

## Project Overview

**Areas of Study:** (1) Program and Policy Development (2) Clinical Practice (3) Advocacy

**Population:** Health & Wellness, Rehabilitation & Disability

**Project Site:** Siouxland Center for Active Generations

**Description:** The capstone project focuses on the expansion of pre-existing Parkinson Disease (PD) programming through the creation of a ground kayak paddling program at a community senior center. Development of such programming integrates current research and preexisting PD intervention strategies to further promote social and leisure participation, manage symptoms, and improve overall quality of life.



## Project Completion and Outcomes

**Outcome Measure #1:** Develop an in-depth base of knowledge in exercise-based programming for individuals with PD through completion of Rock Steady Boxing (RSB) coaching certification.

**Outcome Measure #2:** Demonstrate advanced knowledge of clinical PD-focused interventions through completion of Lee Silverman Voice Treatment BIG (LSVT BIG) certification.

**Outcome Measure #3:** Continue to develop competence in recreation-based intervention through the creation of sustainable resources for a ground kayak paddling program within a facility.

**Outcome Measure #4:** Advocate for occupational therapy's (OT) role in the expansion of clinical and community-based outdoor recreation opportunities to maximize therapeutic outcomes as evidenced by the completion of a manuscript specific to disability special interests.

**Related Learning Objectives:** Gain competency in RSB program components, advocate for OT's role in the promotion of recreation-based interventions, create a ground kayak-paddling program guide, and enhance knowledge and generalizability across client populations through the creation of a client-centered case study surrounding outdoor activity participation.

## Mission and Vision Statements

**Project Mission:** To encourage the promotion of health management and social participation through the creation of a ground kayak paddling program for individuals with Parkinson's Disease.

**Vision Statement:** To expand opportunities for inclusive, recreation-based programming for individuals with Parkinson's Disease in order to manage symptoms and maintain overall quality of life.

## Needs Assessment | Literature Review

**Needs Assessment:** To assess the need for my capstone project, I reviewed evidence-based literature, collaborated with OTs, outdoor recreation professionals, and my expert mentor. These efforts revealed the need to further investigate the implementation of outdoor recreation-based community programming to enhance therapeutic outcomes across the lifespan.

### Literature Review:

- The utilization of an outdoor recreation-based medium using a kayak and paddling exercises is shown to improve physical and psychosocial well-being as this approach promotes occupational engagement and identity development, further improving emotional well-being and non-motor symptoms (Frances, 2004).
- Ground kayak paddling exercises yield significant improvements in motor-related symptoms such as axial rigidity, postural balance muscle performance, and cognitive function (Shujaat et al., 2014; Choi & Lee, 2018).
- While common non-motor symptoms such as depression are often treated with pharmaceutical intervention, paddling is unique in that participation in a paddling-based exercises program can improve many non-motor symptoms as well. This is a vital benefit as unmanaged non-motor symptoms often result in emotional distress, which can further exacerbate preexisting cognitive deficits, motor function, and overall quality of life (Marsh, 2013).

## Deliverables

- Rock Steady Boxing coaching and LSVT BIG certifications
- Evidence of facilitation of five RSB classes
- Presentation to OT students regarding clinical and recreation-based interventions for PD
- Completed kayak program guide and compilation of sustainable resources
- Abstract of scholarly work advocating for community-based outdoor recreation
- Design of an occupation-based case study

## Future Implications

### Implications within the Field of OT:

- The use of an outdoor recreation-based medium and kayak paddling exercises yielded improvements in physical function and emotional well-being in individuals with PD.
- Illustrates the need for accessible community programming to enhance therapeutic outcomes.

### Implications for My Career:

- Gained hands-on experience with common age-related impairments and diagnoses.
- Gained professional certifications that I can utilize as a clinician.



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## Curricular Threads

**Christ:** "The sea is His, for He made it, and His hands formed the dry land" Psalm 95:5

**Scholarship:** Application of clinical knowledge and production of scholarly writing.

**Service:** Development of sustainable programming in my local community.

### Key References \*Full list of reference available upon request\*

- Choi, W., & Lee, S. (2018). Ground kayak paddling exercise improves postural balance, muscle performance, and cognitive function in older adults with mild cognitive impairment: A randomized controlled trial. *Medical Science Monitor*, 24, 3909–3915. <https://doi.org/10.12659/msm.908248>
- Frances, K. (2006). Outdoor recreation as an occupation to improve quality of life for people with enduring mental health problems. *British Journal of Occupational Therapy*, 69(4), 182–186. <https://doi.org/10.1177/030802260606900406>
- Marsh, L. (2013). Depression and Parkinson's disease: Current knowledge. *Current Neurology and Neuroscience Reports*, 13(12). <https://doi.org/10.1007/s11910-013-0409-5>
- Shujaat, F., Soomro, N., & Khan, M. (2014). The effectiveness of kayaking exercises as compared to general mobility exercises in reducing axial rigidity and improve bed mobility in Parkinson's patients. *Pakistan Journal of Medical Sciences*, 30(5), 1094–1098. <https://doi.org/10.12669/pjms.305.5231>