

Comparison of Digital Mental Health Intervention with Usual Care and In-Person Counseling for Orthopedic Patients

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Introduction

Depression and anxiety are common among patients with chronic musculoskeletal pain, negatively affecting their orthopedic treatment outcomes. Mental health support is often overlooked in orthopedic care due to stigma and logistical challenges. Digital mental health interventions, like the Wysa app, offer a scalable and accessible solution to integrate mental health support into routine care.

This retrospective cohort study, conducted at Washington University, involved 153 adults with chronic musculoskeletal pain and elevated symptoms of depression or anxiety (PROMIS scores ≥ 55). Participants were divided into three groups:

- **Group 1:** Digital mental health intervention (Wysa) plus usual orthopedic care.
- **Group 2:** Usual orthopedic care alone.
- **Group 3:** Usual orthopedic care plus in-person psychological counseling.

The Wysa app provided cognitive-behavioral therapy (CBT), mindfulness exercises, and chat-based support. Primary outcomes included changes in PROMIS Depression and Anxiety scores, with secondary outcomes assessing PROMIS Pain Interference and Physical Function scores.

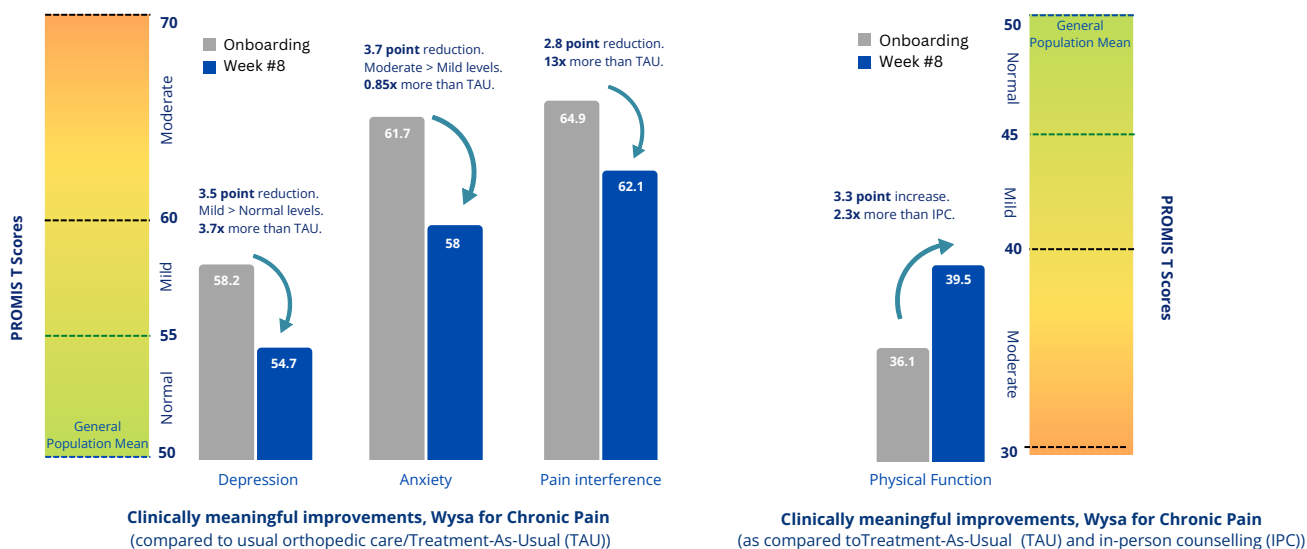
Results

Patients using the Wysa digital intervention demonstrated significant improvements across various metrics:

- **Depression and Anxiety:** Notable reductions in depression and anxiety levels.
- **Pain Interference and Physical Function:** Enhanced scores in pain interference and physical function.

The digital intervention group showed greater reductions in depression and pain interference compared to the usual care group, with mean differences ranging from 2.6 to 4.8 points.

Improvements in physical function were also more substantial in the digital intervention group compared to the in-person counseling group, with a mean difference of 2.4 points.



Depression: The average PROMIS T-score decreased by 3.5 points, moving patients from mild to normal levels.

Anxiety: The average PROMIS T-score decreased by 3.7 points, moving patients from moderate to mild levels.

Discussion

This study highlights the effectiveness of digital mental health interventions for orthopedic patients dealing with depression and anxiety. The Wysa app provided benefits comparable to traditional in-person psychological counseling and outperformed it in certain areas, such as improvements in physical function.

Digital mental health tools offer a practical solution to overcome barriers like stigma and limited access to mental health services. They integrate seamlessly into orthopedic care routines, providing a valuable alternative or complement to existing treatment approaches. The scalability and accessibility of digital interventions make them a compelling choice for enhancing patient care and addressing mental health issues in this patient population.

Citation

Leo A, Schuelke M, Hunt D, Miller J, Areán P, Cheng A
 Digital Mental Health Intervention Plus Usual Care Compared With Usual Care Only and Usual Care Plus In-Person Psychological Counseling for Orthopedic Patients With Symptoms of Depression or Anxiety: Cohort Study
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