
A Multilevel Analysis of the Links between Youth's After-School Time Activities and their Well-Being

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After-school time activities & youth's well-being: What's missing from the research?

- Extant research often incorporates global measure of youth's participation
 - Type of participation & patterns of participation (e.g., breadth, duration) also important
 - Research exploring whether participation is associated with decreases in youth's problem behavior is sparse
 - Studies have not explored neighborhood-level variation on associations between participation and youth's well-being
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Research questions

1. What are the associations between participation and youth's anxiety/depression and delinquency using 3 different measures of participation?
 2. Does participation alter the trajectory of youth's outcomes over 6 years?
 3. Does the strength and direction of associations between participation and outcomes vary by neighborhood characteristics?
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Project on Human Development in Chicago Neighborhoods (PHDCN)*

- **Longitudinal Cohort Study:**
 - 1,000 children from 7 age cohorts (birth, 3, 6, 9, 12, 15, 18)
 - 6,226 children (and primary caregivers) sampled from 80 Chicago neighborhoods
 - Followed over 6 years in 3 waves of data collection
- **Community Survey:**
 - *Community Survey* in 343 Chicago neighborhoods
 - 8,782 adults participated in survey at time of wave 1
 - Independent sample from Cohort Study

Sample characteristics for 9 & 12 age cohorts ($N = 1,313$)*

<i>Child characteristics</i>	
Age wave 1	10.66 (1.54)
Age wave 2	12.70 (1.60)
Age wave 3	15.21 (1.58)
Sex (male)	50.4%
Latino	49.3%
Black	35.7%
<i>Maternal characteristics</i>	
< high school graduate	44.9%
> high school graduate	41.2%
Mother married	59.6%
Income-to-needs ratio	1.43 (.98)

*Youth in 9 and 12 cohorts who were not White, Black, or Latino ($n = 72$), not in school at Wave 1 ($n = 12$), classified as severely learning disabled ($n = 35$), and missing substantial demographic, after-school participation, or outcome data ($n = 217$) excluded from analytic sample.

After-school time participation measures at waves 2 & 3

Type of Participation	% 1 wave	% 2 waves
Any (of 6)	51%	40%
Sports/cheerleading	50%	20%
Arts	45%	9%
Student government	19%	3%
Community-based clubs	25%	6%
Church groups	36%	7%
Part-time work	28%	5%

- Also assessed breadth of participation
 - M # activities at waves 2 & 3
 - $M=2.11$, $SD=1.38$ at wave 2
 - $M=1.88$, $SD=1.41$ at wave 3
 - Created quadratic term
- Global measure of extracurricular/after-school participation at wave 1 (0=no participation, 1=participation) used as control

Youth outcomes at waves 1, 2, & 3

Dimension	Description	<i>M (SD)</i> Wave 1	<i>M (SD)</i> Wave 2	<i>M (SD)</i> Wave 3
Anxiety/ depression	Sum of 14 maternal-reported items experienced by child in past 6 months (e.g., feeling unhappy, sad, or depressed) rated from (0) “not true” to (2) “very or often true”	3.92 (3.78)	4.51 (4.28)	4.46 (4.33)
Delinquency	Sum of 15 child-reported acts (e.g., attacking someone with weapon) committed in past year top coded at 5	.43 (.91)	.50 (1.01)	.52 (1.05)

