

4.2 Physical Activity

Despite the health benefits of regular physical activity, only two out of three (60%) of Americans are active at recommended levels.¹

Social environments such as school, work, family and friends can significantly influence an individual's level of physical activity. However, characteristics of our communities such as the accessibility and location of parks, trails, sidewalks, and recreational centers as well as street design, density of housing, and availability of public transit may play an even greater role in promoting or discouraging an individual or family's level of physical activity.²

Many technological advances and conveniences that have made our lives easier and less active, many personal variables, including physiological, behavioral, and psychological factors, may affect our plans to become more physically active. In fact, the ten most common reasons adults cite for not adopting more physically active lifestyles are: do not have enough time to exercise, find it inconvenient to exercise, lack self-motivation, do not find exercise enjoyable, find exercise boring, lack confidence in their ability to be physically active (low self-efficacy), fear being injured or have been injured recently, lack self-management skills, such as the ability to set personal goals, monitor progress, or reward progress toward such goals, lack encouragement, support, or companionship from family and friends, and do not have parks, sidewalks, bicycle trails, or safe and pleasant walking paths convenient to their homes or offices.³

Regular physical activity is one of the most important things you can do for your health. It can help control your weight, reduce your risk of cardiovascular disease, reduce your risk for type 2 diabetes and metabolic syndrome, reduce your risk of some cancers, strengthen your bones and muscles, improve your mental health and mood, improve your ability to do daily activities and prevent falls if you are an older adult, and increase your chances of living longer.⁴

¹ Physical Activity for Everyone: Physical Activity, Centers for Disease Control, 2012, accessed at <http://www.cdc.gov/physicalactivity/everyone/health/index.html>.

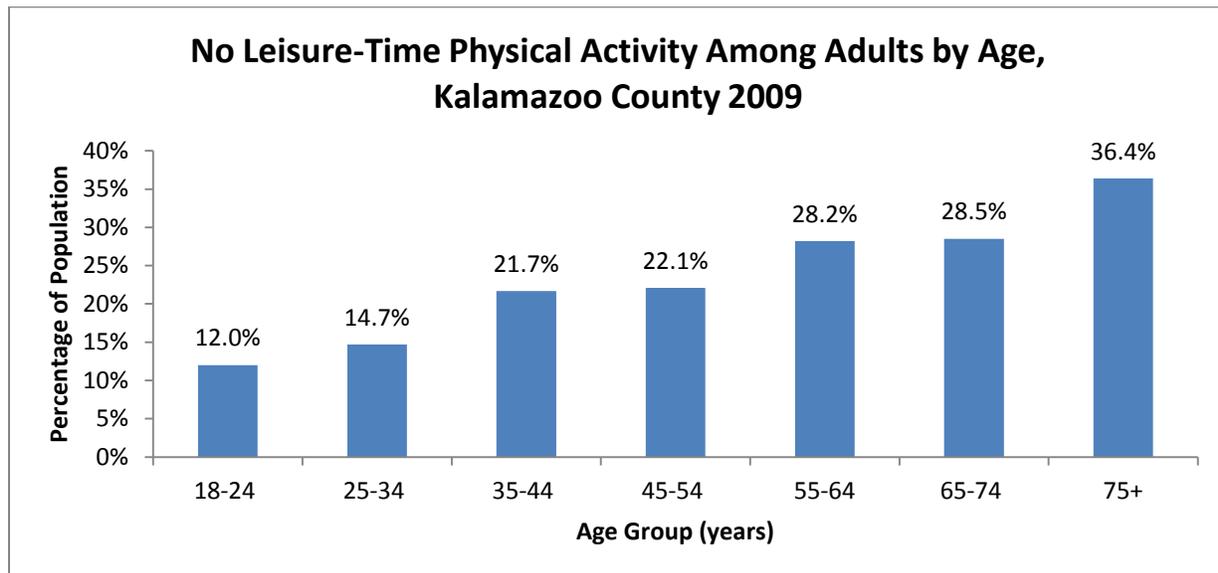
² Physical Activity for Everyone: Making Physical Activity Part of Your Life: Overcoming Barriers to Physical Activity, Centers for Disease Control, 2012, accessed at <http://www.cdc.gov/nccdphp/dnpa/physical/life/overcome.htm>

³ Physical Activity for Everyone: Making Physical Activity Part of Your Life: Overcoming Barriers to Physical Activity, Centers for Disease Control, 2012, accessed at <http://www.cdc.gov/nccdphp/dnpa/physical/life/overcome.htm>

⁴ Physical Activity for Everyone: Making Physical Activity Part of Your Life: Health Benefits to Physical Activity, Centers for Disease Control, 2012, accessed at <http://www.cdc.gov/physicalactivity/everyone/health/index.html>.

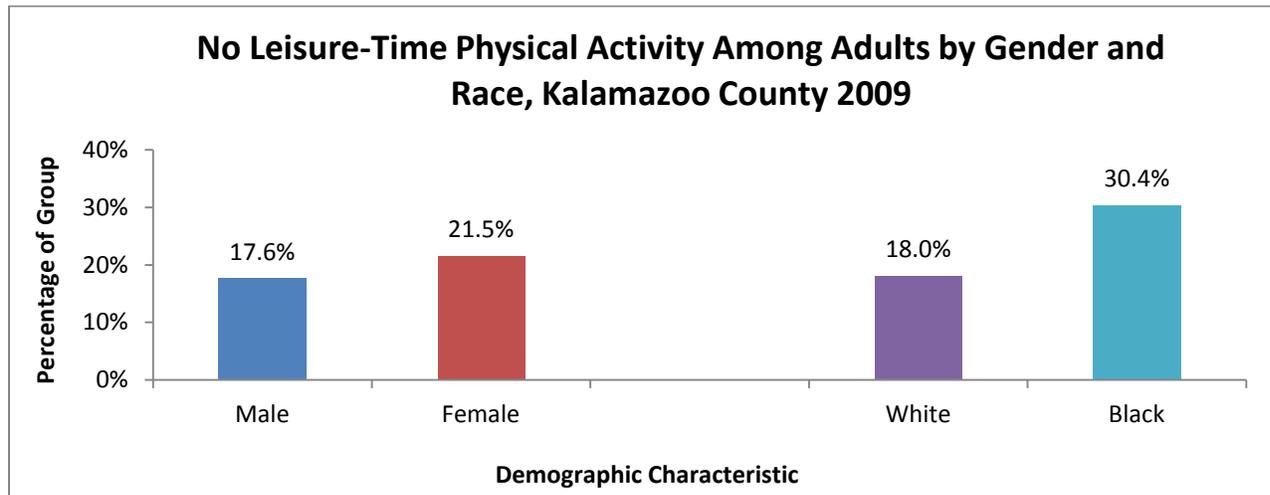
4.2.1 No Leisure-Time Physical Activity

In Kalamazoo County in 2009, 19.6% of adults reported no leisure-time physical activity. Leisure-time physical activity varied by age group, with a decreasing proportion of the population participating in leisure-time physical activity as age increased. Young adults were most likely to participate in leisure-time physical activity (only 12.0% of adults aged 18 to 24 years reported they did not participate in leisure-time physical activity) and seniors were least likely to report participating in leisure-time physical activity (28.5% of adults aged 65 to 74 years and 36.4% of adults aged 75 years and older reported they did not participate in any leisure-time physical activity).



