

Impact of “Open School Policies” and Community Access to Physical Activity Facilities on Childhood Obesity and Fitness

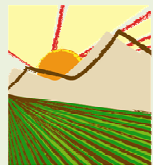
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Central California
REGIONAL OBESITY
PREVENTION PROGRAM

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**Central Valley
Health Policy Institute**

California State University, Fresno

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CONFLICT OF INTEREST

- NONE

Policy and Programs Context

- 2006 was watershed year for policies and programs that supported or promoted community access to school Physical activity space
- CCROPP is one of those programs that focuses on a policy and environmental approach
- In prior study, we found that despite policies e.g. Civic Center Act (1917) (*Education Code Section 38130-38139* that permit schools to open facilities for public use) almost 30% continue to keep them locked after school hours

Challenges to physical activity



“I see people at this school in my neighborhood jumping the fence. It’s hard to be active because the school is closed.”

– Fabiola, Age 13, Fresno, CA

Photovoice-CCROPP

- **Finding a safe place to play**

Purpose & Objectives

- **Purpose is to:**

Determine impact of community access to school PA facilities on children's fitness and obesity

- **Learning Objectives**

- 1) **Identify** State and Federal policies that support public access to school space
- 2) **Describe how** school, community access, and local school policies are associated with passing the body composition and other fitness tests
- 3) **Discuss** the importance of community access to schools space in preventing childhood

We defined Open Policy as:

- **Formal open policy** - School opens to the public after school hours via written policy guidelines (i.e. public fills out an application to use school facilities after school hours)
- **Informal open policy** - School opens to the public after school hours *without* written policy guidelines (i.e. principal unlocks the gates so neighbors can play ball on evenings and weekends)
- **Formal joint use policy** - School opens via contractual agreement with one or more parties and some other written guidelines (i.e. an agreement between city and school to share responsibilities such as liability and maintenance to open school space for public use)
- **Informal joint use policy** - School opens via agreement with one or more parties with no other written guidelines (i.e. a school opens its soccer field to a local league for weekend games)

Methods

Design:

Survey Research Approach

Sample:

- 600 schools reached
- 400 schools target goal
- 385 completed
 - Response rate 64%
 - Goal's percentage 96%
- Random samples from four strata:
 - Urban, small school
 - Urban, large school
 - Rural, small school
 - Rural, large school
- 2006, 2009 Fitness Gram Results

Characteristics of Sample Schools

- 44.0% (166) were Small schools (<500 students)
- 40.0% (154) were Small school Districts (<10 schools)
- 34.0%(115) had <45% total acreage as Open Space
- 63.0% (237) had >60% students on free/reduced price meals
- 45.0% (171) were located in the Rural area
- 24.0% (91) were located in a CCROPP program sites

School-Level Policies for Public Access to Physical Activities Facilities After School hours

- About 28% (106) of school were not open for public use
- Of the 276 that were open
- Less than 40%(86) had joint use agreements
- Of the joint use and non-joint use the majority were formal agreement
 - 85% (73 of 86) joint use were formal agreements
 - 74 % (139 of 188) non-joint use were formal agreements

Barriers to opening school Physical Activities Facilities After School hours

Of the schools that were not open:

- 56% reported Socio-cultural Barriers
- 47 % reported operational barriers
 - **Socio-cultural Barriers (104) 56%**
 - Liability (50) 50%
 - Safety (40) 39%
 - Lack of School's Interest (12) 12%
 - Cultural Conflicts (2) 2%
 - **Operational Barriers (83) 47%**
 - Lack of Facilities(47) 57%
 - Maintenance (36)3%

Table 1: Factors Associated With Percent Students Passing 6 Of 6 Fitness And Body Composition

Variables	6 of 6 test			Body composition		
	N	Mean(%)	SD	N	Mean(%)	SD
<i>FRP meals</i> ≥ 60%	216	24***	16.1	216	62***	11.6
<60%	139	36	17.8	139	70.3	11.0
<i>Open to Public use</i>	276	30**	18.4	276	65.3	11.4
<i>Not open</i>	85	24	14.6	85	65.2	14.1
<i>Percent school acres as open space:</i> ≥ 45%	220	31	17.6	220	68***	10.4
<45%	96	28	18.1	96	62.3	14.6

