



## Implementing 10-minute classroom physical activity breaks in California elementary schools

UC San Diego

Jessa Engelberg, Jordan Carlson, Kelli Cain, Alex Mignano, Edith Bonilla, Carrie Geremia, Terry Conway, Judi Larsen, James F. Sallis



# Outline

- Background
  - Why?
  - How?
    - Intervention details
- Effectiveness
  - Physical activity during school
  - Classroom behaviors
- Implementation factors
  - Barriers
  - Facilitators



# Learning objectives:

Learn about...

- Implementation strategies and barriers to implementing classroom physical activity breaks,
- Positive impacts on students' physical activity levels and classroom behaviors found from a one-year intervention across 7 CA school districts



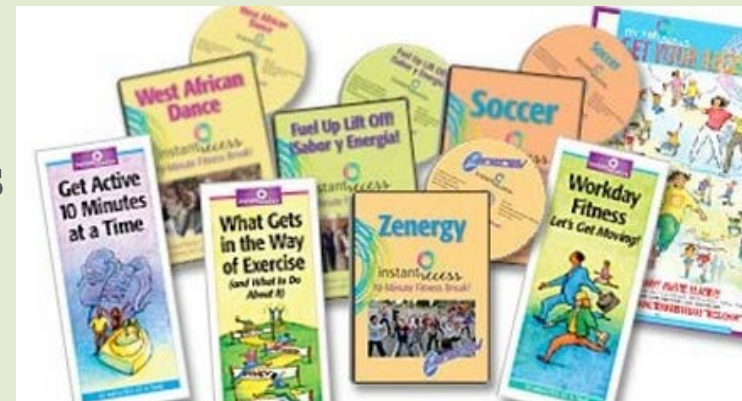


# Background and Study details

The “why” and ”how”

# + Why classroom PA breaks?

- 60 minutes of physical activity (PA) per day are recommended for children
- Schools to provide opportunities for children to obtain 30 minutes/day
  - Institute of Medicine recommends a “whole of school approach”
    - i.e. Provide multiple PA opportunities, through physical education (PE), recess, classroom activities and before-and-after school opportunities
- Most kids are not meeting 30 min/day
  - From recess and PE alone
- Evidence of short classroom PA breaks is promising
  - Breaks ~10 minutes long and
  - Involve movement in the classroom





# How?

## Evaluation Study Design

- CA endowment funded 7 school districts to implement 10-min PA breaks
  - 6 districts participated in the study
- Each district developed a plan
  - Goal=all classrooms to implement  $\geq 1$  PA break/day
    - Evidence-based curriculum (Instant Recess, Take 10)
    - Fall 2013-Spring 2014 school year
- Similar components:
  - A district-level coordinator to provide:
    - Trainings
    - Support
    - Technical assistance
    - Classroom PA break materials

# + Participants

- 6 of 7 districts participated in the evaluation
  - 24 elementary schools
    - Almost all low-income schools
    - 5 classrooms from each school for PA assessments
      - Total: 1322 students from 97 classrooms
    - 397 teachers participated in the teacher survey
  - >90% retention rate for students and teachers



# + Measures

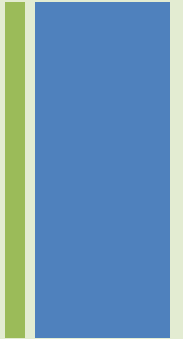
## ■ Teacher survey

### ■ Measured constructs related to:

- Implementation of PA breaks
- Student classroom behavior
- Barriers to implementation
- Implementation factors
  - E.g. if they received training and/or materials

## ■ Student PA

- Waist-worn Actigraph GT3X+ accelerometers
- 15 students/class from 5 classes
  - Each student wore the accelerometer for 1 school day
- Two schools per week