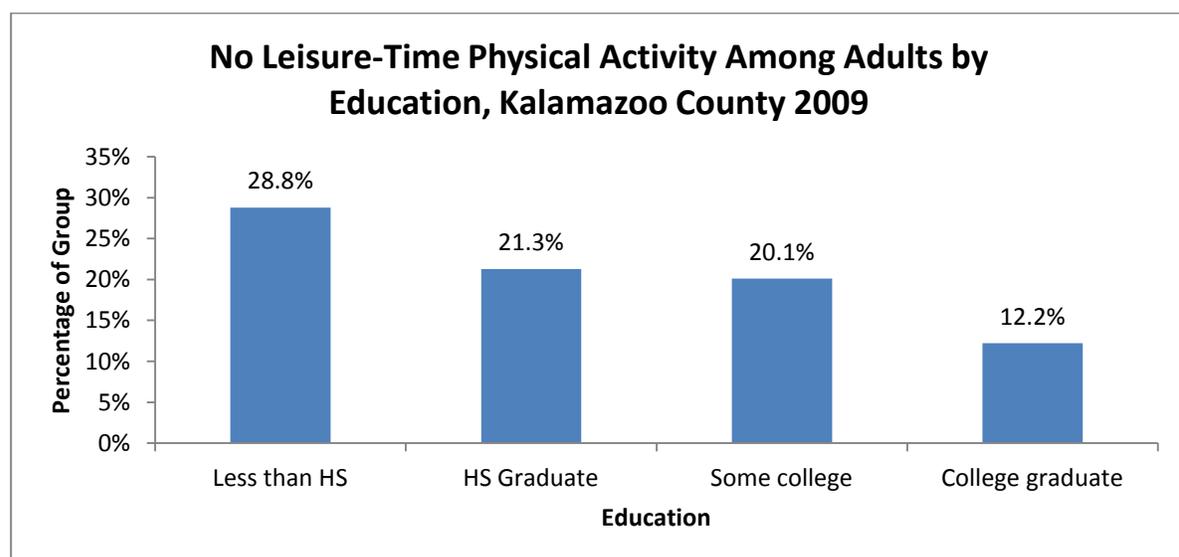
Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

Participation in leisure-time physical activity differed by sex and by race in Kalamazoo County in 2009. Females were less likely than males to participate in leisure-time physical activity (21.5% of females compared to 17.6% of males reported no leisure-time physical activity). Black adults were less likely than white adults to participate in leisure-time physical activity with 30.4% of black adults not participating in leisure-time physical activity, while only 18.0% of white adults reported no leisure-time physical activity.

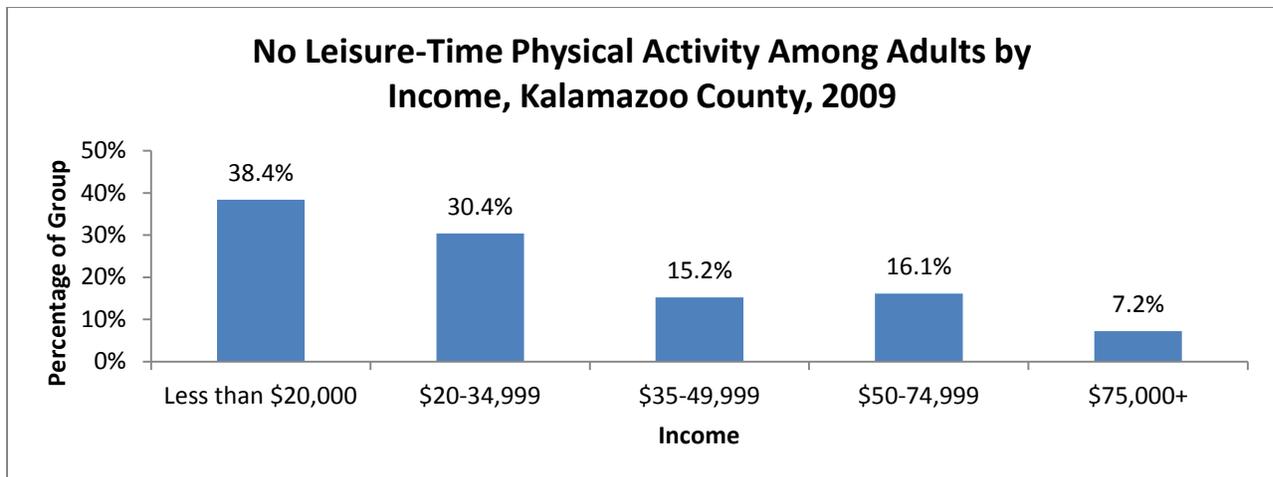


Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

Participation in leisure-time physical activity varied across income and education levels, as well. As income level and educational level increased, participation in leisure-time physical activity increased. While 28.8% of adults who did not graduate from high school reported having no leisure-time physical activity, only 12.2% of college graduates did not participate in leisure-time physical activity. Among adults earning less than \$20,000, 38.4% reported no leisure-time physical activity, while among adults earning \$75,000 and above, only 7.2% did not participate in leisure-time physical activity.

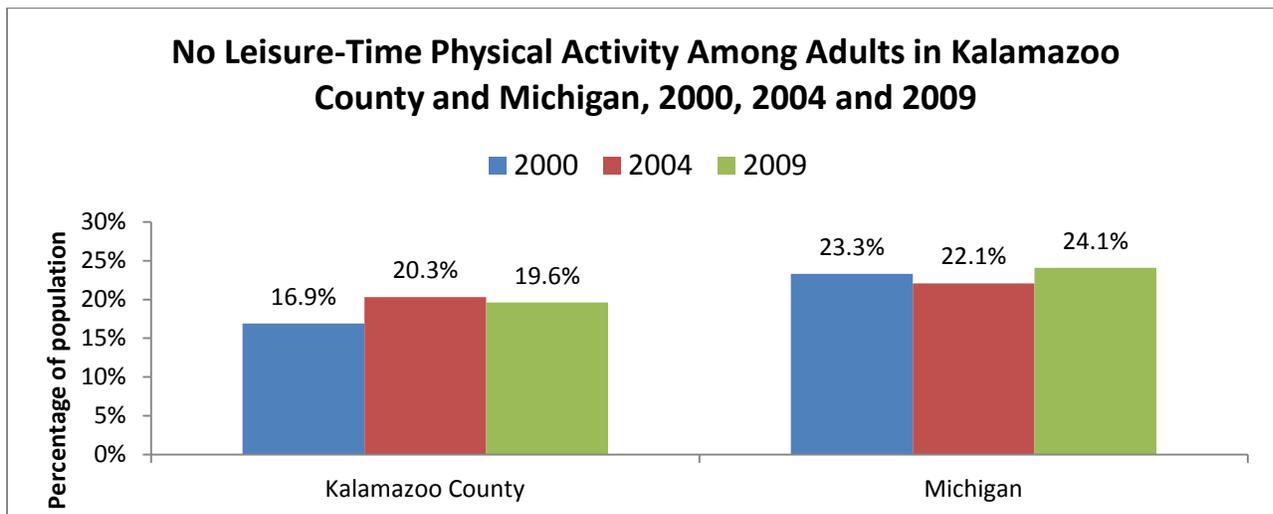


Source: Kalamazoo County 2009 Behavioral Risk Factor Survey



Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

Participation in leisure-time physical activity decreased slightly between 2000 and 2009 in Kalamazoo County. Leisure-time physical activity was more common among Kalamazoo County residents than Michigan residents, as surveyed in the years 2000, 2004, and 2009. In 2009, 24.1% of Michigan residents reported no leisure-time physical activity, and 19.6% of Kalamazoo County residents reported this.



