

# Active Living Research

Using Evidence to Prevent Childhood Obesity  
and Create Active Communities

## ARTICLE SUMMARY

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## Who Uses School Athletic Facilities?

### Introduction

Children spend much of their time in school, and many schools provide programs and facilities to give students opportunities to be physically active. This study examined whether the availability of sport facilities was related to students' physical activity, as well as whether children who participated in intramural sports had different levels of physical activity than children who participated in varsity sports. Intramural school sports differ from varsity school sports in that they allow every child to participate, regardless of ability. Furthermore, the range of intramural sports tends to be greater than varsity sports. Thus although traditional school sports such as soccer and basketball are available, other non-traditional sports (e.g., floor hockey, golf, dance, and flag football) are also offered.

### Key Findings

Girls were more likely to participate in varsity sports and be more physically active than girls in intramural schools. However, boys who were varsity sport participants were significantly less likely to be active than boys who were intramural sport participants. Boys were more likely than girls to participate in intramural sports. Intramural sports occurred most often in indoor spaces. The use of sports facilities was associated with more physical activity among boys only. Most school athletic facilities were not used at all after school.

### Methodology

Four middle schools with students of similar racial and socioeconomic backgrounds (Table 1) participated in the study. Two schools only offered varsity sports, and the other two only offered intramural sports. Researchers observed children's physical activity in the sports areas in each of the four schools between 2:30-4:30pm, and observed students' gender, how they were using the space, the setting (e.g., gym, multi-purpose fields, tracks), and whether there was adult supervision. To cover multiple sports seasons, observations were conducted between April 2009 and September to December 2009. In total there were 1,188 observations over 43 days. A sample of 6,735 children (52% boys and 48% girls) was observed during the study.

### SOURCE

Bocarro, J.N., Kanters, M.A., Cerin, E., Floyd, M.F., Casper, J.M., Suau, L.J., McKenzie, T.L. (2012). School sport policy and school-based physical activity environments and their association with observed physical activity in middle school children. *Health & Place*, 18(1), 31-38.

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**Table 1.** Racial/ethnic, socioeconomic status (SES), and sport policy characteristics of schools

School	Race/ethnic composition	Low SES <sup>a</sup>	Sport Policy Type	% Students Active		Total
				Boys	Girls	
East Millbrook Middle School	56% Black 31% White 9% Hispanic 4% Other N=968	43%	Varsity	12.0%	15.7%	27.7%
Daniels Middle School	30% Black 57% White 9% Hispanic 4% Other n=1006	33%	Varsity	13.1%	15.9%	29.0%
Moore Square Middle School	52% Black 45% White 0% Hispanic 3% Other n=582	33%	Intramural	7.6%	2.2%	9.8%
Centennial Middle School	36% Black 58% White 6% Other n=543	31%	Intramural	18.7%	8.3%	27.0%

<sup>a</sup> Percentage of student population receiving free or reduced price school lunch.

## Other Findings

Participants in intramural sports were most often observed in gyms (68.6% of children observed), followed by multi-purpose fields (12.2%), tracks (8.4%), and baseball fields (6.4%). Participants in varsity sports were most often observed in multi-purpose fields (31.8%), followed by gyms (28.8%), tracks (15.5%), and baseball fields (8.4%). Across all schools, physical activity areas were empty during 68 percent of observed visits, with facilities likelier to be empty in schools offering intramural sports than in schools offering varsity sports (78% vs. 59%). Boys participating in varsity sports were less likely to engage in high intensity physical activity than boys participating in intramural sports. Boys tended to be most active in the following settings: an inside studio, track, soccer/football field, open area, or basketball court. Girls were more active on a baseball field than they were in a gym.

## Implications

Our findings suggest that school sport policies may impact children's levels of physical activity. For example, it appears that boys participating in varsity school sport were significantly less likely to be active. We also found that more than half (53%) the children observed in all schools were seen lying down, seated, or standing at some point during the time they were observed, suggesting that school sports programs may not consistently engage children in physical activity. Varsity school sports had lower activity intensity among boys only.

Boys were significantly more active than girls in five of the eight activity facilities examined, which indicates that current school environments therefore may not be benefitting boys and girls equally. If so, this would suggest a need for both programming and policy change. Both intramural sports programs were coeducational, and it is possible that boys' participation could have limited girls' participation. Offering single-sex intramural sports programs may improve girls' levels of activity.

Lastly, we found that the sports facilities were often empty or not used much after school, from 2:30 to 4:30pm. Joint use of school facilities with community partners or local government agencies (such as public departments of parks and recreation) could result in greater use of facilities, by ensuring that they are available for children outside of school hours. Partnerships among school districts, local government agencies, and community groups sharing public school facilities during non-school hours can create more time for physical activity.