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## Determining the effects of an evidence-based after school program on objectively measured physical ability in urban children

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**Presenter Information**

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# DETERMINING THE EFFECTS OF AN EVIDENCED-BASED AFTER SCHOOL PROGRAM ON PHYSICAL ACTIVITY IN URBAN CHILDREN



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## Introduction

- MANE (Methodical Approach to Activity and Nutrition Education) Program
  - Is an after-school program that provides children with the knowledge, skills, and supportive environment that will help them lead healthier eating and physically active lifestyles.
  - Partners include Orchard Knob Elementary School, UTC, Urban League of Chattanooga, & Hamilton County Department of Education.
  - Closely follows the CDC guidelines for a comprehensive school health-related program (CDC, 2018).
- Purpose: This study determined whether improvements occurred in participant physical activity from the MANE program.

## Methods

- Self-report physical activity surveys and accelerometers were used to determine the physical activity levels in 3<sup>rd</sup>-5<sup>th</sup> graders at OKES before and following the eight-week MANE program.
- The MANE program occurred three days a week (Mon, Wed, Fri) for three hours (3:00pm-6:00 pm), over the course of eight weeks during the spring semester at Orchard Knob Elementary School.
- UTC students enrolled in the undergraduate course, *Understanding and Addressing Health Disparities*, provided a supportive environment for participants to be physically active. This was accomplished by having four stations with different games for the participants to engage in each week.
- Following each lesson, students collected data on participant activity watches, pertaining to steps taken and physical activity minutes obtained. Based on a scale of 1-10, participants selected a number that represented how hard they played.



Department of Health & Human Performance

## Results

Variable	Min	Max	Mean	Std. Deviation	n(%)
Age (years)	8	11	9.7	0.7	***
BMI (%tile)	23	99	81.5	27.6	***
Overweight or Obese	***	***	***	***	12 (70.6%)
African American	***	***	***	***	18 (94.7%)
Hispanic/Latino	***	***	***	***	1 (5.9%)
Male	***	***	***	***	7 (36.8%)
Female	***	***	***	***	12 (63.2%)

**Table 1.** Participant (n=19) baseline characteristics.



## Results

	Baseline	Follow-up	Δ (Follow-up – Baseline)
Moderate-to-Vigorous Physical Activity (min/day)	23.3 (14.6)	26.8 (13.4)	3.5 (18.2)
Physical Activity Survey Score (Range: 12-60)	36.1 (9.8)	40.8 (7.1)	4.7 (8.0)*
Physical Activity Beliefs (Range: 7-40)	31.0 (29.0, 32.0)	34.0 (32.0, 35.0)	3.0 (0.5, 6.0)*

**Table 2.** Baseline and follow-up physical activity-related outcomes of participants (n=19). Follow-up scores of physical activity and physical activity beliefs were higher than at baseline,  $p < 0.05$ . Values are reported as means (standard deviation) or medians (25th percentile, 75th percentile) based on normality or non-normality of the distribution. \* $p < 0.05$

## Discussion & Conclusions

Following the MANE program, self-report physical activity and physical activity beliefs improved ( $p < 0.05$ ). The next step will be to determine whether participant activity watches bolstered the impact of the program. This program demonstrates the importance of community partner involvement when designing a culturally relevant, effective program. Because this program was effective, this program may expand to additional urban schools in Chattanooga in the future.

## References

CDC. (2018, August 27). Comprehensive School Physical Activity Programs: A Guide for Schools. Retrieved from [https://www.cdc.gov/healthyschools/professional\\_development/e-learning/cspap.html](https://www.cdc.gov/healthyschools/professional_development/e-learning/cspap.html)