

# EXAMINING WHETHER THE SOCIAL DETERMINANTS OF HEALTH PREDICT ENGAGEMENT IN EXERCISE IN PEOPLE LIVING WITH HIV

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# PURPOSE, INTERVENTION & DATA COLLECTION

**Purpose:** To understand the influence of social determinants of health (SDOH) on engagement in exercise among community dwelling adults (ages 18 and above) living with HIV enrolled in a 25- week community-based exercise intervention (CBE).

## Specific Objectives:

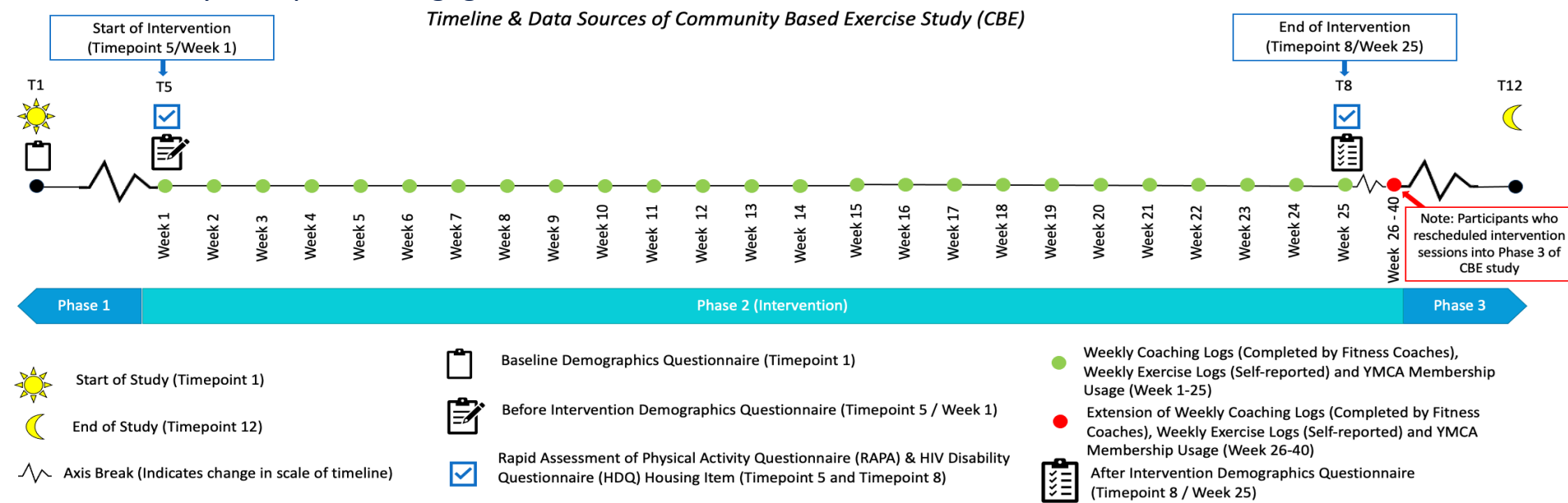
1. To describe the a) nature and b) extent of engagement in exercise
2. To examine whether the social determinants of health predict engagement in exercise

**Study Design:** Longitudinal observational study using secondary data to examine Phase 2 (Intervention) of a large community-based exercise intervention (CBE). Larger study entails Phase 1 (Baseline Monitoring Phase), Phase 2 (Intervention) and Phase 3 (Follow Up Monitoring Phase).

**Intervention:** Participants were asked to engage in exercise 3 times/week for 90 minutes for 25-week intervention period, weekly sessions supervised and progressed by a fitness coach at Toronto YMCA.

**Data Analysis:** Objective 1 &2: Descriptive Analysis across 25-weeks (Nominal & Ordinal Variables → Frequency & Percent, Continuous Variables → Mean, SD, median, 25<sup>th</sup> and 75<sup>th</sup> percentile) ●●📋📝📋✅

Objective 2: Univariate Analysis of SDOH Predictor Variables, logistic regression analysis of significant variables from univariate analysis to predict engagement in the intervention 📋📝📋✅



