

School Physical Activity Policy Assessment



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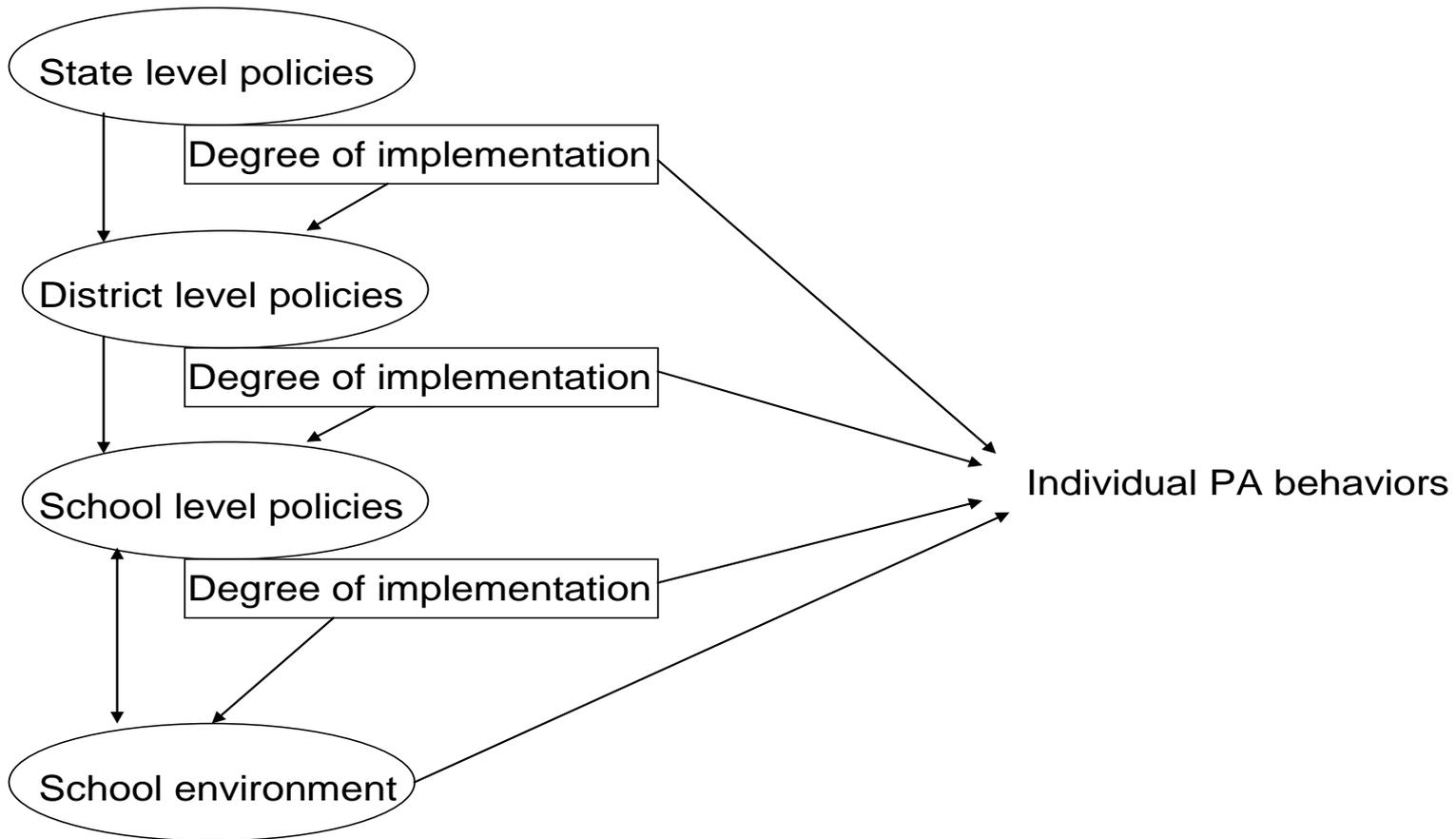
- Numerous U.S. health agencies and organizations recognize the potential of schools to promote and provide PA
- Few students receive daily PE
 - 3.8% of elementary schools
 - 7.9% of middle schools
 - 2.1% of high schools
- Most consistent opportunities for PA come from recess
 - 20% of elementary schools in the United States have reduced recess (American Association for the Child's Right to Play)



Policies

- Integral to the structure and function of what happens in schools
 - little known about how specific policies relate to program minutes or actual PA
- Enacted at different levels (e.g., state, district, school)
- Policy characteristics
 - Language strength
 - Implementation

