

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

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Overview

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- ▶ Purpose
- ▶ Methods
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- ▶ Results
- ▶ Conclusion
- ▶ Limitations
- ▶ Clinical Relevance
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- ▶ Acknowledgements



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Definitions

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- ▶ Chronic pain
 - ▶ Pain that persists past normal healing time and lasts or recurs for more than 3 to 6 months, often has psychological component¹



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Definitions cont.

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- ▶ Traditional Pain Management includes:
 - ▶ Physical Therapy
 - ▶ Moist Heat/Cryotherapy
 - ▶ TENS
 - ▶ Manual therapy/traction²
 - ▶ Pharmacologic Use
 - ▶ Anti-inflammatories
 - ▶ Opioids
 - ▶ Anti-depressants/Anti-convulsants³



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Definitions cont.

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- ▶ 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 Relaxation⁴



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Purpose

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- ▶ 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



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Methods

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- ▶ 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"



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Methods

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Inclusion Criteria

- ▶ Adults with chronic pain
- ▶ Home health physical therapy or therapists

Exclusion Criteria

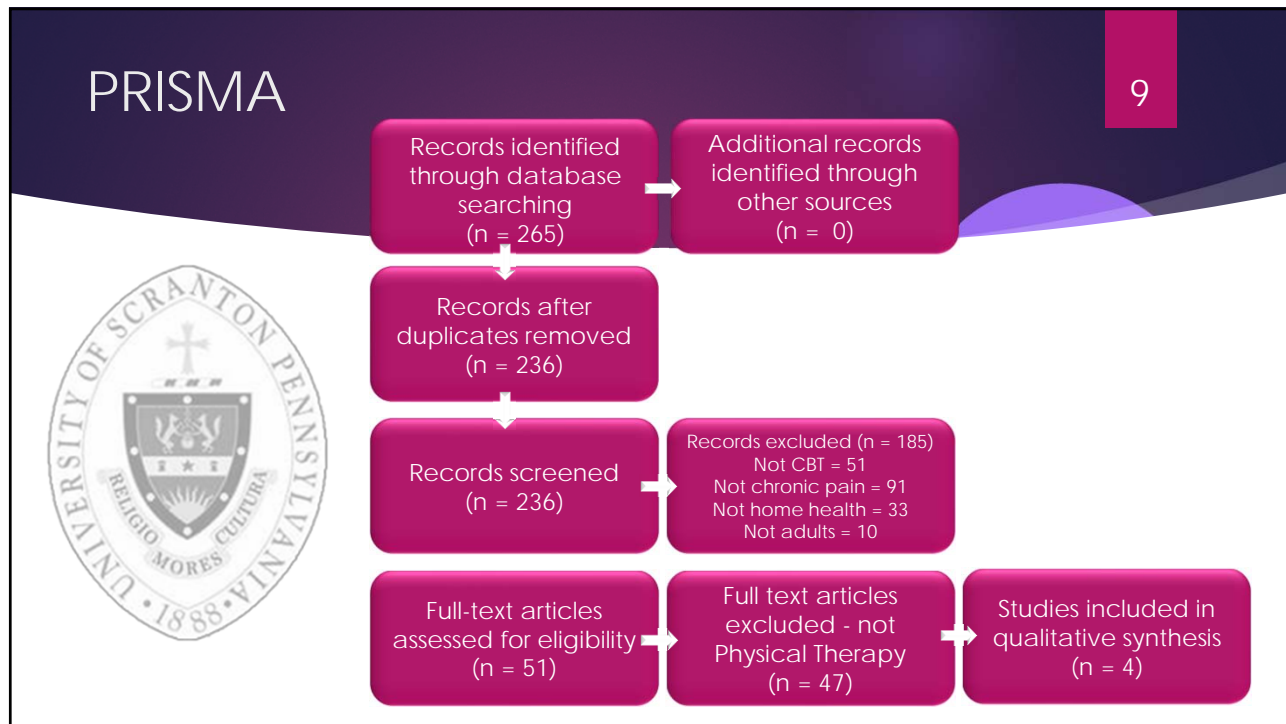
- ▶ Not children
- ▶ Not receiving therapy in any other setting
- ▶ Not specifying home health
- ▶ Not using physical therapy services explicitly