Source: Michigan and Kalamazoo County 2000-2009 Behavioral Risk Factor Survey

No Leisure-Time Physical Activity Among Adults, Kalamazoo County 2009

Demographic Characteristics	No Leisure-Time Physical Activity ^a	
	%	95% C.I.
Total	19.6	(14.9 - 25.4)
Age		
18-24 years	12.0	(3.8 - 32.0)
25-34 years	14.7	(6.9 - 28.8)
35-44 years	21.7	(14.3 - 31.5)
45-54 years	22.1	(14.6 - 32.0)
55-64 years	28.2	(19.6 - 38.7)
65-74 years	28.5	(20.4 - 38.3)
75 years +	36.4	(25.4 - 49.1)
Gender		
Male	17.6	(11.4 - 26.4)
Female	21.5	(14.9 - 30.0)
Race		
White non-Hispanic	18.0	(13.2 - 24.0)
Black non-Hispanic	30.4	(13.5 - 55.0)
Education		
Less than HS	28.8	(10.3 - 58.9)
HS Graduate	21.3	(14.6 - 30.0)
Some college	20.1	(12.1 - 31.5)
College graduate	12.2	(8.2 - 17.6)
Income		
Less than \$20,000	38.4	(24.3 - 54.7)
\$20,000-34,999	30.4	(19.1 - 44.6)
\$35,000-49,999	15.2	(7.3 - 28.8)
\$50,000-74,999	16.1	(8.5 - 28.1)
\$75,000+	7.2	(3.9 - 12.8)
City/Out-County		
City of Kalamazoo	27.5	(18.4 - 39.1)
Rest of County	17.1	(11.0 - 25.7)
Within City of Kalamazoo		
White in City	21.4	(13.2 - 32.8)
Black in City	37.2	(17.1 - 63.0)
^a The proportion who reported not participating in any leisure-time physical activities or exercises such as running, calisthenics, golf, gardening, or walking during the past month.		

Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

4.2.2 Moderate and Vigorous Physical Activity: Duration and Frequency

Current physical activity recommendations from the Centers for Disease Control and Prevention, American College of Sports Medicine, and Healthy People 2010 are that adults perform moderate physical activity for at least 30 minutes on five days per week, or that adults perform vigorous physical activity for at least 20 minutes on three days per week.^{5,6}

Moderate-intensity physical activity refers to a level of effort in which a person should experience:

- Some increase in breathing or heart rate
- A "perceived exertion" of 11 to 14 on the Borg scale⁷
- The effort a healthy individual might expend while walking briskly, mowing the lawn, dancing, swimming, or bicycling on level terrain, for example.
- 3 to 6 metabolic equivalents (METs)⁸; or
- Any activity that burns 3.5 to 7 Calories per minute (kcal/min)

Vigorous-intensity physical activity may be intense enough to represent a substantial challenge to an individual and refers to a level of effort in which a person should experience:

- Large increase in breathing or heart rate (conversation is difficult or "broken")
- A "perceived exertion" of 15 or greater on the Borg scale;
- The effort a healthy individual might expend while jogging, mowing the lawn with a nonmotorized pushmower, participating in high-impact aerobic dancing, swimming continuous laps, or bicycling uphill, carrying more than 25 lbs up a flight of stairs, standing or walking with more than 50 lbs for example.
- Greater than 6 metabolic equivalents (METs); or
- Any activity that burns more than 7 kcal/ min

Explanations for moderate and vigorous physical activity from the Centers for Disease Control and Prevention website⁹

⁵ Centers for Disease Control and Prevention/American College of Sports Medicine; online reference at <http://www.cdc.gov/nccdphp/dnpa/physical/recommendations/index.htm>

⁶ Healthy People 2010; online reference at <http://www.cdc.gov/nccdphp/dnpa/physical/recommendations/index.htm>

⁷ Borg rating of perceived exertion scale explained at http://www.cdc.gov/nccdphp/dnpa/physical/measuring/perceived_exertion.htm

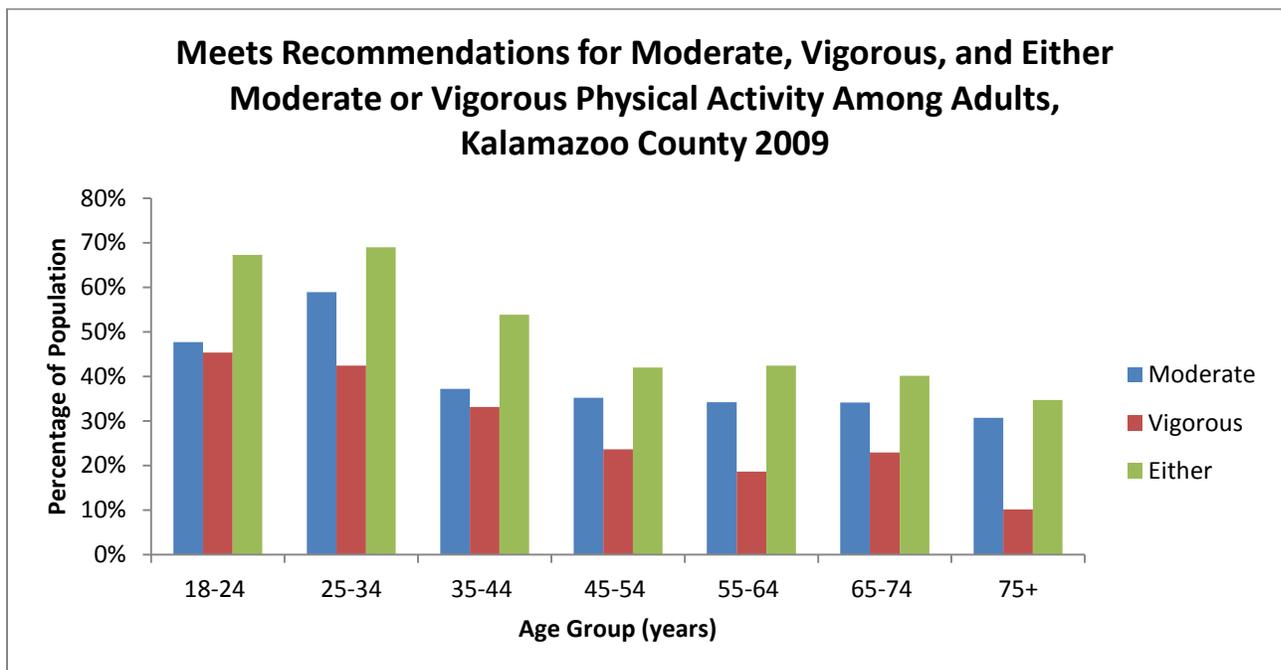
⁸ MET (Metabolic Equivalent Level) explained at <http://www.cdc.gov/nccdphp/dnpa/physical/measuring/met.htm>

⁹ <http://www.cdc.gov/nccdphp/dnpa/physical/terms/index.htm#Moderate>

Among adults in Kalamazoo County in 2009, 42.0% met the recommendations for moderate physical activity and 33.0% met the recommendations for vigorous physical activity; 54.6% complied with either moderate or vigorous physical activity recommendations.

