “downsizing” is most pronounced from early to middle adulthood (Carstensen et al., 1999) and may be especially true of older adults with decreasing physical capacities, since they may lack the energy or resources to maintain a large group of friends (Aartsen, van Tilburg, Smits, & Knipscheer, 2004). It is worth noting that the perspective that older adults intentionally reduce their networks (rather than have them reduced for them by loss and bereavement)

is not without controversy. But almost certainly, older people attach less significance to the absolute number of social relationships in their networks, and the emphasis on quality over quantity seems to increase linearly with age (Heylen, 2010).

Unfortunately, these smaller networks are naturally more sensitive to losses and strain. In the case of persistent pain, smaller social networks may be less able to provide necessary tangible support. Older adults with persistent pain conditions rely on social support as a coping mechanism (K. R. Martin, Schoster, Woodard & Callahan, 2012) and have better outcomes in the context of larger and more satisfying social networks (Ferreira & Sherman, 2006, 2007). Older adults may also have more difficulty in replacing lost relationships with new ones (Broese van Groenou et al. 2013). It is also true that many older adults rely on their same-age spouses and friends for help with activities of daily living. This becomes problematic when those individuals, too, age into health problems or disability. One participant in a focus group study of pain associated with disability in later life summarized this phenomenon well: "Every friend I have lives upstairs, and they haul you up the steps. They're getting older, and they have their aches and pains and say, 'My back's out, I can't help'" (Yorkston, McMullan, Molton, & Jensen, 2010, p. 1702).

Special Clinical Issues

Aging and Polypharmacy

Polypharmacy, or the taking of multiple medications, is exceedingly common in later adulthood. A population-based survey demonstrated that most older adults take between five and eight daily medications, with 12%–39% taking nine or more (Cannon, Choi, & Zuniga, 2006; Kaufman, Kelly, Rosenberg, Anderson, & Mitchell, 2002). This problem appears to be growing—rates of office visits involving polypharmacy in older adults nearly quadrupled from 1990 to 2000, even after controlling for population growth (Aparasu, Mort, & Brandt, 2005). Although those over age 65 represent about 12% of the U.S. population, they use 40% of all over-the-counter medications, further complicating polypharmacy (Maiese, 2002; Rolita & Freedman, 2008). The unfortunate consequences of multiple medications include very high rates of adverse drug interactions and reactions in older persons (~20%; Routledge, O'Mahony, & Woodhouse, 2004).

Polypharmacy is an especially difficult issue among older people given the significant changes in how an aging body processes medication. Although a full description is beyond the scope of this review (see Wooten, 2012), aging is associated with reduced drug absorption (due to reduced gastrointestinal tract motility and blood flow), changes in distribution (due to declines in muscle mass and an increase in the proportion of body fat), poorer drug metabolism (due to decreases in hepatic blood flow and liver mass), and reduced excretion (due to declines in renal function). There are also changes at the molecular level that alter receptor binding and thereby may induce more or less sensitivity to particular drug classes (Miller, 2007).

The implications of these changes in pharmacokinetics for persistent pain medications in older persons are considerable. For example, in older adults, long-term use of nonsteroidal anti-inflammatory drugs such as Ibuprofen is associated with gastrointestinal bleeding and renal dysfunction (Cooper & Burfield, 2010) and may exacerbate the development of congestive heart failure (Page & Henry, 2000). Although opiates remain an effective tool for pain management in properly monitored older patients (e.g., Papaleontiou et al., 2010), their use in older adults may be associated with a number of adverse outcomes, including chronic constipation (Papaleontiou et al., 2010); testosterone deficiency in men (Daniell, 2002); somnolence, disorientation, and confusion in acute care (especially when combined with benzodiazepines; Pisani et al., 2009); and problems with balance and dizziness that contribute to an increased risk of falls (French et al., 2006).

It is important to remember that despite the complexities of polypharmacy and the high risk of adverse reactions, medications can still be safe and effective for persistent pain when their use is carefully monitored, and undertreatment of persistent pain in older persons is perhaps a more serious problem (American Geriatrics Society Panel on the Pharmacological Management of Persistent Pain in Older Persons, 2009). Especially in older persons, a comprehensive treatment approach that emphasizes empirically supported psychosocial interventions in conjunction with appropriate and carefully monitored medical management is recommended.

