

Impact of School Sport Policy on Observed Physical Activity in Middle School Children

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Middle School Years

- Participation in youth sport declines significantly among both boys and girls (Casey et al., 2009; Hedstrom & Gould, 2004; President's Council on Physical Fitness and Sport, 1997)
- By 16, most adolescents have adopted a pattern of leisure activities and sport participation that will form the foundation for their adult leisure lifestyle (Green et al., 2005; Roberts, 1999).

Rationale

- Youth sports – Effective mechanism to get PA and social benefits (*American Academy of Pediatrics, 2001; 2007*)
- Intramurals recommended (*Institute of Medicine, 2005*) but little data
- Participants wanted to play more sport (*Casper et al., 2011*)

Objectives

- Compare physical activity levels of middle school children engaged in two different types of sport programs (Intramural [IM] or Varsity sports [VS])
- Associations between physical activity levels and gender, level of program supervision by type of sport program (IM or VS).

Research Questions

1. Does the type of extra-curricular school sport program affect PA levels of middle school children?
2. Do extra-curricular school sport programs affect boys' and girls' PA levels differently?
3. Does supervision within these programs impact PA levels?

Methods

- Setting
 - Four Public Middle Schools (IM and VS)
- Research Design
 - On line Survey
 - Focus Groups
 - Accelerometers – sub group of children from 4 schools
 - **SOPLAY**

Measures

SOPLAY

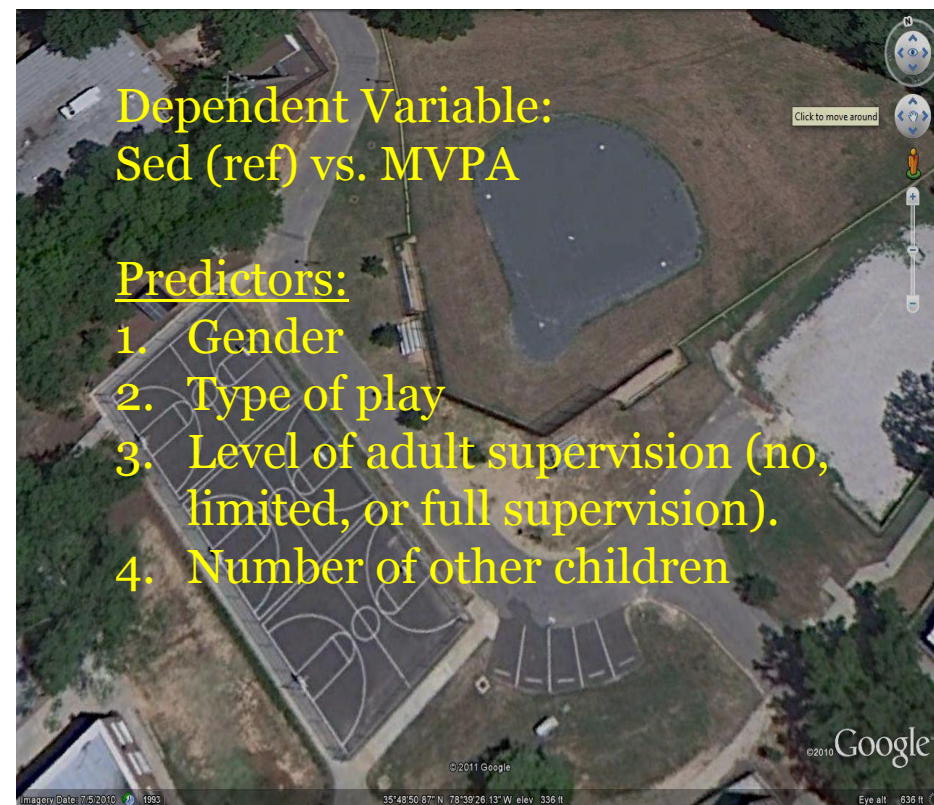
System for Observing Play and Leisure Activity in Youth (McKenzie et al., 2002)

School visits (4 Schools):