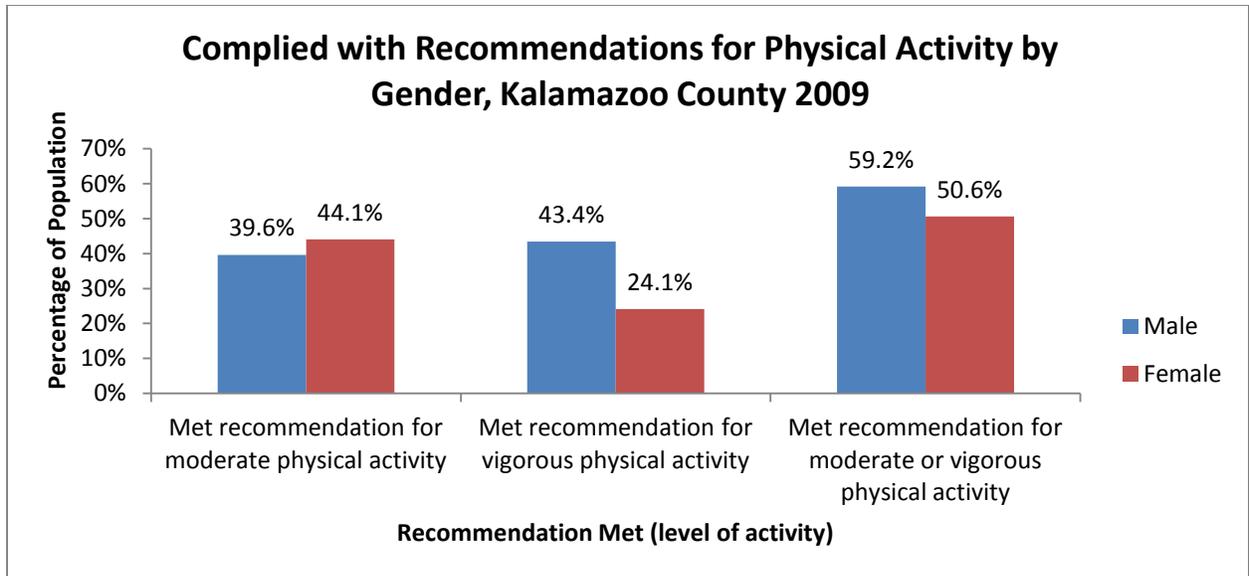
The percentage of adults meeting the recommendations for moderate physical activity and either moderate or vigorous physical activity did not vary significantly by income level or education; however the percentage of adults meeting the recommendations for vigorous physical activity varied among income and education groups. Although the percentage of adults meeting the recommendation for *moderate* physical activity was similar across age and race/ethnicity groups and among males and females, the percentage of adults meeting the recommendation for *vigorous* physical activity did vary by age, race, sex, education and income.

As age increased, the proportion of adults meeting the recommendation for moderate or vigorous physical activity decreased. Among adults between the ages of 18 and 24 years, 67.3% met the recommendations for moderate or vigorous physical activity while only 34.7% of adults age 75 and above met recommendations for moderate or vigorous physical activity.



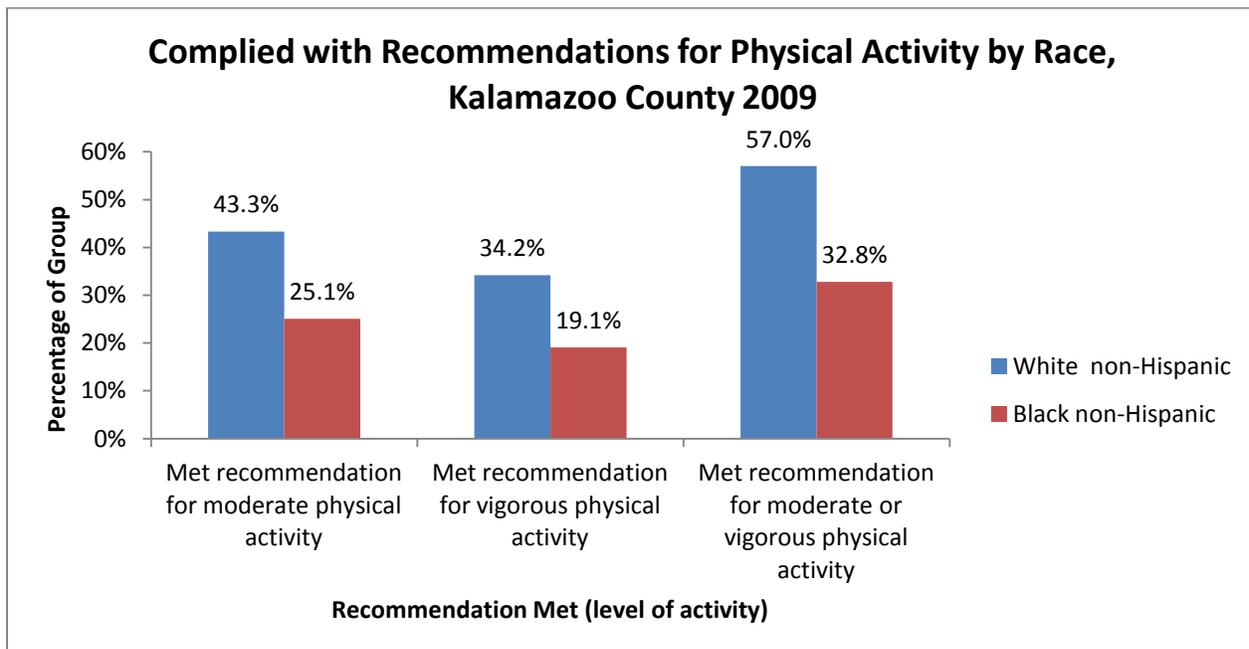
Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

More males than females met the recommendations for vigorous physical activity, and a greater proportion of males than females met either the recommendation for moderate or vigorous physical activity. A slightly greater proportion of females than males met the recommendation for moderate physical activity.



