

WHEELCHAIR Biking

Evidence Based Practice for
Addressing Depression

The purpose of wheelchair biking is to be a stimulus that initiates a change in behavior. This specific therapy focuses on the older adult's social well-being. It provides an opportunity to enjoy extended mobility, sense of freedom, opportunity to be outdoors, feel the wind and sun and bring back familiar childhood memories.

Clients are assessed by a recreation therapist. Inclusion in therapy requires a diagnosis, history, signs and/or symptoms of depression. Assessments such as the Cornell Scale for Depression, Geriatric Depression Scale, and/or Observed Emotion Rating Scale are utilized.

Following each therapy session, documentation to track individual client progress is completed using the Wheelchair Biking Ride Record and weekly Wheelchair Outcome Monitor.

Therapy is implemented in groups of 4 to 6 clients. Sessions have two components:

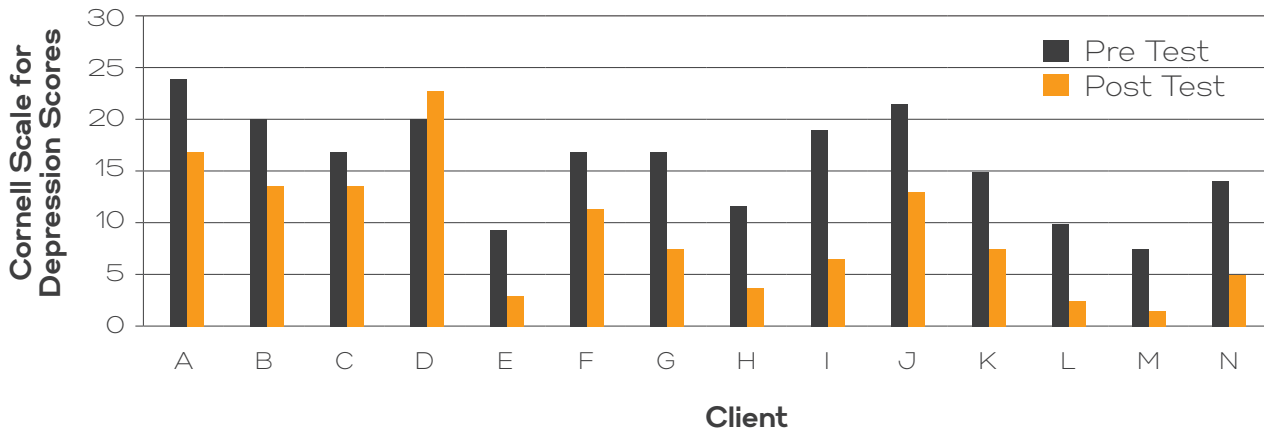
1. A discussion about past biking experiences.
2. Individual rides with a therapeutic recreation staff trained in wheelchair biking.

Therapy is implemented 5 days a week for 2 weeks, followed by 2 times a week for a 10 week maintenance period.



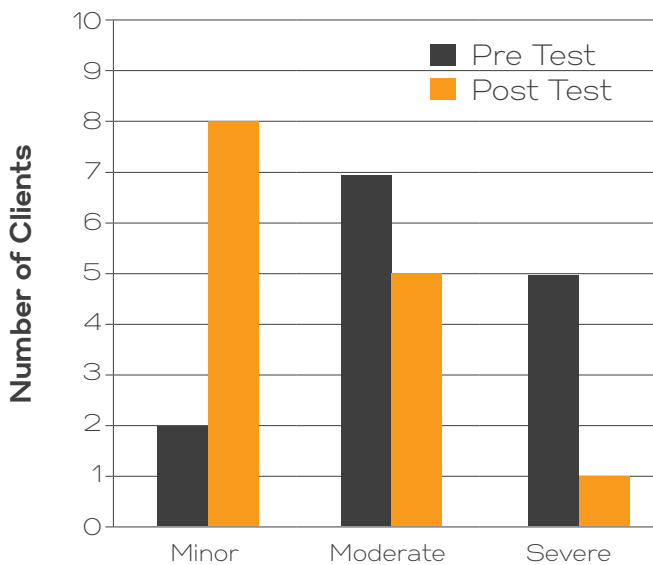
Wheelchair Biking Outcome Measures

Cornell Scale for Depression Pre & Post Test Scores



*The lower the score the less severe symptoms of depression are experienced

Levels of Depression Experienced by Clients Pre and Post Wheelchair Biking



- 91% of clients demonstrated a decrease in weepiness, sadness, apathy, and complaints
- Approximately 82% of the clients observed slept better, experienced less daytime fatigue, and had better overall night-time sleeping patterns
- Overall, the clients (n=14) averaged a 39% decrease in score, with the greatest decrease in one client being 66%

Cornell Scale for Depression Scores

The wheelchair biking therapy uses a specialized piece of equipment called the Duet Bike®, which is a modified tandem bicycle manufactured in Germany by Robert Hoening Spezialfahrzeuge (Hoening, 2010).

In Alberta Health Services south zone there are currently 6 sites that are implementing wheelchair biking. The bikes were purchased through a combination of Alberta Health Services funding and private donations.

Reference

Fitzsimmons, S., Buettner, L. L. (2010). Evidence-Based Practice Guideline – Wheelchair Biking for the Treatment of Depression