

# Protocol for co-creating a peer-run physical activity program in the community for adults with moderate to severe traumatic brain injury

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## Background

**Community-Based Exercise** after traumatic brain injury (TBI) is:

- Logistically and economically sustainable<sup>1</sup>
- Improves mood, participation, and
- Quality of life<sup>2</sup>

**Physical Activity (PA)** after TBI

- Increased PA barriers related to the TBI<sup>3</sup>
- Reduced leisure activities (PA) after TBI<sup>4</sup>



**Existing Community-Based Program**

- Phase I: Training safely
- Phase II: Training independently
- Phase III: Training for a sport challenge

## Objectives

- Explore impact of program
- Co-create program's logic model
- Co-create program's protocols/modules
- Evaluate the program in a feasibility study

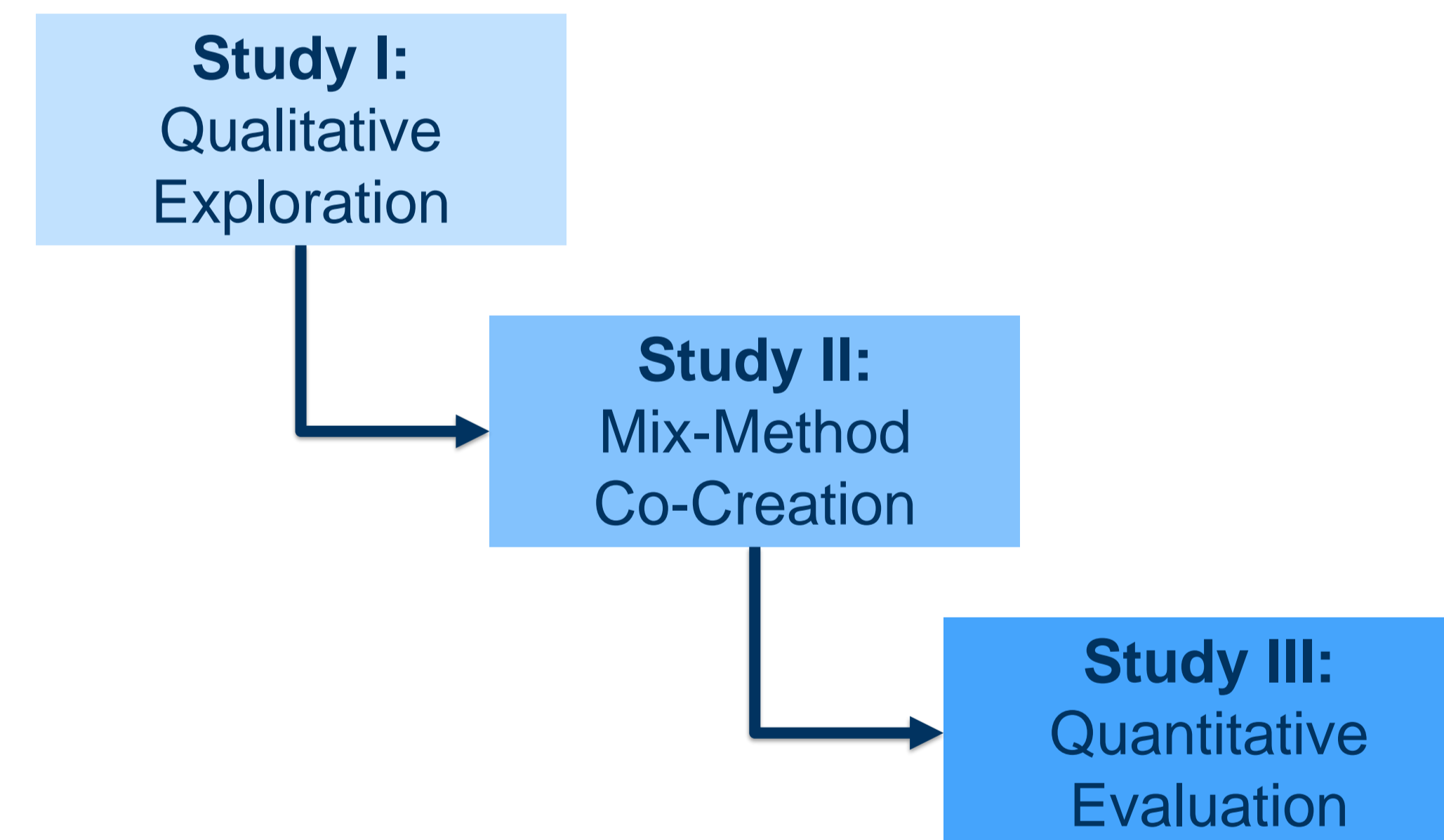
## Methods

**Partners**

- Organizational representatives (n=3)
- Multidisciplinary researchers (n=5)
- Community members (n=4)

**Design**

- Exploratory sequential mixed methods
- Qualitatively explore with sex/gender lens
- Before leading to a quantitative evaluation



**Participants**

- 20 adult participants with different genders
- Moderate-severe TBI, live in community
- 4 peer mentors, 16 active participants

