

# School Adoption of Evidence-Based PE

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# Evidence-Based PE (EBPE)

- EBPE programs have been developed - they provide substantial research base for improving health-related behavior /outcomes \*\*

- CATCH PE ([http://www.sph.uth.tmc.edu/catch/curriculum\\_pe.htm](http://www.sph.uth.tmc.edu/catch/curriculum_pe.htm))

- Planet Health ([http://www.hsph.harvard.edu/prc/proj\\_planet.html](http://www.hsph.harvard.edu/prc/proj_planet.html))

- SPARK (<http://www.sparkpe.org>)

\*\*Implementation of EBPE curricula have been shown to increase PA levels as much as 18%

# Project Overview

## Aim

To compare EBPE adoption facilitators and barriers from elementary schools that had and had not adopted EBPE

## Methods

- Purposeful selection of elementary schools from all regions of the country
  - Sample of schools that had and had not adopted EBPE
- Questionnaire responses from principals and PE teachers from each school
- Data analyzed using descriptive statistics, independent t-tests or Wilcoxon Signed Rank Tests (continuous outcomes), and chi-square analyses (categorical outcomes).

# Sample

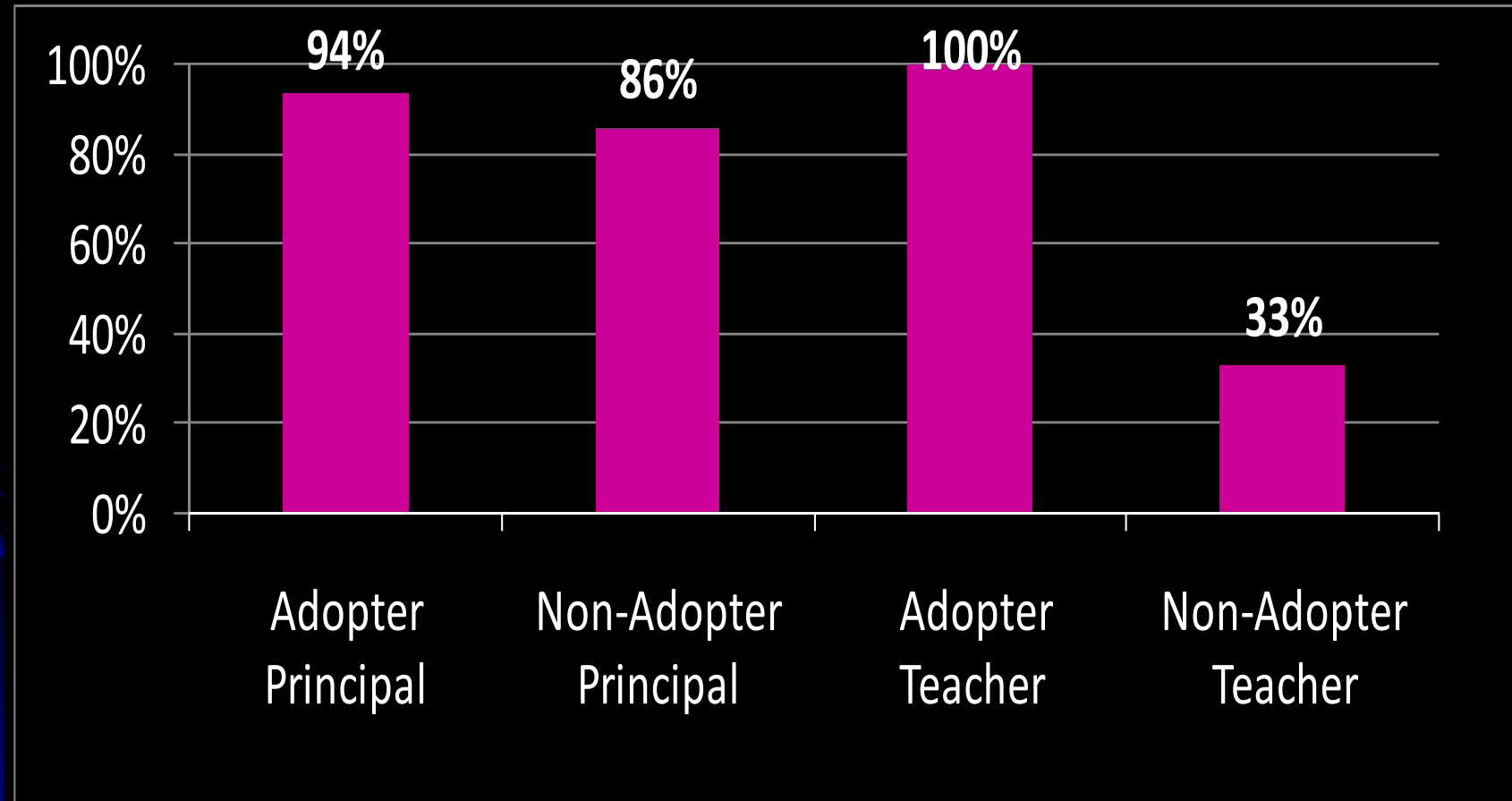
118 schools from 34 states

	<b>Adopter Schools (N = 49)</b>	<b>Non-Adopter Schools (N = 69)</b>
<b>Mean Student enrollment</b>	<b>497</b>	<b>481</b>
<b>Mean % Free/reduced meals</b>	<b>50.6</b>	<b>44.0</b>
<b>Median Annual PE Budget</b>	<b>\$800</b>	<b>\$1000</b>
<b>% &gt; 20% Minority students</b>	<b>36.2</b>	<b>34.7</b>
<b>Median # of PE days/wk</b>	<b>2</b>	<b>2</b>
<b>Class size</b>	<b>26</b>	<b>22</b>
<b>Median # of PE Specialists</b>	<b>1</b>	<b>1</b>

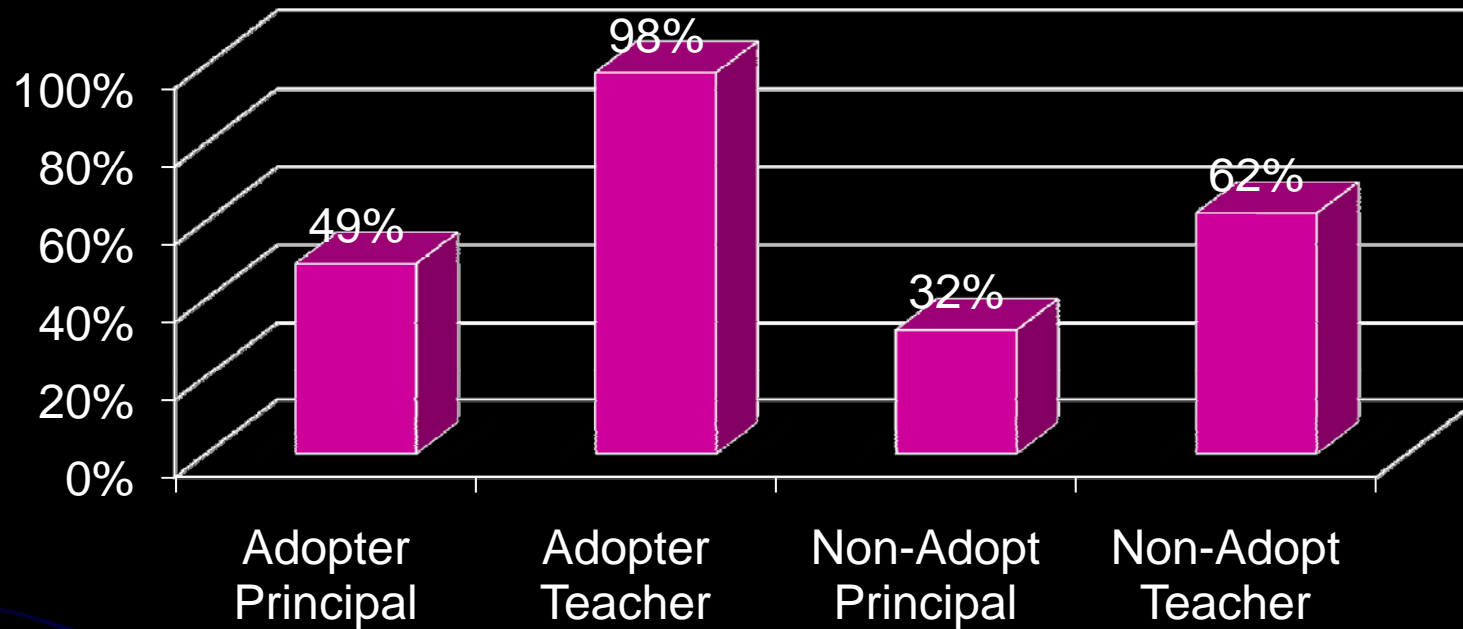
# Results Overview

- Use of a Specific Curriculum
- EBPE Awareness and Interest
- Satisfaction with Current PE
- Role in Decision Making
- PE Program Adoption Beliefs
- Sources of Influence on Program Adoption
- Barriers to Quality