- 2.30-5:00pm
- April – May; September – December, 2009
- Monday-Thursday

Scans

- 1,510 scans (868 SOPLAY only; 642 reliability)
- 1,189 scans used in analysis (duplicates removed)
- Inter-rater reliability for SOPLAY codes was acceptable ($\kappa > 0.70$)

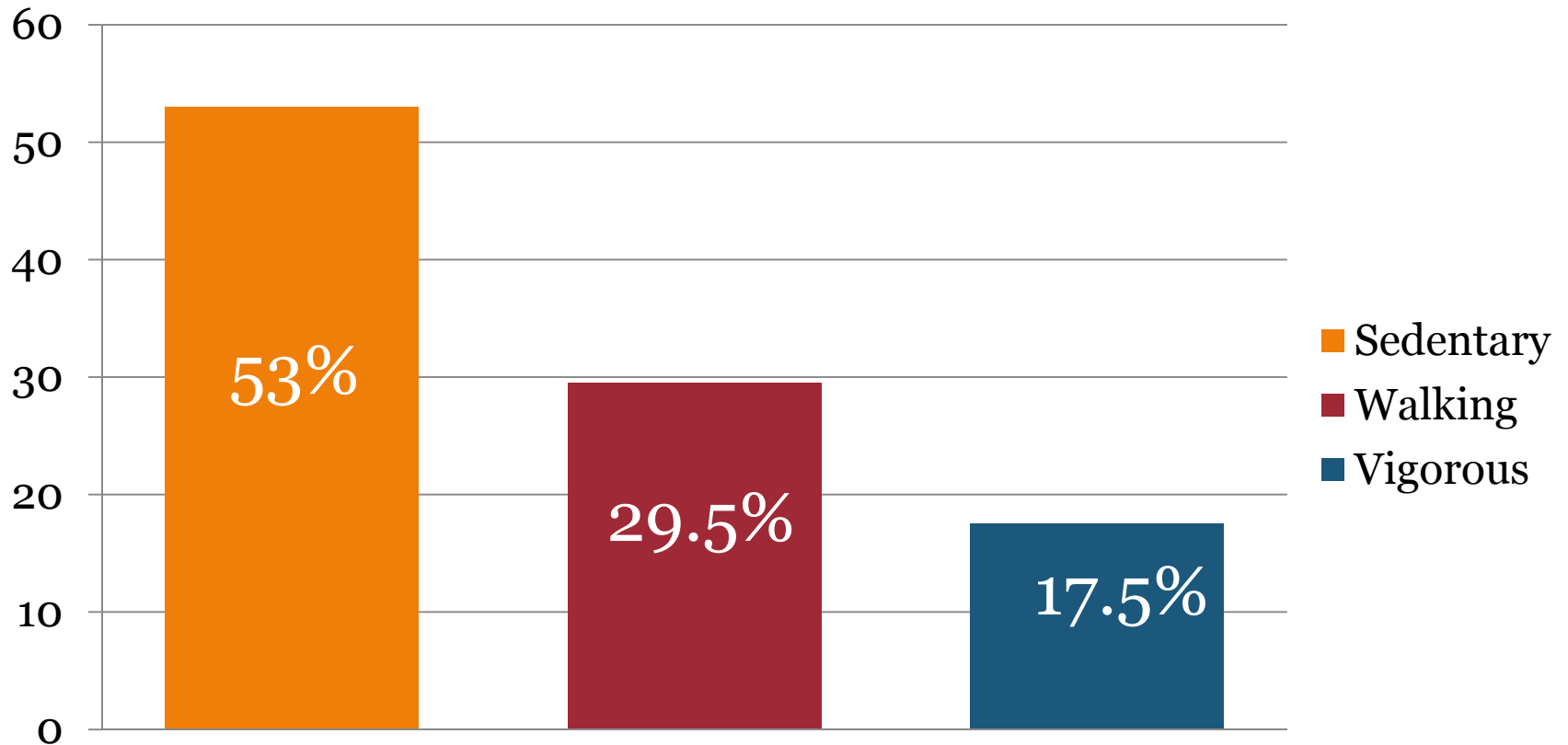


Results

- Overall, 6,821 children (52% boys and 48% girls) were observed during the study.