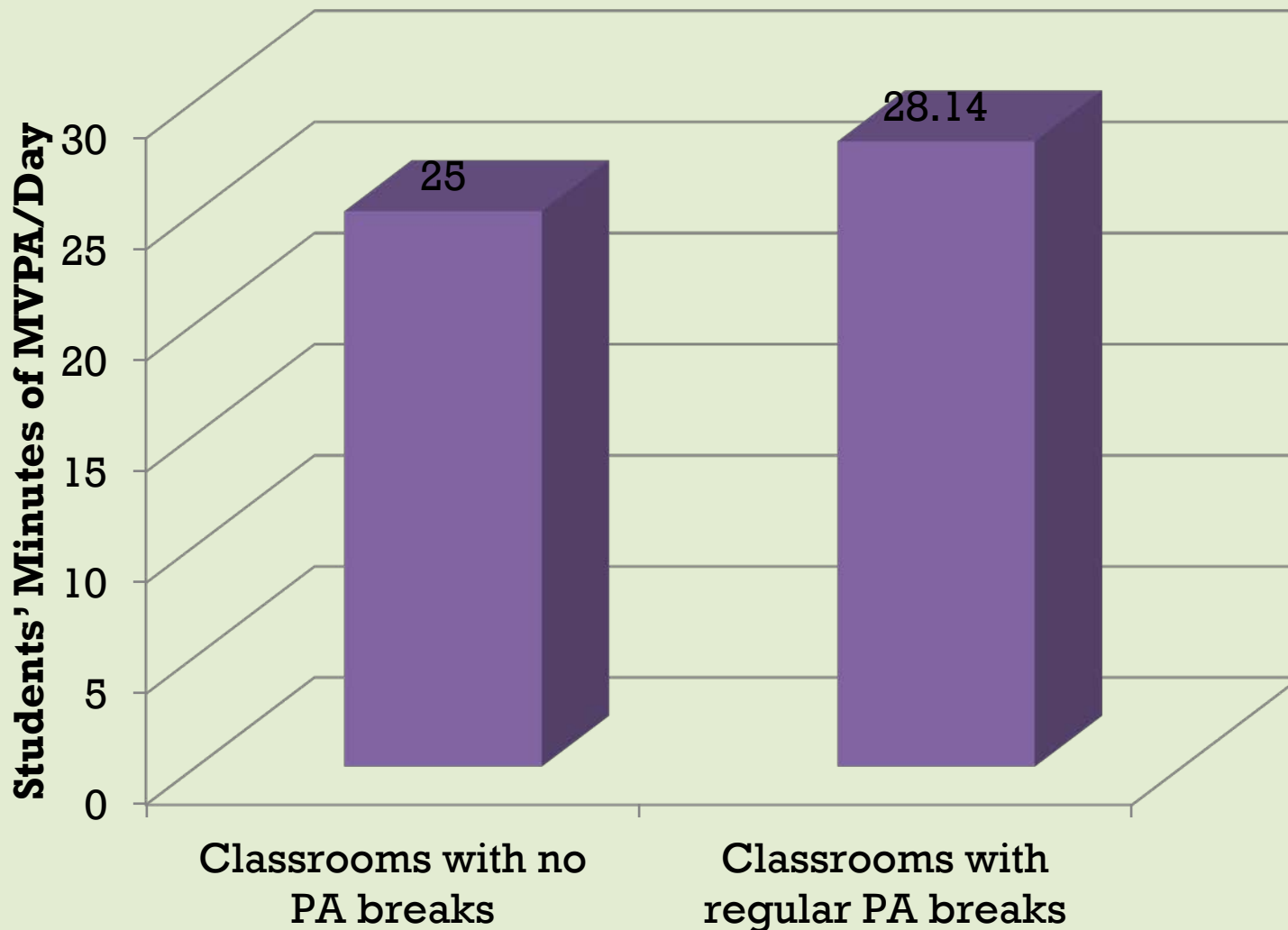






+ Results:  
Intervention effects on PA

# Total PA at school, in classrooms with and without PA breaks



$p < .05$

+

# PA was related to 1 of 10 teacher-reported classroom behaviors

**1. Pay attention in class**

**2. Cooperate with peers, ability to work with others**

**3. Have a positive, cheerful