Abstract: To identify the effects of mindfulness meditation on older adults with chronic low back pain (CLBP), we conducted a qualitative study based on grounded theory and used content analysis of diary entries from older adults who had participated in a clinical trial of an 8-week mindfulness meditation program. Participants were 27 adults ≥65 years of age with CLBP of at least moderate severity and of at least 3 months duration. We found several themes reflecting the beneficial effects of mindfulness meditation on pain, attention, sleep, and achieving well-being. Various methods of pain reduction were used, including distraction, increased body awareness leading to behavior change, better pain coping, and direct pain reduction through meditation. Participants described improved attention skills. A number of participants reported improved sleep latency as well as quality of sleep. Participants described achieving well-being during and after a meditation session that had immediate effects on mood elevation but also long-term global effects on improved quality of life. Several themes were identified related to pain reduction, improved attention, improved sleep, and achieving well-being resulting from mindfulness meditation that suggest it has promising potential as a nonpharmacologic treatment of chronic pain for older adults.

Perspective: Community-dwelling older adults with chronic low back pain experience numerous benefits from mindfulness meditation including less pain, improved attention, better sleep, enhanced well-being, and improved quality of life. Additional research is needed to determine how mindfulness meditation works and how it might help with other chronic illnesses.

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Key words: Qualitative research, meditation, back pain, aging, mindfulness.
cognitive-evaluative components to the pain experience. Mindfulness meditation is a mind-body therapy that may be able to affect the experience of pain on all 3 of these components. This possibility has led investigators to study mindfulness meditation for the treatment of pain, beginning with the early work of Kabat-Zinn. It has been found to reduce the intensity of pain as well as to increase mood and function. 

There are few first-person accounts that exist in the literature that describe what an individual experiences while learning mindfulness meditation, and none focus on an older population of chronic pain patients and how they use it to alleviate pain. Why is this important? Because personal descriptions of the experience of applying mindfulness meditation to reduce pain, as well as other unknown effects, can provide insight into possible mechanisms of effect and help generate hypotheses for quantitative research methods. Given the early stage of research on mindfulness meditation and its effect on pain, studies that reveal patterns and themes and generate hypotheses for future research are timely.

In this context, we conducted a content analysis of meditation diaries written by older adults with chronic low back pain during their participation in a clinical trial of mindfulness meditation. The original trial randomly assigned 37 community-dwelling older adults to an 8-week mindfulness meditation program or to a wait-list control group. The control subjects were crossed over into the meditation program after the intervention group completed the classes. Diaries from all 27 participants who completed the program were available for analysis. We found that the program was feasible in older adults, that participants meditated an average of 4 days a week for 30 minutes a session, and that coping as measured by acceptance of pain and self-reported physical function was significantly improved at the completion of the program. These quantitative findings do not describe the means by which participants used mindfulness to work with pain or other effects of meditation. Since the diary entries revealed a rich depth of experience, our objective was to identify themes that best described or commonly suggested participants’ experience of applying mindfulness meditation to pain as well as to their daily lives, which would complement the quantitative analysis.

Materials and Methods

Participants

The sample consisted of 27 older adults (Table 1) with chronic low back pain (CLBP) who had participated in a trial of mindfulness meditation modeled on the mindfulness-based stress reduction (MBSR) program and who had filled out a daily diary about their experience [27/37 (73.0%) of trial participants completed the meditation program and filled out diaries]. The mean number of participants who handed in a diary every week (1 page per week) was 18 (range, 10–26). The first 3 weeks, 26, 22, and 23 participants, respectively, handed in a diary. The following 4 weeks, 16, 16, 15, and 13 participants, respectively, handed in a diary, and the last week, 10 participants handed in a diary. Including their comments about the class at 3-month follow-up, there were 742 lines of text available for analysis (see reference for trial details). The 10 participants who did not participate in the meditation program were not significantly different (P > .05) in age, gender, ethnicity, education, religion, income, or marital status than participants who completed the 8-week program.

All participants were included if they (1) were 65 years of age or older, (2) had intact cognition (Mini-Mental Status Exam >23), (3) had CLBP, defined as moderate pain occurring daily or almost every day for at least the previous 3 months, and (4) spoke English. Participants were excluded if they (1) had previously participated in a mindfulness meditation program or (2) had “red flags” suggestive of serious underlying illness (eg, malignancy, infection, unexplained fever, weight loss or recent trauma) causing their pain.