Psychosocial Aspects of Pharmacotherapy

Generally speaking, older adults are more adherent to prescribed medications for a range of health conditions than are younger people (Barclay et al., 2007; Kripalani, Gatti, & Jacobson, 2010). However, this is not the case when it comes to medication prescribed specifically for pain. There is good evidence that older adults are reluctant to take painkilling medications and that when they do, they often take much lower doses less frequently than prescribed (Chang, Wray, Sessanna, & Peng, 2011; Sale, Gignac, & Hawker, 2006). Older adults have also been shown to share pain medications with friends (Resnick, Shaughnessy, & Treloar, 1999) and to stockpile unused pain pills (Ellis, Mullan, & Worsley, 2011). In one study of older adults with osteoarthritis, participants reported that they did not keep their painkilling medications in their pill organizers and were more likely to take them only "as needed" when the pain got really bad, regardless of the prescription instructions (Sale et al., 2006). Similarly, Pahor and colleagues (1999) found that in a sample of older women, almost half of those who reported "severe" pain were taking either no analgesics at all or a very small dose (<20% of the maximum). These and other data suggest that older adults may be more likely to depart from the prescribed medication regimen and to take analgesic medications in a way that they believe will be most helpful, rather than as their doctor prescribed.

Why these unusual behaviors when it comes to pain medications? First and foremost, older adults may be le-

gitimately concerned about side effects and complicated medication interactions. Changes such as lapses in memory and concentration may be especially uncomfortable for older adults given common worries about the potential to develop dementia (e.g., Mol, van Boxtel, Willems, & Jolles, 2006). Older adults also seem to be more worried about becoming “addicted” to analgesics than are younger people (Sale et al., 2006; Weiner & Rudy, 2002). Although prescription medication abuse is a significant problem in the United States, it is important to remember that most individuals who abuse pain medications are not the patients for whom the medications were prescribed but rather are younger adults who (a) get the medications from family members who were prescribed them for pain (Boyd, McCabe, & Teter, 2006) and (b) use them recreationally. In reality, true addiction is not common among patients who use prescribed opioids to manage pain, notwithstanding physiological tolerance, and ranges from 3% to 5% (Fishbain, Cole, Lewis, Rosomoff, & Rosomoff, 2008; Joranson, Ryan, Gilson, & Dahl, 2000). Regardless, it seems that older adults may not readily distinguish among different types of “painkillers” (e.g., Sale et al., 2006) and may not receive adequate education regarding the difference between street use of analgesics for euphoric effect and long-term use of prescribed medication for pain management. Concerns about medication addiction have been well documented in older pain patients, including one individual in a qualitative study (Sale et al., 2006) who said of Percocet, “That is a hard drug . . . I think of the druggies on the street.” Pain education addressing these concerns may be especially important in older populations.

Pain and Dementia

Dementia in and of itself is not painful; however, advanced dementia is associated with an increased risk of several pain-causing medical conditions, such as urinary tract infections, pressure ulcers, and fall-induced fractures. It appears that 30%–50% of people with dementia experience persistent pain (Corbett et al., 2012; McAuliffe, Brown, & Fetherstonhaugh, 2012). Pain in dementia may contribute to problems such as aggression, agitation, withdrawal, and confusion; may further exacerbate cognitive impairment; and can lead to sleep deprivation and impaired ambulation (Corbett et al., 2012; McAuliffe et al., 2012).

The commonly held (but incorrect) belief that people with cognitive impairment feel and experience less pain contributes to a significantly greater risk of underassessment and undertreatment of pain in people with dementia (McAuliffe, Nay, O'Donnell, & Fetherstonhaugh, 2009). Research suggests that while individuals with dementia may experience pain somewhat differently than people without cognitive impairment (Benedetti et al., 2004; Scherder et al., 2005; Scherder, Sergeant, & Swaab, 2003), the perception of pain severity does not change appreciably in most dementing conditions.