◇ < .10

* = < .050

** = < .010

*** = .000

Table 2: School-level Policies Associated With Percent Students Passing 6 Of 6 Fitness And Body Composition

	Body Composition					6_of_6			
	N	Mean(%)	SD	P value		N	Mean(%)	SD	P value
Not School District Or School Board Initiative	50	68.2*	9.6		50.0	34.0(ns)	18.2		
School District/School Board Initiative	214	64.6	11.9	0.050	214.0	28.8(ns)	18.5	0.075	
Joint. Use	77.0	67.8*	9.3		77.0	31.6	16.0		
Not Joint Use	199.0	64.3	12.0	0.024	199.0	28.7	19.2	0.231	
Youth & Communities Allowed:0-2	81.0	61.0	13.0		81.0	20.9	15.4		
Youth & Communities Allow:3	194.0	67.2***	10.1	0.000	194.0	33.1***	18.4	0.000	
Nonprofits Not Allowed	44	59.1	12.0		44	19.9	17.1		
Nonprofits Allowed	231.0	66.5***	10.9	0.000	231.0	31.4***	18.1	0.000	

Ruwe M B, Islas-Hooker G, Ramirez M, Capitman J A, 2009

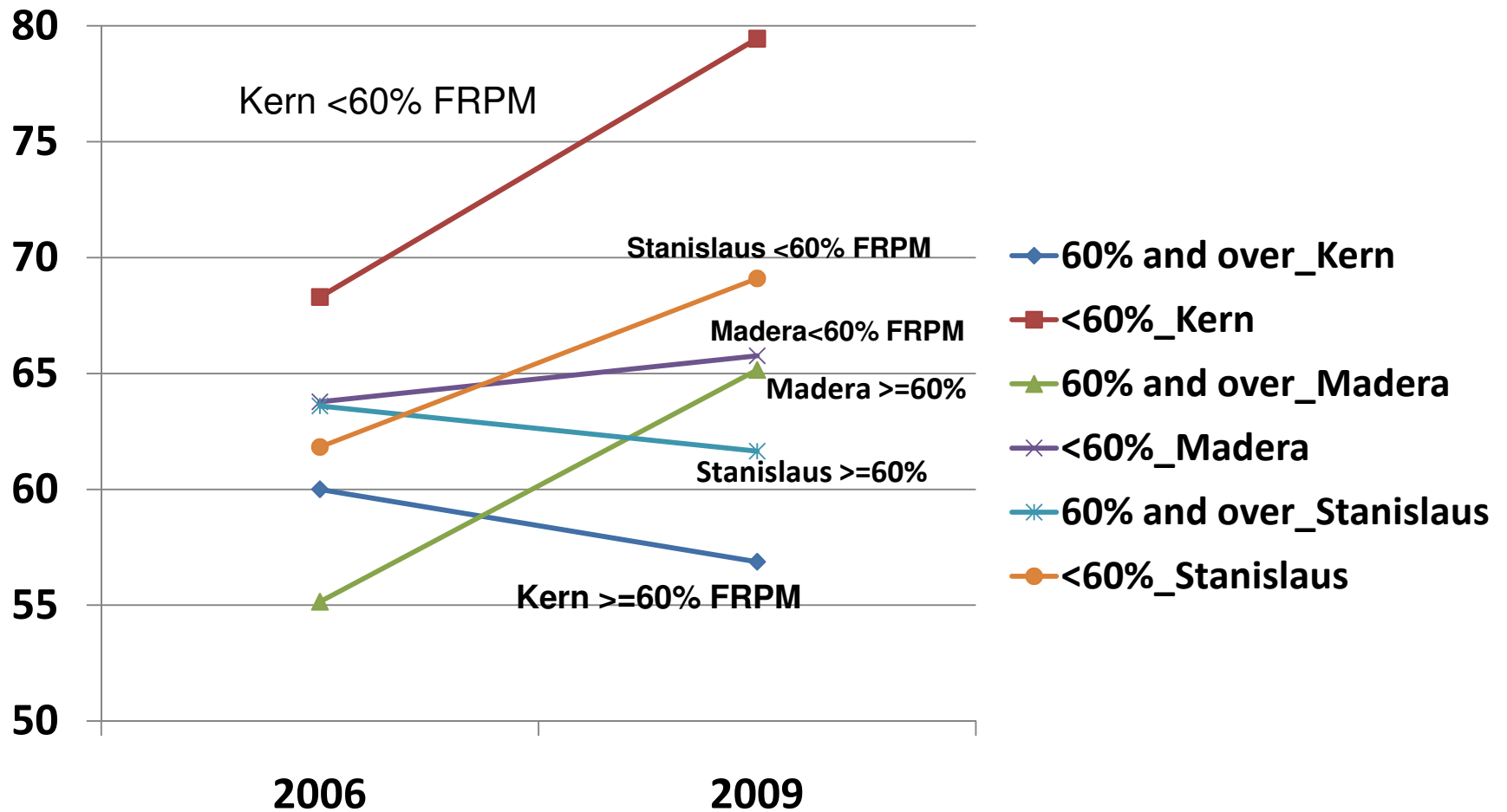
Impact of community access to school Physical activity facilities and joint use policy on Healthy Body Composition : 5-step weighted regression analysis

