

Background

- Brief (e.g., 10 minute) breaks for physical activity in the classroom have been effective for increasing student physical activity in numerous studies, but implementation rates are low.

Intervention

- Six school districts in California received grant funding to provide classroom physical activity breaks to elementary school students.

Research Question

- How do teacher-reported implementation contextual factors relate to the likelihood of providing classroom physical activity breaks (i.e., implementation fidelity)?

Methods

- 365 classroom teachers from 24 elementary schools completed a survey approximately 6 months after their districts adopted the intervention.
 - Implementation fidelity was defined as whether the teacher reported holding at least 1 classroom physical activity break in the past week.
- Implementation contextual factors included perceived intervention characteristics, teacher and classroom characteristics, training and resources, school characteristics, school culture, and implementation climate.

Associations between teacher-reported implementation contextual factors and teacher-reported implementation fidelity for providing classroom physical activity breaks

	Implementation fidelity (teacher reported holding classroom physical activity breaks in past week)	
	OR (95% CI)	P value
Perceived intervention characteristics		
Classroom behavior benefits [1-4]	1.20 (1.05, 1.37)	.007
Other benefits [1-4]	1.85 (1.29, 2.66)	.001
Time barriers [1-4]	0.36 (0.29, 0.46)	<.001
Academic/teaching barriers [1-4]	0.50 (0.39, 0.65)	<.001
Lack of student cooperation [1-4]	0.78 (0.62, 1.03)	.077
Teacher and classroom characteristics		
Teacher female [y/n]	1.23 (0.82, 1.84)	.325
Teacher age [yrs]	1.02 (1.01, 1.04)	.009
Teacher years teaching [yrs]	1.01 (0.99, 1.03)	.318
Class size [# students]	0.99 (0.98, 1.01)	.370
Training and resources		
Encouraged to hold PA breaks [y/n]	2.25 (1.64, 3.09)	<.001
Trained to hold PA breaks [y/n]	1.40 (1.02, 1.93)	.039
Received materials for PA breaks [y/n]	1.35 (0.98, 1.87)	.071
School characteristics		
Economic status [%FRPL/10]	0.88 (0.80, 0.96)	.003
PE teacher at school [y/n]	0.86 (0.75, 0.98)	.026
School culture		
Teachers support each other [1-4]	1.15 (0.89, 1.48)	.299
Implementation climate		
Teachers support physical activity breaks [1-4]	1.52 (1.13, 2.06)	.006
Administrators support physical activity breaks [1-4]	1.75 (1.32, 2.33)	<.001

Results

- Perceived benefits of the intervention (both health and behavioral), and perceived barriers due to time and interfering with academics, were related to fidelity in the expected directions.
- Receiving training and encouragement, but not materials, were positively related to fidelity.
- Schools with lower economic status and a physical education teacher had lower fidelity.
- Support for classroom physical activity breaks from administrators and other teachers was positively related to implementation fidelity, but general support/culture among teachers was unrelated to fidelity.

Conclusions

- Teachers who had a more favorable view of the intervention, and perceived the intervention to be beneficial to both student health and classroom behavior, were more likely to provide classroom physical activity breaks.
- Support from other teachers and administrators, specific to the intervention, also stood out as an important contextual factor.
- Teacher and administrator buy-in and school climate around the intervention appear to be critical for successful implementation.
- Effective strategies for communicating the direct benefits of classroom physical activity breaks to schools, such as improved classroom behavior, should be identified and systematically studied.

Sample Characteristics

Total number of teachers	365
Mean (SD) teachers per school	15.2 (4.4)
Mean (SD) class size	25.7 (12.7)
Mean (SD) years teaching	16.3 (8.8)
Percent of teachers women	83.4%
Range of grades assessed	1 st – 6 th
Mean (SD) percent of students at school who are eligible for free or reduced price lunch	77.8% (20.4)