Declines in cognition and lack of verbal communication ability have also been identified as major contributing factors in the inadequate assessment and treatment of pain in older adults with dementia (Scherder et al., 2009). Be-

cause self-report pain assessment methods rely on higher cognitive capacities such as memory and language, they are inappropriate to use in individuals with advanced stages of dementia. An alternative option for assessing pain is to use proxy-rating or nonverbal behavioral indicator pain assessment scales (Herr, Bjoro, & Decker, 2006), which rely on caregivers or health care professionals to note physiological and behavioral changes that signal the presence of, the severity of, or a change in pain. Assessing a person's cognitive status is imperative in order to determine which assessment tool is appropriate, and the use of more than one instrument for identification of pain is recommended to ensure accuracy (Corbett et al., 2012).

Barriers to Pain Treatment

Pain remains underassessed, underdiagnosed, and undertreated—or mistreated—in older persons across all health care settings (Gibson & Lussier, 2012). Personal barriers to pain treatment include cognitive, hearing, and communication impairments, which are particularly problematic for appropriately assessing pain (Lansbury, 2000; Leavitt, Van Schepen, Kroustos, & Hartzler, 2012), as well as fears, attitudes, and expectations about pain that interfere with treatment.

Findings across the literature suggest that older adults are more likely than their younger counterparts to underreport or minimize pain (Helme & Gibson, 2001). Particularly if pain symptoms are manageable, older adults may try to adapt by limiting their physical and social activities in lieu of seeking treatment (Crombie et al., 2004; Zamora & Clingerman, 2011). Stoicism, defined as endurance of pain or hardship without a display of feelings and without complaint (e.g., being “brave in the face of pain” or “not getting emotional when in pain”), has been both positively and negatively associated with adjustment to chronic illness and has also been implicated in a person's willingness to report symptoms (Helme & Gibson, 2001; Yong, Bell, Workman & Gibson, 2003). Older adults with stoic attitudes present with lower levels of affective distress relative to their pain levels (Cook & Chastain, 2001). However, stoicism in the face of pain may also limit reporting of important pain symptoms to family and health care providers, which in turn may delay diagnosis or treatment of chronic illness (Cornally & McCarthy, 2011; Weiner & Rudy, 2002; Yong, 2006). Biases in willingness to report mood states, social acceptability, cultural norms, and variability in appraisal and coping have all been proposed as potential mechanisms for stoic attitudes in older adults (Cornally & McCarthy, 2011).

Some older adults' reluctance to report pain may be motivated by fear. Often the etiology of persistent pain is uncertain, and an older person may be afraid of diagnostic and prognostic consequences such as illness progression, loss of independence, and the potential terminality of a condition (D. Brown, 2004). Fear of not being believed or of being labeled a hypochondriac, wanting to be a “good” patient, and not wanting to be a burden have also been suggested as contributing to the underreporting or minimizing of pain symptoms in older people (Cowan et al.,

2003; Gagliese, 2009; Weiner & Rudy, 2002). An older adult in persistent pain may also have misconceptions about pain treatment options, and the belief that treatment will be costly and/or ineffective may inhibit treatment adherence (Leavitt et al., 2012).

Systematic barriers in health care delivery systems may also prevent effective pain management in older people. The medical care system presents significant problems in the coordination and delivery of services to older persons, due partly to administrative limitations, lack of leadership, and provider time constraints (Putnam & Stoeber, 2007). This is especially true when it comes to treating comorbid pain and mood problems in older adults (Szczerbińska et al., 2012), and as many as half of those with depressed mood and persistent pain may receive either inadequate or no mental health care whatsoever (Gleicher et al., 2011). To receive pain care, older adults must navigate an increasingly complex health care system that includes many variables outside of their control (Morrow & Wilson, 2010). Older adults also face tangible barriers, such as financial limitations and lack of transportation (Bentley, 2003). However, even when an older adult with persistent pain is able to access care, findings from across the literature have documented poor understanding of geriatric persistent pain among health care providers. This may manifest in an absence of standardized pain assessment tools that consist of subjective patient report and observable behavior scales and deficits in knowledge of effective pain management (Barkin, Barkin, & Barkin, 2005; D. Brown, 2004; Gagliese, 2009; Reid et al., 2011). Misinformed attitudes about pain and aging among health care providers (e.g., that disabling pain is normal with aging and that it is unlikely to respond to treatment; Barkin et al., 2005; Weiner & Rudy, 2002) can also hinder effective treatment for pain. Disbelieving an older adult's complaints of pain without external signs of pain-related pathology or labeling pain report as "attention-seeking" can also impede appropriate assessment and treatment (Weiner & Rudy, 2002). Fortunately, brief educational interventions have been shown to result in greater knowledge about pain and aging in both older persons and health care providers (Gagliese et al., 2012).

