

BEST SCHOOL PRACTICES FOR SUPPORTING CHILDREN'S PHYSICAL ACTIVITY: *A Research Report*

July 2013



STUDY OBJECTIVE

This study sought to identify whether elementary schools were implementing evidence-based physical activity practices and whether children attending schools that were implementing evidence-based physical activity practices obtained more minutes of physical activity during school.

STUDY METHODS

In 2009-2010, Physical Education (PE) teachers and/or principals at 97 elementary schools from 25 districts in southern California and Seattle, Washington were

surveyed to evaluate several physical activity practices during school. Physical activity of 1-3 children aged 6 to 10 years at each school was assessed with an accelerometer device that objectively measured the minutes of physical activity they engaged in during school over the course of 2-5 days. The practices that were measured are presented in Table 1. This summary outlines best practices identified for supporting children's physical activity during school.

TABLE 1. SCHOOL PHYSICAL ACTIVITY PRACTICES COVERED IN SURVEY

- Having a certified PE teacher
- Providing the minimum required amount of PE in California (≥ 100 minutes per week)
- Having adequate/small PE class size (≤ 30 students per lesson)
- Training teachers to provide moderate to vigorous physical activity (MVPA) in PE
- Having recess supervised by non-classroom teacher
- Providing the recommended length of recess (≥ 20 minutes per period)
- Having an adequate/small student-to-teacher ratio in recess (≤ 75 students per supervisor)
- Providing activities during recess
- Having classroom teachers implement classroom physical activity breaks

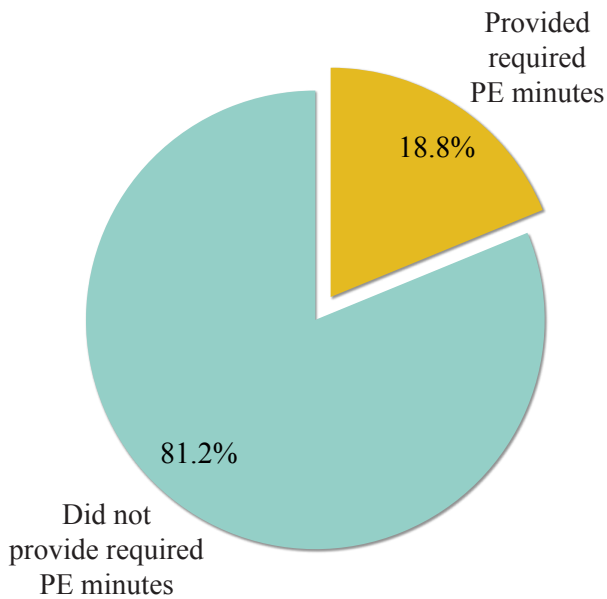
FINDINGS & RECOMMENDATIONS

MOST SCHOOLS WERE NOT MEETING MANDATES FOR PHYSICAL EDUCATION

FINDING 1:

- Only 19% of schools reported providing the minimum required 100 minutes per week of PE (see Figure 1).
- Schools with a certified PE teacher provided fewer minutes/week of PE and had larger class sizes than schools without a PE teacher.

FIGURE 1. Percent of schools surveyed that provided the required amount of PE \geq 100 minutes per week



RECOMMENDATION 1:

To meet the minimum guideline of 100 minutes per week of PE, classroom teachers need to hold PE lessons in addition to what PE teachers provide.

SCHOOL PRACTICES WERE RELATED TO STUDENTS' PHYSICAL ACTIVITY

FINDING 2:

- Seven of the practices evaluated were related to children's physical activity (see Figure 2).
- Children in schools that met the required 100 minutes per week of PE had almost 35 more minutes of physical activity per school week.
- In schools with certified PE teachers, students were active almost 30 minutes more per week.
- Children in recess sessions that had a LARGER student:supervisor ratio in recess engaged in more physical activity.

RECOMMENDATION 2:

- Based on present findings, which are consistent with other studies, the most effective strategies for increasing physical activity at school are to hire certified PE teachers to instruct PE and ensure at least 100 minutes per week of PE lesson time.
- Classroom teachers responsible for instructing PE need better training and monitoring to effectively support children's physical activity through PE.
- Trained volunteers or aides should be used to supervise recess rather than classroom teachers.
- Recess supervisors should be trained to encourage physical activity. Encouraging safety without regard to physical activity can inhibit physical activity.
- More training and support are needed for classroom teachers to be effective at incorporating physical activity breaks in the classroom.