Neighborhood characteristics from *Community Survey*

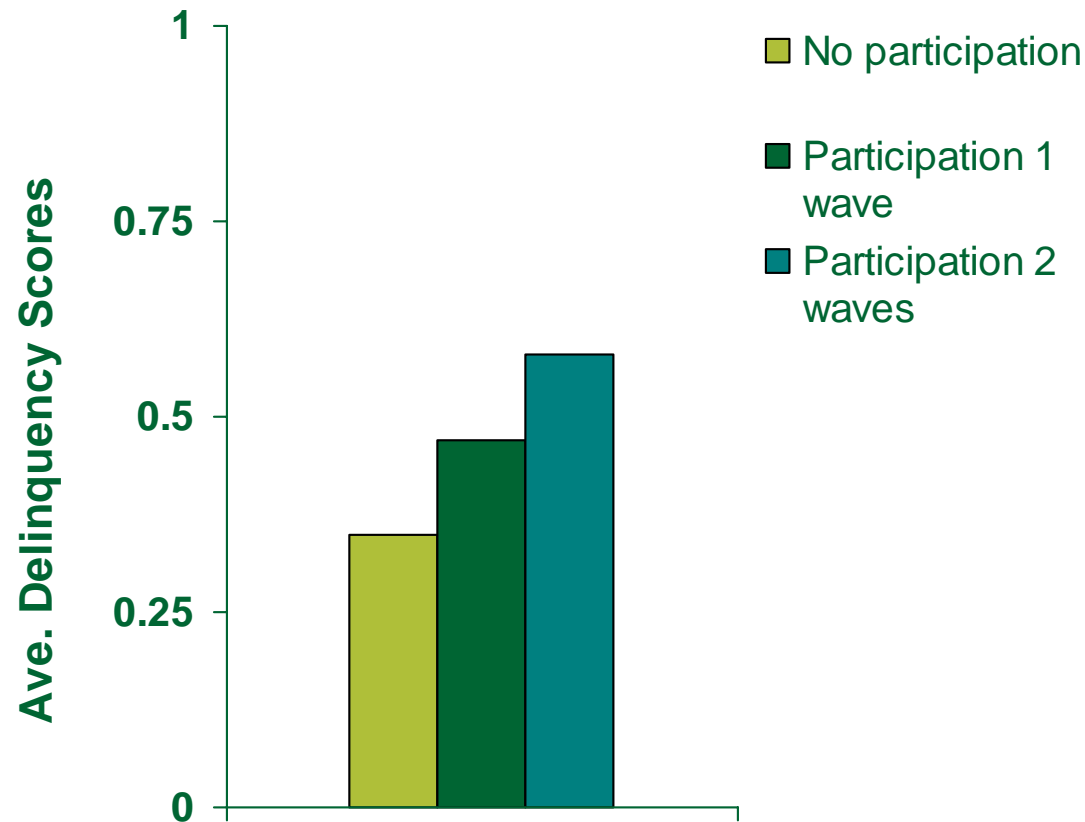
Dimension	Description	Range
Community resources for youth	Mean number (of 6) of youth services in neighborhood (e.g., youth center, mentoring/counseling programs)	-2.16—2.59
Perceived violence	Mean frequency residents observed 5 types of violent acts in neighborhood (e.g., gang fights, sexual assault/rape) rated from (1) “never to (4) “often”	-1.79—2.25

- Measures standardized factor scores ($M=0$, $SD=1$)
- 78 Chicago neighborhoods represented
- $M=16.83$, $SD=7.72$ youth per neighborhood

Analytic strategy

- **3-level Hierarchical Linear Regression Models:**
 - *Level 1:* Within youth variation
 - *Level 2:* Between youth, within neighborhoods variation
 - *Level 3:* Between neighborhoods variation
 - **Model steps:**
 - *Step 1:* After-school time participation variables
 - Any participation, type of participation (6 activities), breadth of participation each in separate models
 - *Step 2:* Youth and maternal characteristics
 - *Step 3:* Neighborhood characteristics
 - Cross-level interactions between community resources and violence and after-school time participation tested
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Question 1: Associations between any participation & youth's problem behavior



Note. $N = 1,313$; figure presents average delinquency scores percent adjusted for youth and maternal characteristics