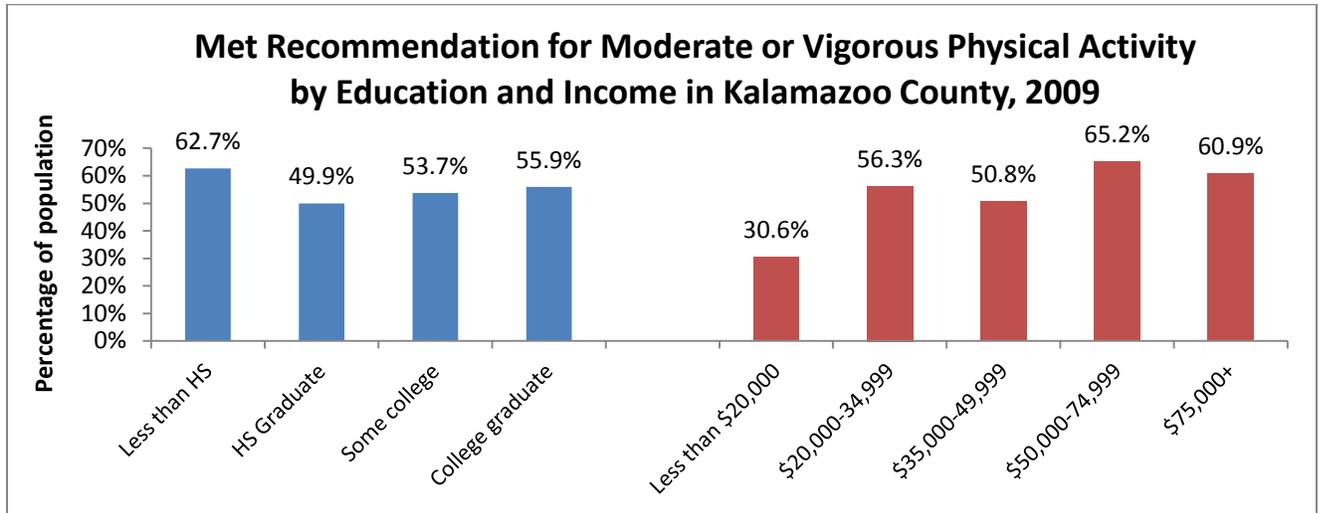
Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

More white adults than black adults met the recommendation for vigorous physical activity, for moderate physical activity, and met either the recommendation for moderate or vigorous physical activity.



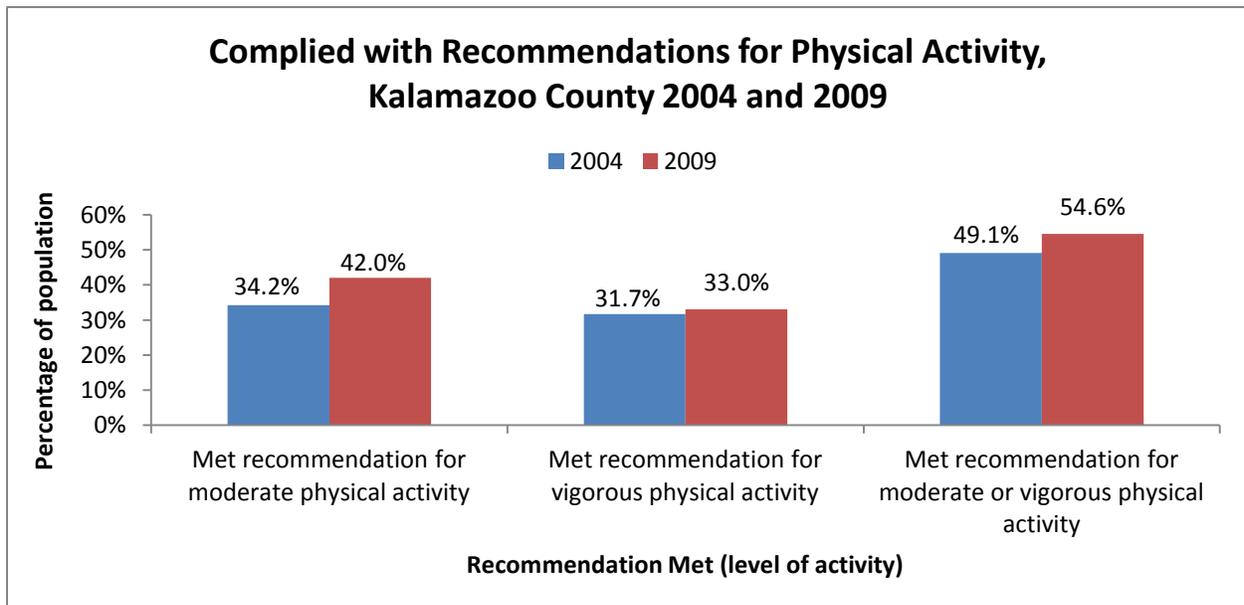
Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

As both income increased, the percent of adults who met the recommendation for moderate or vigorous physical activity increased as well. The proportion of adults meeting moderate or vigorous physical activity recommendations was similar across education levels.

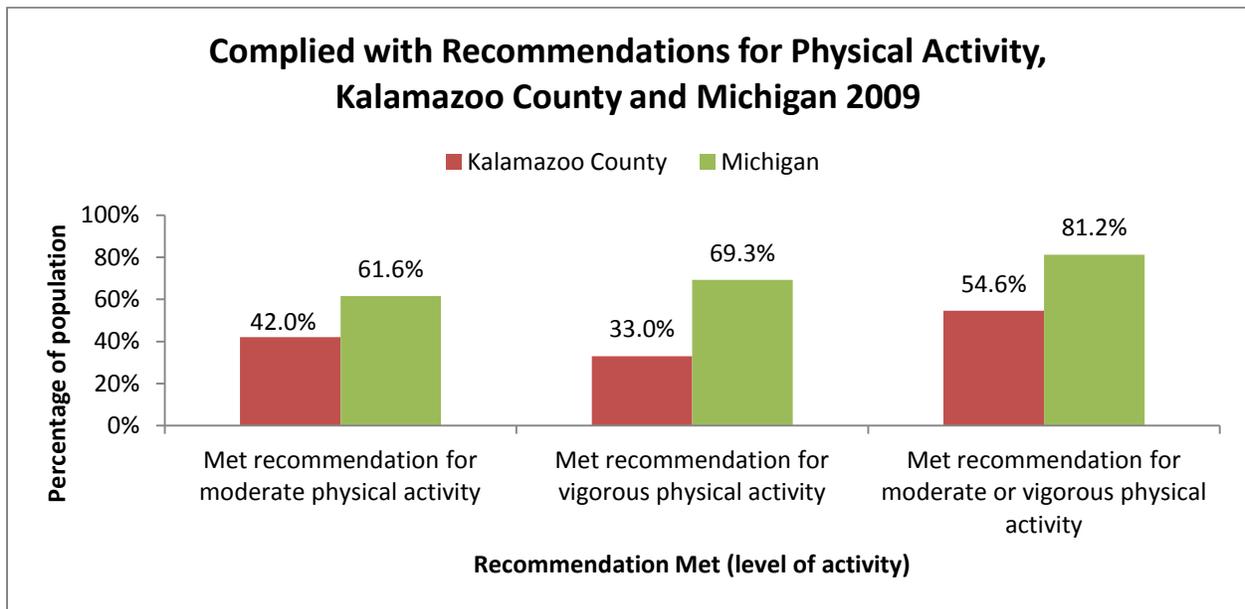


Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

Between 2004 and 2009, the proportion of adults in Kalamazoo County who met the recommendations for physical activity increased. In 2009, Michigan had a higher proportion of adults who met the recommendations for moderate physical activity and vigorous physical activity than in Kalamazoo County. Among Michigan residents only 18.8% did not comply with recommendations for moderate or vigorous physical activity; among Kalamazoo County residents, almost half of adults (45.4%) were not complying with recommendations for moderate or vigorous physical activity.