attitude**

**4. Produce work and assignments that are high quality**

**5. Are defiant or noncompliant**

**6. Lack effort or motivation or give up easily**

**7. Have excessive movement or are out of seat often**

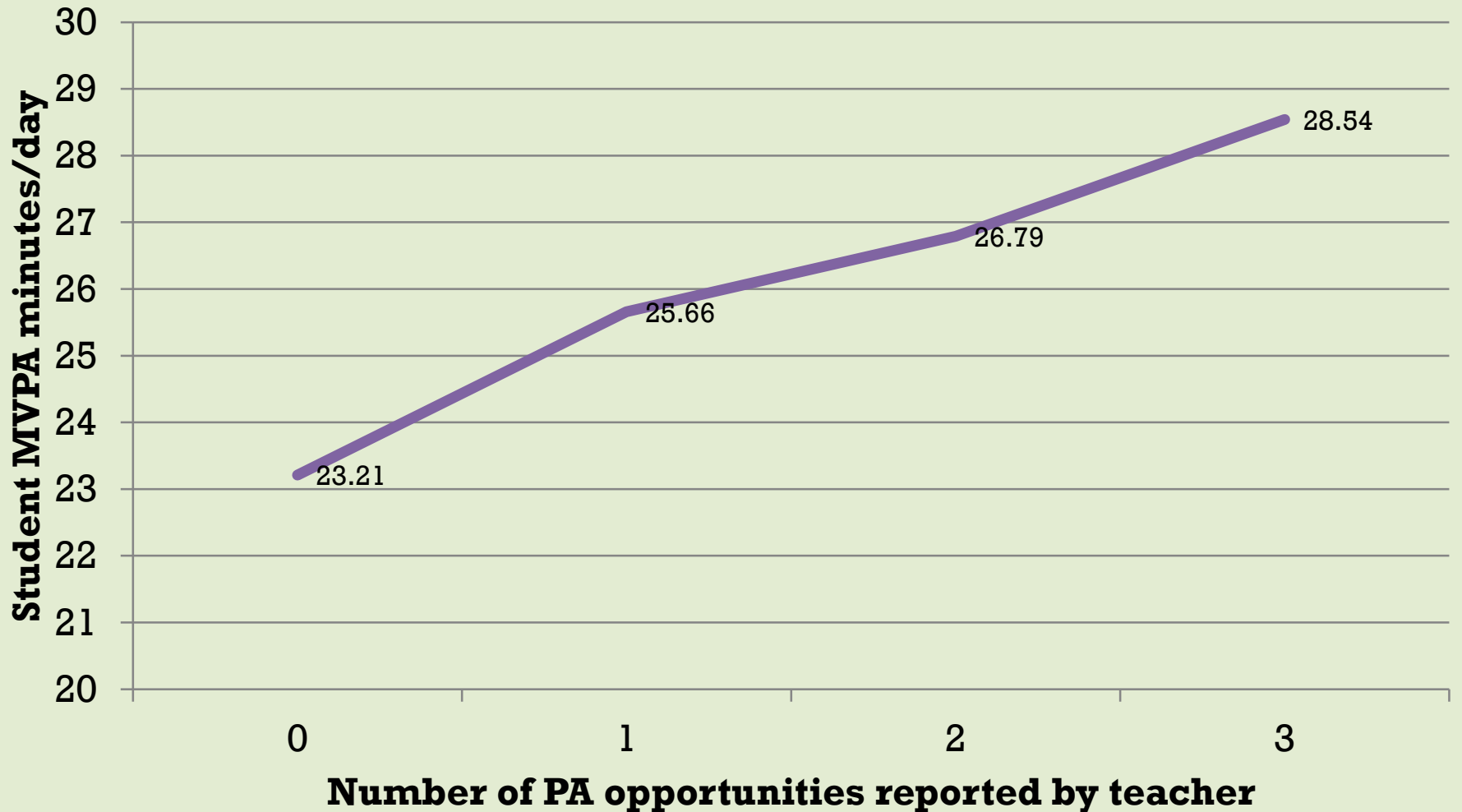
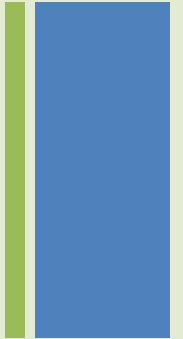
**8. Are off task or inattentive during class time**

