PARTICIPATORY ACTION RESEARCH TO IMPROVE PHYSICAL EDUCATION IN SAN FRANCISCO PUBLIC SCHOOLS

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Children and adolescents should get at least 60 minutes of MVPA every day. 60 minutes of MVPA during school is recommended.

US Department of Health and Human Services, 1996; Institute of Medicine, 2013
WHY PE

- PE is the most important public health tool to increase physical activity

- PE just doesn’t happen
  - Particularly in elementary schools

PE LAWS AND RECOMMENDATIONS

- California - 200 minutes/10 days (elementary schools)
  - Nationally = 300 minutes/10 days
- Students spend 50% of PE class time in MVPA

CA State Board of Education Policy #99-03, Ed Code Section 51210, June 1999; Institute of Medicine, 2013
Focuses on research to enable action
Power deliberately shared between the researcher and the researched
Those being researched are actively involved in the research process

Baum et al, J Epidemiol Community Health, 2006
GOALS

- **Immediate**
  - To gather data on the state of PE in San Francisco schools, with a focus on elementary schools

- **Long term**
  - To improve PE in San Francisco

- **Ultimate**
  - To improve student health
SAN FRANCISCO UNIFIED SCHOOL DISTRICT

- 56,000 students
- 88% non-white
- 60% qualify for free or reduced price meals
- 72 elementary schools
20 elementary schools

Collected 5th grade teachers’ PE schedules

Systematic observations of 5th grade PE classes using SOFIT

- 2-3 teachers per school
  - N = 30 teachers

- 3 PE classes per teacher
  - N = 91 PE class observations

Only 20% of schools met the state PE minute mandate of 200 minutes of PE/10 days, based on teachers’ schedules

- 71 scheduled minutes of PE/week
- 56 observed minutes of PE/week
- 54% of class time in MVPA
- Average of 7 minutes of MVPA/day from PE
WHAT WE DID NEXT

- Presented our results to the district
  - The Board of Education
  - District administrators
  - Principals
  - Teachers
- Publically disclosed data
  - Newspaper articles
  - TV news spots
  - Radio
Funding for PE specialists increased 25% from 2010-11 to 2011-12.

- 72 Elementary Schools
- 19 PE Specialists
Funding for PE specialists increased 78% from 2010-11 to 2012-13.

But did this impact PE quantity?
STUDY METHODS, TIME 2 – SPRING 2013

- 20 elementary schools from Time 1
- Systematic observations of 5th grade PE classes using SOFIT
  - N = 34 teachers
  - N = 101 PE class observations
- Key stakeholder interviews
DATA ANALYSIS

- Linear mixed effects models
  - Account for clustering by school and teacher
RESULTS

- Changes from 2011 (Time 1) to 2013 (Time 2)
SCHOOLS MEETING PE MANDATE
(BASED ON TEACHERS’ SCHEDULES)

- 2011: 16 schools, 4 (20%) met mandate
- 2013: 14 schools, 6 (30%) met mandate

+ 2 schools added in 2013
SCHEDULED MINUTES OF PE/WEEK

- 2011: 71 minutes
- 2013: 83 minutes

$p = 0.008$

+ 11 minutes
OBSERVED MINUTES OF PE/WEEK

- **2011:** 56 minutes
- **2013:** 70 minutes

*Change: +14 minutes

*p = 0.023*
% OF CLASS TIME IN MVPA

- 2011: 54%
- 2013: 61%

Increase of 7%

p < 0.001
WHAT STAKEHOLDERS SAID

“PE’s now got a place at the table, so to speak, in terms of what’s valued in terms of use of time.” – District Partner

“Having hard numbers and shining a really public light on it was really critical to the district paying more attention to PE.” – District Partner
ESTIMATED DAILY MINUTES OF MVPA FROM PE

51 minutes of MVPA still needed to achieve 60 minutes/day
LIMITATIONS

- Drawing causal inference
- Generalizability
CONCLUSIONS

- Positive changes
- Still far from meeting PE mandates
- Methods to increase compliance

7 DAYS WITHOUT EXERCISE MAKES ONE WEEK
YOU SHOULD EXERCISE 60 MINUTES EVERY DAY
THANK YOU

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