Percent of Children Observed PA (n=6,821)

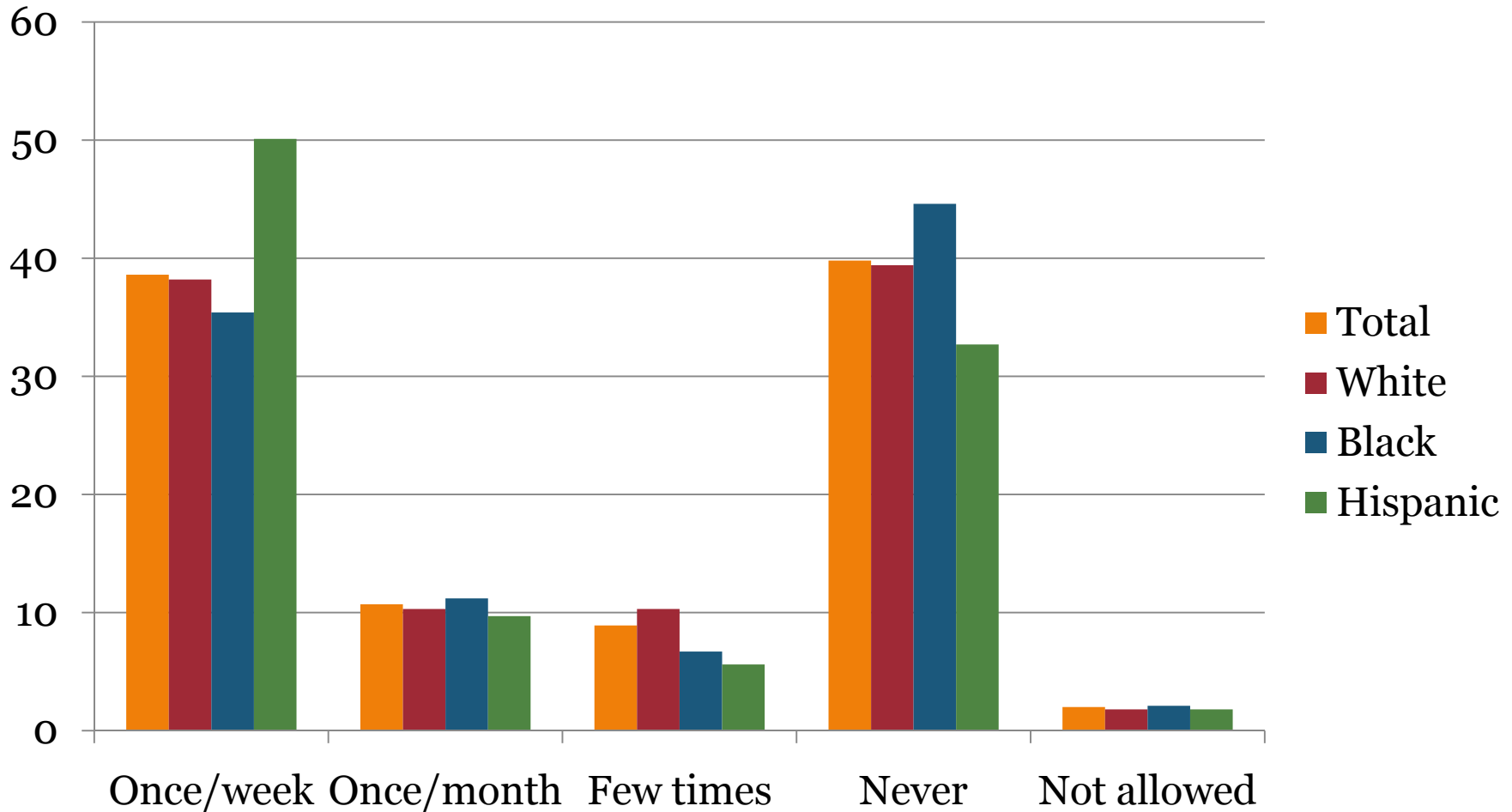


R1: Does the type of extra-curricular school sport program affect PA levels of middle school children?