Multi-Level Ecological Model of School PA Policy



Purpose

1. Develop a valid and reliable instrument to assess
 - school and district PA policy adoption
 - school environmental variables that provide indications of the degree of policy implementation
2. Use the newly developed instrument to
 - Assess the relations of PA policy and PA opportunity minutes



Methods

Item Development

- Relevant literature
- Analyzed related instruments
 - School Health Index , School Health Program Policy , and Physical Education Curriculum Assessment Tool , National Association Sport and Physical Education's Checklist for Quality Physical Education
- Consultation with PE policy stakeholders and researchers

Content Validity

- Several rounds of feedback and revision
 - educational policy makers, PE teachers, school PA researchers

Test Retest Reliabilities

- 31 elementary school physical education teachers
- Two occasions, 14 days apart

Reliability of PE and recess items had fair to substantial levels of agreement (Kappas=0.31-0.81)

Other before/during/after school PA programs had fair to perfect agreement (Kappas=0.31–1.00).

Description of S-PAPA

- The School Physical Activity Policy Assessment (S-PAPA) uses open-ended, dichotomous, multichotomous, and checklist formatting
- S-PAPA respondents are instructed to seek accurate answers from appropriate sources
- PE teacher is likely the best S-PAPA respondent

S-PAPA

Three distinct sections

Physical Education (47 items)

Recess (27 items)

Other Before, During, and After School Programs (15 items)

Administration time approximately 30 minutes

Lounsbery, M. A. F., McKenzie, T. L. Morrow, J. R., Holt, K. A., & Budnar, R. G. (2012, in press). School Physical Activity Policy Assessment (SPAPA): Test-Retest Reliabilities. *Journal of Physical Activity & Health*.

S-PAPA is available on the ALR web site

SECTION A. BACKGROUND AND GENERAL QUESTIONS

1. What is your current position at this school? (check one)

<input type="checkbox"/> 1. Principal	<input type="checkbox"/> 2. Assistant Principal
<input type="checkbox"/> 3. Physical education specialist	<input type="checkbox"/> 4. Classroom teacher
<input type="checkbox"/> 5. Project Coordinator (name program) _____	<input type="checkbox"/> 6. Other (please specify) _____

2. How long have you worked in THIS position at this school? _____ years

3. What grade levels are taught at this school? (Check all that apply.)

<input type="checkbox"/> K	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
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4. What grade levels receive physical education at this school? (Check all that apply.)

<input type="checkbox"/> K	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
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5. How many students are enrolled in your school? _____ students

6. What percentage of students is eligible for free or reduced school meals in your school? _____ % of students

7. This question asks about facilities available for physical activity at your school. Please place an "X" in the appropriate spaces to identify if the following facilities are typically available for physical education and for before and after school physical activity programs at your school. (Check all that apply.)

	Physical Education	Before School	After School
a. Gymnasium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Multipurpose Room/Cafeteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Blacktop Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Grassy Field (Football/Soccer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Playground	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Regular classroom for indoor physical education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Trailers or mobile building for indoor physical education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MODULE 1. PHYSICAL EDUCATION

Formal Physical Education Policies

	Yes	No
8. Does your <u>school district</u> have a written policy that requires schools to follow specific physical education standards or guidelines? (e.g., NASPE)	<input type="checkbox"/>	<input type="checkbox"/>
9. Does your <u>school</u> have a written policy that requires your school's physical education program to follow specific physical education standards or guidelines? (e.g., NASPE)	<input type="checkbox"/>	<input type="checkbox"/>
10. Does your <u>school district</u> have a written policy that requires a specific number of days per week that students will have physical education?	<input type="checkbox"/>	<input type="checkbox"/>
11. Does your <u>school</u> have a written policy that requires a specific number days per week that students will have physical education?	<input type="checkbox"/>	<input type="checkbox"/>

School Physical Activity Policy Implementation

-Fidelity Index-

- Provides policy implementation indicators for policies assessed in S-PAPA
- Check list format; completed by researchers
- Recommends multiple data sources specific to each policy
 - actual written policy, completed S-PAPA, direct observation data, and school records
- S-PAPA policy indicators were based on results from relevant literature and existing instrumentation, and critically reviewed by
 - PE policy researchers, a school superintendent, a school board member, an elementary school principal, elementary PE teachers, and representatives from school wellness professional organizations
- Inter-rater reliability was .89 (20%)

Methods (2)