**9. Are unable to change activities or make transitions smoothly**

**10. Are unhappy, sad or depressed**



# Cumulative effect of PA opportunities in school on MVPA



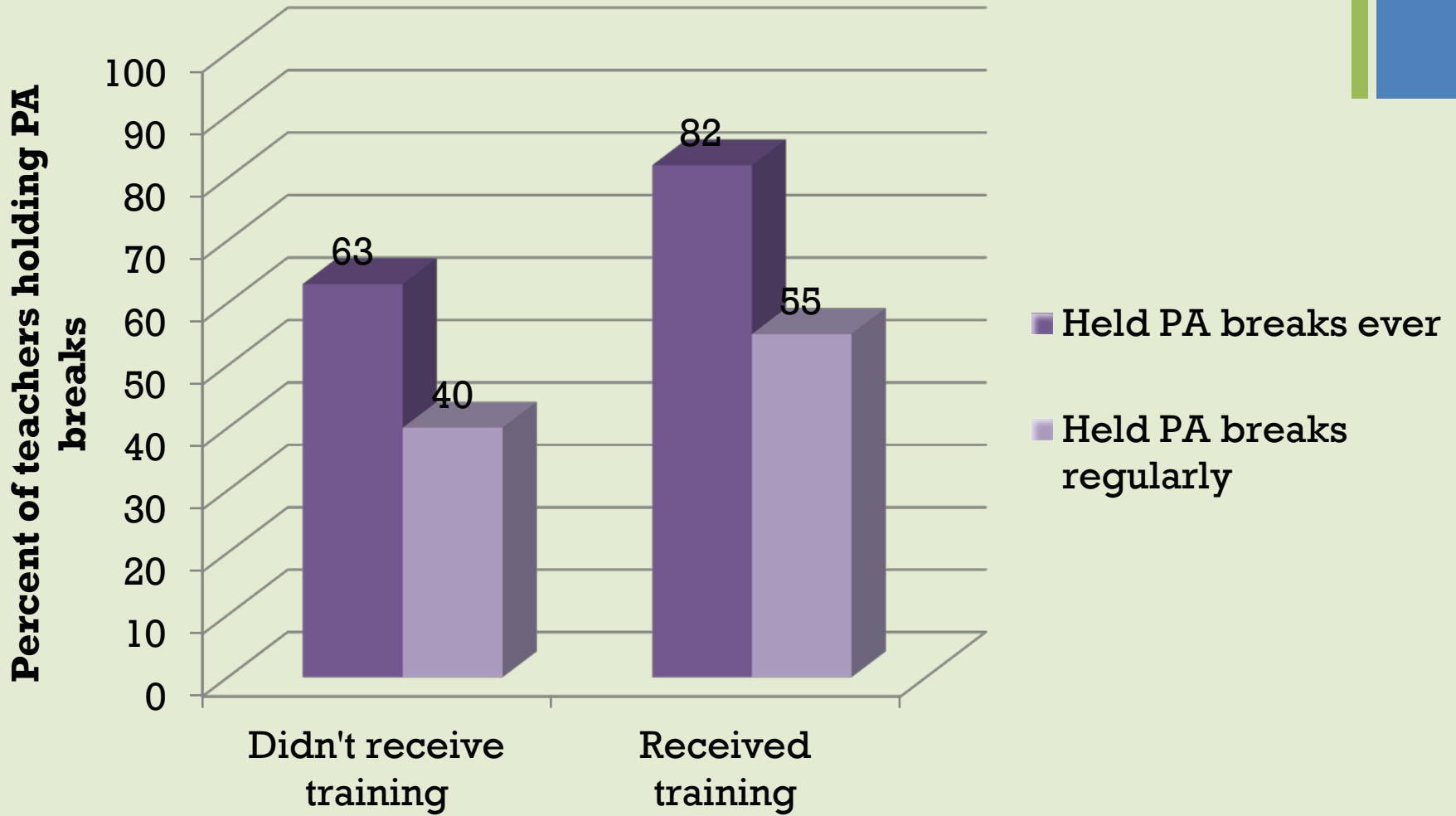
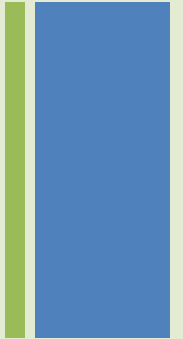