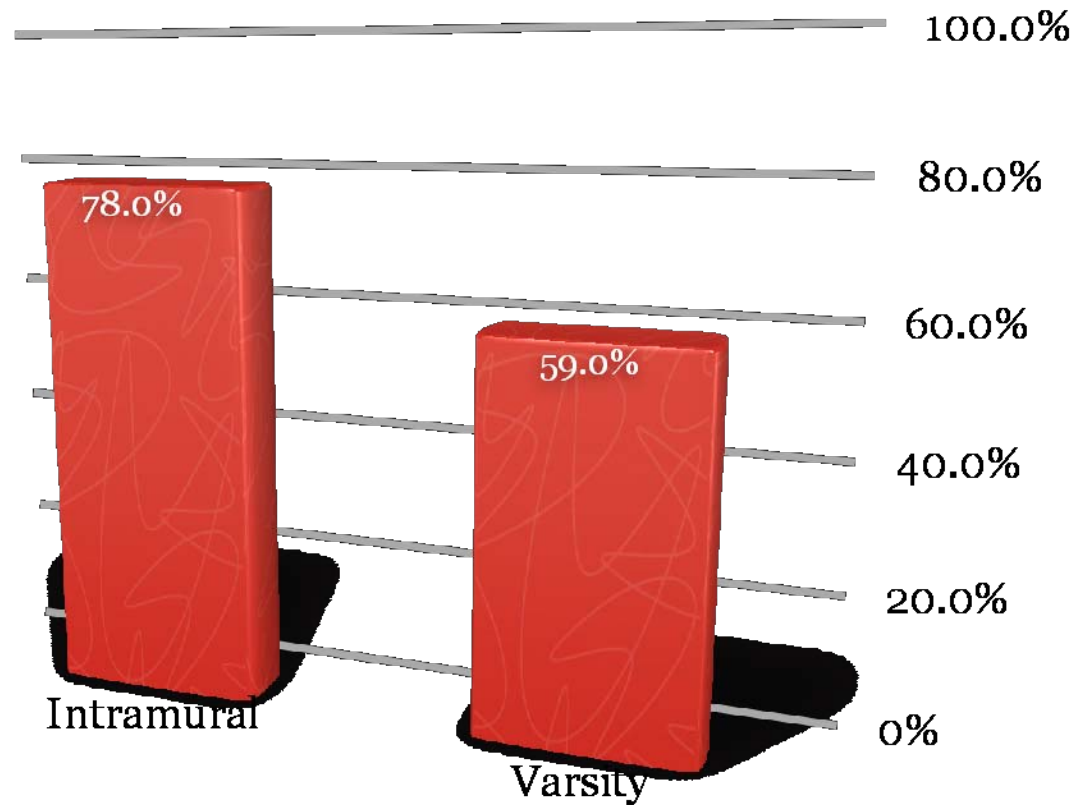


Physical activity areas were empty during 68% of observations

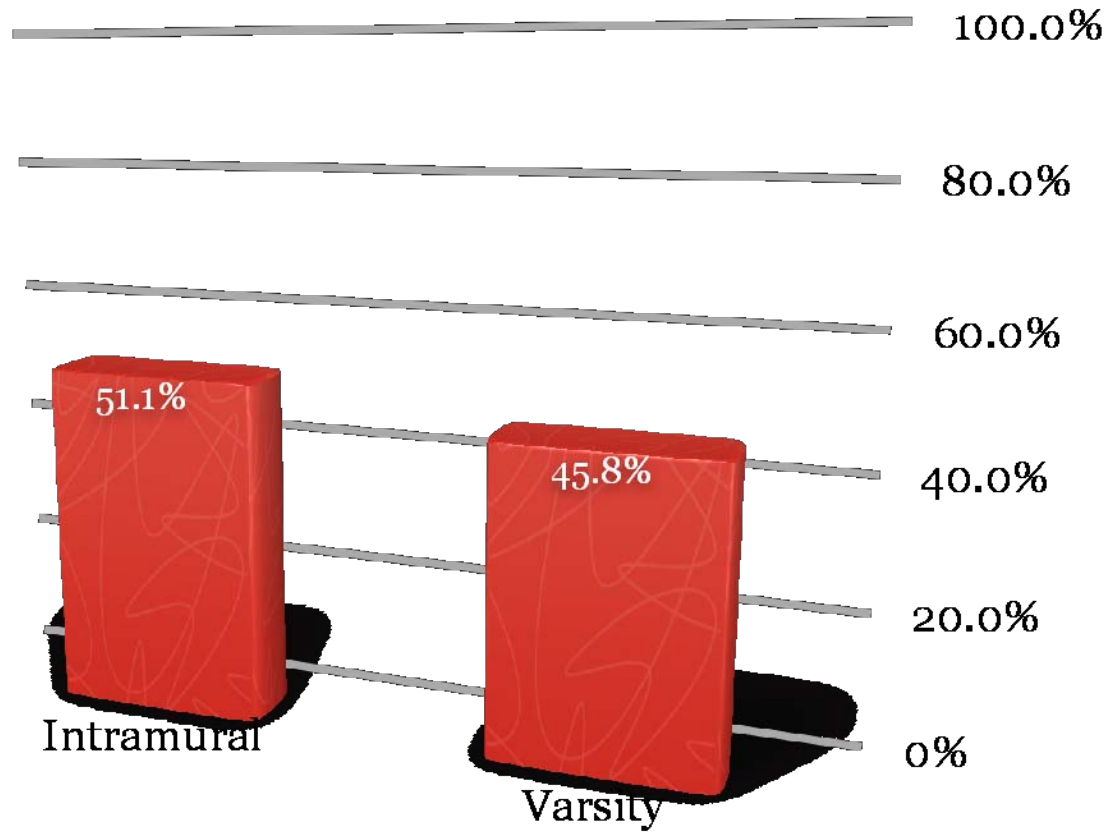
How often do you or your child use any of the playing fields or facilities at a school in your community during after-school hours or on weekends?



