

Psychological Issues in Pain Perception and Treatment in the Elderly

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Appropriate pain management is an important issue for health care professionals working with older patients in long-term care settings. This article reviews published literature concerning psychological factors in pain perception and treatment in the elderly. Specifically, it examines research on the importance of internal locus of control, active coping, comorbid depression, and cognitive status in older pain patients. Psychologically based interventions, including behavioral, cognitive-behavioral, and multidisciplinary treatments, are also discussed. As suggested by the biopsychosocial model, this review supports the importance of multidisciplinary pain management, which includes considering and addressing psychological and social factors along with traditional medical interventions for optimal treatment of pain in the elderly.

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Pain is a pressing concern among the elderly and their health care providers. Prevalence rates indicate that 71%¹ to 76%² of older adults in long-term care facilities report experiencing pain. Inherently uncomfortable and often resulting in functional impairment, pain negatively affects quality of life.^{1,3} In a review of chronic pain in the elderly, Galiese and Melzack⁴ reported that the majority of older adults suffer functionally impairing levels of chronic pain, and, unfortunately, many do not receive adequate treatment.

The International Association for the Study of Pain (IASP) defines pain as “an unpleasant subjective experience related to tissue damage, or described in terms of tissue damage, or related to the two conditions simultaneously.”⁵ As people age, they may develop potentially pain-producing biomedical conditions that lead to the experience of pain; however, it is also important to emphasize that according to the IASP, pain is always subjective. The biopsychosocial model^{6,7} improves upon traditional medical perspectives and argues for a comprehensive framework, which combines physical, psychological, and social factors in the etiology and treatment of pain.⁸ Consistent with the biopsychosocial model, nursing home residents benefit from treatment approaches that include medication, psychological techniques, and social support, all of which work together

for the cumulative benefit of the patient.⁹ Consequently, psychological issues in pain perception and management should be included in a multidisciplinary treatment plan.

The biopsychosocial model also elicits the basic reasons for the potential undertreatment of pain: (1) ineffective pain assessment, (2) pharmacotherapy risks, and (3) inaccurate attitudes toward nonmedical treatments in the elderly.⁴ A recent review article in *Annals of Long-Term Care: Clinical Care and Aging*¹⁰ addressed the first two reasons for the undertreatment of pain in a discussion of assessment and pharmacologic treatments for pain in the elderly. The present review focuses on the third reason for ineffective pain management in the elderly and considers psychological factors in pain perception and implications for treatment.

PSYCHOLOGICAL FACTORS IN PAIN PERCEPTION

Locus of Control

Health locus of control refers to who is responsible for health outcomes—the individual, powerful others (such as health care providers), or chance.¹¹ Research suggests that as people age, they develop a more external locus of control by associating pain with the influence of powerful others or chance.^{12,13} At first glance, this finding might argue against psychological interventions in pain management in the elderly; however, research also indicates that external locus of control orientations can become more internal with the addition of psychologically based treatment.^{12,14} In particular, increased perceived control over pain results in decreased patient disability, depression, and pain intensity.¹⁵ Consistent with these findings, Arnstein¹⁶ suggests that chronic pain patients with a low sense of personal control are more likely to perceive themselves as disabled. He proposes that chronic pain patients should be encouraged to develop active coping strategies to increase self-efficacy and decrease perceived disability. Another study documents that psychoeducational programming

decreases external locus of control and improves sleep, pain, and emotional disturbance in older adults.¹⁷ Older people should be encouraged to develop an internal locus of control, which has been associated with more active and effective coping strategies, increased behavioral activities, improved self-efficacy, fewer depressive symptoms, and less pain in older adults.¹²

Active Coping

Despite a tendency to become more externally oriented with age, older patients desire an active role in their own treatment and prefer to use physical and cognitive coping strategies that they control.¹⁸ A preference for active, internally driven coping in the elderly is consistent with the finding that older people cope in predominantly the same ways as younger people.^{19, 20, 21} Older people benefit from interventions that target coping skills and benefit most from active, problem-focused coping interventions.²² Related to these findings, externally focused patients who rely more heavily on medical professionals appear to have fewer positive coping strategies than those with more internal control,¹³ so older pain patients should be encouraged to develop more active, personally controlled, coping strategies for managing the pain.

Depression

Although coping strategy preference does not vary with age, the relationship between depression and pain does. Turk, Okifuji, and Scharff¹⁹ report that the relationship between pain intensity and decreased control, and therefore more depression resulting from a lack of control, is stronger for older patients than for younger patients. A path-analysis study indicates that pain contributes to activity restriction, and activity restriction leads to symptoms of depression.²³ Another study found, using multiple regression analysis, that increasing levels of pain, number of medical conditions, and

lack of social support are predictors of depression, and pain is the strongest predictor.²⁴ Similarly, when older headache patients were given multidisciplinary treatment, their pain lessened and so did their levels of depression and anxiety.²⁵ Research suggests that when offering comprehensive treatment to the elderly, pain and depression should be assessed and, when indicated, treated together.

