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Promoting Physical Activity in Schools

A statewide survey in Iowa highlights the need for schools to create an active and healthy school environment.

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Although children have a biological need to be physically active, aspects of modern life make it difficult for them to get sufficient amounts of activity during the day. When most of our generation was growing up, we walked and biked to school, had frequent physical education classes, cherished recess, and played outdoors from sunup to sundown. Children from rural areas also helped with chores on the farm before and after school. But times have clearly changed. Today, most children are driven to school and are less likely to be active after school. The lures of video games, computers, and television pull many kids indoors, and parents also have legitimate concerns about safety if their children play outside. The resulting decrease in physical activity plays a major role in the increased prevalence of children being overweight today.

Schools are not solely responsible for ensuring that children get physical activity, but research clearly shows that children learn more effectively and perform better when they are given opportunities to be active during the day. Therefore, it is important for school administrators and PE teachers to work together to promote healthy environments that help children be more physically active.

This article summarizes results of recent research examining physical activity, fitness levels, and prevalence of overweight among rural and urban youths in Iowa, with recommendations to help schools establish environments that promote physical activity in children, both in and out of school.[1]

How Active and Fit Are Today's Children?

There has been considerable interest in better understanding the status of children's activity and fitness levels. Although schools routinely conduct these types of assessments, comparative studies are needed to understand the patterns and trends that exist. We recently completed a study examining differences in physical activity, physical fitness, and overweight among rural and urban children (Joens-Matre, Welk, Calabro, Nicklay, & Hensley, 2008). A total of 41 elementary schools in Iowa participated in the project during the 2003-2004 year, distributed among 21 of the state's 99 counties. Data were obtained on 1,243 children in grade 4; 1,119 in grade 5; and 1,243 in grade 6, with 17 percent from urban areas, 54 percent from small cities, and 30 percent from rural areas.

Physical activity was assessed by a self-report measure while physical fitness was assessed by established aerobic fitness tests. Students' height and weight were measured by physical education teachers and body mass index was used to evaluate weight status.

The higher prevalence of obesity in rural areas indicated by the survey may be due to the lower socioeconomic status of rural populations, estimated at the school level by the percentage of students eligible for free and reduced-cost lunches.

These percentages were highest in rural areas (40 percent), followed by small cities (24 percent) and urban areas (18 percent). Initial results showed no significant differences by grade; therefore data from all three grades were combined and adjusted for age.

Physical Activity. Children from rural areas and small cities were more active than urban children, although differences were small to moderate. The greatest difference in physical activity among urban children as compared with children from small cities and rural areas was in activity around lunchtime at school. Girls were less active than boys at all ages and in all locations, consistent with results reported for other regions of the country.

Physical Fitness. The passing rates on the aerobic fitness assessments ranged from 82 percent to 90 percent across the schools. The rate was highest in children from small cities, with no differences evident between urban and rural children. Boys generally had higher fitness values than girls, but this was not as evident in urban youths. Urban boys showed significantly lower levels of physical fitness compared with boys from rural areas and small cities.

Body Mass Index. Despite higher activity levels, the prevalence of overweight was higher among rural children (25 percent) than children from urban areas (19 percent) and small cities (17 percent). Rural children were 1.47 times more likely to be categorized as overweight than children from small cities. The body mass index of boys and girls did not differ significantly, and the higher prevalence of overweight among rural children was consistent with results found in other regions of the country. Overall prevalence for overweight *and* at risk for overweight was 40 percent, considerably higher than the national average of 30 percent for similarly aged children.

At first glance, the results may appear contradictory given that rural children had higher levels of physical activity but higher prevalence of overweight than urban children. Diet clearly impacts weight status and was not examined in this study, but the results show that there are unique patterns and trends of physical activity, physical fitness, and overweight in youths from urban and rural populations.

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Regardless of location, the results show that youths are generally not getting sufficient activity for good health. Increased physical activity would help contribute to reducing body fat, and also provide some protection against the health risks of overweight. Schools and teachers also benefit from active and healthy children.