Unoccupied Areas



Moderate or Vigorous Physical Activity

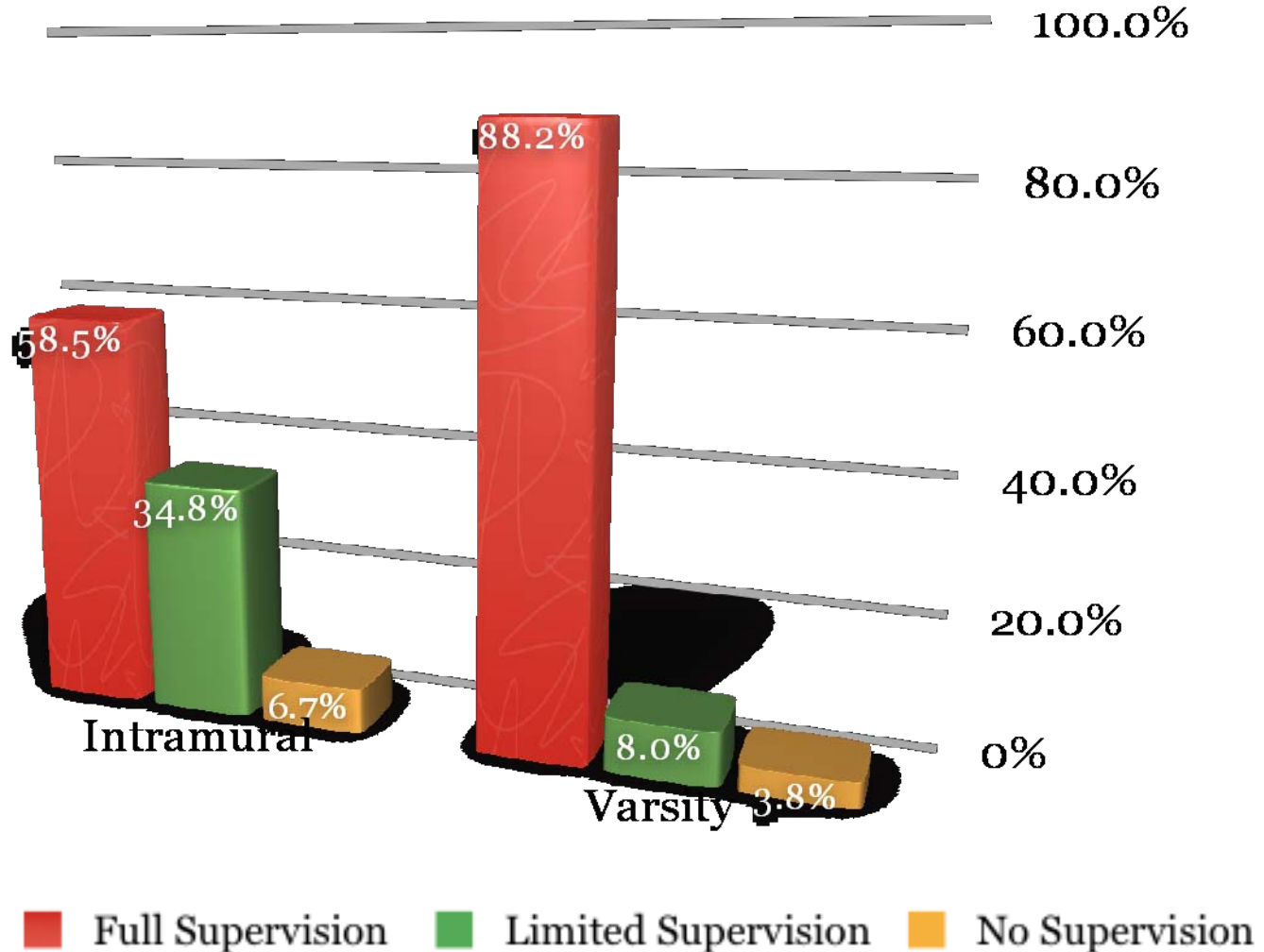


$p < .001$, $\eta^2 = .047$

R2: Do extra-curricular school sport programs affect boys' and girls' PA levels differently?

- Boys in **INTRAMURAL** sports were more likely to be engaged in VPA than girls (OR =1.87, $p < .0001$).
- No differences between girls and boys engaged in MPA levels were observed in **INTRAMURAL** schools.
- No differences in VPA levels by gender in **VARSITY** schools.
- Boys were less likely to engage MPA in **VARSITY** school sports than girls (OR =.74, $p < .0001$).

Supervision (Research question #3)



Supervision (Research question #3)

- Full supervision among **INTRAMURAL** sport participants was associated with higher odds of engaging in VPA (OR= 2.06, $p < .05$).
- Supervision (limited or full) was associated with lower odds of VPA among **VARSITY** sport participants (full supervision - OR = 0.49, $p < .001$; limited supervision OR = 0.34, $p < .0001$).

Summary

- School sport settings are under-utilized.
- Current school sport policies may impact opportunities for vigorous activity levels among children (particularly boys).
- Intramurals may not be supporting girls PA
- Supervision may be suppressing PA in highly competitive sport (see Leek et al., 2010).

Recommendations

1. Increasing joint programming/joint use of school facilities where there is “excess capacity”
2. Examine the type of adult supervision that occurs during sport to maximize physical activity levels
3. Adopting intramural programming that is more likely to facilitate activity among girls (e.g., sports exclusively for girls and more student involvement in the selection of intramural sports)
4. Monitoring time spent in actual activity during sport program and establishing minimum standards

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Questions

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