# Use of a Specific Curriculum



## EBPE Awareness



## Interest in EBPE

### Teachers

Adopter = 96%; Non-Adopter = 81%;  
 $p = .02$

### Principals

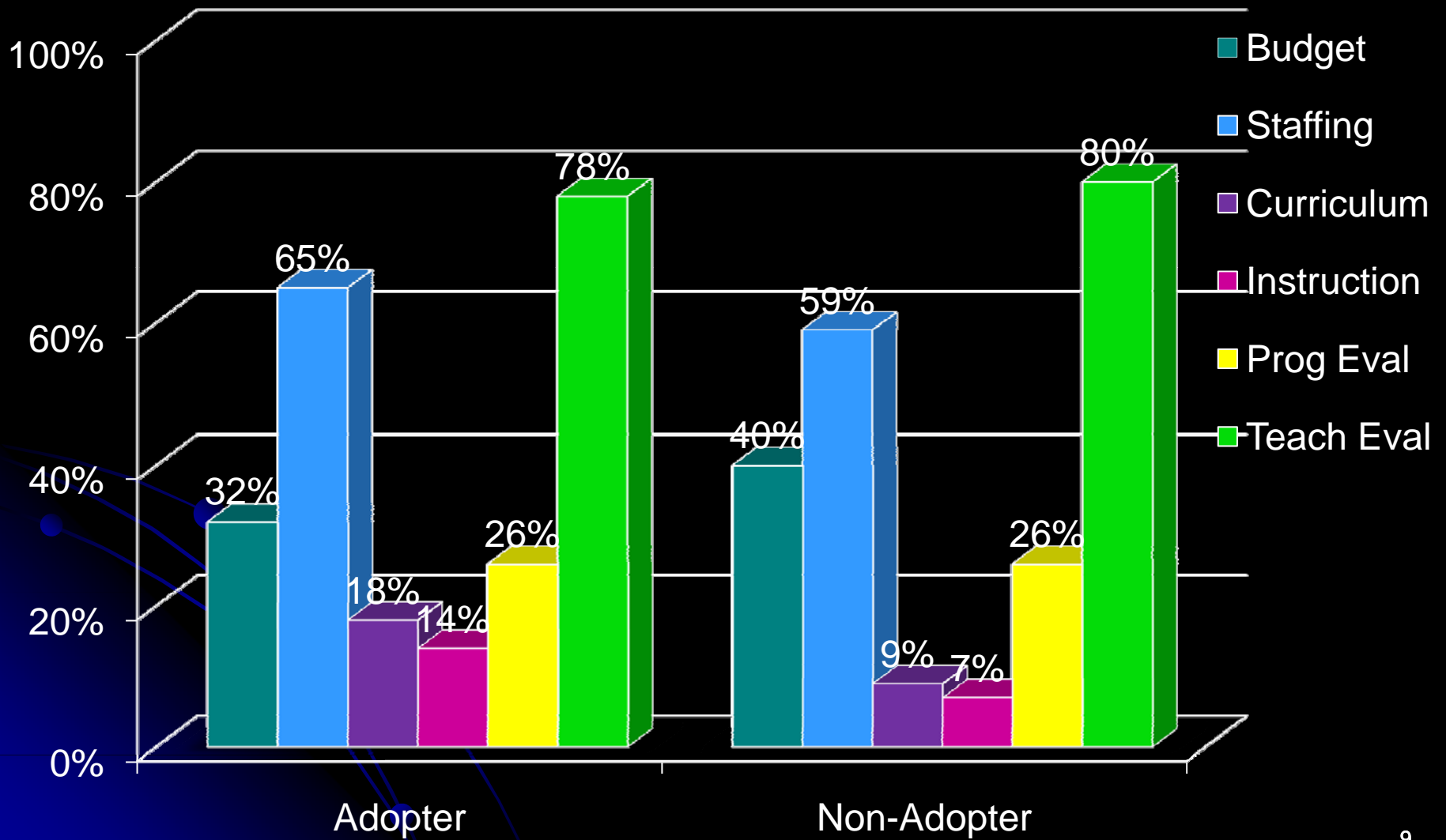
Adopter = 82%; Non-Adopter = 59%;  
 $p = .01$