# + Results: Implementation Factors

Barriers, Facilitators and Buy-in



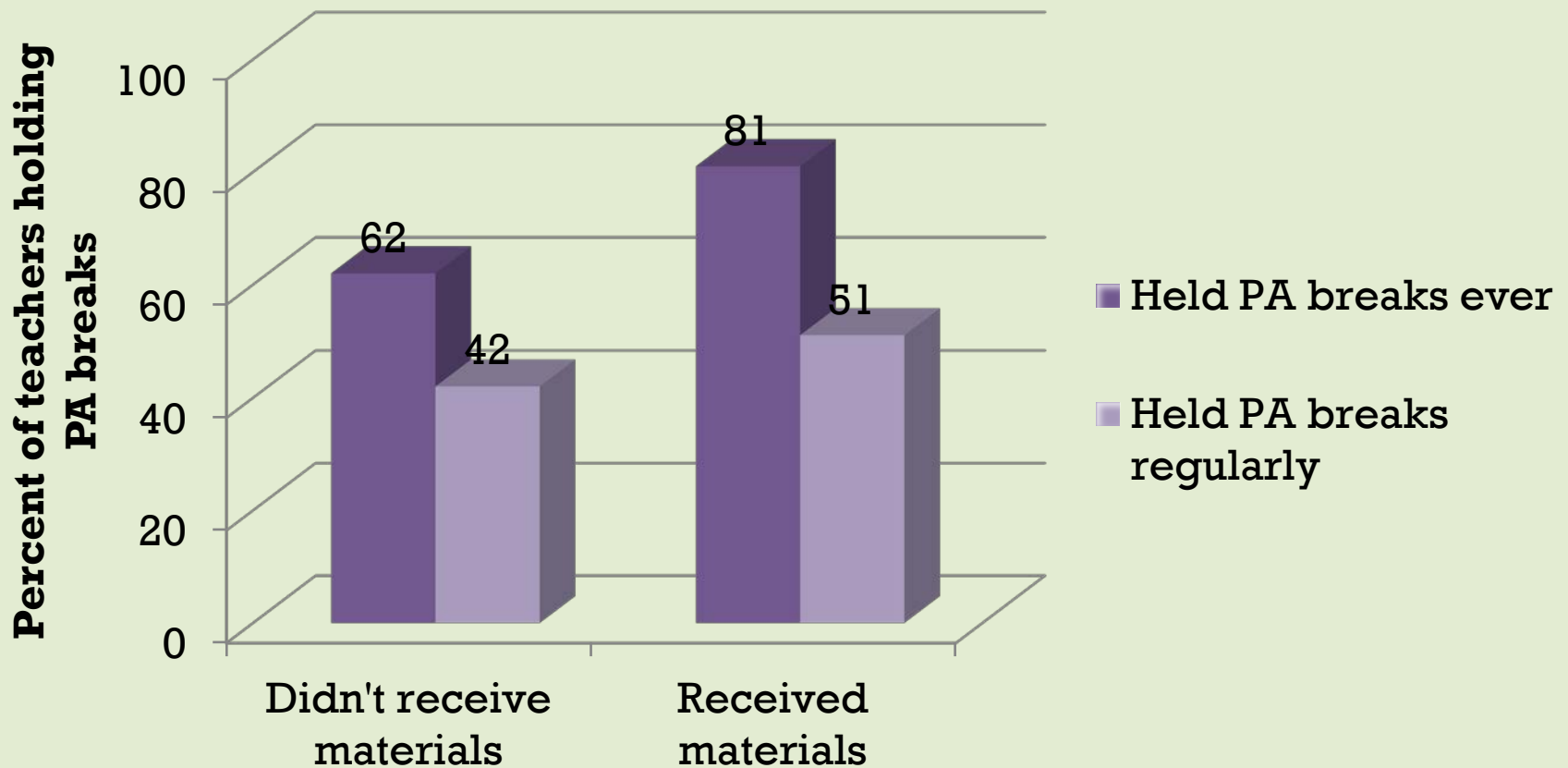
# Implementation Factors: Training



*Note: 46% of teachers reported receiving training*



# Implementation Factors: Receiving Materials



*Note: 51% of teachers reported receiving any materials*

# + Teacher Beliefs Related to Implementation

## Factors related to LESS implementation (barriers)

- Not enough time
- Interferes with teaching/academics
- Lack incentive
- Having a PE teacher
- Lower SES school

## Factors related to MORE implementation (facilitators)

- Awareness of classroom benefits
- Awareness of health and student enjoyment benefits
- Buy-in from other teachers
- Administrator support
- Teachers' support PA breaks

## Factors unrelated to implementation

- Class size
- Years teaching
- Students' cooperation



# + Quotes from teachers related to classroom PA breaks

## ■ Barriers

- *“Time is needed for academic instruction”*
- *“Our district has strongly pushed us not to do any physical activity. I have to resort to tip toeing. site administrator is anti-fun activities”*
- *“Teachers need a little more flexibility in scheduling and expectations of how much should be covered and by when”*

## ■ Benefits

- *“It wakes up some students and/or jumpstarts them. It is an opportunity to refocus on what was being taught”*
- *“Kids get their wiggles out”*
- *“Children's mood improves. Their attention span improves and they can pay closer attention”*



+

## Conclusion & Takeaways

# + Takeaways:

- Classroom PA breaks are promising ways to add to the PA children already get in school
  - Goal: 30 MVPA minutes/day in school
- Teachers noticed improvements in on-task behavior
  - PA breaks as classroom management tool
- Implementation varied based on buy-in at the district, school, administrative and teacher level
  - A major barrier is the lack of time
    - Restructure day and emphasis on test scores
  - Training and materials may not be enough
  - Support and encouragement are key
- Comprehensive school PA programs are likely needed
  - E.g. PE + recess +PA breaks





+

Questions?