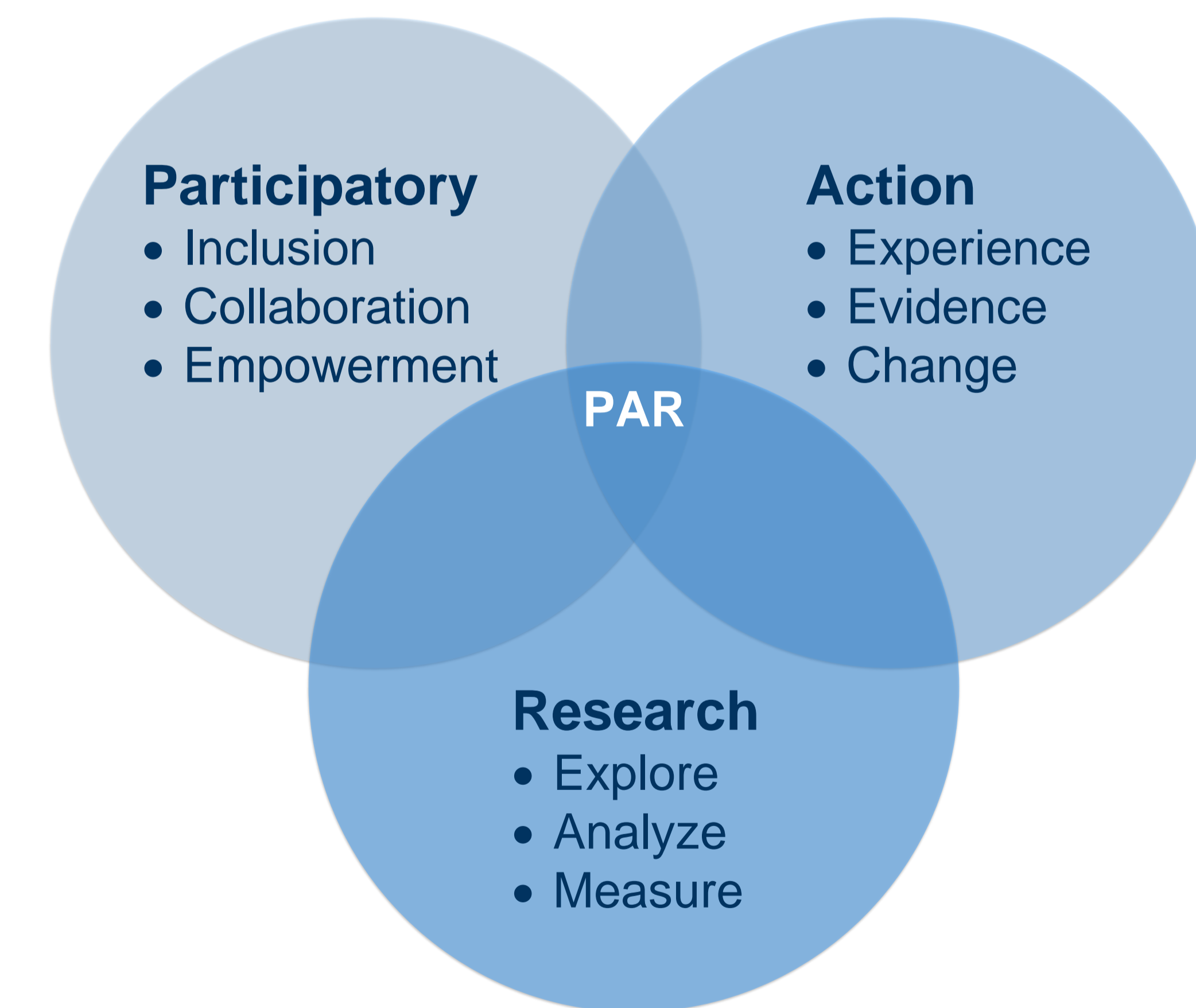
**Peer Mentors (n=4)**

- Share their perspectives
- Encourage new participants
- Assist with development of project

## Participatory Action Research

**Tandon's 10 Steps<sup>5</sup>**

- Clarify research question
- Establish trusting relationship
- Build working groups
- Develop research collaboratively
- Collect the data collaboratively
- Analyze the data collaboratively
- Share the knowledge
- Develop changes collaboratively
- Implement necessary changes
- Consolidate the learning



## Anticipated Results

**Outcomes**

- Identify measures for the future trial
- Sex and gender considerations
- Replicable program modules

**Significance**

- Integrated knowledge transfer
- Recommendations for accessibility
- Working side by side with TBI community

<sup>1</sup>Devine et al., 2016. Independent, community-based aerobic exercise training for people with moderate-to-severe TBI. *Archives of Physical Medicine and Rehabilitation*

<sup>2</sup>Wise et al., 2012. Benefits of exercise maintenance after traumatic brain injury. *Archives of Physical Medicine and Rehabilitation*

<sup>3</sup>Driver et al., 2012. What barriers to physical activity do people with a recent brain injury face? *Disability and Health Journal*.

<sup>4</sup>Wise et al., 2010. Impact of Traumatic Brain Injury on Leisure Activities. *Archives of Physical Medicine and Rehabilitation*.

<sup>5</sup>Tandon, R., 2002. Participatory Action Research: Main Concepts and Issues. *Participatory Research: Revisiting the Roots*