# Satisfaction with Current Program Outcomes (7 items)

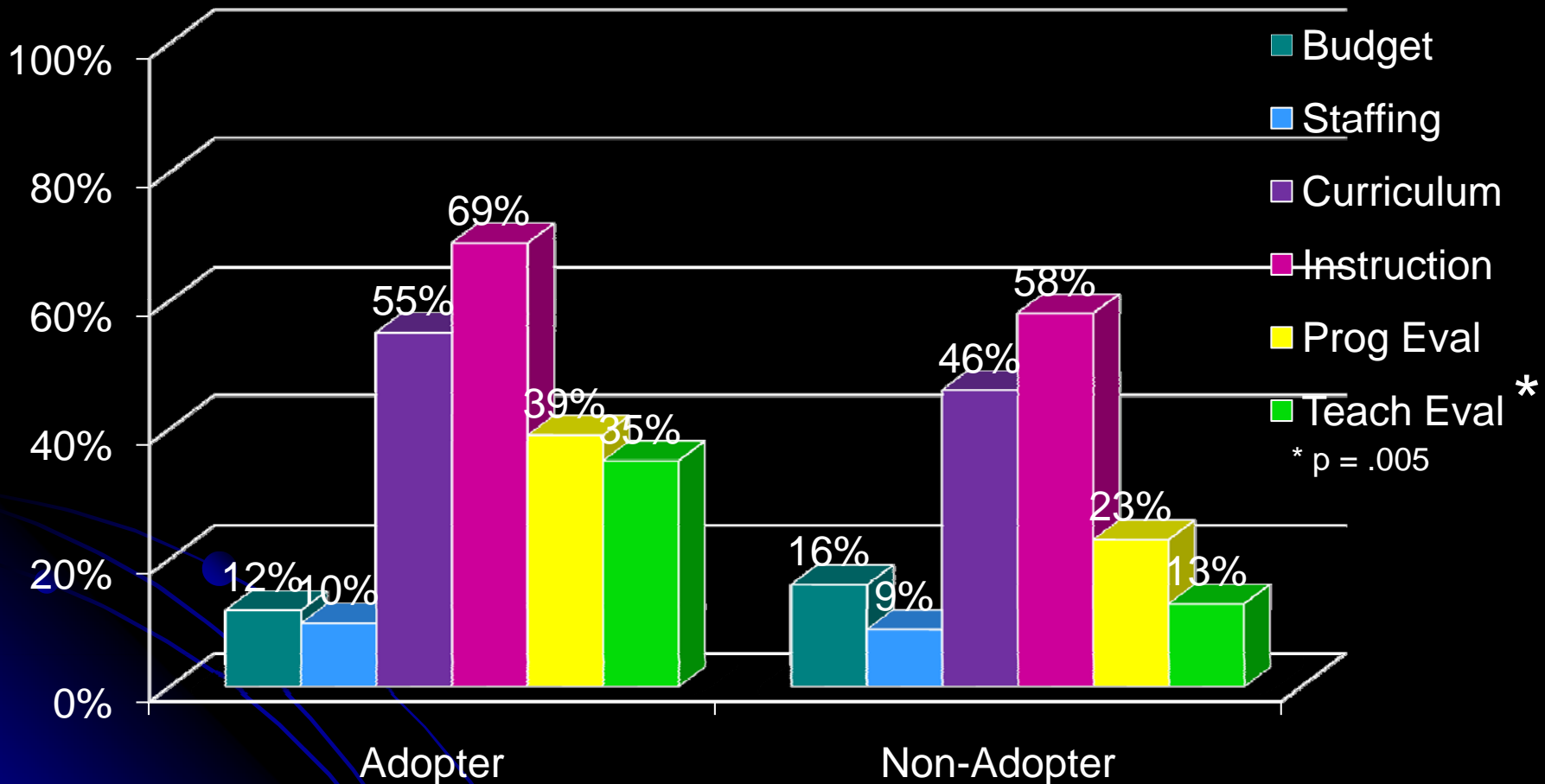
- In general, teachers and principals were satisfied with current programs' achievement of student outcomes
  - Adopter principals (R = 47% to 65%)
  - Non-Adopter principals (R = 42% to 61%)
  - Adopter teacher (R = 37% to 61%)
  - Non-Adopter teachers (R = 25% to 47%)
- No significant differences were found between principals in Adopter and Non-Adopter schools.
- Teacher differences were statistically significant for four characteristics:
  - learning activities used for a lifetime (61.2 vs. 39.1%;  $p=.018$ )
  - learning to get along with others (53.1 vs. 29.0%;  $p=.008$ )
  - improving sport and movement skills (51.0 vs. 30.4%;  $p=.02$ )
  - increasing physical fitness (46.9 vs. 24.7%;  $p=.012$ )