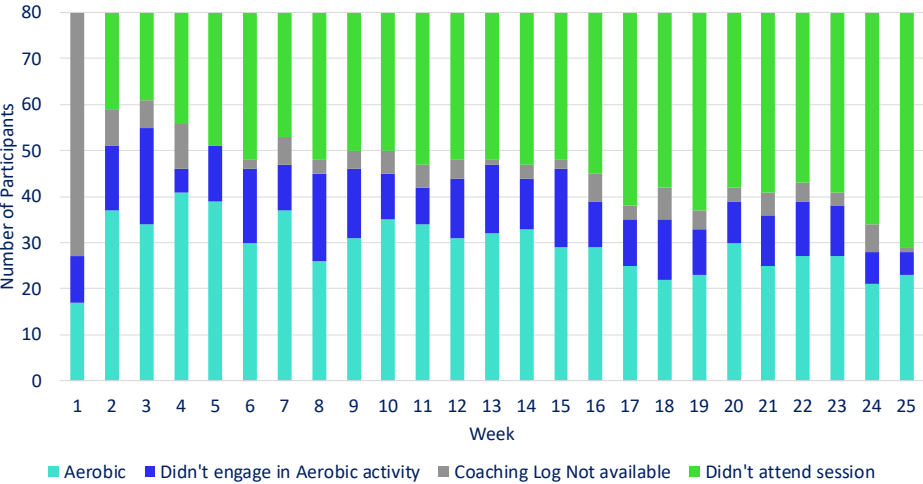
# PARTICIPANTS

| Characteristics of Participants   | Initiated CBE<br>(n=80) N (%)          | Completed CBE<br>(n=67) N (%)              |
|---|--|--|
| Median Age<br>Interquartile Range (IQR)<br>≥50 years                      | 51 years<br>(45, 60)<br>42 (61%)       | 52 years<br>(46, 60)<br>37 (64%)           |
| Men<br>Women<br>Two-Spirited<br>Inter-sex                                 | 72 (90%)<br>6 (8%)<br>1 (1%)<br>1 (1%) | 59 (88%)<br>6 (9%)<br>1 (1.5%)<br>1 (1.5%) |
| Median Year of Diagnosis<br>(IQR)   | 1998<br>(1989,2008)                    | 1995<br>(1988, 2007)                       |
| Median Number of comorbidities<br>(IQR)<br>Living with ≥2 comorbidities   | 4<br>(2,7)<br>65 (81%)                 | 4<br>(2,7)<br>55 (82%)                     |
| Gross Yearly Income \$<20,000 CAD   | 38 (48%)                               | 31 (47%)                                   |
| Employed Full-Time or Part-Time   | 28 (35%)                               | 21 (31%)                                   |
| Exercise History: I currently exercise and have<br>done so for > 6 months | 27 (34%)                               | 25 (37%)                                   |

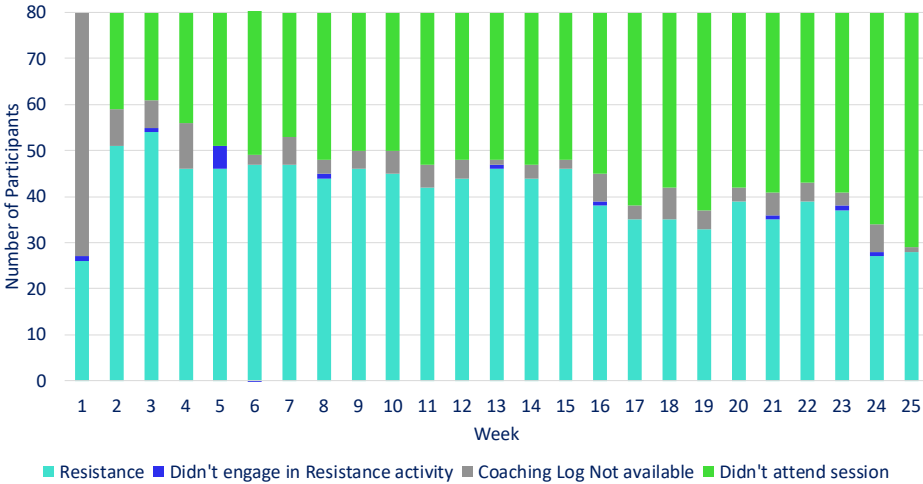
- 80 community dwelling adults (ages 18 and above) living with HIV enrolled in a 25- week community-based exercise intervention (CBE)
- 67/80 (84%) Participants completed the 25-week CBE intervention
- 13/ 80 (14%) Participants withdrew or were lost to follow-up
- 37/67 (55%) Participants completed Study within 25 weeks
- 30/67 (45%) Participants rescheduled Instructional sessions into Phase 3 of CBE study (i.e., beyond 25-weeks)

