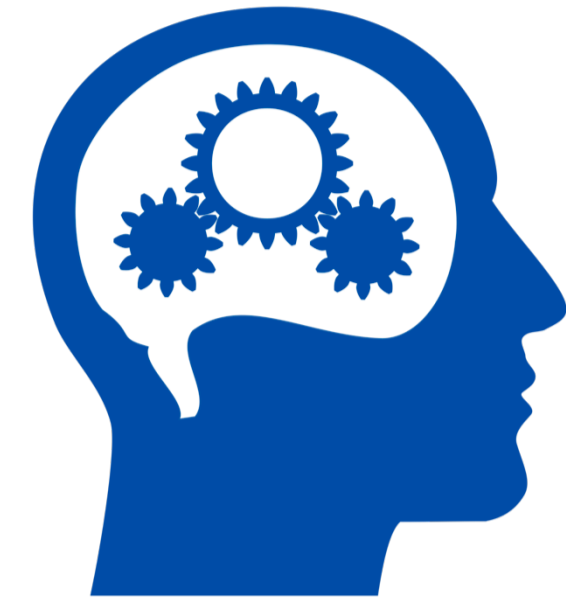


# Launching the co-creation, implementation, and evaluation of a community-based peer-run physical activity program to enhance exercise and sport participation for adults with moderate-severe traumatic brain injury

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## Background & Objectives



### Traumatic Brain Injury (TBI)

Leading cause of disability (≤45 yrs.) in Canada<sup>1</sup>; reduced employment, interpersonal relationships, and leisure activity after injury<sup>2</sup>

### Physical Activity (PA) after TBI

Exercise improves cognitive functioning after TBI<sup>3</sup>; exercise maintenance leads to improved mood, participation, and quality of life<sup>4</sup>



### Community-Based Peer-Run PA Program

36 Weeks

90 min. 2 x a week

Phase I: Training safely

Phase II: Training independently

Phase III: Training for a sport challenge

### Research Objectives

Explore impact of program

Co-create the program's protocols

Evaluate the program through a feasibility study



## Design & Methods



### Participatory Approach with Multiple Partners

Multidisciplinary team of researchers (n=6)

Organizational representatives (n=3)

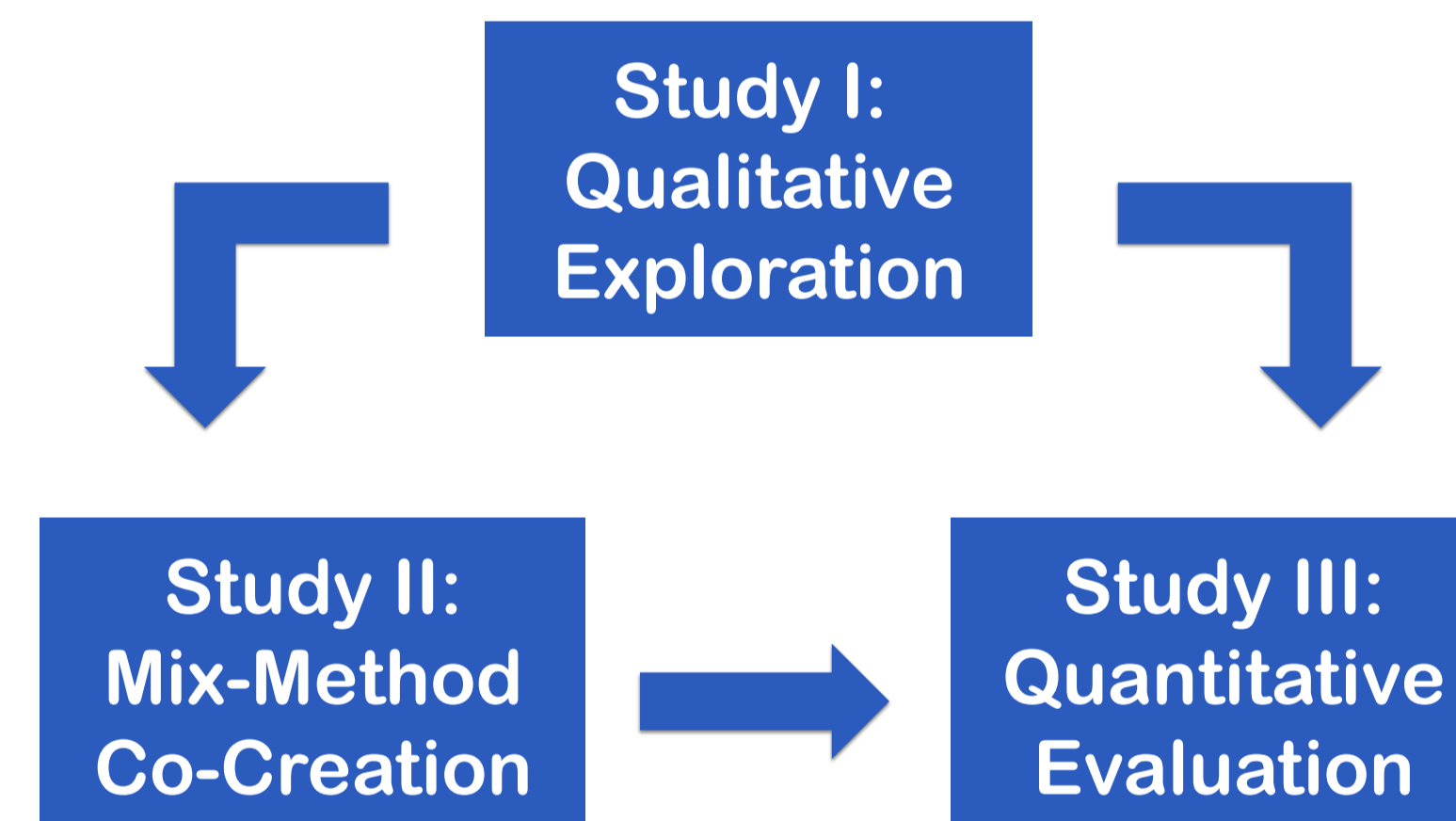
Community members (n=4)