# Principal Decision Making Involvement



## Teacher Decision Making Involvement



All aspects of Teacher and Principal involvement were significantly different from one another – except for program evaluation

# PE Program Adoption Beliefs (very important)

<b>Student Outcomes</b>	<b>Adopter Principal</b>	<b>Non-Adopter Principal</b>	<b>Adopter Teacher</b>	<b>Non-Adopter Teacher</b>
Provides activity for all children	86%	81%	90%	83%
Teaches lifetime skills	74%	70%	90%	81%
Enjoyable to children <b>P*</b>	80%	63%	84%	81%
Improves children's fitness	78%	75%	88%	76%
Improves sport/movement skills	69%	61%	80%	75%
Helps children be active outside of school <b>T*</b>	65%	62%	84%	68%
<b>Other</b>	<b>Adopter Principal</b>	<b>Non-Adopter Principal</b>	<b>Adopter Teacher</b>	<b>Non-Adopter Teacher</b>
Fulfills district/state standards <b>T*</b>	86%	88%	90%	73%
Specific easy to follow lessons	55%	49%	69%	62%
Easy for teachers to implement <b>T*</b>	53%	45%	76%	55%
Teacher Tested <b>T*</b>	59%	49%	76%	55%
Provides instructional training for teachers <b>T*</b>	63%	56%	69%	49%

**P\*** = principal p value < .05; **T\*** = teacher p value < .05

# Sources of Influence (extremely Influential)

Extremely influential sources receiving the greatest proportion of principals' and teachers' responses

## PE Specialist

Teachers (> 50%)  
Principals (≥ 45%)

## District PE coordinator

Teachers (> 40%)  
Principals (> 25%)

## Principals

Teachers (≥ 29%)  
Principals (25%)

## Superintendent

Teachers (≥ 29%)  
Principals (≥ 27%)

More teachers in Adopter schools identified a special committee or task force to be extremely influential compared to those in Non-adopter schools (20.4 vs. 7.3%;  $p = .03$ ).

No significant differences among principals by school adoption status were found.

# Barriers to Quality PE

(Tremendous Barrier)

A= Adopter ; NA = Non-Adopter

The most frequent barriers to quality PE for both teachers and principals were the number of PE specialists, financial resources, and time in the school day.

- Number of PE specialists  
Teachers (A = 24.5%; NA = 26.1% )  
Principals (A = 14.3%; NA = 7.3%)
- Financial resources  
Teachers (A= 16%; NA = 29% )  
Principals (A = 12.2%; NA = 11.6%)
- Time in the school day  
Teachers (A = 16.3%; NA = 24.6%)  
Principals (A = 22.5%; NA = 15.9%)

More teachers in Non-Adopter than Adopter schools identified indoor (15.9% vs. 2.0%;  $p = .014$ ) and outdoor (10% vs. 0%;  $p = .04$ ) facilities as barriers

A significantly greater proportion of principals in Adopter schools than Non Adopter schools considered class size to be a tremendous barrier (8.2% vs. 0%;  $p = .02$ ).

# Conclusions

- Results suggested that Adopter and Non-Adopter schools were similar (e.g., profiles, program satisfaction, beliefs, influences,)
- More significant differences between Adopter and Non-Adopter teachers than principals
  - teachers appear to have been important adoption catalysts
  - data suggest principals have less PE knowledge and previous EBPE dissemination efforts have not been effective
- Top barriers to quality PE coupled w/ satisfaction results → student access to PE
  - Need for continued advocacy on changing PE enrollment policies
  - Marketing strategies of EBPE should capitalize on program adoption beliefs as well as affordability of programs

# Conclusions

- Interest in learning more about EBPE, but less for principals
  - Principals not likely motivated to be improve PE without accountability
  - PE teachers have potential to influence principals
- Satisfaction of current programs and lack of program evaluation are barriers to adoption of EBPE
  - Advocacy targeting policies to evaluate PE programs and report outcomes
  - Social marketing efforts targeting teachers, principals and district administrators