A Need for Further Training and Improved Service Delivery

Available data, although limited, tell us that most clinical psychologists are insufficiently trained in the psychosocial aspects of geriatric pain management. One survey (Siegel & Roistacher, 1988) revealed that only 22% of doctoral clinical psychology programs offered a course in pain management. More recently, in one novel dissertation study (Diamond, 2007) of 834 licensed psychologists in active practice, one in three reported having no formal education whatsoever in this area, although about 75% of the sample reported "significant exposure to pain management through informal sources" (such as discussion with colleagues). This lack of training was reflected in performance on a standard measure of current standards of pain management,

where the average correct score was 69%, far below the acceptable cutoff.

Despite this apparent lack of confidence and education in pain management, at the time of this writing only one state in the United States (Oregon) required psychologists to receive continuing education in pain management. This statistic is especially troubling given that common clinical presentations, such as depression and anxiety, are highly comorbid with persistent pain problems. One in five psychiatric outpatients describe pain as a significant problem (Griffith, 2008), and 35% of patients with persistent pain will seek mental health services (Oregon Pain Management Commission, 2011). We do not mean to suggest that a single psychologist could provide comprehensive geriatric pain treatment; clearly, team-centered approaches are the most effective and recommended (e.g., Institute of Medicine, 2011). However, a good basic understanding of the clinical issues for older adults with persistent pain, along with an appreciation of the unique psychosocial context of this population, may improve service quality and delivery. This is particularly true in rural settings, where specialized pain programs may not be available. Recently, an American Psychological Association report highlighted efforts to influence educational competencies for health psychology training programs, including formal training in pain management (Azar, 2011), and such efforts should be maintained and supported.

State licensing boards are also a significant influence on the continuing education of psychologists, and we maintain that greater requirements for pain education may help to prepare community therapists for the increasing numbers of older adults appearing in their practices. We recommend that psychologists, their state associations, and international pain societies continue to lobby state licensing bodies to require ongoing continuing education in pain management, especially as it pertains to older adults.

Part of the challenge in delivering effective pain treatment to older adults also comes from a disconnection between academic researchers and community service organizations providing direct care to elderly persons (e.g., Simons, Shepherd, & Munn, 2008; Stevens-Roseman & Leung, 2004) and a gap in knowledge translation from research to clinical practice in older adult care settings (Putnam & Stoeber, 2007). This disconnection has real consequences. In the absence of specialized training, community paraprofessionals working with older adults may rely on a model of "figuring it out in the moment" by relying on personal experience and the insights of trusted coworkers rather than on knowledge of best practices (Janes, Sidani, Cott, & Rappolt, 2008). Generally speaking, the issue is less about a need for new treatments and more about translation of already proven treatments to existing community settings, including training and education for community providers. Further efforts should aim to ensure effective translation of empirically supported treatments from the academic centers in which they arise to the community organizations providing direct service to older adults. A number of successful academic–community partnerships to improve access to and quality of care in older

adults have been described (e.g., Cotter, Welleford, Vesley-Massey & Thurston, 2003), and similar models may be tested for older adults with persistent pain. Novel delivery models, such as collaborative care interventions for pain (e.g., Kroenke et al., 2013), may also increase access to standard-of-care-level treatment for older persons. Successfully decreasing the burden of persistent pain in older adults will require further efforts to bring effective interventions to community agencies that provide direct care and to promote new approaches to maximize access.

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