<table>
<thead>
<tr>
<th>Table 1. Characteristics of Study Participants</th>
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<tbody>
<tr>
<td>CHARACTERISTIC</td>
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<tr>
<td>Age, mean ± SD</td>
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<tr>
<td>Gender, n</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
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<tr>
<td>Ethnicity, n</td>
</tr>
<tr>
<td>White</td>
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<tr>
<td>African American</td>
</tr>
<tr>
<td>Asian</td>
</tr>
<tr>
<td>Education, n</td>
</tr>
<tr>
<td>High school graduate</td>
</tr>
<tr>
<td>Technical school</td>
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<tr>
<td>Some college</td>
</tr>
<tr>
<td>College</td>
</tr>
<tr>
<td>Master’s or greater</td>
</tr>
<tr>
<td>Religion, n</td>
</tr>
<tr>
<td>Catholic</td>
</tr>
<tr>
<td>Jewish</td>
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<tr>
<td>Protestant</td>
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<tr>
<td>Other</td>
</tr>
<tr>
<td>Income, n*</td>
</tr>
<tr>
<td>$10,000–$29,999</td>
</tr>
<tr>
<td>$30,000–$59,999</td>
</tr>
<tr>
<td>$60,000 or greater</td>
</tr>
<tr>
<td>Marital status, n</td>
</tr>
<tr>
<td>Single</td>
</tr>
<tr>
<td>Married</td>
</tr>
<tr>
<td>Separated/divorced</td>
</tr>
<tr>
<td>Widowed</td>
</tr>
<tr>
<td>Low back pain cause, n</td>
</tr>
<tr>
<td>Osteoarthritis</td>
</tr>
<tr>
<td>Spinal stenosis</td>
</tr>
<tr>
<td>Fibromyalgia</td>
</tr>
<tr>
<td>Not sure</td>
</tr>
<tr>
<td>Medications, n</td>
</tr>
<tr>
<td>Opioids</td>
</tr>
<tr>
<td>Other analgesics</td>
</tr>
<tr>
<td>None</td>
</tr>
</tbody>
</table>

*Not all participants chose to disclose their income.
The study was approved by the University of Pittsburgh Institutional Review Board, and all participants signed informed consent before participating in the study.

**Intervention**

The intervention was modeled on the work of Kabat-Zinn13 and the mindfulness-based stress reduction program he pioneered at the University of Massachusetts Medical Center. Participants were seen in a group setting once a week for 90 minutes for a total of 8 weeks. Mindfulness meditation takes everyday activities such as breathing, sitting, lying down, and walking and turns them into a meditation through directed attention on sensation, thoughts, or emotions.

The techniques used were (1) the body scan, where in a lying position, the participant is guided to place their attention nonjudgmentally on each area of the body from the toes to the top of the head, (2) sitting practice, which is focused attention on breathing while sitting on a chair or on a meditation cushion on the floor, and (3) walking meditation, which is mindful slow walking with focused attention on body sensation and/or breathing. The study protocol also included “homework” of daily meditation (6 of 7 days per week) lasting 50 minutes (45 minutes of meditation, 5 minutes to complete the diary). Support materials of audiotape, daily diary, and reading materials were provided. The audiotape was a guided 45-minute recording of the steps in the body scan meditation on one side and a guided 30 minute recording of sitting meditation on the other side.22

The diary listed 1 full week per page, with space next to each day to record the number of minutes meditated, as well as space for comments about the day’s meditation session. There was also a section for general comments about the meditation experience. Headings were “Amount of time spent meditating.” “Any benefits or problems with the meditation,” and a “Comments” section. Diaries were collected weekly.

**Analytic Approach**

An approach based on grounded theory was used to analyze the diary entries of participants who recorded information about their experiences with mindfulness meditation. Grounded theory in qualitative research is a powerful analytic approach that refers to theory that is inductively generated from the researcher’s observations and not deduced from the laboratory bench.23

With this approach, the data were amassed and examined using content analysis to identify recurring words, phrases, or concepts. These were then assigned codes. Key themes were detected based on the codes that emerged from the data. We imported the diary data into the qualitative software package ATLAS.ti 5.0 (ATLAS.ti Scientific Software Development; Berlin, Germany) to facilitate the coding process. Two experienced coders independently identified words, phrases, or concepts of similar meaning, assigned codes, and then placed the codes into categories. Via an iterative process of reviewing data and generating codes and code categories24 followed by meeting to discuss and resolve differences, the 2 coders devised a final coding scheme. This final coding scheme was applied to all diary entries, where several common themes were identified, particularly concerning the effects of meditation. For the purpose of validation, we reviewed the diary data with other investigators to develop consensus regarding codes and themes and to resolve any differences in the interpretation of the data.9 The final coding scheme is presented in Table 2.