Cognitive Status

Age-related cognitive decline is another important complicating factor in pain management in the elderly. Moderate to severe levels of cognitive impairment increase progressively with advancing age.²⁶ Because cognitive abilities are essential for adequate communication, impaired individuals are often unable to communicate their experience of pain effectively to health care providers,²⁷ placing them at risk for undertreatment of pain.³ Research indicates that cognitively impaired elderly are prescribed and receive significantly less medication than their cognitively intact counterparts, despite matching intact patients on physical diagnoses and age.²⁷ Based on these findings, patient complaint may not be an adequate source of information for sufficient pain management in the cognitively impaired elderly. Observation of pain behaviors including nonverbal cues such as grimacing, protecting a body part, or moaning should be used in the assessment of pain in cognitively impaired individuals to improve treatment.²⁷

PSYCHOLOGICAL TREATMENT OF PAIN

In addition to standard pharmacologic treatments not covered in this review, other psychologically based treatments can maximize the effectiveness of pain management in older adults.

Behavioral Treatment

Fordyce²⁸ discusses the importance of behavioral analysis of pain in a complete pain assessment. Pain is

physically based, but also affected by psychological and social factors. People are distressed by pain and often receive reinforcement for the expression of pain through the attention of family or health care providers. By definition, reinforcement results in the likelihood that pain behavior, and therefore patient perception of pain, will increase. Fordyce suggests that behavioral analysis can identify the presence of operant reinforcement for pain, as well as identify reinforcers that can be used to support pain reduction during treatment. Research indicates that using behavioral interventions to reduce pain in nursing home residents by offering praise and attention for compliance with treatment goals and ignoring pain complaints and behaviors results in decreased medication usage, pain behaviors, and pain complaints, but does not increase activity level.²⁹ Pure behavioral treatment is effective but is generally enhanced by the addition of cognitive factors.

Cognitive-Behavioral Treatment

Cognitive-behavioral treatment combines behavioral issues of activity and reinforcement with the cognitive components of thinking and education. Because cognitive-behavioral treatment is multifaceted, it is often a very effective form of pain management. For example, one study found that patients who received coping skills training, especially those developing high self-efficacy in their coping, experienced less pain and disability than patients receiving only education or support.³⁰ This finding argues for the importance of teaching both new skills and new perceptions. A long-term follow-up of this study showed that patients in the coping skills training group maintained their improvement and continued to benefit from their new coping strategies more than the other groups over time.³¹

Other studies found similar benefits of cognitive-behavioral interventions. Older patients benefited in terms of reduced headaches, less medication, and decreased psy-

chological distress from treatments involving relaxation training, biofeedback, coping strategies, and problem solving.^{25, 32} Similarly, a treatment for elderly nursing home residents consisting of education, reconceptualization of pain, coping skills, and skills practice results in less reported pain and physical disability than treatment offering only attention and support, and these improvements were maintained at follow-up.³³

In strong support of psychological interventions, a large meta-analysis of 25 controlled, randomized trials examining the effectiveness of cognitive-behavioral therapy in adult pain patients reports that cognitive-behavioral interventions are effective.³⁴ This review indicates that cognitive-behavioral therapy facilitates the development of positive approaches for coping, decreases pain-related behaviors, and reduces patient experiences of pain. This important large-scale review suggests that cognitive-behavioral treatment is effective in the management of chronic pain in the full adult population.

Multidisciplinary Treatment

Although this article focuses on psychological factors in pain management, it does not discount the importance of combining psychological treatments with traditional medical interventions. Multidisciplinary treatments combine the expertise of psychologists, physicians, nurses, and other health care professionals to create a team to offer complete patient care.³⁵ Supporting the biopsychosocial model, a study of multidisciplinary treatment of elderly patients with cancer pain shows that those patients receiving combined pharmacologic treatment, social support, and psychotherapy, as compared to patients receiving only medication and/or social support, improved most in terms of quality of life.³⁶

Because of the complex nature of multidisciplinary treatment, providers might be wary of its utility with elderly patients; however, research demonstrates that older and younger pain patients are more similar than

different and suggests that patients of all ages benefit from multidisciplinary treatment.³⁷ Another important review article examining 12 randomized, controlled, multidisciplinary treatments for a total of 1964 adult patients with chronic low back pain concluded that biopsychosocial multidisciplinary intervention is effective in reducing pain and improving functioning in the adult population.³⁸ Finally, a study comparing the results of multidisciplinary treatment, including physical and occupational therapy and biofeedback/relaxation training, as well as psychological and medical treatments in older and younger pain patients, indicates that although both age groups benefit, older patients reduce health care utilization more than younger patients.³⁹ These results suggest that multidisciplinary treatment benefits older patients as much, if not more, than younger patients.