FINDINGS & RECOMMENDATIONS *(continued)*

FIGURE 2. School practices provided varying physical activity minutes to students

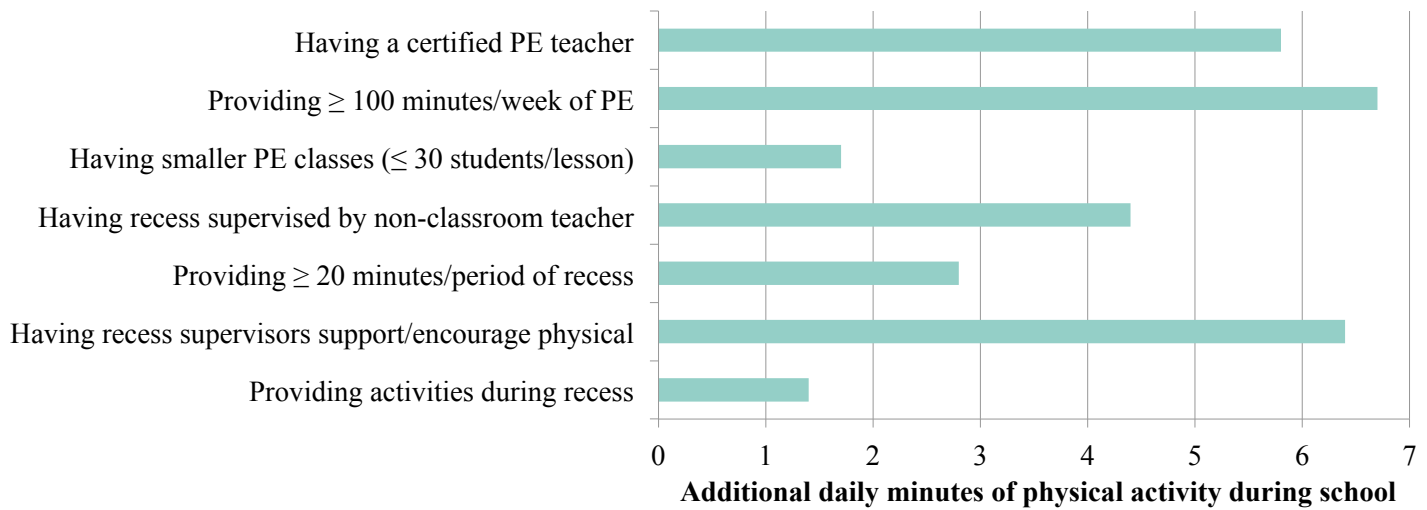
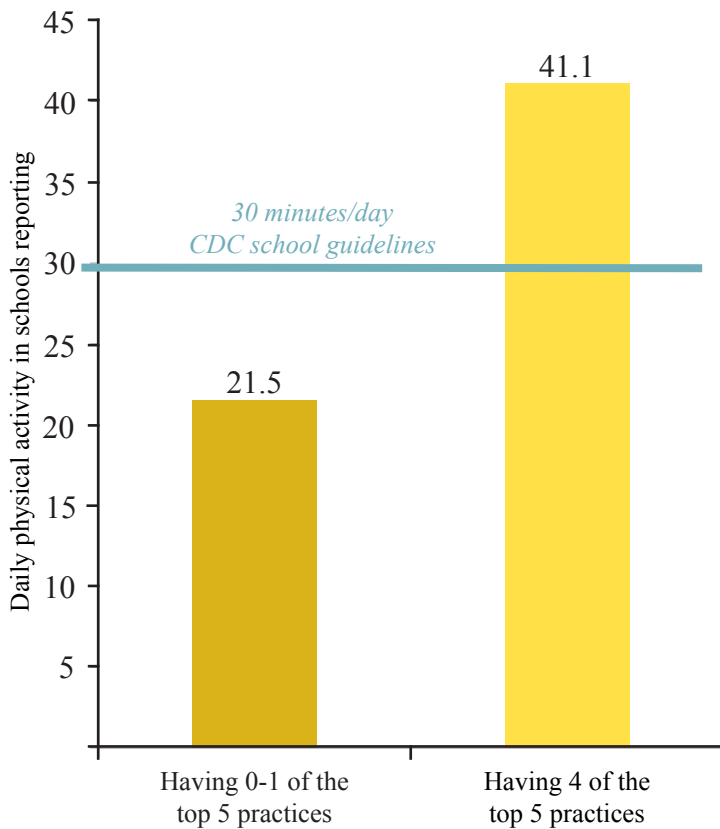