Question 1: Associations between type of activities & youth's problem behavior

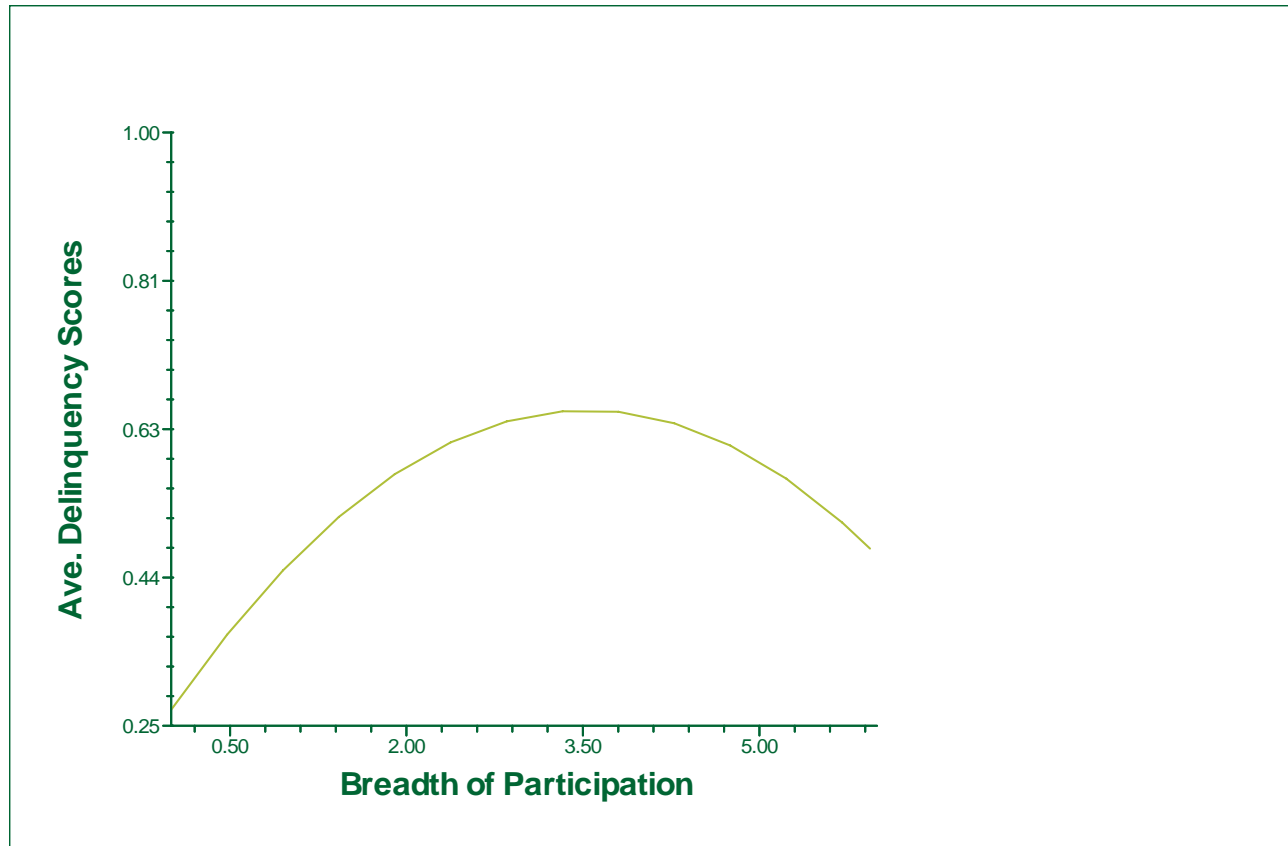
- **Anxiety/Depression**

- Sports *negative* association with anxiety/depression
 - n.s. when youth and maternal characteristics entered
- Church groups modest *negative* association with anxiety/depression
- Community-based clubs *positive* association with anxiety/depression

- **Delinquency**

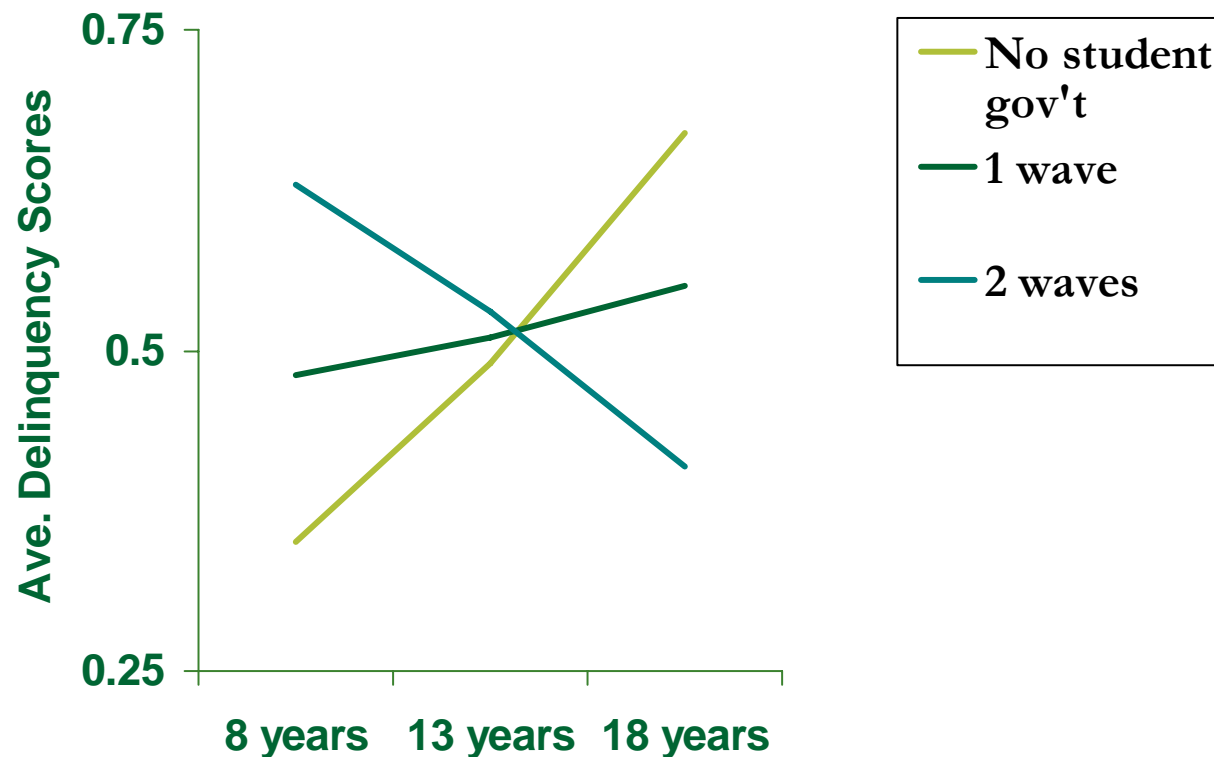
- Sports & part-time work *positive* association with delinquency
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Question 1: Associations between breadth of participation & youth's problem behavior