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PRISMA

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Results

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- ▶ 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



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MINORS Scoring

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Category	Bach et al	Beissner et al	Carrington Reid et al	Cederbom et al
Clearly stated aim	2	2	2	2
Inclusion of consecutive patients	2	0	2	2
Prospective collection of data	1	1	2	2
Endpoints appropriate to aim of study	2	0	2	1
Unbiased assessment of study endpoint	0	0	1	2
Follow-up period appropriate to aim	1	0	2	1
Loss to follow up less than 5%	1	1	1	1
Prospective calculation of study size	1	0	2	1
<i>Additional criteria in comparative studies</i>				
An adequate control group			2	2
Contemporary groups			2	2
Baseline equivalence of groups			2	2
Adequate statistical analysis			2	2
Total Score	10/12	4/12	22/24	20/24

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Results

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- ▶ 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 pacing⁴
- ▶ 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



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Results

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- ▶ Improved self-efficacy with exercises but not a significant impact on pain management⁷
- ▶ Limitations reported by therapists were insufficient knowledge of CBT modalities reported by (59%) and issues with reimbursement (31%)⁸
- ▶ Feedback⁴
 - ▶ “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”



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Conclusion

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- ▶ 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



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Limitations

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- ▶ 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



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Clinical Relevance

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- ▶ 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



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Recommendations

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- ▶ 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



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Take Home Message

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- ▶ 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



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Acknowledgements

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References

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- ▶ 1. Treede R-D, Rief W, Barke A, et al. A classification of chronic pain for ICD-11. *Pain*. 2015;156(6):1003-1007.
- ▶ 2. Ranjeeta A, Saleh A-O. Physiotherapy management of chronic back pain: systematic literature review. *Indian J Physiother Occup Ther*. 2011;5(4):167-170
- ▶ 3. Mehalick ML, PhD., McPherson S, PhD., Schmaling KB, PhD., Blume AW, PhD., Magnan RE, PhD. Pharmacological management of chronic low back pain: A clinical assessment. *J Pain Manag*. 2016;9(1):39-48.
- ▶ 4. Reid MC, Henderson CR, Trachtenberg M, Beissner K, Bach E, Barron Y, Sridharan S, Murtaugh CM. Implementing a pain self-management protocol in home care: a cluster-randomized pragmatic trial. *J Am Geriatr Soc*. 2017;65:1667-1675.
- ▶ 5. Bach E, Beissner K, Murtaugh C, Trachtenberg M, Carrington Reid M. Implementing a cognitive-behavioral pain self-management program in home health part 2: feasibility and accessibility cohort study. *J Geriatr Phys Ther*. 2013;36(3):130-137.
- ▶ 6. Beissner K, Henderson CR, Papaleontiou M, Olkhovskaya Y, Wigglesworth J, Reid MC. Physical therapists' use of cognitive-behavioral therapy for older adults with chronic pain: a nationwide survey. *Phys Ther*. 2009;89:456-469.
- ▶ 7. Cederbom S, Rydwick E, Soderlund A, Denison E, Frandin K, von Heideken Wagert P. A behavioral medicine intervention for older women living alone with chronic pain – a feasibility study. *Clin Interv Aging*. 2014;9:1383-1397.
- ▶ 8. Beissner K, Bach E, Murtaugh C, Parker SJ, Reid MC. Implementing a cognitive-behavioral pain self-management program in home health care, part 1: program adaptation. *J Geriatr Phys Ther*. 2013;36(3):123-129



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THANK YOU!

ANY QUESTIONS?