### Design

Integrated knowledge transfer

Exploratory sequential mixed methods



### Participants

9-17 adult with moderate-severe TBI

(3-4 peer mentors, 6-13 active members)

1-3 adult administrators and staff from the YMCA

### Study I: Data Collection

Semi-structured, audio-recorded interviews with administration and focus groups with participants

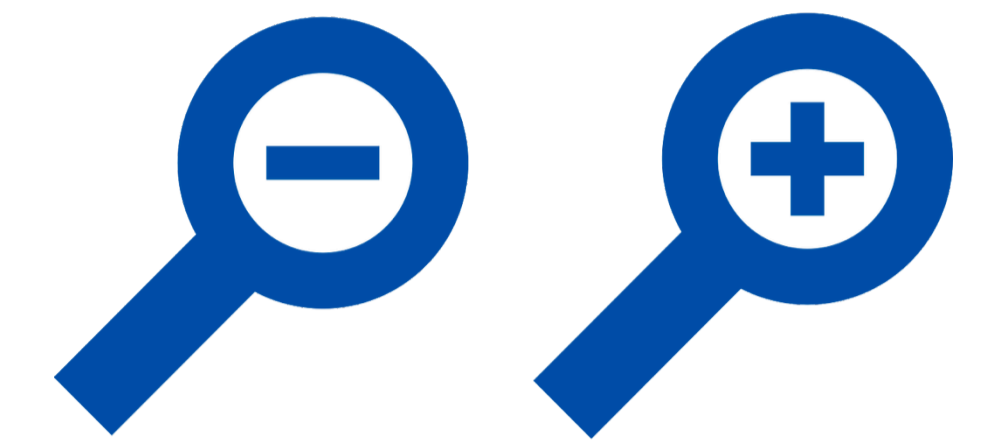
### Study II: Data Collection

Work groups with mentors & journals

Work groups with the YMCA administration

Focus groups with participants after each phase

## Progress & Preliminary Results



### Study I: Exploration

Identified a guiding framework

Identified gender-based preferences

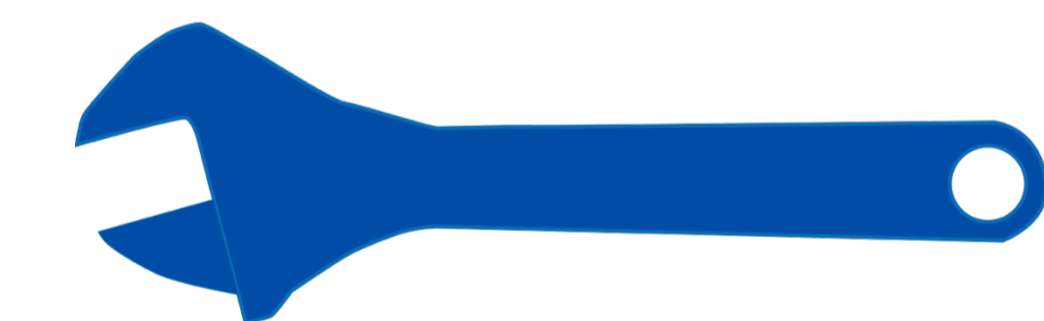
Identified potential measures of interest

“I don't think we appeal to women, and that goes back to the beginning of the program when they come in. They (women) need to be put into a safe environment.”

– Administrator

“Sports allow me to overcome the TBI. It's as much for the body, relearning how to live, regaining its memory, as it's about developing a taste for living again too.”

– Participant



### Study II: Co-Creation

Designing the program's logic model

Documenting the implementation process

Developing the program manual and protocols

Code of Conduct: “Show up to the gym and train hard. Try to join other activities that are offered. Help others...”

– Mentor 1

Group Dynamics: “Making groups associated with each mentor will develop camaraderie and be more efficient.”

– Mentor 4

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<sup>1</sup>Mapping connections: *An understanding of neurological conditions in Canada*. (2014) Ottawa: Neurological Health Charities Canada; <sup>2</sup>Wise et al., 2010. Impact of Traumatic Brain Injury on Leisure Activities. *Archives of Physical Medicine and Rehabilitation*;

<sup>3</sup>Vanderbeken, I., & Kerckhofs, E. (2017). A systematic review of the effect of physical exercise on cognition in stroke and traumatic brain injury patients. *NeuroRehabilitation*; <sup>4</sup>Wise et al., 2012. Benefits of exercise maintenance after traumatic brain injury. *Archives of physical medicine and rehabilitation*.



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