

# Chapin Hall Issue Brief

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Chapin Hall at the University of Chicago 1313 East 60th Street Chicago, IL 60637 T: 773.753.5900 F: 773.753.5940 [www.chapinhall.org](http://www.chapinhall.org)

## How Active Are Teens during Their Out-of-School Time? The View from Chicago

By Robert M. Goerge, Gretchen Ruth Cusick, Shannon Gultinan

A growing national concern about obesity and related health problems has focused attention on early risk indicators. For instance, a 2005 study by the Centers for Disease Control and Prevention discovered that 16 percent of Chicago public high school students were overweight, and another 19 percent were at risk for being overweight. How can we alleviate youthful obesity risk and promote healthier behavior? Increasing levels of physical activity would be a significant first step. And policymakers and administrators can promote this goal by removing economic, programmatic, cultural, and environmental obstacles.

Chapin Hall conducted a survey from 2002 to 2007, asking high school students in the Chicago Public Schools how they spend their out-of-school time. Drawing on responses from 23,563 teens during the 2005–2006 school year, researchers defined four levels of physical activity. By identifying key factors associated with lower levels of physical activity, the Chapin Hall study provides information that can help in designing programs and activities that encourage participation

by inactive and less active youth—thus improving their chances of enjoying good health throughout adolescence and into adulthood.

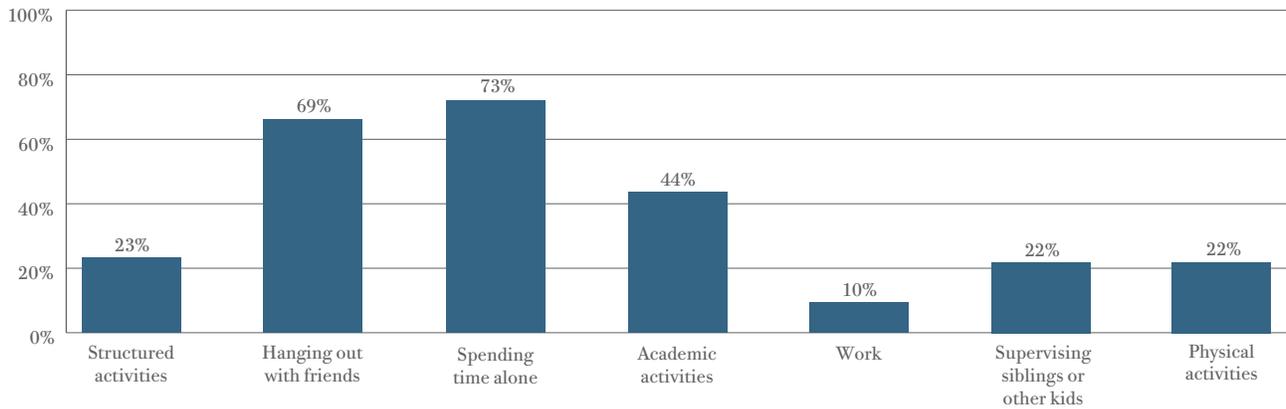
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### How Do Chicago Teens Spend Their Out-of-School Time?

Chapin Hall’s annual surveys asked Chicago teens how they usually spent their out-of-school time, what types of afterschool activities they participated in, and whether they felt there were safe places to “hang out” in their neighborhoods. The surveys also asked for information about various categories of physical activity, including participation in organized and informal sports or exercise. In addition, it asked teens to describe what types of activities — both structured and unstructured — they had engaged in on the previous day, in a typical week, and on weekends, and how often they engaged in “fun” activities with their families.

Twenty-two percent of Chicago teens reported participating in physical activities on any given day

## How many high school students participate in specific activities on any given day?



during the 2005–2006 school year.<sup>1</sup> These activities might include team sports, informal sports, or other exercise. But participation in *physical activities* is one of the least frequent types of activities the students reported. *Hanging out with friends* and *spending time alone* are more frequently reported, at 69 percent and 73 percent, respectively. Neither typically entails any type of physical activity. For example, *hanging out with friends* means talking on the phone or chatting online, or spending time with a boyfriend or girlfriend. Examples of *spending time alone* include watching TV, listening to music, sleeping, reading, or playing or working on a computer.

Forty-four percent of respondents spent time on *academic activities*, and 23 percent were engaged in *structured activities*, which could include such things as music lessons or volunteer work. *Supervising siblings or other kids* was reported by 22 percent of respondents, and *work* was reported by 10 percent of respondents. Of course, other types of activities, such as *supervising siblings or other kids*, might also involve a certain amount of physical exertion.