Source: Kalamazoo County 2004 and 2009 Behavioral Risk Factor Survey



Source: Kalamazoo County 2009 Behavioral Risk Factor Survey, Michigan 2009 Behavioral Risk Factor Survey

Moderate and Vigorous Physical Activity: Duration and Frequency, Kalamazoo County 2009

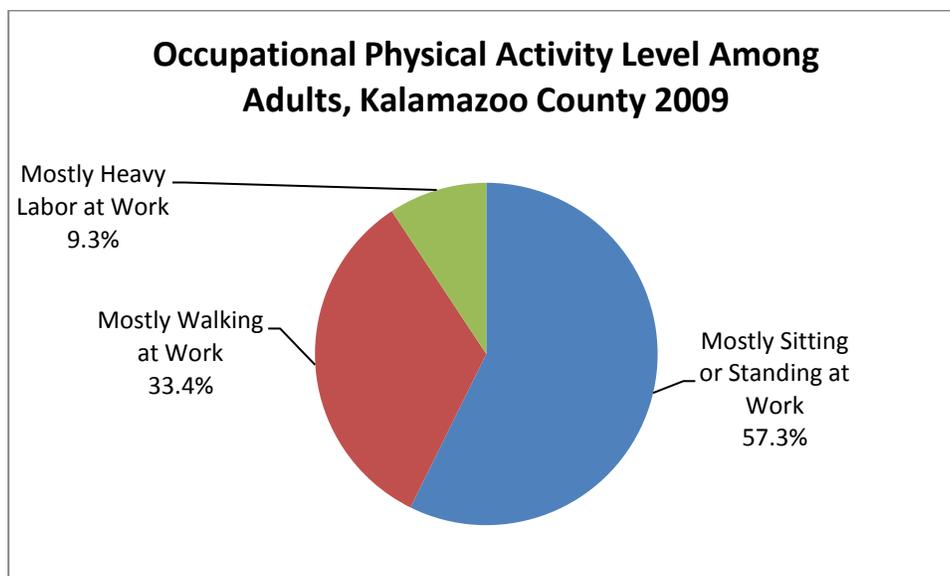
Demographic Characteristics	Meets Recommendation for Moderate Physical Activity (at least 30 minutes on 5 days per week) ^a		Meets Recommendation for Vigorous Physical Activity (at least 20 minutes on 3 days per week) ^b		Complies with Moderate or Vigorous Physical Activity Recommendations ^c	
	%	95% C.I.	%	95% C.I.	%	95% C.I.
	Total	42.0	(33.4 - 51.1)	33.0	(25.0 - 42.0)	54.6
Age						
18-24 years	47.7	(23.8 - 72.7)	45.3	(21.8 - 71.0)	67.3	(43.5 - 84.6)
25-34 years	58.9	(43.6 - 72.7)	42.4	(27.9 - 58.4)	69.0	(54.3 - 80.7)
35-44 years	37.2	(26.9 - 48.8)	33.1	(23.6 - 44.1)	53.8	(42.9 - 64.3)
45-54 years	35.2	(26.2 - 45.4)	23.6	(16.7 - 32.3)	42.0	(32.6 - 52.0)
55-64 years	34.2	(24.9 - 45.0)	18.6	(12.1 - 27.4)	42.4	(32.0 - 53.5)
65-74 years	34.1	(24.6 - 45.1)	22.9	(14.7 - 33.8)	40.1	(30.2 - 50.9)
75 years +	30.7	(21.0 - 42.5)	10.1	(5.0 - 19.2)	34.7	(24.4 - 46.6)
Gender						
Male	39.6	(28.9 - 51.4)	43.4	(30.7 - 57.0)	59.2	(47.6 - 69.8)
Female	44.1	(31.8 - 57.2)	24.1	(16.7 - 33.3)	50.6	(38.7 - 62.5)
Race						
White non-Hispanic	43.3	(33.6 - 53.4)	34.2	(25.2 - 44.4)	57.0	(47.9 - 65.7)
Black non-Hispanic	25.1	(12.6 - 43.7)	19.1	(9.7 - 34.1)	32.8	(17.7 - 52.6)
Education						
Less than HS	61.1	(27.0 - 86.9)	10.3	(2.3 - 36.6)	62.7	(28.9 - 87.5)
HS Graduate	43.7	(31.5 - 56.8)	31.0	(20.1 - 44.5)	49.9	(37.7 - 62.2)
Some college	35.6	(23.8 - 49.4)	39.0	(24.0 - 56.5)	53.7	(39.1 - 67.7)
College graduate	40.3	(32.5 - 48.6)	37.7	(30.4 - 45.6)	55.9	(47.6 - 63.9)
Income						
Less than \$20,000	26.3	(16.7 - 38.8)	13.5	(8.1 - 21.7)	30.6	(20.1 - 43.4)
\$20,000-34,999	46.2	(31.6 - 61.5)	29.1	(18.1 - 43.3)	56.3	(41.1 - 70.4)
\$35,000-49,999	44.6	(26.3 - 64.5)	38.8	(21.0 - 60.2)	50.8	(31.9 - 69.5)
\$50,000-74,999	57.7	(42.8 - 71.4)	40.0	(24.4 - 57.9)	65.2	(51.2 - 77.0)
\$75,000+	50.0	(32.7 - 67.3)	33.6	(21.0 - 49.0)	60.9	(45.1 - 74.7)
City/Out-County						
City of Kalamazoo	44.6	(33.3 - 56.5)	31.1	(21.5 - 42.6)	51.7	(40.1 - 63.0)
Rest of County	44.8	(31.5 - 58.8)	31.9	(20.0 - 46.8)	57.5	(44.9 - 69.2)
Within City of Kalamazoo						
White in City	52.4	(38.2 - 66.2)	36.9	(24.0 - 52.0)	58.8	(44.6 - 71.7)
Black in City	29.2	(14.3 - 50.4)	20.4	(9.9 - 37.3)	37.9	(20.4 - 59.2)
<p>^a Among all adults, the proportion who reported that they usually do moderate physical activities such as brisk walking, bicycling, vacuuming, or gardening for at least 30 minutes on five or more days per week while not at work.</p> <p>^b Among all adults, the proportion who reported that they usually participate in vigorous physical activities such as running, aerobics, or heavy yard work for at least 20 minutes on three or more days per week while not at work.</p> <p>^c Among all adults, the proportion who reported that they usually do moderate physical activities for 30 minutes on five or more days per week OR vigorous physical activities for at least 20 minutes on three or more days per week while not at work.</p>						

Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

4.2.3 Occupational Physical Activity Level

Occupational physical activity is completed regularly as part of one's job. It includes activities such as walking, hauling, lifting, pushing, carpentry, shoveling, and packing boxes.¹⁰

Among adults in Kalamazoo County in 2009, 57.3% reported that their physical activity at work consisted mostly of sitting or standing, 33.4% mostly walked while at work, and 9.3% performed mostly heavy labor while at work.

