The Effects of Meditation on Psychosocial and Physiological Factors

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BACKGROUND

Occupational therapists use a holistic approach when treating patients; addressing certain psychosocial and physiological factors during intervention sessions is well within the scope of occupational therapy practice.

Many patients experience pain during hospital stays – in a study of the prevalence of pain in elderly hospital patients, researchers found that 67.3% of participants reported regular pain (Gianni et al., 2010).

A study by Andersen & Vægter found that mindfulness meditation can reduce depression, anxiety, and pain-catastrophizing in patients experiencing chronic pain (2016). A study by Henriksson, Wasara, & Rönnlund found that participants who experienced chronic pain displayed increased pain acceptance and reduced affective distress following mindfulness training (2016).

According to a study by Kabat-Zinn, Lipworth, & Burney (1985), after administering a meditation program, patients reported decreased levels of stress.

After discussions with occupational therapists and nurses working in inpatient rehabilitation facilities, it was identified that a mindfulness meditation program may be beneficial to patients experiencing increased pain, anxiety, and/or depression. The inpatient rehabilitation facility where this research was conducted was also interested in identifying non-pharmacological techniques for pain reduction for their patients.

The role of mindfulness meditation as an intervention tool used by occupational therapist has limited research, and therefore in an effort to inform the practice, this study was created and implemented.

FOCUSED QUESTION

Can meditation affect psychosocial or physiological factors in patients receiving care in an inpatient rehabilitation facility?

METHODS

Thirteen individuals were individually selected based on self-reported psychosocial factors including anxiety, depression, and high pain levels. Participants were provided basic information about the program and meditation and verbally agreed to participate in therapist-led meditation session(s) to focus on relaxation, pain relief, and mindfulness.

Prior to the initial session, the therapist administered the Hospital Anxiety and Depression Scale (HADS) and recorded scores, however due to limitations of study, only two participants were able to complete the assessment following their final meditation session (Zigmond & Snaith,1983). Prior to each meditation session, participants' pain levels were recorded using a verbal rating scale from 0-10; participants' heart rates were also recorded using a digital fingertip pulse oximeter. Post pain levels and heart rate were recorded in 72 percent of meditation sessions.

Participants took part in one to four meditation sessions throughout the program. Each meditation session lasted between 25-40 minutes and was administered in a calm, low-light environment with therapist in the room and reading from a script pertaining to anticipated outcome of session (relaxation, pain relief, and/or mindfulness) based on participants' needs. Participants were instructed to sit or lie down in a position of their choice and close their eyes for the duration of the meditation sessions. Participants were offered the option to listen to calming nature sounds in background.

Following the meditation session, interested participants were provided additional information and resources to facilitate their personal meditation practice.

RESULTS

The results from changes in participants reported pain levels following meditation sessions are shown in Table 1. Decreases in participants' reported pain levels occurred in 41 percent of meditation sessions. Throughout 28 percent of sessions, participants fell asleep, and therefore post-meditation pain levels were unable to be accurately reported. Participants reported no change pain levels in 14 percent of sessions. In 17 percent of sessions, participants reported no pain prior to or following meditation sessions. There were no participants who reported increased pain levels following meditation sessions.

Table 1

Pain

Reduced	Fell Asleep	No Change	Increased	No Pain
12	8	4	0	5
41%	28%	14%	0%	17%

The results from changes in participants heart rates following meditation sessions are shown in Table 2. In 52 percent of meditation sessions, participants experienced a decrease in heart rate. Throughout 28 percent of sessions, participants fell asleep, and the researcher was unable to accurately record heart rates. Participants' heart rates increased following 10 percent of meditation sessions. In 10 percent of sessions, participants experienced no change in heart rates.

Table 2

Heart rate

Reduced	Fell Asleep	Increased	No Change
15	8	3	3
52%	28%	10%	10%

LIMITATIONS

The primary limitations observed throughout this study included small sample size, participants falling asleep during sessions, staff interruptions during sessions, scheduling conflicts, inability to perform meditation with certain diagnoses/conditions, unexpected patient discharge from hospital, and frequent changes in participants' health status affecting willingness/ability to participate.

BOTTOM LINE FOR OT

For occupational therapists working in inpatient rehabilitation settings, learning and implementing mindfulness-based techniques for use with patients could be an effective strategy to manage some of the sequala that many patients often experience. Mindfulness meditation methods have minimal side effects and promote a holistic approach that coincides with the core values of the occupational therapy profession.

The promising outcomes from this small study indicate that meditation may be an effective tool for decreasing pain and decreasing heart rates for patients in inpatient rehabilitation hospital stays; however, more research is needed to conclude these findings.

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