FIGURE 3. Children’s physical activity by number of physical activity-supportive school practices



HAVING MULTIPLE SCHOOL PHYSICAL ACTIVITY PRACTICES DOUBLED STUDENTS’ PHYSICAL ACTIVITY

FINDING 3:

- The most active children were in schools that implemented multiple physical activity-supportive practices (see Figure 3).
- Children at schools implementing 4 of the top 5 practices had 20 more minutes per day of physical activity than children at schools with zero or 1 of the 5 practices.

RECOMMENDATION 3:

Schools need to adopt a package of multiple physical activity-supportive practices to effectively support children’s physical activity.

FINDINGS & RECOMMENDATIONS *(continued)*

LOW SES SCHOOLS HAD FEWER PHYSICAL ACTIVITY PRACTICES AND STUDENTS WHO WERE LESS PHYSICALLY ACTIVE

FINDING 4:

- Higher SES schools were significantly more likely to have a PE teacher or PE aide than lower SES schools (see Figure 4a).
- Children had almost 5 more minutes per day of physical activity during school at higher SES schools as compared to lower SES schools (see Figure 4b).

RECOMMENDATION 4:

- More funding needs to be allocated to low-income schools to hire certified PE teachers.
- Increased funding for PE and physical activity to low-income schools could help reduce health disparities.

FIGURE 4A. Children's physical activity during school by school SES

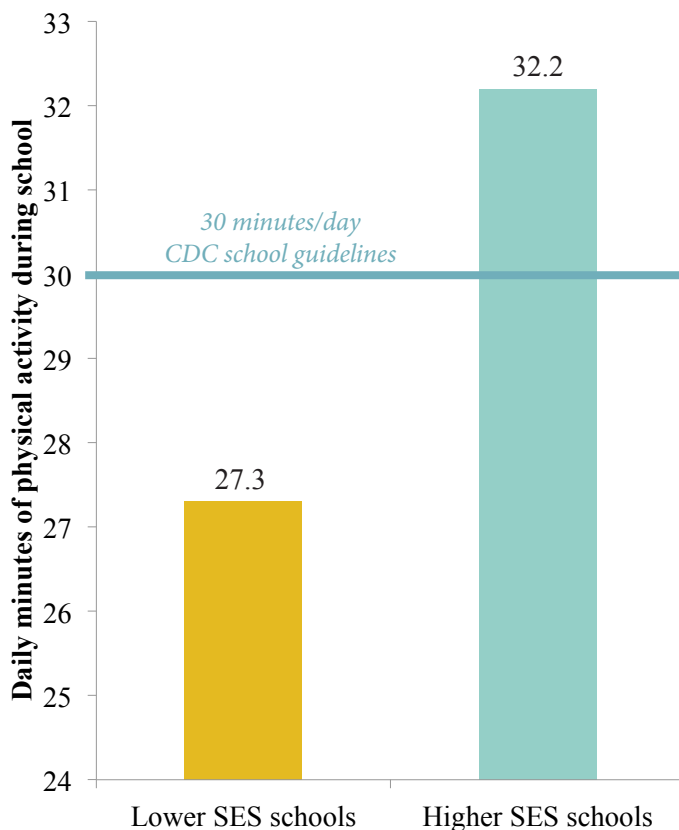
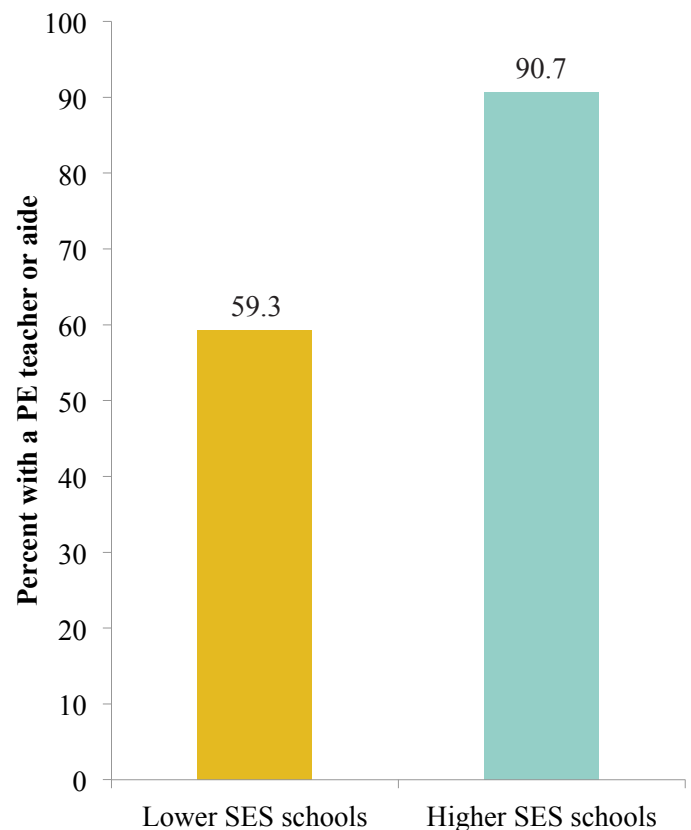