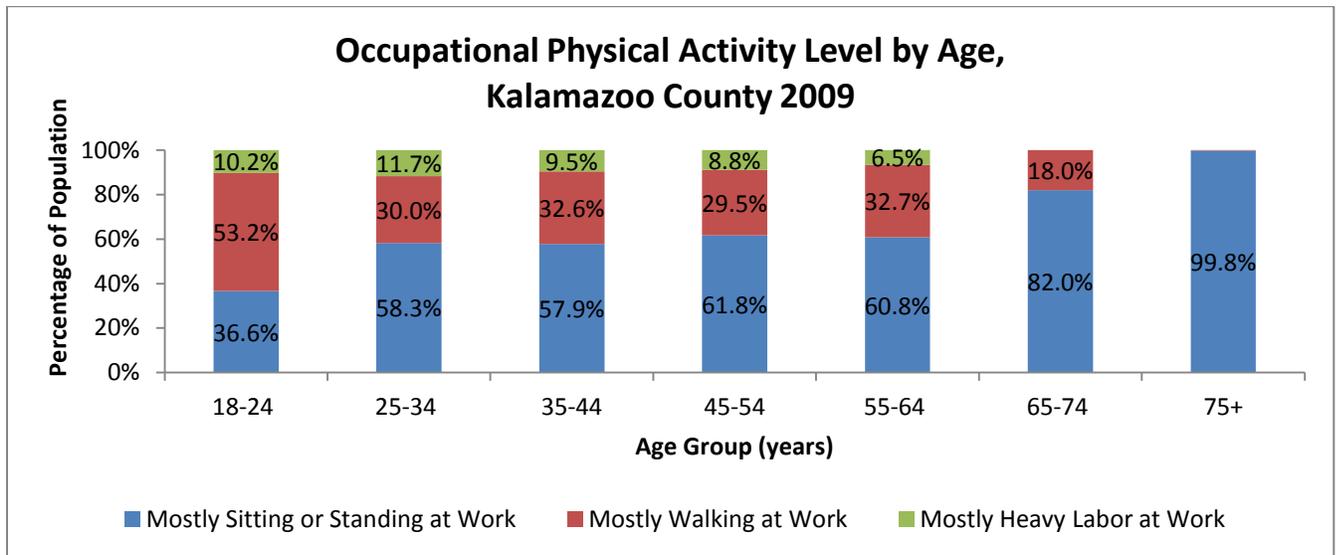


Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

Occupational physical activity varied by age, sex, and educational level. Some of these differences in activity while at work coincide with differences in reported leisure-time activity (see section 4.2.1 of the Health Surveillance Data Book). While certain demographic groups report lower rates of leisure-time physical activity, they also report higher rates of occupational physical activity. Other demographic groups report both low rates of leisure-time physical activity and occupational physical activity.

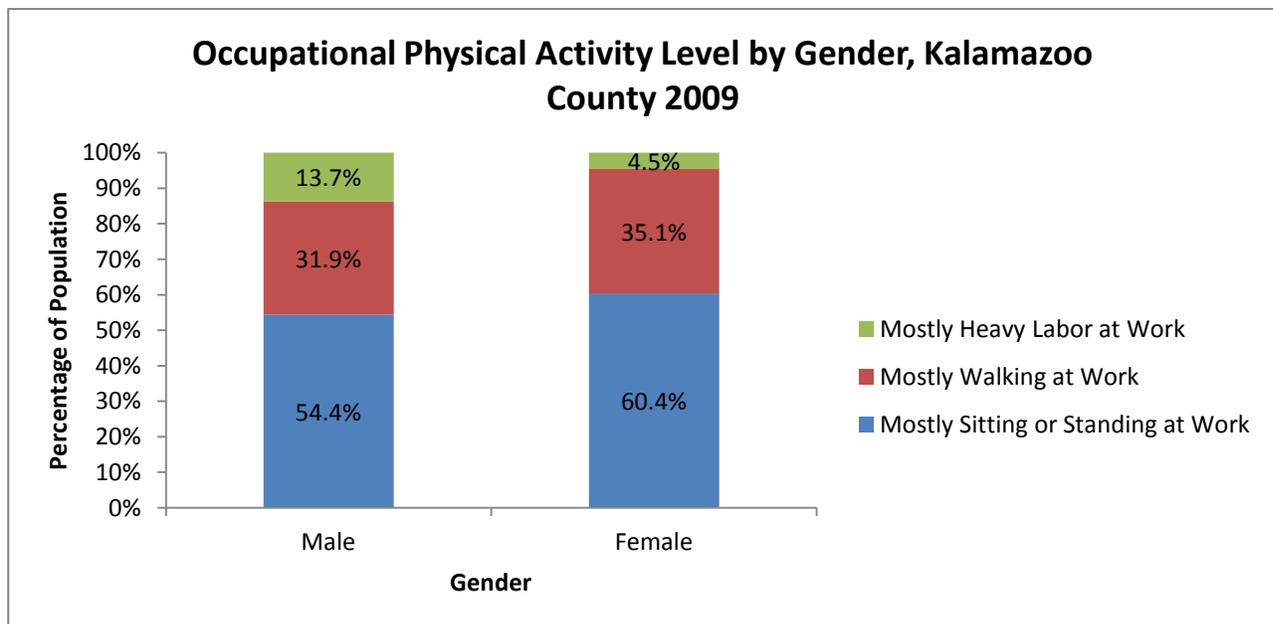
¹⁰ From the Centers for Disease Control and Prevention website:
<http://www.cdc.gov/nccdphp/dnpa/physical/terms/index.htm>

Age group differences were seen in both leisure-time physical activity and occupational activity. As age increased, rates of both leisure-time physical activity and occupational physical activity decreased.¹¹



Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

Gender differences were also seen in both leisure-time physical activity and occupational physical activity.¹² Females were less physically active in both leisure-time and at work.

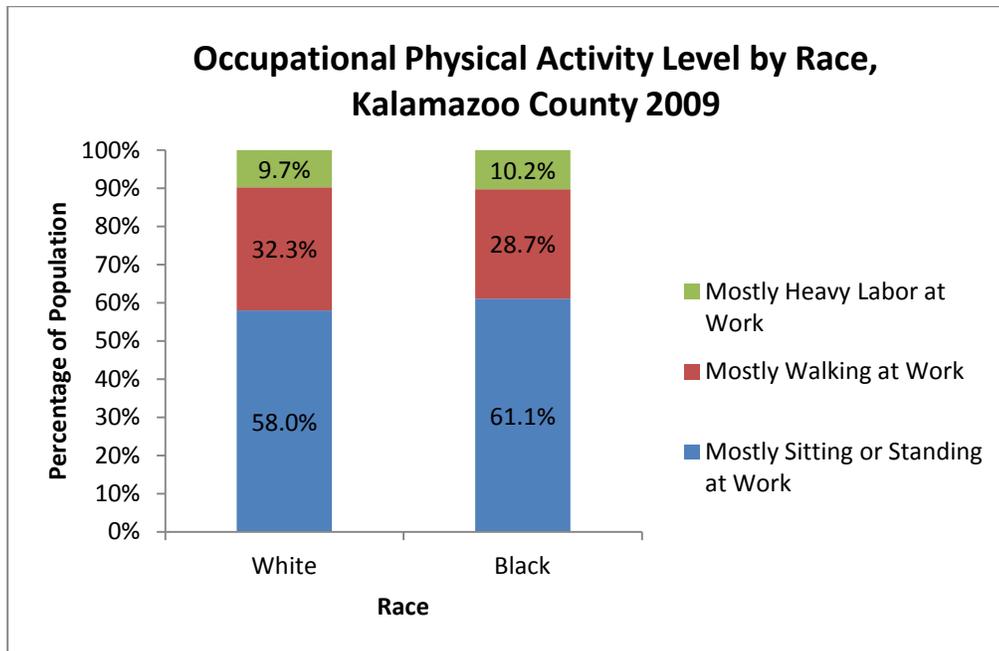


Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

¹¹ Leisure-time physical activity rates by age group shown on page 2 of this section (4.2.1).

