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Expanding Targets for Intervention in Later Life Pain: What Role Can Patient Beliefs, Expectations and Pleasant Activities Play?

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Keywords

Beliefs and Attitudes; Patient Expectations; Pleasant Activity Scheduling

Pain is one of the most common conditions healthcare providers encounter when caring for older patients. Treating pain in older patients is challenging because of a variety of physical (e.g., age-related physiologic changes; onset of sensory and cognitive impairments, gait and balance problems; multimorbidity and associated polypharmacy) and psychosocial (e.g., affective disorders, care rejecting behaviors, social isolation) factors that constrain treatment choices.[1] A limited evidence base to guide treatment also constitutes a significant barrier to effective geriatric pain management.[2] Pain generators such as spinal stenosis or advanced osteoarthritis often can't be targeted due to the factors noted above or because of patient concerns about undergoing a surgical procedure.

As described in previous articles in this series, targets for intervention include:

1. Pain reduction using pharmacotherapies (refer readers to Makris and Hanlon articles), interventional approaches that do not involve surgery (refer readers to Brooks article here), and/or non-drug therapies,
2. Preservation of function by means of exercise and other physical therapies (refer readers to Beissner article), and
3. Coping skills training as a way of helping patients to adapt to pain and its consequences (refer readers to Eccleston article).

Augmenting the number and type of targets clinicians have at their disposal is important to do. These targets can be factors that amplify the adverse effects of pain or mediate its effects and help providers to broaden their portfolio of pain management options. For example, among patients with depressed mood and pain, clinicians often direct treatment at the

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depressive symptoms, particularly when the patient cannot be prescribed (or tolerate) a pain medication, achieving positive results in the form of reduced depressive symptomatology and pain. Similarly, targeting sleep problems in patients with comorbid pain and sleep disturbance often leads to reduced pain and improved functioning.

The current article highlights three additional targets clinicians should consider when initiating treatment plans for older patients with chronic pain: 1) patient attitudes and beliefs about pain and pain treatments; 2) patient expectations regarding treatment outcomes, and 3) pleasurable activity scheduling. Evidence supporting these recommendations is provided below, as well as practical strategies to intervene on each in the outpatient setting.

Pain Attitudes and Beliefs

Older adults can maintain attitudes and beliefs about pain and pain treatments that negatively influence expectations regarding treatment outcome, impact specific health behaviors and negatively affect their willingness to engage in and/or adhere with specific treatments. Many theories of health behavior (e.g., social cognitive theory) highlight the important role that patients' attitudes (a settled way of thinking or feeling about something) and beliefs (a feeling or thought that something is true) play regarding behaviors such as engaging in physical activity or taking a prescribed medication as directed.[3] Patient attitudes and beliefs about pain and specific pain treatments come from varied sources, including friends and other members of their social network, family, social media, patients' healthcare providers, and their own experiences living with chronic pain often over many years.

What types of pain-related beliefs and attitudes do older adults endorse and how common are they? In one survey of community-dwelling older adults, more than 50% of participants considered arthritis-related pain to be a natural part of getting old.[4] In a large study of veterans, those who were older (65 and above) were far more likely to believe that arthritis is a natural part of growing older and that once you get it, it only gets worse.[5] A study of nursing home residents found that many participants strongly endorsed the belief that there is little potential to improve outcomes with treatment once persistent pain develops.[6] Older adults with pain can also harbor beliefs regarding specific drug and non-drug treatments. Reluctance to take pain medications (particularly opioids) because of a fear of addiction appears to be prevalent.[7] In addition, some older adults believe that use of pain medication will invariably lead to adverse effects.[8] These beliefs may be held by older patients' caregivers who voice reluctance about initiating a course of analgesic medication for their loved one.[9] Research also suggests that many older adults believe that exercise and/or physical activity can hasten disease progression or exacerbate pain.[10-12] Table 1 lists beliefs endorsed by older adults with pain problems.