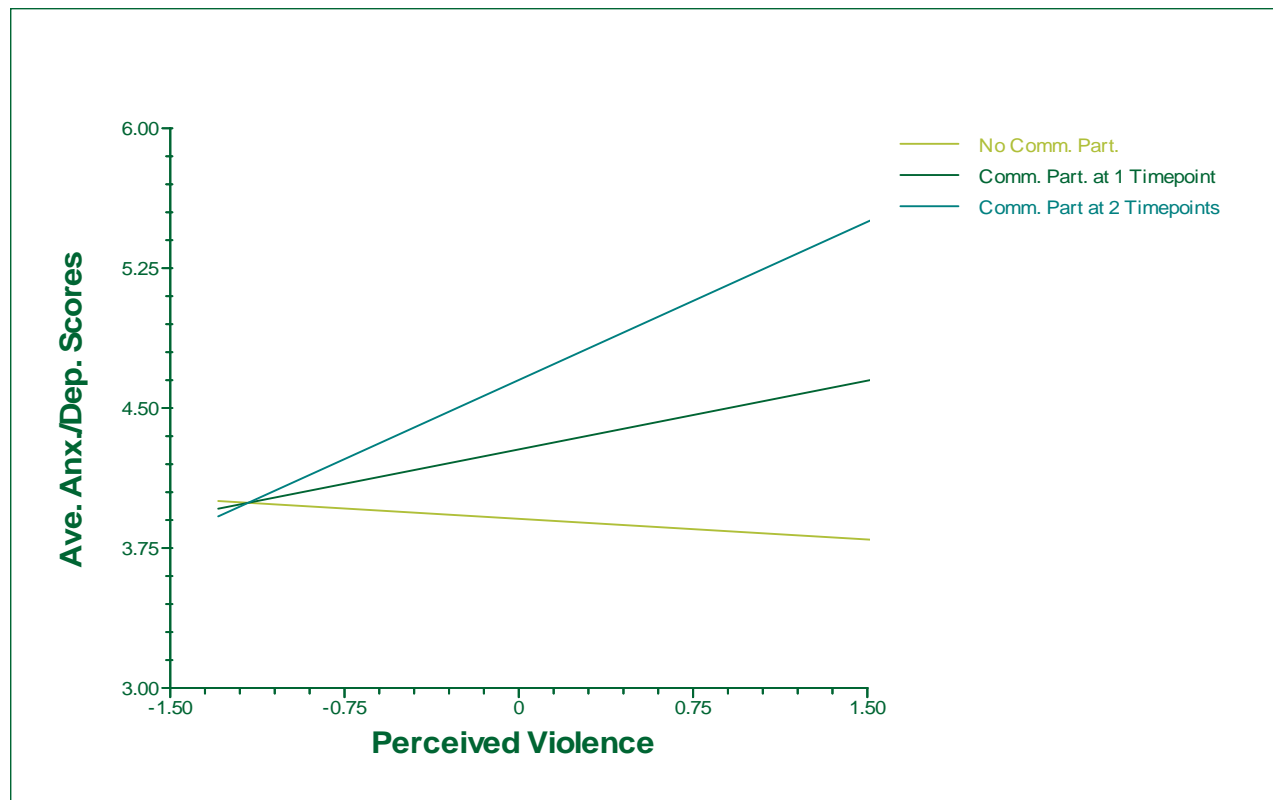
Note. $N = 1.313$; figure presents average delinquency scores adjusted for youth and maternal characteristics

Question 2: Associations between participation & change in youth's problem behavior