# RESULTS

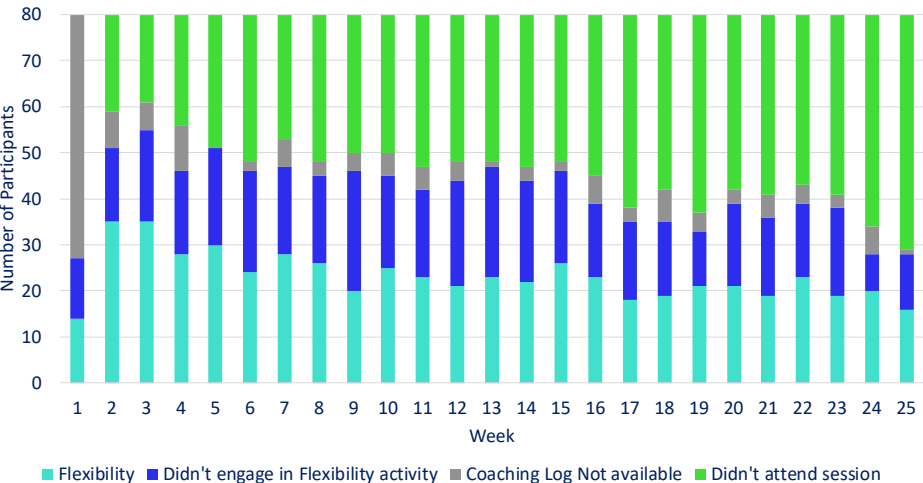
Engagement in Aerobic Exercises



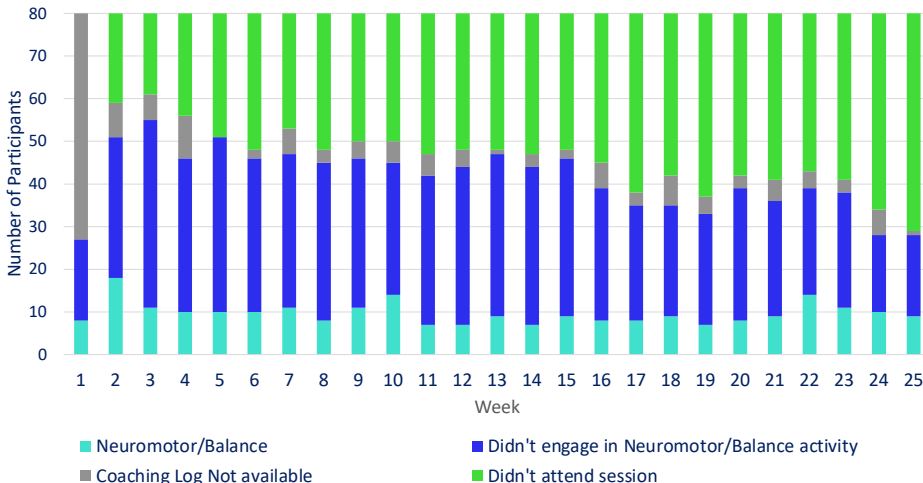
Engagement in Resistance Exercises



Engagement in Flexibility Exercises



Engagement in Neuromotor/Balance Exercises



## Nature of Exercise:

- Adherence: Participants attended a median of 17/25 (68%) of weekly supervised sessions at YMCA Toronto.
- The proportion of participants who engaged in all 4 types of exercises (Aerobic, Resistance, Flexibility and Neuromotor/Balance ) during during one supervised exercise session ranged from 2- 24% over the 25-week period.

# RESULTS & IMPLICATIONS

## Extent of Engagement:

*Note: Based on participants who reported these extent of engagement variables across the 25-week period*

*Note: Objective 2 analysis is in progress.*

| Variable                             | Frequency (Across 25-weeks)    |
|--------------------------------------|--------------------------------|
| Frequency of Engagement in Exercise  | 3 days/week<br>IQR (2.5,5)     |
| Duration of Aerobic Exercise         | 240 mins/week<br>IQR (120,391) |
| Variable                             | Proportion (Across 25-weeks)   |
| Experienced a change in Intensity    | 63%                            |
| Experienced an increase in Intensity | 71%                            |
| Experienced a change in progression  |                                |
| Aerobic:                             | 35%                            |
| Resistance:                          | 28%                            |
| Flexibility:                         | 25%                            |
| Neuromotor/Balance:                  | 0%                             |

## Conclusion:

- Participants attended a median of 17/25 (68%) of supervised weekly session across the 25-week period.
- Engagement in all 4 types of exercises during one session ranged from 2-24% across the 25-week period.
- Of the participants who reported on progression, 35% experienced change in progression for aerobic exercises, 28% experienced change in resistance exercises, 25% experienced change in flexibility exercises and no changes in progression of neuromotor exercises was reported.

## Implications:

- Results of this study will help to better understand the engagement level in exercise among people living with HIV in urban settings and how social determinants of health may impact engagement level in exercise in this population

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