While less research has evaluated the impact of pain-related beliefs on health behaviors, it stands to reason that older adults who believe a given treatment will lead to adverse outcomes, hasten disease progression, or fail to lower pain or improve function will be less likely to try and/or adhere with it over time. Data supporting this hypothesis come from a variety of sources, including a Spanish study which evaluated older adults with chronic pain and assessed for associations between specific pain attitudes and the degree of pain-related

interference with everyday life.[13] Participants who strongly endorsed the belief that pain is a signal that damage is occurring were much more likely to report that physical activity should be avoided. In a study of nonelderly adults with chronic pain, researchers evaluated the relationship between specific pain beliefs and medication adherence behaviors.[14] Those who endorsed strong concerns about side effects from pain medications and the potential for addiction were much more likely to underuse pain medications. Qualitative research has identified that certain beliefs—uncertainty about the role of exercise as therapy for knee pain, whether exercise can slow disease progression—likely deter individuals from exercising as a form of treatment for their pain.[15] Finally, in one study of community-dwelling older adults, participants who endorsed the belief that nothing could be done about their arthritis condition were significantly less likely to have a regular physician, suggesting a relationship between a fatalistic belief and willingness to utilize health resources.[4]

If certain pain beliefs lead to specific behaviors (e.g., nonadherence with pain medication, unwillingness to try an exercise program, reluctance/refusal to undergo a needed joint replacement), a key question is whether these beliefs are modifiable. Negative beliefs about the value of exercise were amenable to change in one study of exercise for older adults with knee pain and judged to be an important mediator of treatment success.[15] Fear-avoidance beliefs, i.e., a worry/concern that physical activities will bring on (or aggravate existing) pain or harm an affected body part are common in many populations with chronic pain and constitute an important target for intervention efforts. In a small study conducted in primary care, patients with chronic low back pain who received a brief intervention consisting of education and a speed walking task to overcome their fear of movement combined with feedback about their performance endorsed fewer fear-avoidance beliefs following the intervention.[16] A longitudinal study of patients with chronic pain examined the relationships between changes in pain beliefs with change in overall functioning following multidisciplinary treatment.[17] Participants whose belief in their ability to effectively control pain decreased over time were more likely to experience greater disability at a 12-month follow-up after completing treatment. Finally, another study found that decreases in catastrophizing beliefs about pain were associated with less pain-related disability and pain intensity over time.[18]

Targeting Patient Attitudes and Beliefs in Practice

Existing research supports the notion that certain pain beliefs and attitudes negatively impact older adults' willingness to engage in and/or adhere with treatment, can adversely affect treatment outcomes, and are amenable to change. Clinicians caring for older adults with chronic pain are strongly encouraged to assess patients' beliefs and attitudes prior to initiating any treatment plan and when nonadherence with a treatment is acknowledged by the patient or suspected by the clinician. Existing tools designed to measure patients' beliefs and attitudes about pain (e.g., Survey of Pain Attitudes,[19] Pain Belief Questionnaire[20]) and pain treatments (e.g., Pain Medication Attitude Questionnaire[14]) are not practical for use in a busy office setting. Open-ended questions (Box 1) may be useful and help to elicit erroneous beliefs and attitudes maintained by older patients and their caregivers. Countering erroneous beliefs with simple education often suffices, e.g., exercise does not hasten disease progression in patients with arthritis. It may also help patients to point out how a given belief

impacts pain, e.g., fear of medication side effects leads to medication nonadherence which leads to poorly controlled pain. Some beliefs are harder to counter than others, particularly if the belief has been present for years or is reinforced by others such as the patient's healthcare provider or caregiver. For these patients referral to practitioners skilled in delivering cognitive-behavioral therapy (CBT) can be helpful, given that challenging unhelpful pain beliefs and changing them constitute core components of CBT.

Patient Expectations

Treatment expectancy refers to improvements that patients believe are likely to occur with treatment. Prior research has documented that pre-treatment expectations are associated with enhanced treatment outcomes in patients with pain.[21-24] In one study of adults receiving CBT for chronic pain, patients who believed that the treatment would help them to cope more effectively with their pain reported enhanced pain coping skills and efficacy for controlling pain at treatment completion and at a 12-month follow-up evaluation.[21] Similar findings have been reported in a large study involving patients with chronic pain receiving multidisciplinary treatment, which found that pre-treatment expectations were strong predictors of degree of pain relief and improvement in quality of life.[22] Similar findings have been reported in studies examining acupuncture[23] and treatment for individuals with acute low back pain.[24] These relationships have not been found across all studies. Pre-treatment expectations did not predict outcomes among patients undergoing total hip or knee arthroplasty[25] or those receiving acupuncture for chronic low back pain.[26]

Collectively, these data support the notion that for many patients with pain, a more positive outlook regarding the anticipated outcome of therapy (endorsed prior to initiating the trial) can enhance treatment outcomes. While the mechanisms underlying this effect are not known, possible explanations include enhanced adherence with the therapy among individuals with positive treatment expectations, a placebo effect, adoption of a more positive attitude about their condition, and reporting bias, i.e., those who expect enhanced outcomes report improvements to remain consistent in their responses.