- 65 elementary schools; 27 school districts in 9 states
 - PE teacher completed the S-PAPA
 - Two classroom teachers (one primary and one intermediate) completed PARC (Physical Activity Record for Classes) – a two week log of class daily minutes in PE and recess
- Analyses
 - descriptive statistics to describe PA program minutes and policies
 - correlation to assess relationships
 - logistic regression to identify policy and environmental variables that predicted higher PA program minutes

Characteristic	Schools (N=65)
Students eligible for FRMP ^a (%)	Mean=52.1%; Range= 2-98%
Student enrollment (#)	Mean=605; Range=177-1050
PE Specialists (#)	Median=1
PE days per week (#)	Mean=1.7; Range-1-5
Typical class size (#)	Mean=26.5; Range=18-63
Annual budget for PE (\$)	Mean=225; Median=389; Range=0-2000
100% of PE taught by a PE specialist	88%
Days of PE	Median = 2 1 day = 38.5%; 2 days = 54%
PE Minutes (#) (150 minutes/week recommended)	Mean = 63; SD = 30.
Recess Minutes (#) (20 minutes per day recommended)	Mean = 146; SD = 49
PARC (#)	Mean = 209; SD = 59

Prevalence of District PE Policies

Follow specific PE standards or guidelines (e.g. NASPE)	86.7%
Assigning grades for PE	85.3%
Specific number of PE minutes per week or days	68.3%
Fitness testing in PE	33.3%
Maximum student-to-teacher ratio	24.0%
Annual PE program evaluation	16.1%

Prevalence of School PE Policies

Assigning grades for PE	76.6%
Specific number of PE minutes per week or days	55.6%
Follow specific PE standards or guidelines (e.g. NASPE)	47.5%
Fitness testing in PE	21.5%
Annual PE program evaluation	3.6%

Relationship between PE Policies and PE and Recess Minutes

	PE Minutes	Recess Minutes
District Policies		
Follow specific PE standards or guidelines (e.g. NASPE)	.035	.101
Specific number of PE minutes per week or days	-.116	.378**
Maximum student-to-teacher ratio	-.180	-.138
Annual PE program evaluation	.245	-.062
School Policies		
Follow specific PE standards or guidelines (e.g. NASPE)	.150	.269*
Specific number of PE minutes per week or days	-.134	.210
Maximum student-to-teacher ratio	-.154	-.121
Annual PE program evaluation	.560***	-.181

***p<.001; **p<.01; p<.05

Smaller Class Sizes and PE Specialists

- 88% of schools had 100% of PE taught by a specialist
- Only 2 schools had class sizes that exceeded 30 students
- Negatively associated with being in schools that provided more minutes of PE
 - Having smaller/similar class size as other classes ($\beta = -2.26$, $p < .01$, OR = .105)
 - Having 100% of PE taught by PE teacher ($\beta = -2.63$, $p < .01$, OR = 0.72)

Importance of Policy for Annual PE Evaluation

- District
 - District policy maximum student to teacher ratio ($r = .30$)
 - District policy to test fitness ($r = .28$)
 - School policy for annual PE evaluation ($r = .47$)
 - School policy for PE standards ($r = .30$)
- School
 - Gym ($r = .29$)
 - PE grading same as other subjects ($r = .28$)
 - PE classes per week ($r = .32$)
 - PE class length ($r = .35$)
 - Reported minutes of student MVPA ($r = .29$)

PARC Minutes

- Variables most related to PARC minutes were:
 - percentage eligible for free/reduced meals ($r = -.31, p < .05$)
 - having a school policy for PE standards/guidelines ($r = .32, p < .05$)
 - requiring specific number of minutes per week of PE ($r = .26, p < .05$).
- School-based policy of minutes/days of PE increased the odds of being in the top 40% of PARC minutes when contrasted with the lowest 40% of PARC minutes (OR=4.43, 95% CI=1.28 - 15.35).
 - Compared to schools and schools in districts without this policy, schools that at least partially implemented it had more PARC Minutes
 - **School level policy had 36 more PARC minutes ($\beta = 35.6, p < .05$)**
 - **District level policy had 50 more PARC minutes ($\beta = 50.1, p < .01$)**

Recess

- Greatest contribution to school PARC (70%)
- Few policies were in place to govern it
- Even when present, policies were rarely highly or fully implemented
 - 54% of schools had a recess policy specifying minutes per day, but only 24% were high or full implementers of the policy

Conclusions

- Few significant associations between PE policies and PE and Recess program minutes
- Some PE policies were positively associated with recess minutes, while negatively associated with PE minutes
- Smaller class sizes and having lessons delivered by a certified PE teacher were negatively associated with higher PE minutes
 - Investigate creative scheduling and optimal instructional format strategies

Thank you!

