THE USE OF COGNITIVE BEHAVIORAL THERAPY ON PATIENTS WITH CHRONIC PAIN IN HOME HEALTH PHYSICAL THERAPY: A SYSTEMATIC REVIEW

MAURA MCGOWAN, SPT

DR. TRACEY COLLINS, PT, PH.D., MBA, BOARD-CERTIFIED CLINICAL SPECIALIST IN GERIATRIC PHYSICAL THERAPY

Overview

- Definitions
- Purpose
- Methods
- PRISMA
- Results
- Conclusion
- Limitations
- Clinical Relevance
- Recommendations
- Acknowledgements
Definitions

- Chronic pain
  - Pain that persists past normal healing time and lasts or recurs for more than 3 to 6 months, often has psychological component.

Definitions cont.

- Traditional Pain Management includes:
  - Physical Therapy
    - Moist Heat/Cryotherapy
    - TENS
    - Manual therapy/traction
  - Pharmacologic Use
    - Anti-inflammatories
    - Opioids
    - Anti-depressants/Anti-convulsants
Definitions cont.

- Cognitive behavioral therapy or CBT
  - A non-pharmacological way to manage pain that uses specific techniques to teach patients how thoughts, beliefs, attitudes, and emotions influence pain
  - Techniques include:
    - Deep breathing
    - Imagery
    - Activity Pacing
    - Progressive Muscle Relaxation

Purpose

- To examine the effectiveness and knowledge of using cognitive-behavioral therapy (CBT) for the management of chronic pain in patients receiving home health physical therapy services
Methods

Four databases were searched for articles that were published after 2008 in English and were peer-reviewed:
- CINAHL, Health Source, PubMed and ProQuest
- Search terms: “home health” or “home care” and “cognitive therapy” or “behavioral therapy” and “pain” or “pain management”

Methods

Inclusion Criteria
- Adults with chronic pain
- Home health physical therapy or therapists

Exclusion Criteria
- Not children
- Not receiving therapy in any other setting
- Not specifying home health
- Not using physical therapy services explicitly
Results

- The quality of the results was assessed by two independent reviewers using the MINORS scoring system.
  - The 4 articles averaged a score of 14.
  - Total number of subjects = 808.
  - Ages were 55 to 92 years.
## MINORS Scoring

<table>
<thead>
<tr>
<th>Category</th>
<th>Bach et al</th>
<th>Beissner et al</th>
<th>Carrington Reid et al</th>
<th>Cederbom et al</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearly stated aim</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Inclusion of consecutive patients</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Prospective collection of data</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Endpoints appropriate to aim of study</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Unbiased assessment of study endpoint</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Follow-up period appropriate to aim</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Loss to follow up less than 5%</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Prospective calculation of study size</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

### Additional criteria in comparative studies

<table>
<thead>
<tr>
<th>Criterion</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>An adequate control group</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Contemporary groups</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Baseline equivalence of groups</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Adequate statistical analysis</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Score**

|            | 10/12      | 4/12       | 22/24      | 20/24      |

## Results

- When used as an adjunct for 60 days, a significant improvement in pain intensity, function and disability was found ($p < 0.0001$)\(^4\)
- Success with CBT in 80% of patients with muscle relaxation and activity pacing\(^4\)
- Therapist assessment of its use\(^5,6\)
  - Comfortable after 1 month of training
  - 81% used activity pacing
  - Only 12-16% used imagery
  - 84% were interested in learning more
Results

- Improved self-efficacy with exercises but not a significant impact on pain management
- Limitations reported by therapists were insufficient knowledge of CBT modalities reported by (59%) and issues with reimbursement (31%)
- Feedback:
  - “You can use at least one of these techniques on your patients. There isn’t any part that cannot be used at all.”
  - “I think it’s a good program. In home care it is difficult to apply because of the time constraints but it is doable.”

Conclusion

- Low to moderate evidence that CBT can be used as an adjunct to traditional physical therapy interventions
- Most effective techniques were deep breathing and activity pacing
Limitations

- The studies used in this review vary in design and specific study purpose.
- Samples in each study were small and did not have specific CBT protocols to measure the outcomes of each.

Clinical Relevance

- CBT can be an effective addition to physical therapy services with minimal formal training.
- Each technique can be adapted to fit varying diagnoses and patient cases.
Recommendations

- Further research should be conducted to more specifically measure the efficacy of CBT interventions in addition with traditional PT services.
- A more specific program for interventions should be developed in order to properly determine which techniques are the most effective.

Take Home Message

- It is important to treat holistically in order to best improve patient outcomes.
- Cognitive behavioral therapy can be used to address some of the psychological components to chronic pain and associated dysfunction.
Acknowledgements

Dr. Tracey Collins, PT, Ph.D., MBA, Board-Certified Clinical Specialist in Geriatric Physical Therapy

References

THANK YOU!

ANY QUESTIONS?