CONCLUSIONS AND TREATMENT RECOMMENDATIONS

Pain occurs at increasing rates in the elderly; however, because a variety of effective treatments are available, pain “should never be considered a natural or necessary part of the aging process.”³ Health care professionals should offer effective pain management tools in order to ensure that these patients do not suffer unnecessarily. The American Geriatrics Society (AGS) recommended clinical practice guidelines for managing chronic pain in the elderly in 1998.⁴⁰ The recommendations include the use of nonpharmacologic treatments such as psychological treatments alone or in conjunction with more traditional pain management strategies.⁴⁰ The AGS guidelines also suggest that multidisciplinary treatment is a viable option for older adults.⁴⁰ Consistent with the AGS clinical practice guidelines, this review identifies the importance of developing patients’ internal loci of control, teaching problem-focused coping skills, managing depression related to decreased activ-

ity, and using behavioral assessment tools to detect pain in cognitively impaired patients.

A variety of treatment tools are available to help providers care for their patients. Because of the interactive effect of physical, psychological, and social factors (see Figure), we advocate for the biopsychosocial approach in the understanding and treatment of pain. A list of possible psychological and social treatments is provided in the Table. Individualized treatment can incorporate a variety of these techniques along with traditional medical interventions to reduce pain in elderly patients. For instance, behavioral tools change reinforcement contingencies, cognitive tools alter perceptions and thoughts about pain, and social support provides information and appropriate empathy when learning new coping mechanisms. Continuing education and the inclusion of health care professionals trained in alternate pain interventions such as biofeedback, relaxation training, and psychother-

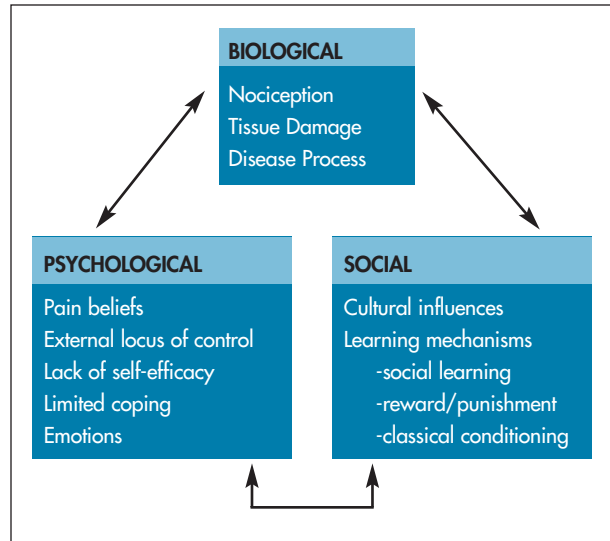


Figure. Schematic representation of possible contributors to pain according to the biopsychosocial model. Psychological and social factors are fully discussed in a review by Turk.⁸

apy are essential for maximally effective treatment in any pain setting, including long-term care facilities.

TABLE

Psychological, Behavioral, and Social Pain Management Techniques

Technique	Benefits
Psychotherapy	Helps patients understand the role of pain in their lives and manage accompanying/comorbid psychological distress (eg, depression, anxiety, loss), which complicates and worsens pain.
Behavioral Treatment	Rewards healthy behaviors and ignores pain behaviors to decrease reinforced contingencies for having pain.
Education	Provides information and knowledge about painful conditions, which increases patients' comfort levels and perceptions of control.
Coping Skills	Teaches new and active coping skills including planning, seeking social support, and problem solving to provide patients new options and increased personal control.
Biofeedback	Provides physiological cues about involuntary body responses such as muscle tension, temperature, or heart rate so patients can learn to manage autonomic arousal.
Relaxation Training	Teaches patients to reduce autonomic arousal through progressive muscle relaxation (tense and release major muscle groups), focusing techniques (mentally scan body and let go of pain), or autogenic training (distribute blood flow into the periphery by imagining extremities as heavy and warm).
Visualization	Directs mental images of favorite places/pain-free situations and provides distraction from and control over painful conditions.
Hypnosis	Offers patients intense states of relaxation and psychologically controlled suggestions to decrease pain perception.
Social Support	Provides appropriate interventions with patients, family, or medical professionals to help patients cope with pain through education, information, tangible assistance, and personal empathy.

In summary, this review indicates that optimal treatment of pain in the elderly is contingent upon helping patients develop effective physical, psychological, and social pain management strategies. However, future research should continue to explore and document the utility of alternate pain management strategies in the older pain patient. Although significant literature supports psychological treatments for pain in the general adult population,⁸ the present review summarizes the bulk of the rather limited literature discussing psychological issues in pain management in the elderly and nursing home populations. This review clearly advocates for the benefits of multidisciplinary treatments; however, additional research targeting older adults and nursing home residents is necessary to further investigate and document psychological contributions to optimal pain management strategies in the elderly.

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