**Results**

Six main themes were identified from the diary entries of older adults with CLBP (summarized in Table 3). The first was experiencing pain reduction from mindfulness meditation, the second was improvement in attention skills, the third was improved sleep resulting from meditation, the fourth was achieving well-being, the fifth was barriers to meditation, and the sixth was processes of meditation. Because of space considerations and clinical relevance, we focus the results on the first 4 themes as they reflect health outcomes and we provide descriptive examples or quotes to illustrate these themes.

**Experiencing Pain Reduction From Mindfulness Meditation**

Many participants commented on the reduction of pain by indicating the methods and processes used to reduce it, such as distraction from pain, heightened awareness of pain sensation leading to behavior change, better coping with pain, and actual pain reduction using the meditation technique. In the context of distraction, some participants described their increased ability to constructively distract from pain by purposely placing their attention on routine activities: “I practice informal meditation, and try to be more fully aware, during every day activities in the house” (participant 22), and “[I] focus on things to distract from pain” (participant 5). Another specific distraction process involved redirecting the mind’s focus to more general body awareness, “I am able to reduce my back and leg pain by deflecting the pain and by focusing on other parts of my body” (participant 2).

Another means of pain reduction was the development of a heightened awareness of body sensations that led to behavior change that reduced pain. It was generally stated that “I am learning to appreciate awareness of sensations” (participant 2). The awakened realization of subtle body sensations enabled participants to recognize pain earlier than was typical for them, thus allowing

<table>
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<tr>
<th>Table 2. Final Coding Scheme</th>
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<tr>
<td>Effect pain</td>
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<tr>
<td>Effect sleep</td>
</tr>
<tr>
<td>Effect cognition</td>
</tr>
<tr>
<td>Effect well-being: Physical</td>
</tr>
<tr>
<td>Effect well-being: Mental</td>
</tr>
<tr>
<td>Global effects</td>
</tr>
<tr>
<td>Stress reduction</td>
</tr>
</tbody>
</table>
them to intervene before the pain escalated, “Upon first signs of pain, I stop and meditate, helpful at times” (participant 10). One participant’s increased awareness of body sensation led her to realize “minor” pains could be easily cured, “I realized I had a toenail so overgrown it was causing definite sharp pain . . . I shut off the CD [for the body scan meditation] and trimmed it and started again. It seemed silly not to eliminate such a small source of discomfort” (participant 18). We also found that heightened awareness with some participants stimulated imagery that helped reduce their pain and enhance their mood. This is depicted best by the quote, “I hear a sound in the distance and felt it was bearing my pain away, replacing it with a joyful ‘lifting’ of my spirits” (participant 18).

Interestingly, the process of learning meditation and becoming more aware of the body also allowed some participants to be more introspective. Some realized that they had adopted maladaptive coping strategies such as repression to deal with their pain. We received feedback from a participant who detailed her process stating, “It felt good to be ‘directed’ to these quite soluble problems and I realized that in my stoic, actually . . . rather angry, ‘at the end of my rope’ reaction to my seemingly insoluble back pain . . . I was neglecting my whole body trying as it were to blot out all pain even the minor ‘itch’ I can scratch. I was in a strange way turning myself into a whole ‘petrified forest,’ because one area, my lower back, was in need of relief from the pain” (participant 18). In general, participants stated they were better able to cope with their pain by using various methods realized or learned through mindfulness meditation “I still have the same back pain but am coping with it much better” (participant 6). It was reported several times that pain was improved and meditation was frequently used in different situations, “I have used mindfulness in other situations (ie, stress, improved memory, decision making)” (participant 14).

