**Title:** Evidence supporting interventions within the scope of occupational therapy for addressing psychological and cognitive factors contributing to chronic pain

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**Objectives of Presentation:** At the conclusion of this presentation, attendees will...

- List three effective interventions to address cognitive and psychological factors in chronic pain based on the presented scoping review of the literature.

- Articulate the importance of cognitive/psychosocial factors in relation to chronic pain.

**Clinical/Research Question:**

What is the evidence supporting interventions within the scope of occupational therapy for addressing psychological and cognitive factors contributing to chronic pain?

**Methods**:

**Inclusion criteria**

- Peer-reviewed articles, English, discussed chronic pain and psychological or cognitive factors
- Conditions: chronic back pain, fibromyalgia, chronic headache, rheumatoid arthritis, osteoarthritis, and any other chronic pain conditions that lasted longer than 3 months
- Interventions: All within the scope of OT

**Exclusion Criteria**

- Date: published before 2009
- Non-OT interventions: hypnosis, pharmacological, prayer/spiritual, chiropractic, and strictly kinesiophobia
- Studies examining cancer-related pain, post-surgical pain, headaches, and migraine/chronic migraines
- Study design: Scoping Review
- Evidence-based adapted scoping review protocol (Arskey & O’Malley, 2005; Daudt et al., 2013; Levac et al., 2020)
- Screening process: Independent review of title and abstracts (n=1899), then full-text n=(90). Secondary review of the articles to prevent bias. Google form to capture inclusion and exclusion criteria
- Data extraction: Google form (n=63). Questions created by research mentor and edited by team members. Audit of 10% of articles to ensure validity
- Data Analysis: Grouped interventions into categories based on similar characteristics. Examined outcomes of interventions. Reviewed trends and important themes. Variables collected: year and country of publication, length of treatment, age of population, type of chronic pain in population, length of time the populations have had chronic pain at the time of treatment, psychological and cognitive factors, study design, measures for the psychosocial and cognitive factors, and the reported outcomes of the studies

**Results:**

A total of 63 articles were included. 26 articles were randomized control trials, 18 were experimental, 5 articles were systematic reviews, 2 were meta-analyses, and 2 were descriptive studies. The prominent interventions identified fell into the following categories: cognition-based training (n=18), mindfulness-based therapy (n=21), education-based (n=6), movement-based therapy (n=13), and multicomponent interventions (n=21). The main psychosocial and cognitive factors addressed were depression, anxiety, QOL, pain self-efficacy beliefs, stress, and catastrophization. The most frequently reported measures used to assess psychosocial and cognitive factors were Beck's Depression Inventory, Hospital Anxiety and Depression Scale, Pain Catastrophizing Scale (PCS), Quality of Life Scale, Health Status Inventory (SF-36), and the Multiple Pain Inventory (MPI-Brief). Our determined intervention themes are defined as follows, per group and mentor discussion:

- **Mindfulness-based interventions** include therapeutic techniques focusing on awareness of the present moment and thought processes to reduce anxiety, stress, pain, and depression. The two most frequently
reported interventions within this theme are Mindfulness-Based Stress Reduction (MBSR) and Acceptance and Commitment Therapy (ACT). Additional interventions include meditation, relaxation education, and web-based mindfulness training

- **Education-based interventions** include teaching on the client’s condition and its impact on their body or functioning. The most prevalent interventions in this category are pain education, which describes the biological mechanisms behind pain in the body and mind and pacing a learned skill involving pre-planning to balance activity and improve level of function. Additional interventions were pain neuroscience education conducted over the phone.

- **Cognition based interventions** include interventions focusing on the client’s thought processes and strategies surrounding the treatment of chronic pain. One example is Cognitive Behavioral Therapy, which utilizes a specific protocol with associated training to improve cognitive processes related to behavior, thought patterns, and awareness as it pertains to chronic pain and daily functioning. Additional interventions included CBT with biofeedback, web-based behavioral self-management, cognitive functional therapy, telephone-delivered CBT, interactive voice response-based CBT, mindfulness-based cognitive therapy, internet-based CBT, CBT with a virtual reality component, and a FibroQol intervention specifically for fibromyalgia.

- **Movement-based therapy** includes interventions entailing physical activity in some form. Examples of such interventions are yoga and physical exercise. Other movement-based interventions included telephone-supported physical activity and a specialized biodanza program.

- **Multicomponent interventions** include programs that involve multiple interventions, whether those interventions were derived from the same discipline or not. The most prevalent intervention in this theme is Interdisciplinary Pain Rehabilitation Programs, where professionals from different disciplines collaborate together as a team on the same goals in order to help the client achieve therapeutic outcomes.

**Implications:**

- Gives practitioners an overview of available interventions within the scope of occupational therapy practice that address psychological and cognitive factors in chronic pain
- Highlights the importance for other individuals in healthcare to understand the role that psychosocial and cognitive factors play in the experience and management of chronic pain
- Reveals the need for further research on the quality of the available interventions
- Further research through a systematic review to confirm significant, positive outcomes of available interventions could also inform policy makers of the need to promote and reimburse OT-based treatments as a form of nonpharmacological, effective treatment for chronic pain

**References**


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