



PAIN: A CROSS-SECTIONAL STUDY WITH SECONDARY DATA ANALYSIS

Prevalence and correlates of pain interference in older adults: Why treating the whole body and mind is necessary



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Summary Our study presents pain-related interference rates in a sample of community-dwelling, older adults and determines factors associated with these restrictions. Participants were 9506 respondents to the Biopsychosocial Religion and Health Study (66.8% female and 33.2% male; average age = 62.3 years). In this sample, 48.2% reported no pain-related interference, whereas 37.7% reported moderate and 14.1% reported severe interference. As hypothesized, older age, female gender, lower education, financial strain, traumatic experiences, worse health, increased body mass index, poor sleep, and depressive symptoms all were associated with higher pain interference ratings (ordered logistic regression/three-level pain criterion; odds ratios $p < 0.05$). Our findings are similar to those from younger adults, and they suggest enduring effects of trauma on health and reveal the complexity of chronic pain in community-dwelling, older adults.

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An estimated 100 million individuals in the United States suffer from chronic pain at an annual cost of \$560–\$635 billion in healthcare expenses and loss of productivity (National Research Council, 2011). Persistent and disabling pain is prevalent in older, community-dwelling adults. Approximately 33–50% experience chronic pain, and 20% experience pain that limits activity (American Geriatrics Society, 2009). The present study was designed to provide evidence that will help explain why older adults with chronic pain have been resistant to traditional treatment strategies directed exclusively at biological causes (Barry et al., 2009).

Pain as a disease entity

Pain serves a preservative function by signaling present or potential tissue damage (Melzak and Wall, 1988). When pain is acute, a clear relationship usually exists between medical findings and the location of the pain. When pain becomes chronic, this relationship no longer is obvious, and a consistent biomarker for pain has been difficult to demonstrate. The relationships among chronic pain, pain diagnoses, objective findings, and pain intensity are not consistent.

To illustrate the problem, in older adults, the relationship between radiographic evidence of osteoarthritis and pain is difficult to explain because many in pain have no known pathology, and many with known pathology report no pain (Odding et al., 1998). More than 50% of people with magnetic resonance imaging findings in their lumbar spine report no detectable pain (Jensen et al., 1994). Moreover, many functional pain disorders (e.g., fibromyalgia and tension-type headache) have no objective findings, yet they are extremely painful and disabling. Such evidence supports the often-cited contention that objective medical findings do not predict pain or pain levels (Parks et al., 2003). To further complicate matters, current evidence suggests that objective medical findings do not predict pain-related disability (Weiner et al., 2004). The most consistent biomarker for chronic pain is changes in the function and structure of cortical areas, findings that have been consistent among most chronic pain diagnoses (Apkarian et al., 2009; Tracey, 2008).

Further insight emerges by examining factors that contribute to the progression of acute pain to chronic pain and factors that maintain chronic pain. Most factors are associated with sub-optimal cognition, depressive symptoms, and adverse experiences, as opposed to objective medical findings (Young-Casey et al., 2008). As an example, pain catastrophizing has been shown to predict pain outcomes better than medical variables (Sullivan and Neish, 1998). As evidence accumulates, many believe that pain should be viewed as an independent disease entity (see, for example, Breivik, 2004; and, when treated as such, preliminary evidence suggests better outcomes (Przekop et al., 2010)).

Pain correlates in older adults

Persistent pain can be especially disabling for older adults (Mossey and Gallagher, 2004). Increased numbers of pain locations, pain intensity and advancing age all have been associated with pain-related restrictions in older adults (Ayis and Dieppe, 2009; Mottram et al., 2008). Other factors

associated with pain intensity and pain-related interference ratings in older adults are depressive symptoms, increased weight, low socioeconomic status (SES), poor sleep, and a sedentary lifestyle (Dorner et al., 2011; Shi et al., 2010). Consideration of these factors in treatment planning affords opportunities for novel approaches because traditional treatment strategies have been inadequate. We believe that these approaches should include body oriented therapy, movement, and cognitive and emotional growth and change. This will afford us opportunities to research alternative treatment strategies that will be successful in older adults with chronic pain.

Persistent pain and traumatic experiences

Traumatic events across the lifespan can have a dramatic effect upon future cognitions, behavior, and disease development (e.g., Lovallo et al., 2013). Moreover, studies consistently have shown that traumatic experiences are associated with the development of persistent pain (Hart-Johnson and Green, 2012; Paras et al., 2009; Wuest et al., 2010). This relationship may exist due to an increased vulnerability to stress and an altered and prolonged stress response (Dudley et al., 2011). The relationship between traumatic experiences and persistent pain in older adults, however, has not been explored.

The older persistent pain patient

The evidence cited above characterizes the older persistent pain patient as sedentary, overweight, less educated, having experienced trauma, in poor physical and mental health (typically with depressive symptoms), and socially and economically isolated. These factors lead to high stress, high pain intensity, severe pain-related restrictions, maladaptive coping, sub-optimal decision making, and low motivation. We believe that all of the factors above must be considered in treating these patients.

Purpose of present study

We designed the present study to (a) establish the pain-related interference rate in a sample of community-dwelling, older adults, (b) determine factors associated with this interference, and (c) make treatment and research recommendations. We hypothesized that (a) a substantial percentage of sampled older adults would report pain-related restrictions, (b) reports of traumatic experiences would be associated with increased pain-related restrictions, and (c) significant associations with more severe restrictions would include older age, female gender, lower SES, sleep difficulties, and worse physical and mental health.

Method

Data source

Data were from the Biopsychosocial Religion and Health Study (BRHS; Lee et al., 2009). BRHS investigators drew a

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