

# Impact of School-Based Lessons on Physical Activity and Self-Efficacy Levels of Female Adolescents



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## Introduction

- Physical inactivity during adolescence increases the risk of poor health outcomes and behavioral problems
- Self-efficacy is positively associated with initiation and maintenance of physical activity
- 84% of female adolescents do not meet Physical Activity guidelines
- Activity and self-efficacy levels decrease during puberty
- Effective programs are needed to improve physical and psychosocial outcomes

## Purpose & Aims

The purpose of this project was to determine if incorporating positive-youth development lessons into an after-school program would enhance female adolescents' self-efficacy and increase engagement in physical activity.

- Aim 1:** Increase the total amount of moderate-to-vigorous physical activity female adolescents engaged in over a four week period
- Aim 2:** Increase female adolescent's self-efficacy levels following four weekly self-efficacy lessons

## Methods

**Design:** pre/post dependent t-test  
**Setting:** after-school program at a public inner city middle school  
**Participants:** 4 female middle school students  
**Exclusion Criteria:** any known disability that prevents engagement in physical activity

## Measures

- Centers for Disease Control and Prevention physical activity logs
- Physical Self Description Questionnaire- Short version (PSDQ-S)
- Demographic Questionnaire

## Intervention

- Four weekly 60-minute lessons utilizing the positive youth development curriculum "Girls Just Wanna Have Fun"
- Each lessons addressed a self-efficacy topic (goal setting, self-talk, confidence, teamwork, thought control) and included an interactive activity

*Baseline Sample Characteristics of Participants Who Attended Self-Efficacy Lessons (n=4)*

Demographic Characteristics	Total (N=4)
Age in Years, n (%)	
Twelve	2 (50)
Thirteen	2 (50)
Grade in School, n (%)	
Fifth	1 (25)
Sixth	1 (25)
Eighth	2 (50)
Race, n (%)	
African American	3 (75)
Mixed	1 (25)
Number of Sports Individual Currently Participates In, n (%)	
1	3 (75)
3	1 (25)
Access to a Recreational/Sports Facility, n (%)	
Yes	1 (25)
No	3 (75)
Number of Days per week the Participant's Parent(s) are Physically Active, n (%)	
0	1 (25)
1-2	2 (50)
3-4	1 (25)

## Statistical Analysis

SPSS 25 was used to evaluate pre/post changes in Aim 1 & 2. These aims were analyzed using the Wilcoxon Signed Rank Test and descriptive statistics.

*Participant's Weekly Minutes of Physical Activity (N=4)*

Participant	Timeframe		Net Difference
	Pre-Intervention	Post-Intervention	
1	520	70	-450
2	268	345	+77
3	-	355	-
4	0	0	0

## Results

- Aim 1**
- 60 minute *decrease* in weekly physical activity levels
  - No statistically significant difference in pre/post-intervention activity level ( $p=.655$ )
- Aim 2**
- 7.5 point *increase* in PSDQ-S scores
  - No statistically significant difference in pre/post-intervention scores ( $p=.593$ )

*Participant's PSDQ-S Raw Scores (N=4)*

Participant	Timeframe		Net difference
	Pre-Intervention	Post-Intervention	
1	98	130	+32
2	86	86	0
3	112	113	+1
4	84	63	-23

## Summary

- Activity rates and self-efficacy levels decreased from pre to post-intervention
- Findings are inconsistent with literature that states positive youth development programs enhance activity and self-efficacy
- Results were impacted by a small sample size and a short implementation period, Participants exceeded U.S. Physical Activity Guidelines at pre/post-intervention
- Participants reported lessons were enjoyable and fostered positive relationships

## Conclusions & Dissemination

- Information regarding the impact positive youth development programs have on physical activity and self-efficacy remains mixed
  - More robust and longitudinal studies are needed
  - Future lessons should be fun and consider alternative ways to measure physical activity
- Dissemination:*
- ✓ Partner with additional after-school programs to understand lesson outcomes
  - ✓ Guide and train teachers on project curriculum
  - ✓ Disseminate results to adolescent organizations and health/wellness programs

Key Reference: World Health Organization. (2018). Physical Activity. In *World Health Organization*. Retrieved from <http://www.who.int/en/news-room/fact-sheets/detail/physical-activity>