Treatment expectancies are particularly relevant in the care of older adults with chronic pain because many affected individuals have undergone multiple failed attempts to treat their pain in the past. Older patients are often unwilling to retry a therapy that provided no benefit in the past. Indeed many older adults with a history of multiple failed trials find it difficult to believe that meaningful pain relief is achievable, i.e., low pre-treatment expectancy. Negative treatment expectations that occur as a consequence of failed analgesic trials in the past have been shown to significantly reduce analgesic efficacy in experimental studies.[27,28] Providers and patients should guard against therapeutic nihilism, i.e., the conviction that further treatments are not likely to yield benefit. Clinicians also encounter older patients whose treatment expectations are unrealistically high, e.g., "I expect the treatment to make my pain go away entirely." These patients are challenging because eradicating pain entirely is not often possible to achieve.

If patient expectations impact treatment outcomes, are they modifiable? In one study of patients undergoing total hip or knee arthroplasty, a simple educational intervention

delivered pre-operatively was found to change participants' pre-treatment expectations regarding outcomes after surgery.[29] Fostering realistic expectations prior to the time of surgery is important because participants whose expectations are met are more likely to adhere with postoperative recommendations and to report satisfaction with surgical outcomes.[29] Other research indicates that patient expectations can be positively influenced when providers employ both cognitive (providing a clear diagnosis, being optimistic about the anticipated outcome of therapy) and emotional (remaining warm, providing reassurance) techniques during the clinical encounter.[30] Motivational interviewing has also been suggested as a method to help patients modify their expectations.[31]

Targeting Patient Expectations in Practice

Available research supports the idea that patient expectations can impact treatment outcomes and are potentially malleable. Prior to initiating treatment, clinicians caring for older adults with chronic pain are encouraged to assess patients' treatment expectancies (e.g., degree of pain relief expected, degree of anticipated functional improvement). There are several validated questionnaires—e.g., Credibility/Expectancy Questionnaire[32] and the Stanford Expectations of Treatment Scale (SETS)[33]—that are used to identify expectations of individuals participating in clinical trials. Both scales are short enough to be considered for use in the clinical setting. Other options include single-item questions such as "how much do you expect this treatment will relieve your pain?" Response items could include a 0-to-10 scale, where a 0 represents "no relief at all" and a 10 represents "complete relief of pain." An ordinal word ranking scale can also be employed where scale anchors might range from "not at all" to "the most I could imagine." Since pre-treatment expectancy can vary by outcome, ascertaining patients' expectancies should occur for outcomes patients and providers agree constitute important treatment goals (e.g., degree of expected pain relief or functional status enhancement or ability to participate in social activities). Established threshold scores for what constitutes low treatment expectancy (or an unrealistically high treatment expectancy) don't currently exist. Healthcare providers are encouraged to use their own clinical experience in terms of what constitutes an average treatment response (along with the range of responses encountered in similar patients) to identify older patients whose treatment expectancies are either too low (i.e., they don't expect any success) or too high (e.g., they expect complete pain relief). Healthcare providers should educate older patients whose treatment expectancies are very low about what is possible to achieve with the intended therapy. Motivational interviewing may help to change patients' pre-treatment expectations that are unrealistically low.[34] Working to instill a hopeful mindset justified by an adequate evidence-base is also recommended.[1] Finally, fostering realistic treatment expectations through education is particularly important to do in patients whose treatment expectancies are unrealistically high (and often requires multiple visits).

Pleasurable Activity Scheduling

Many older adults with chronic pain cut back (or eliminate altogether) activities that bring pleasure or meaning to their lives citing chronic pain as a reason.[35] This can include participating in social events, traveling, or pursuing hobbies or recreational activities.[35] Reducing or eliminating pleasurable activities may also occur because of depressed mood

and lack of motivation that occur as a consequence of living with chronic pain. Pleasant activity scheduling constitutes a core behavioral coping skill that is present in standard CBT protocols for patients with pain. Patients work with therapists to identify pleasurable/meaningful pursuits, develop a plan to participate in them on a regular basis and work to identify barriers that might get in the way of achieving success. Patients can select unrealistic pursuits at first, so selecting activities that are feasible to accomplish given a patient's functional ability is important to do.