As participants became more skilled at using the mindfulness meditation technique, some indicated that it directly eliminated their pain. They spoke of relieving pain by concentrating on their breathing, “I have used the breath concentration to successfully relieve pain in a number of situations” (participant 6). Another stated “When I was able to concentrate I had a great experience. The only time I had a sensation is when I was concentrating on my lower back. I felt like something was happening to that section of my body and . . . the pain would disappear” (participant 9). Most diary entries described a feeling of relaxation and serenity after medita-

**Table 3. Themes and Sample Quotes From Diary Entries of Older Adults With Chronic Low Back Pain**

<table>
<thead>
<tr>
<th>THEMES</th>
<th>EXAMPLE</th>
</tr>
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<tbody>
<tr>
<td>Experiencing pain reduction from mindfulness meditation</td>
<td>“I have known for years that distraction made me forget my pain to a great extent . . . with mindfulness I can concentrate on prayer, music, exercise, and probably many other things that distract me from the pain. This is something I did not realize on my own.”</td>
</tr>
<tr>
<td>Heightened awareness of pain sensation leading to behavior change</td>
<td>“I learned to stop when the pain starts up.”</td>
</tr>
<tr>
<td>Better coping with pain</td>
<td>“The pain is still with me; however, it just doesn’t feel as intense as it was. I feel results of the study and the practice is having a positive effect.”</td>
</tr>
<tr>
<td>Direct elimination of pain</td>
<td>“By using meditation I have been able to reduce the feeling of pain.”</td>
</tr>
<tr>
<td>Improvement in attention skills resulting from mindfulness meditation</td>
<td>“Benefits of clearer thinking/focusing continue.”</td>
</tr>
<tr>
<td>Improved sleep resulting from mindfulness meditation</td>
<td>“Felt very well relaxed for sleep, which came quickly.”</td>
</tr>
<tr>
<td>Improved attention</td>
<td>“Slept great after meditation.”</td>
</tr>
<tr>
<td>Decreased sleep latency</td>
<td>“It has helped me to get back to sleep more readily when I awake at night.”</td>
</tr>
<tr>
<td>Increased sleep quality</td>
<td></td>
</tr>
<tr>
<td>Getting back to sleep more readily</td>
<td></td>
</tr>
<tr>
<td>Achieving well-being</td>
<td>“When I finished the meditation I felt like a new person.”</td>
</tr>
<tr>
<td>Short-term effects</td>
<td>“This program has really changed my life. Because of the meditation, I not only have less back pain, I am more aware of my life and am learning to live it to the fullest.”</td>
</tr>
<tr>
<td>Long-term effects</td>
<td></td>
</tr>
<tr>
<td>Barriers to meditation</td>
<td>“I always fall asleep after 15 to 30 minutes (of meditation).”</td>
</tr>
<tr>
<td>Becoming sleepy</td>
<td>“It seems like there is never a good time to meditate.”</td>
</tr>
<tr>
<td>Finding time</td>
<td></td>
</tr>
<tr>
<td>Processes of meditation</td>
<td>“It is easier and easier to jump right into the meditation mode.”</td>
</tr>
<tr>
<td>Becoming familiar with meditation</td>
<td>“Concentrating on deep breathing.”</td>
</tr>
<tr>
<td>Location of focus</td>
<td>“I am learning to appreciate awareness of sensations.”</td>
</tr>
</tbody>
</table>
tion that caused participants to continue using medita-
tion for this pain-reducing, mood-elevating effect. “I
have no pain lying down and I do feel more comfortable
with my back when I am finished. I can stand on my feet
longer” (participant 11).

Improvement in Attention Skills Resulting From Mindfulness Meditation

Participants noted improvement in their ability to pay
attention. As one participant described, “My concentra-
tion and awareness improved so much. My mind does
not wander anymore as much as it used to. I am more
focused” (participant 12). Additionally, a participant
noted their increased attention was also associated with
a sense of well-being: “Learning mindfulness meditation
helped me to be more relaxed and focused in day to day
living” (participant 4).

Improved Sleep Resulting From Meditation

Participants consistently commented on how medita-
tion increased the quality of sleep. Though it was stated
that sleep came very easily during meditation, partici-
pants also often said that sleep latency (the time from
the decision to sleep to the onset of sleep) was reduced
and more restful or refreshing. Even if night awakenings
occurred some participants were able to “get back to
sleep more readily” (participant 6). A woman who had
difficulty with insomnia also found a great benefit from
meditation as she reported that “sleeplessness was
harming my quality of life in every aspect and I am grate-
ful I no longer have the problem. It has made a huge
difference in my life” (participant 4).

Achieving Well-Being

Learning mindfulness meditation resulted in positive
affect and experiences of greater mental and physical
well being, which occurred immediately after medita-
tion but also remained long-term. Meditation also pro-
vided participants with a tool to positively handle stress.