## Three-Fourths of Chicago Youth Are Inactive or Only Moderately Active.

To further distinguish levels of physical activity among teens, Chapin Hall researchers analyzed the responses to questions on physical activity using a

### The Chapin Hall Survey

We asked teens what they did on the previous day and how much time they spent on those activities during the previous weekend. We also asked students to go through this same list of activities and indicate whether, in a typical week, they engage in the activity *rarely* or *never*, *less than once a week*, *once or twice a week*, or *every day* or *almost every day*. Finally, we asked teens how often in a typical week they do something fun with their families, such as playing a game, attending a sporting event, or going swimming. In previous survey analysis, we found that parents' connections with their adolescents seemed to have an effect on young people's physical activity. Youth who did something fun with their family more than three days a week were significantly more likely to participate in sports than youth who were not engaged with their family in this way. Using these questions, we analyzed five indicators: formal sports participation, informal sports participation, typical weekly physical activity, physical activity last weekend, and family activity.

<sup>1</sup> Chicago Public Schools has a waiver for the physical education (P.E.) requirement, so students do not take P.E. every day for 4 years. Currently, students take P.E., which includes drivers' education and health classes, for 2 years.

statistical technique called *latent class analysis*, which identified four clusters of young people based on the amount, type, and frequency of their physical activity. The clusters, or groups, were defined as *inactive*, *moderately active*, *active*, and *very active*.

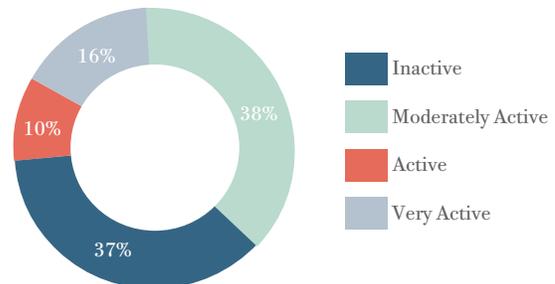
The largest group, which includes 38 percent of the youth surveyed, is described as *inactive*. It is characterized by a nearly total lack of physical activity, including formal and informal sports. Youth in this class are most likely to indicate that they *rarely or never* participate in physical activity during the week and are unlikely to have participated in physical activity on the previous weekend. This group is also the least likely to say they do fun things with their family in a typical week.

The *moderately active* cluster, which includes 37 percent of respondents, also has very low levels of sports participation. Although teens in this group tend to engage in some type of physical activity at least once or twice during a typical week, they were not physically active during the preceding weekend. They also have moderate levels of family activities.

The remaining one-fourth of youth in the survey are classified as *active* (10%) or *very active* (16%). The *active* youth participate primarily in informal sports or exercise rather than in formal sports, and they tend to participate in some kind of physical activity anywhere from once or twice to almost every day during a typical week. Teens in the *very active* group tend to have the highest participation in formal sports and report being physically active every day or almost every day of the week as well as engaging in physical activity for more than three hours during the previous weekend.

As shown in the graph below, the responses reveal that a low level of physical activity is the rule, rather than the exception, among Chicago public high school students. Seventy-five percent of youth in the survey are classified as *inactive* or only *moderately active*. With their very

### Nearly 40% of Chicago teens get little or no exercise.



Due to rounding, totals do not add to 100 percent.

low tendency to participate in sports and other physical activities, this large number of teens likely falls far short of the National Center for Chronic Disease Prevention and Health Promotion’s recommended levels of physical activity (at least 60 minutes of activity per day, for at least 5 days per week).

## How Do Active and Inactive Youth Differ?

Researchers performed further analyses to investigate differences in the characteristics of youth across the activity-level clusters—that is, to identify risk factors for lower levels of physical activity.<sup>2</sup> Both individual and neighborhood characteristics were found to predict membership in the less-active groups (*inactive*, *moderately active*, and *active*) as opposed to the *very active* group.