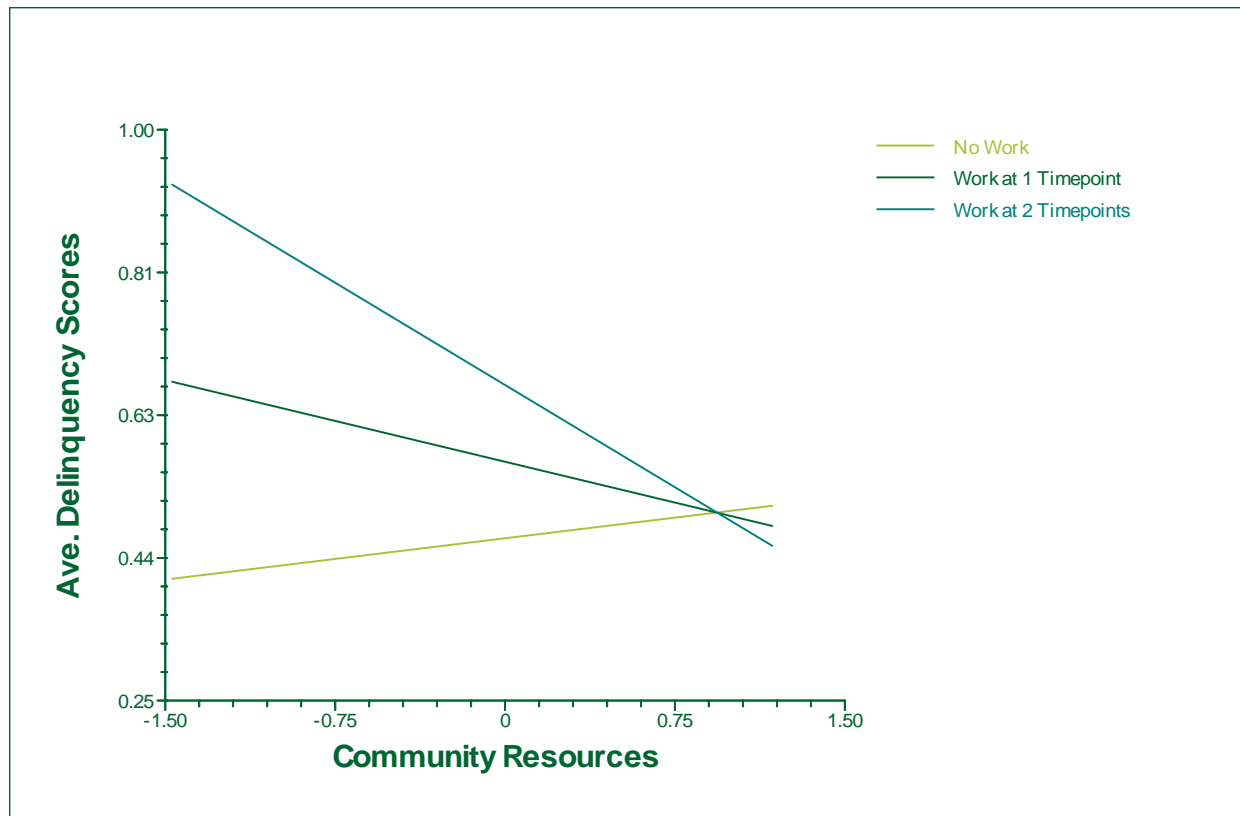
Note. $N = 1,313$; figure presents average delinquency scores over time adjusted for youth and maternal characteristics

Question 3: Cross-level interactions between participation and neighborhood characteristics



Note. $N = 1,313$; figure presents average anxiety/depression scores adjusted for youth, maternal, and neighborhood characteristics

Question 3: Cross-level interactions between participation and neighborhood characteristics



Note. $N = 1,313$; figure presents average delinquency scores adjusted for youth, maternal, and neighborhood characteristics

Summary of associations between after-school participation and youth's problem behavior

- *Sports* associated with a **decrease** in *anxiety/depression* and **increase** in *delinquency*
 - *Community-based clubs* associated with an **increase** in *anxiety/depression* in **violent** neighborhoods only, especially for youth participating for 2 years
 - *Part-time work* associated with an **increase** in *delinquency* in **resource-poor** neighborhoods
 - 2 years of participation in *student government* attenuated increasing *delinquency* trajectory
 - *Breadth* associated with *delinquency* in a *nonlinear* manner, such that *delinquency increased* for *moderately* involved youth
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Conclusions and implications

- Type, duration, and breadth of participation differentially associated with youth's problem behavior outcomes
 - Participation generally did not influence trajectory of youth's problem behavior
 - Influence of participation conditional on neighborhood characteristics, to some extent
 - Policymakers should consider context of youth's participation and mix of activities available to them
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