Well-Being: Short-Term Effects

A meditation session frequently had immediate gen-
eral physical and mental restorative effects on partici-
pants. As alluded to in the pain section of the results,
participants consistently and repeatedly wrote about
feelings of relaxation and serenity in their diaries. Most
stated that their experience of being refreshed or regen-
erated was stimulated by practicing meditation as one
participant wrote after completing a session: “feel re-
freshed and relaxed” (participant 23). Some participants
translated the experience of mindfulness meditation us-
ing metaphors: “when I was able to concentrate I felt like
the mattress commercial—sleeping on a cloud” (par-
ticipant 9).

Well-Being: Long-Term Effects

Several entries centered on a theme of stress reduc-
tion. It appeared that learning mindfulness meditation
helped facilitate the transition from a stressful to a less
stressful state for participants. One participant expressed
that “mindfulness meditation has a quieting effect on me . . . it gives me a peaceful feeling while doing it” (par-
ticipant 2). In another entry, it was articulated that med-
itation was important as a method for coping with ev-
eyday stressors and “that the full effectiveness of the
[meditation] program is a continuity of practice over a
lifetime” (participant 5). The practice of meditation was
easily used by participants as a tool to manage difficult
aspects of their lives regardless of whether the source of
their discomfort was of a physical or mental/emotional
nature.

The process of learning mindfulness meditation was de-
scribed in diary entries as resulting in profound, life-alter-
ing changes that created for one participant “a huge
change in my personality and outlook” (participant 9) and
stated by another as “I’m deeply grateful to have been able
to participate—I can truthfully say my quality of life has
been stepped up a notch” (participant 14). These observa-
tions were representative of its potential to effect compre-
hensive positive change in these older adults’ lives with low
back pain.

Discussion

Mindfulness meditation had beneficial effects on pain,
attention, sleep, and well-being in older adults who ex-
perience chronic low back pain. Various methods of pain
reduction were used, including distraction, increased
body awareness leading to behavior change, better cop-
ing skills, imagery, and direct pain reduction through
meditation. Sleep latency was improved as well as qual-
ity of sleep. Participants described well-being during and
after a meditation session that had immediate effects on
mood elevation but also lasting global effects on quality
of life.

Main Findings in the Context of the Existing Literature

Distraction is a commonly used method of coping with
pain and typically refers to the voluntary or involuntary
moving of attention away from pain.20 However, distrac-
tion as described by our participants involved purpose-
fully bringing and maintaining attention to the present
moment’s activities. Hence, through mindfulness medi-
tation, older adults described learning to fully engage in
present moment activities such as listening to music and
exercise. This full engagement increased absorption in
another activity and effectively caused distraction from
pain. Therefore, mindfulness meditation may have per-
mitted greater attention regulation, so that participants
could become aware of and choose how to direct their
attention. It should be noted that these routine activities
did not necessarily cause pain reduction before learning
mindfulness meditation. Thus, participants were equipped
with a simple tool for pain reduction that they could apply
at any time and in a variety of daily life situations.

Interestingly, the instruction in mindfulness medita-
tion to become more aware of body sensations had a
paradoxical effect. Usually, ignoring pain sensations is considered one of the mechanisms people use to cope with pain.26 However, our participants experienced pain reduction by attending to the experience of their pain. The pain reduction may have occurred through several mechanisms. One possible mechanism was an increased awareness of physical activities or postures that worsened pain. Thus, simply “stopping” a given activity at the first hint of pain may have allowed a person to intervene before pain escalated.

Another possible mechanism was personal insight into negative emotional processing that worsened pain. Thus, the awareness of a particular body sensation was also noted to be linked to a negative affective response that resulted in heightened pain. Negative affect such as anxiety and fear is known to increase a person’s sensation of pain,14 and therefore modifying such responses has the potential to reduce the experience of pain. By encouraging awareness of present moment experience, mindfulness meditation taught participants how to become aware of these negative emotional responses to their pain, which in turn may have allowed participants to manage their reactions in a less self-destructive manner.

In Kabat-Zinn’s12 seminal paper about mindfulness meditation and pain, he describes the process of pain reduction occurring by “an attitude of detached observation toward a sensation when it becomes prominent in the field of awareness, and to observe with similar detachment the accompanying but independent cognitive processes which lead to evaluation and labeling of the sensation as painful, as hurt.” Thus, by “uncoupling” the physical sensation from the emotional and cognitive experience of pain, the patient is able to reduce pain. We believe our findings are consistent with Kabat-Zinn’s proposed mechanism, and expand it, by describing how participants uncouple the different components of the complex experience of pain. Thus, participants’ descriptions of distraction from pain, understanding maladaptive coping strategies for pain, and heightened awareness of pain sensation leading to behavior change are examples of how pain is uncoupled from emotion, cognition, and sensation.