Independent Variables	Step 1	Step 2	Step 3	Step 4	Step5
	B	B	B	B	B
Youth & Community groups Allowed(3 vs0-2)	4.74 ***	4.41***	3.51**	1.42	1.71
Joint Use Policy	--	3.09**	2.88**	1.22	1.52
> 60% students on FRP meals	--	--	-6.64***	-6.55***	-6.35***
>45% open space	--	--	--	2.82*	2.90*
Rural (ns)	--	--	--	--	-2.02
Small Schools(ns)	--	--	--	--	-1.64
Small Districts	--	--	--	--	3.08*
Females(ns)	--	--	--	--	0.12
5th Graders(ns)	--	--	--	--	-0.02
Model estimates					
Adj.R²	0.05;	0.07;	0.20;	0.15;	0.16;
F	15.58;	11.83;	23.29;	11.57;	6.16;
P-Value	0.000	0.000	0.000	0.000	0.000

Table 3: Impact of community access to school Physical activity facilities and joint use policy on passing 6 out of 6 Fitness Tests Passed : 5-step weighted regression analysis

Independent Variables	Step 1	Step 2	Step 3	Step 4	Step 5
	B	B	B	B	
Youth & Community Allowed	9.61***	9.23***	3.51**	5.49*	5.66*
Joint Use Policy	--	3.57	2.88**	1.89	1.73
> 60% students on FRP meals	--	--	-6.64***	-6.03**	-5.51**
>45% open space(ns)	--	--	--	-2.22	-2.29
Rural (ns)	--	--	--	--	-2.77
Small Schools	--	--	--	--	1.61
Small District (ns)	--	--	--	--	1.53
Females(ns)	--	--	--	--	-.03
Five Graders(ns)	--	--	--	--	-4.14
<i>Model estimates:</i>					
<i>Adj.R²</i>	0.07;	0.08;	0.20;	0.06;	0.059;
<i>F</i>	21.9;	12.80;	23.29;	4.64;	2.658;
<i>P</i>	0.000	0.000	0.000	0.001	0.006;

Figure 1: Trend in Body Composition CCROPP Sites Percent On Free Reduce Price Meals



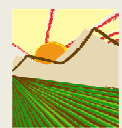
Ruwe M B, Islas-Hooker G, Ramirez M,
Capitman J A, 2009

Conclusion

- This exploratory study suggest that Joint use agreements and allowing youths and communities to use physical activity facilities after school hour may be effective in reducing childhood obesity and increase children who are physically fit.
- However, the study also shows that low income communities have benefitted less from Policies that allow local communities to use school facilities after school hours.
- Factors that influence impact of these policies include :a)reluctance of some schools in opening to the public (due to operational and social culture barriers);b) percent campus that is open space and c) proportion students who are (from low income families)as measured by percent student on free or reduced price meals.
- Future efforts to reduce childhood obesity through policy intervention should also be directed at resolving practical barriers that limit low income communities from benefiting from exiting policies.

Acknowledgements

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