Participating in pleasurable activities is associated with reduced pain.[36,37] The mechanism underlying this effect remains unclear. It may occur because of improved mood or because participating in activities that bring pleasure or meaning successfully distract patients from their pain, reinforcing the adage that "an occupied mind is the best analgesic."

Targeting Pleasurable Activity Scheduling in Practice

A large body of literature documents that pleasurable activity restriction is common in patients with chronic pain, associated with decreased quality of life and depressed mood, and can be modified using simple approaches.[35-37] Clinicians are strongly encouraged to include pleasant activity scheduling as part of their multimodal treatment plan, particularly for those patients who endorse cutting back or eliminating pleasurable activities. Even for older patients who report participating in some activities encouraging them to do more of these activities (with corresponding goal setting) is recommended. For patients who have difficulty endorsing what activities they find pleasurable, providing a list of general pursuits can be helpful. Attention to amotivation or anhedonia as reasons for not being able to identify pleasurable activities is also warranted. Once a list is generated, clinicians can help patients establish a plan to accomplish a defined number of activities (and time spent conducting each) and to brainstorm problems patients may encounter in implementing the plan as a way of identifying barriers that will need to be overcome. The pleasurable activity should be appropriate for the patient's functional abilities and accessible to them. Educating patients about benefits likely to be achieved (e.g., reduction in pain, improved mood and for some activities improved physical functioning) is important to do. To reinforce initiation and maintenance of pleasurable activities, the provider should also consider leveraging social supports in the form of family members, home attendants (if appropriate), and community-based agencies. This may take the form of educating family members or other important members of the patient's social network to reinforce and support the patient's engagement in these activities. Revisiting successes achieved at subsequent office visits (or barriers that prevented success) and reinforcing positive results achieved are also important to do.

Summary

Given the many established barriers to treating pain in older adults, clinicians must seek out additional targets for intervention efforts. Given their impact on treatment outcomes and malleability, clinicians should strongly consider directing their attention to older patients': 1) attitudes and beliefs about pain and pain treatments; 2) expectations regarding treatment outcomes, and 3) pleasurable activity pursuits using practical approaches as described above.

Broadening the portfolio of pain management targets won't guarantee success but enhances the odds of achieving it in this growing population of patients.

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Box 1

Beliefs and Attitudes about Pain and Pain Treatments Questions

Do you have any beliefs about pain that you think would be important for me to know about?

Do you have any concerns about your pain that are particularly important for me to know about at this time?

Do you have any beliefs about pain that influence your decision-making about whether to try or continue to employ a specific pain treatment?

Do you have any beliefs or thoughts about pain treatments that you think it would be important for me to know about?

Do you have any concerns about the treatments you are currently using to help you manage your pain?

Key Points

- Certain pain beliefs and attitudes negatively affect older adults' willingness to engage in and/or adhere with treatment, can adversely impact treatment outcomes, and are amenable to change. Clinicians should assess older patients' beliefs and attitudes prior to initiating treatment.
- Patient expectations can impact treatment outcomes and are potentially malleable. Clinicians caring for older adults with chronic pain should routinely assess patients' treatment expectancies (e.g., degree of pain relief expected, degree of functional improvement patient hopes to achieve) prior to initiating treatment.
- Pleasurable activity restriction is common in older patients with chronic pain and constitutes an important target for intervention. Clinicians should include pleasant activity scheduling as part of their multimodal treatment plan, particularly for those patients who endorse cutting back or eliminating pleasurable activities.

Synopsis

Clinicians are often challenged to find targets for intervention in older adults with chronic pain. This article highlights three targets clinicians should consider when formulating their multimodal treatment plans to include older patients' 1) attitudes and beliefs about pain and pain treatments; 2) expectations regarding treatment outcomes; and 3) pleasurable activity pursuits.

Table 1
Beliefs and Attitudes about Pain and Pain Treatments

About Pain
Pain is a natural part of the aging process
Once you get it, it only gets worse
People should expect to live with pain when they get older
Chronic pain will not get better even with treatment
It is better to persevere (and live) with pain than seek treatment for it
Complaining about pain could lead to me being labeled a bad patient
Beliefs/Attitudes about Pain Treatments
Pain medications are addictive
Pain medications cause dangerous side effects and should be avoided unless absolutely necessary
Pain medications will stop working if taken regularly and lead to the need to take increasing amounts over time
Exercise/physical activity hastens arthritis progression
Avoiding exercise/physical activity is a good way to minimize my pain