The direct resolution of pain while meditating is intriguing and may be explained by several potential mechanisms. One was already discussed above—the uncoupling of pain into its different components. This is consistent with Melzack’s gate control theory,19 in that conditioned or emotional responses to pain can be modified through meditation by disengaging habitual reactivity and therefore a top-down inhibition of pain via the gate control system. Another potential mechanism is the relaxation response as proposed by Benson.2 The hypometabolic state characterized by decreased heart rate, respiratory rate, and oxygen consumption2,28 may well be associated with decreased muscle tension and release of neurotransmitters that cause immediate pain relief. This has direct relevance to older adults with CLBP, as the majority of older adults have myofascial pain as at least 1 contributor to their low back pain.30

Another possible explanation with support from neuroimaging studies is that mind-body therapies may favorably alter pathways that modify the experience of pain. For example, hypnotic suggestions for experiencing either high or low pain unpleasantness produced corresponding changes in activity in the anterior cingulate cortex (ACC), but not the primary somatosensory cortex.25 Top-down inhibition through voluntary control of the rostral ACC has been suggested by deCharms et al,7 who used real-time functional magnetic resonance imaging to demonstrate that participants could voluntarily increase or decrease stimulation to the rostral ACC. This in turn was associated with an increase or decrease, respectively, in their rating of a painful thermal stimulus.

One of the themes was improved attention skills resulting from mindfulness meditation. Improved attention skills were also asked of participants at 3-month follow-up, and 16 of 25 (64%) of them responded affirmatively that they could concentrate better after learning mindfulness meditation.22 This is a particularly interesting finding because slowing cognitive decline is especially relevant to the aging population. Experimental evidence from Jha et al11 suggests that mindfulness meditation from Jha et al11 suggests that mindfulness meditation has been described in a variety of populations.3,4,15 However, qualitative studies mention sleep only briefly6 and do not describe the effects on sleep quality and improved sleep latency with the detail used by the older adults in this study. Sleep promotion was both a negative short-term side effect, because it interfered with the ability to stay alert and awake during meditation, and also a long-term benefit, because of its ability to enhance sleep quality and reduce sleep latency outside of the meditation setting.

Mindfulness meditation led to increased well-being for participants that was present both during meditation and carried over after meditation. This improved well-being was associated with an immediate shift toward a positive affect during a meditation session as revealed by participants’ descriptions of being calm and peaceful while meditating. Immediately after meditation, this positive change persisted so much that a participant described feeling like “a new person.” Brain neuroplasticity, with a shift toward a more positive affect as a result of mindfulness meditation, has support in the neuroscience literature. Davidson et al30 found that participants in an 8-week mindfulness-based stress reduction program demonstrated on EEG a left shift in their prefrontal cortex response to a positive and negative emotion provoking writing task. This left shift may be an indicator for increased positive affect. Management of emotion with an overall increase in positive affect is emerging as one of the central mechanisms by which mindfulness meditation may effect change.
Strengths of This Study

The first-person accounts of the experience of mindfulness meditation in older adults with chronic pain allowed us to describe effects that could not be captured by quantitative techniques. We sampled older adults with persistent pain, who have little written about them regarding mind-body therapies for treating pain. Many of the findings lend themselves to both qualitative and quantitative research and can apply to a younger population.

Limitations of This Study

Because this is a small sample of predominantly white, older adults with CLBP, the results may not be generalizable to a wider population. All the participants did not consistently turn in weekly diaries, and this should be more strictly enforced in future studies.

The diaries were open-ended and did not direct the participant to comment on any specific topic, so other themes or methods for pain reduction may not have been captured.

Mindfulness meditation has promising potential as a nonpharmacologic method of pain reduction in older populations. This is particularly pertinent to older adults, who frequently are limited in the kinds of pain therapy they can receive because of unwanted side effects. Thus, clinicians have another tool available to them to recommend to patients who have chronic pain. Additionally, the results from this study may have applicability to a younger pain population as well. We were able to identify themes related to pain reduction resulting from mindfulness meditation that suggest several avenues for future quantitative research including improved attention skills, emotional processing of pain, direct relief of pain during meditation, and enhanced sleep.

References


