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Pilates and Yoga as Alternative Interventions for the Treatment of Chronic Lower Back Pain in the Primary Care Setting: An Evidence--Based Practice Project

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Pilates and Yoga as Alternative Interventions for the Treatment of Chronic Lower Back Pain in the Primary Care Setting: An Evidence-Based Practice Project

Purpose

The purpose of this project is to answer the clinical PICO question: In patients with chronic lower back pain (CLBP) how do yoga and Pilates compared to conventional treatment of chronic lower back pain affect pain control?

Background

- Primary care providers contribute about half of the opioid prescriptions in the U.S. for chronic pain.¹
- The most common complaint of chronic pain in the primary care setting is chronic lower back pain.²
- Chronic pain is pain lasting longer than three months.¹
- Until recently standard care practice for chronic pain included pharmacologic methods such as opioid pain medications, which have contributed to a nationwide overuse problem.^{1,2}
- Novel research demonstrates that risks of abuse and overdose outweigh the benefits of these medications.¹
- Guidelines are shifting from pharmacological management to alternative methods, making non-pharmacologic interventions the first line for CLBP.²

Evidence Appraisal

- A literature search for level I evidence was conducted utilizing the PubMed, CINAHL, and Cochrane databases.
- Search terms included “yoga” and “lower back pain” within the limitations of 2011-2017, the English language, and all articles were peer reviewed.
- Additionally a manual search of references was performed to yield additional articles.
- Search yielded N = 9 studies. Two studies were excluded as they did not meet criterion for level I evidence .
- Each article was appraised utilizing a standardized rapid clinical appraisal checklist by Fineout-Overholt & Melnyk.³ Each article met quality for inclusion.

Evidence Synthesis

- Most systematic reviews displayed strong evidence for short term reduction in pain with yoga in patients with CLBP.^{4,5}
- Long term effects of yoga yielded moderate evidence for the reduction of CLBP.⁴
- Some evidence suggests significant short term reduction of pain with Pilates similar to studies involving yoga.^{7,10}
- Some systematic reviews lacked significant data to assess the long term effect of Pilates on lower back pain indicating a need for additional high quality randomized controlled trials.^{7,8,9}
- Yoga and Pilates include various forms of exercise that can be tailored to the patient.⁶
- Limitations that may prevent success include patient adherence and comorbidities.

Translation into Practice

Translation into practice will include:

- a patient hand out with basic yoga and Pilates poses as well as web links and resources for back strengthening exercises.
- education of clinical staff and providers about benefits and risks of interventions.

Proposed Evaluation

Evaluation of translation into practice will include:

- pain control evaluation via numeric pain rating scale (0-10) and OLDCARTS acronym during initial and follow up visits typically within 4 to 6 weeks.
- evaluation of frequency, duration, and type of exercise to assess adherence and effectiveness of treatment.



Figure: Lower Back Pain¹¹

Conclusion

- Literature reviews and meta-analyses investigating the effects of yoga and Pilates on CLBP yielded various outcomes with strong evidence for short term benefits when compared to conventional treatment.^{4,5,7,6,10}
- There is limited support for the long term efficacy in the use of these interventions on CLBP indicating a need for additional trials in this area.^{4,7,8,9}
- With laws and guidelines shifting towards non-pharmacologic options, yoga and Pilates appear to be a valid alternative and adjunct methods for treatment of CLBP in the primary care setting.^{4,10}

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