### Individual Characteristics

National studies of obesity trends among children have found that the increased prevalence of overweight is highest among Mexican American and non-Hispanic black adolescents. Among adolescent females (ages 12 to 19), the highest prevalence of overweight and obesity is

<sup>2</sup> We conducted a multilevel multinomial regression analysis to predict membership in each class (inactive, moderately active, and active) when compared with the very active class.

found in black (non-Hispanic) girls. Among adolescent males (ages 12 to 19), the highest overweight and obesity prevalence is found in Mexican Americans. Studies have also shown that female adolescents are less active than their male counterparts, with black girls having the highest prevalence of inactivity by race and gender. Ninth- and tenth-grade students are more likely than eleventh- and twelfth-grade students to be meeting the levels of physical activity currently recommended by the Centers for Disease Control and Prevention.

The Chapin Hall study discovered similar trends among the four identified activity-level clusters in relation to students' gender, race, and ethnicity; age; and self-esteem.

**Gender, race, and ethnicity.** Although, in general, females are more likely than males to fall into the *inactive* and *moderately active* classes than into the *very active* group, differences in activity level between males and females depend on race and ethnicity. Hispanic youth overall are more likely to be in the less-active classes than in the *very active* class, mainly because of the lower rate of physical activity among Hispanic girls. African American females are also more likely to be *inactive* or *moderately active* than white females. In contrast, African American males, when compared to white males, are more likely to be in the *active* or *very active* clusters.

**Age.** Older youth are more likely to fall into the *inactive* or *moderately active* groups than into the *very active* group, and less likely to fall into the *active* group. This may indicate that, although youth in the older grades are generally less active overall, those who are still physically active are more likely to be participating in formal sports than doing informal activities.

**Self-esteem.** Youth with higher self-esteem scores are more likely to fall into the *very active* group than into the *inactive* or *active* groups.

## Neighborhood Characteristics

Several studies have associated high levels of neighborhood crime with inactivity among adolescents, and a concern for personal safety is often posited as a barrier to physical activity. One Chicago study found that neighborhood social disorder and negative perceptions of neighborhood safety were significantly associated with lower levels of physical activity by youth. Chapin Hall also found that youths' opinions about the safety and cohesiveness of their neighborhoods were related to their likelihood of being physically active.

**Safe places.** The survey asked students if there were safe places in their neighborhoods (like parks or community centers) where they could hang out with friends. For both boys and girls, youth who reported having safe places to hang out were more likely to be *very active* than to be *inactive* or *moderately active*.

**Neighborhood cohesion and trust.** Students rated their neighborhoods using the Social Cohesion and Trust Scale, a five-item scale developed by the Project on Human Development in Chicago Neighborhoods. A higher score on the scale means that a great amount of social cohesion is perceived to be present in the neighborhood. In general, youth who reported higher social cohesion in their neighborhoods were more likely to be in the *very active* group than in any of the less-active groups. However, this general finding appears to be different for boys and girls. Among girls, perceiving high neighborhood cohesion is related to increased odds of being in the *very active* group rather than in the *moderately active* group. On the other hand, among boys, perceiving high neighborhood cohesion is related to increased odds of being *moderately active* or *active* rather than *very active*. These findings suggest that if perceived neighborhood cohesion is related to students' activity level, it operates differently for males and females.

### **Neighborhood poverty rate and access to programs.**

The study suggests that, in general, youth living in high-poverty areas are less likely to be *very active*. Yet, as with individual perceptions of neighborhood cohesion, the relationship between living in a high-poverty area and being physically active appears to be different for males and females. Girls in high-poverty areas seem to be less active, while boys are more active. In particular, girls living in a higher-poverty area are more likely to be *inactive* than they are to be *very active*. Conversely, boys living in a higher-poverty area are more likely to be *very active* than to be *active*. Although these findings suggest that a neighborhood's ability to provide opportunities for youth may be related to youth activity, the study does not find any significant relationship between the supply of afterschool programs, measured by the number of available program slots per youth within a 1-mile radius of each census tract, and youth activity level.<sup>3</sup>

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## **Can Afterschool Programs Increase Teens' Physical Activity?**

Although the Chapin Hall study does not reveal any direct connection between the *quantity* of afterschool program slots and levels of physical activity, the information on risk factors provides valuable insights into how *qualitative* changes might make these programs more effective in serving the youth and neighborhoods in greatest need.

A foremost concern is attracting less-active teens to participate and possibly change their activity levels. Results of this analysis suggest that programs need to provide a more diverse range of activities that might appeal to the 75 percent of Chicago youth who do not engage in regular physical activity.

Addressing some of the following individual factors may encourage participation:

**Gender and ethnic preferences.** Intramural sports are very popular with boys and will always be a staple of afterschool programs for teens. However, simply opening up the gym will not be enough to improve overall fitness levels. As seen in the research results, males are already more active than females. Encouraging teenage girls—especially African American and Hispanic girls—is an important priority. This will require greater understanding of the reasons why girls tend to be less active than boys and participate less in team sports.