FIGURE 4B. Percent of schools with a PE teacher by school SES



Lower SES = $\geq 20\%$ FRPL (53% of schools)
Higher SES = $\leq 20\%$ FRPL (47% of schools)

FRPL = percent of students free or reduced price lunch eligible

FURTHER EVIDENCE ON SCHOOL PHYSICAL ACTIVITY PRACTICES

EXPERT CONSENSUS

Schools are among the most effective settings for increasing children's physical activity, as outlined in a recent report by the US Dept of Health and Human Services (USDHHS). The USDHHS report, as well as a recent review paper by Bassett and colleagues, revealed that there are many evidence-based strategies for increasing children's physical activity during school.

CONCLUSIONS

The present study found that some schools are implementing multiple evidence-based practices for improving children's physical activity, suggesting this is feasible for schools to accomplish.

The strategies for improving children's physical activity identified in this study are similar to those shown to be effective in the USDHHS and Bassett reports, but this study shows that children at schools that implement multiple rather than 1-2 evidence-based practices obtain double the minutes of physical activity during school. ■



Report by Jordan Carlson and James Sallis
with support from The California Endowment and the University of California, San Diego
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RECOMMENDATIONS TO SUPPORT STUDENTS' PHYSICAL ACTIVITY

EXAMPLES OF SUCCESS IN CALIFORNIA ELEMENTARY SCHOOLS



1

Provide multiple opportunities for physical activity throughout the day to support children's health and learning

TARGET MULTIPLE SETTINGS FOR PHYSICAL ACTIVITY. Schools that provided evidence-based opportunities for physical activity during PE, recess, classroom time, and before- and after- school programs had students who were twice as active during school (40 vs. 20 minutes per day) than students at schools targeting a single setting.

2

Increase PE time to meet state mandate of 200 minutes of PE every 10 days

SHARE PE RESPONSIBILITIES. Schools that shared PE responsibilities between PE teachers and classroom teachers were most likely to meet state mandates.

MONITOR PE SCHEDULES. Schools that monitor adherence to PE schedules may be more likely to meet state mandates.

3

Seek extra funding and support for low-SES schools, which had fewer physical activity opportunities

EMPLOY CERTIFIED PE TEACHERS. Students at schools with certified PE teachers had 30 more minutes per week (20% more) of physical activity during school than students at schools without a PE specialist.

RECRUIT AND TRAIN VOLUNTEERS TO SUPPORT PHYSICAL ACTIVITY. Students at schools where volunteers or aids were trained on evidence-based practices to support physical activity during recess had 30 more minutes per week (20% more) of physical activity during school than their counterparts.

Adapted from *Best School Practices for Supporting Children's Physical Activity: Research Report* by Jordan Carlson and James Sallis (July 2013) with support from The California Endowment and the University of California, San Diego.