What Can Schools Do?

It would be nice to be able to wind the clock back to times when children primarily walked and biked to school, when they could safely play outside in neighborhood parks and streets, and when a parent was home to supervise or play with them. Back then, it was relatively easy for children to get sufficient physical activity every day, but since today's environmental conditions are not likely to change, we must think about how to wind the clock forward! From this perspective, the question becomes: How can we provide opportunities for children to be active in a world in which both parents work, the motorist has replaced the pedestrian, and engaging multimedia opportunities compete for our time and interests?

Our primary suggestion is to expand the scope and reach of physical education specialists in schools so they can help to build healthy school environments in all geographical areas.

The traditional paradigm of gym classes and fixed curricular responsibilities worked in the past, but broader approaches are needed to provide opportunities for children to be active throughout the school day. Research consistently shows that children perform as well (if not better) when additional time is provided for activity during the school day.

Companies have learned that healthy and active employees are more productive and have lower health care costs than unhealthy ones. In the same way, it is clear that children learn more effectively and perform better when they have opportunities to be active. Worksite wellness leaders also have learned that behavior change programs or awareness campaigns are not effective without broader environmental support. Similarly, improvements in physical education curricula provide only part of the answer to school-based health promotion. To be successful in promoting physical activity in schools, physical education programs should be incorporated into more comprehensive schoolwide efforts aimed at helping students live healthier and more active lives. There are a variety of ways to promote activity in the school day with a coordinated schoolwide effort:

- Incorporation of more structured recess opportunities;
- Increased access to equipment and resources before, during (at recess), and after school;
- Incorporation of "activity breaks" into the school day;
- Promotion of walk-to-school programs; and
- Schoolwide posters and campaigns about physical activity.

Teachers also can extend their influence by encouraging parents to be more involved in promoting activity. Awareness messages and prompts from teachers can remind parents of the important role they play in shaping their child's physical development and encouraging additional activity. Delivering this message through physical education newsletters or reports is another way to get more parents involved.[2]

The FITNESSGRAM youth fitness program widely used in the United States was established with the inherent goal of enhancing communication and involvement of parents in physical education. It allows teachers to print individualized reports on children's physical activity and physical fitness levels and send them home to parents with recommendations for how to improve. These reports or newsletters also serve to effectively promote greater parental involvement in physical education.

Teachers, administrators, and school officials are encouraged to work together with parents to promote active and healthy environments in schools, homes, and the community. Establishing healthy lifestyles in childhood is critical for a healthy and productive future, and that is what schools should be helping to promote.

Notes

1. The research summarized in this article was conducted by the lead author as part of a dissertation project conducted at Iowa State University. Data were collected in collaboration with Larry Hensley from the University of Northern Iowa, who led the Physical Activity and Nutrition Among Rural Youth (PANARY) study. Excerpts from the "Rural-Urban Differences in Physical Activity, Physical Fitness, and Overweight Prevalence of Children" are included with permission from the *Journal of Rural Health*.

2. A review of research linking fitness and academic performance is available from the Robert Wood Johnson Foundation through the Active Living Research initiative. It is available at **www.rwjf.org/pr/product.jsp?id=23456**.

Reference

Joens-Matre, R., Welk, G. J., Calabro, M. A., Russell, D. W., Nicklay, E., & Hensley, L. D. Rural-urban differences in physical activity, physical fitness, and overweight prevalence of children. *Journal of Rural Health, 24*(1), 2008: 49-54.

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On the Same Page

Here are suggested questions that principals and teachers can use to spark discussion about how to apply the points made in this article to their particular schools.

1. What physical activities do students at our school engage?
2. How active are the students in our school compared with national averages?
3. How do the environmental conditions of our school region help or impede the physical activity of our students?
4. How has our school used structured recess or activity breaks in the past? How can we improve those experiences?
5. How can we involve parents and the school community in promoting physical activity?