**Importance of self-esteem.** A 2008 report by the Department of Health and Human Services demonstrated that regular physical activity can promote self-esteem, and that reduced body weight may be either a cause or an effect of increased activity. At the same time, low self-esteem may be associated with other characteristics (for example, shyness, worries about fitting in) that may make youth less comfortable with team sports. Different strategies for reaching this group could be explored; for example, they might be receptive to activities such as tai chi, hiking, bicycling, or helping with a community garden.

**Needs of older adolescents.** The lower rate of physical activity among older adolescents—except for those still involved in organized sports—also requires further exploration. Teens aged 16 or older are developing new interests and taking on new responsibilities as they mature. Therefore, they may welcome activities that provide not only a continuation of physical activity but also opportunities for developing leadership or other skills.

<sup>3</sup> This indicator comes from data collected by Chapin Hall on organizations providing afterschool services and activities. To determine the existing program slots in each community, we mapped the relationship between the number of youths aged 13–17 in each census tract and the number of slots in afterschool programs within a 1-mile radius around that tract. The method used apportions slots in a way that prevents them from being multiply counted. The 1-mile radius is meant to capture the distance teens must go to attend an afterschool program; however, this figure is an approximation.

**Understanding the difference between *inactive* and *moderately active*.** When considering more diverse offerings, policymakers may also have to weigh the need for different approaches for the two less-active clusters identified in this study.

Students in the *moderately active* group are active at least once or twice per week. Learning more about what activities they *do* participate in, and when and where these activities occur, might be a useful first step toward developing additional opportunities. The *inactive* group poses different challenges, as these youth don't have a baseline level of physical activity to build on. The question of how these youth do spend their time needs further exploration.

**Neighborhood factors.** The Chapin Hall study suggests that neighborhood or neighborhood perception factors are related to young people's opportunities for regular physical activity. Poverty and unsafe environments often occur in the same places: Young people living in poorer neighborhoods and those reporting fewer safe places to hang out are less likely to be physically active. For many of these teens, physical activity may be circumscribed by the need to avoid potentially dangerous places; they may not be able to walk even a few blocks to a community center if it means crossing a gang boundary. The clear need to provide safe, well-supervised places for youth to congregate and have opportunities for physical activity may be hampered by the difficulty of finding adequate space and facilities. In high-poverty areas, the challenges are likely to be compounded by inadequate financial resources.

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## How Can Policymakers and Program Planners Use This Information?

Tackling risk factors like these will likely require major community and citywide efforts. In the meantime, Chapin Hall's findings can suggest some policy initiatives and areas for further investigation that

might help in establishing a framework for future development. For example, the study may inform policy initiatives to increase the supply of safe opportunities through a creative use of already-existing resources. Neighborhood schools might play an important role in developing effective activity-promotion programs, since they have the necessary facilities (gyms, playing fields, and classroom space that is often unused after school and on weekends), and young people are accustomed to traveling to school daily.

This study is perhaps most useful in highlighting the importance of targeted approaches in developing and implementing afterschool activities for teens. The four clusters identified by Chapin Hall's analysis offer a good place to begin. Teens who are entirely inactive may not respond to the same program offerings and outreach as those who regularly participate in team sports. Program offerings and attempts at engagement should be informed by the characteristics of the youth they seek to engage as well as the neighborhood context in which they live.

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# ChapinHall at the University of Chicago

Established in 1985, Chapin Hall is an independent policy research center whose mission is to build knowledge that improves policies and programs for children and youth, families, and their communities.

Chapin Hall's areas of research include child maltreatment prevention, child welfare systems and foster care, youth justice, schools and their connections with social services and community organizations, early childhood initiatives, community change initiatives, workforce development, out-of-school time initiatives, economic supports for families, and child well-being indicators.

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## Related Publications

Goerge, R. M., Chaskin, R., & Gultinan, S. (2006). What High School Students Do in their Out-of-School Time: 2003-2005. Chicago: Chapin Hall Center for Children at the University of Chicago

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## Contact

**Chapin Hall  
at the University of Chicago**  
1313 East 60th Street  
Chicago, IL 60637  
T: 773.753.5900  
F: 773.753.5940  
[www.chapinhall.org](http://www.chapinhall.org)