

# Reducing Physical Activity Disparities Among Vulnerable Minorities: Methods and Preliminary Outcomes

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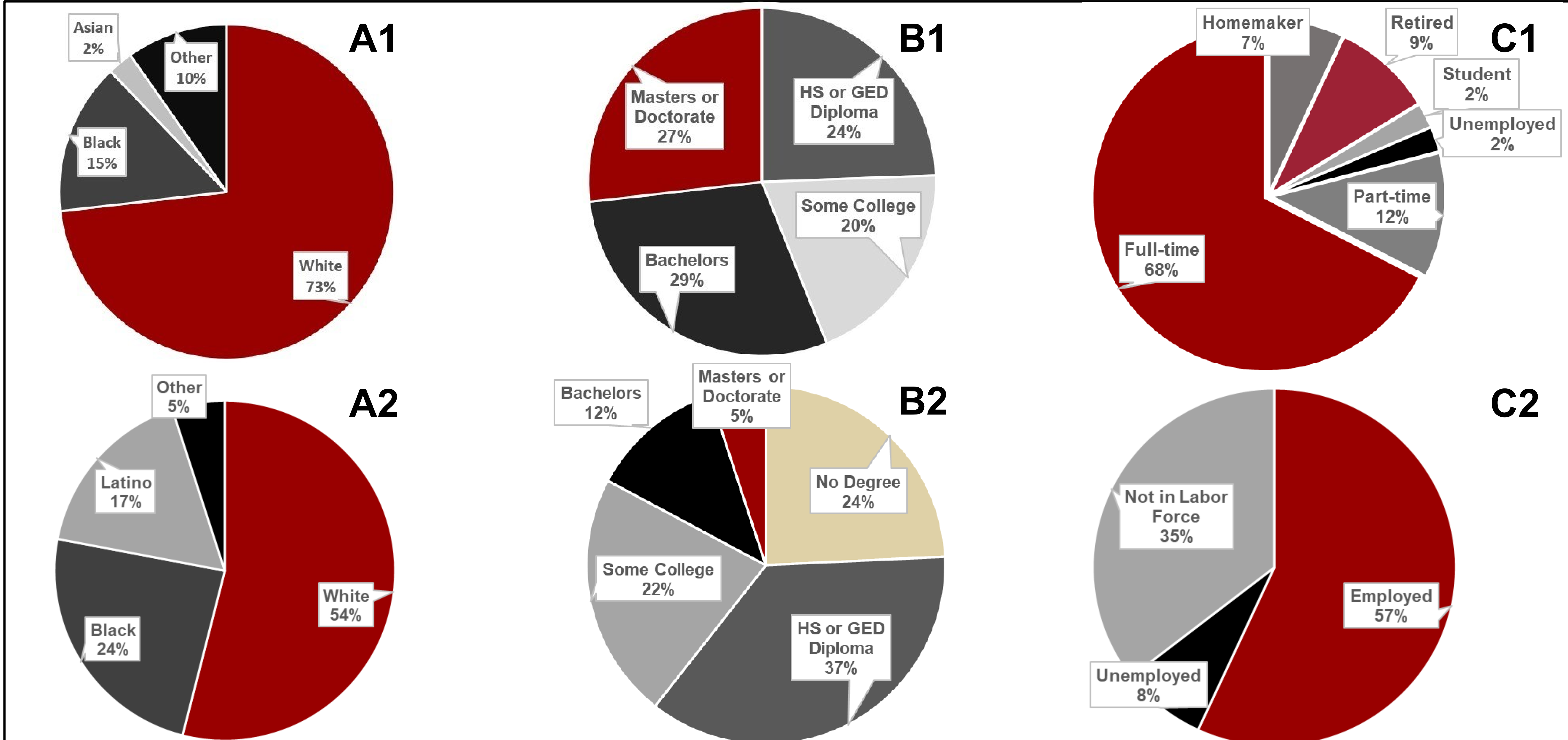
## INTRODUCTION & METHODS

**INTRODUCTION:** Vulnerable minorities experience high rates of chronic disease. Physical Activity (PA) is an effective preventive behavior to mitigate multiple diseases. Vulnerable minorities have low PA participation. Finding ways to engage PA in vulnerable minorities is imperative.

**PURPOSE:** To describe the baseline data from a community-based wait-list pilot PA trial for vulnerable minorities.

**METHOD:** Forty-five participants from a Midwest urban community were randomized to an experimental (EXP) or wait-list control (WLC) group. EXP participants were counseled to engage in regular PA (>4d/wk for >30 mins). EXP participants received a fitness center membership, trainer, and on-site monthly education to help them develop exercise identity and habit formation. The WLC group could engage in PA if desired but did not have the same research resources. Both groups completed monthly surveys assessing exercise identity, social support, and habit formation. Baseline data included one week of moderate-to-vigorous PA (MVPA) and health-related fitness assessments (measured by accelerometry and fitness tests, respectively).

## RESULTS



**Figure 1. Comparison Between Participant and Community Demographics:** Race, Education, and Employment for participants (A1, B1, C1) and the sampled community (A2, B2, C2) are shown above. Data are presented as percentages (%). Community data retrieved from the U.S. Census Bureau American Community Survey - 5-year estimates (2016-2020).

## RESULTS

	EXP	WLC
MVPA (min/wk)	127.9 ± 69.8	174.7 ± 103.1
8ft Up-&-Go Test (secs)	5.01 ± 0.80	5.05 ± 1.10
30s Chair Sit-to-Stand (reps)	15.3 ± 6.5	17.5 ± 5.2
30s Arm Curl Test (reps)		
Right	18.9 ± 5.1	21.2 ± 5.7
Left	19.2 ± 5.1	20.1 ± 5.4
Chair Sit-&-Reach (cm)		
Right	-0.1 ± 8.3	1.0 ± 12.2*
Left	-0.3 ± 8.2	0.1 ± 11.4#

**Table 1. Baseline Outcomes for PA Behavior and Fitness Assessments:** There were no significant differences in weekly PA behavior, agility, and lower/upper body muscular endurance between groups. There were differences in lower body flexibility between groups for both right and left legs. Data reported as Mean ± SD, \*p = 0.003, #p = 0.01.

	EXP	WLC
N	23	22
Male	8	7
Female	15	15
Age (yrs)	48.8 ± 13.2	40.0 ± 9.7
Height (cm)	167.9 ± 7.0	168.5 ± 9.1
Weight (kg)	85.0 ± 19.3	98.0 ± 26.4
BMI (kg/m <sup>2</sup> )	30.2 ± 6.5	33.6 ± 8.3
Body Fat %	32.9 ± 12.0	37.11 ± 10.9

**Table 2. Baseline Characteristics:** 45 healthy adults were recruited for participation. Participants were included if they were not meeting US PA guidelines, > 18yrs, and were not a member of the fitness facility. No significant differences between groups were observed.

## CONCLUSIONS & LIMITATIONS

Data show baseline measures did not vary between groups. Moreover, our team experienced difficulties recruiting vulnerable minorities. Participant-stated barriers to participation in our study included: 1) Schedule (work, child's school, etc.) and conflicting life demands; 2) Fear of getting ill or getting immediate family ill (COVID, flus, etc.); 3) Disruption of routine (e.g., children going on school break); 4) The limited hours of the fitness center; 5) Inflation & rising costs of goods (e.g., gasoline, food, etc.); and 6) Issues interacting with PARCS staff, lack of trust. Next steps include reporting final outcomes and developing refined recruitment methods.

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