¹² Leisure-time physical activity rates by gender reported on page 3 of this section (4.2.1).

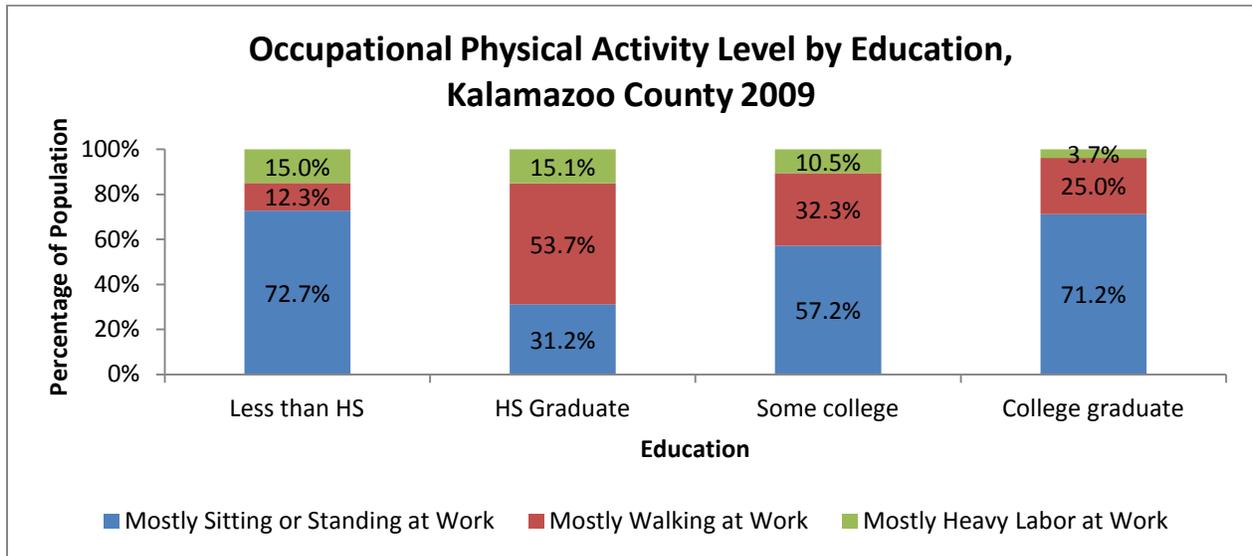
Among the white and black populations in Kalamazoo County, there were similar rates of occupational physical activity reported. (The rate of leisure-time physical activity was lower among the black population than among the white population.)¹³



Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

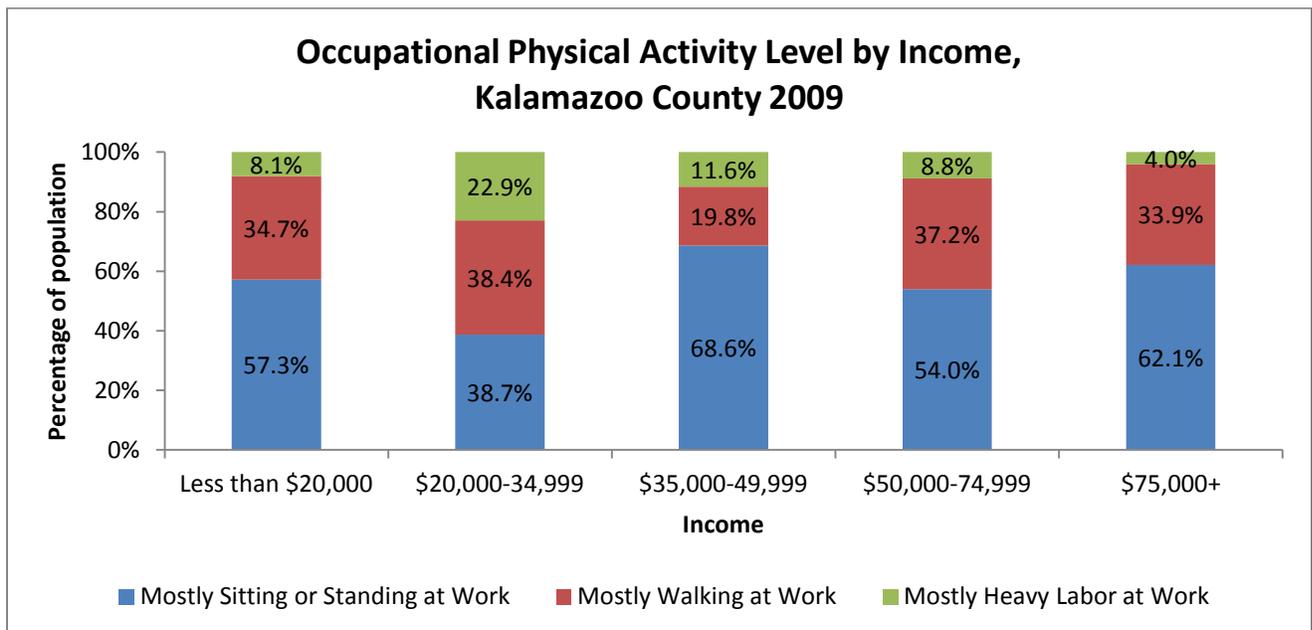
¹³ Leisure-time physical activity rates by race reported on page 3 of this section (4.2.1).

Educational level was another characteristic that correlated with both occupational physical activity level and leisure-time physical activity. Although those with less than a high school education reported the lowest rates of occupational activity (and lowest rates of leisure-time physical activity), beginning with high school graduates as educational levels increased, occupational physical activity decreased (and rates of leisure-time physical activity increased).¹⁴



Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

Occupational physical activity did not show a clear trend with income level (leisure-time physical activity increased with increasing income).¹⁵



Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

¹⁴ Leisure-time physical activity rates by educational level shown on page 3 of this section (4.2.1).

¹⁵ Leisure-time physical activity rates by income level shown on page 4 of this section (4.2.1).

Occupational Physical Activity Level Among Adults, Kalamazoo County 2009

Demographic Characteristics	Mostly Sitting or Standing at Work		Mostly Walking at Work		Mostly Heavy Labor at Work	
	%	95% C.I.	%	95% C.I.	%	95% C.I.
Total	57.3	(49.3 - 64.9)	33.4	(26.0 - 41.7)	9.3	(5.9 - 14.5)
Age						
18-24 years	36.6	(12.0 - 70.9)	53.2	(21.5 - 82.5)	10.2	(1.4 - 46.8)
25-34 years	58.3	(38.8 - 75.5)	30.0	(15.0 - 51.0)	11.7	(4.0 - 29.4)
35-44 years	57.9	(44.8 - 70.0)	32.6	(21.4 - 46.1)	9.5	(4.0 - 20.8)
45-54 years	61.8	(49.5 - 72.7)	29.5	(19.3 - 42.3)	8.8	(4.3 - 16.9)
55-64 years	60.8	(46.9 - 73.1)	32.7	(21.0 - 46.9)	6.5	(2.9 - 13.9)
65-74 years	82.0	(56.3 - 94.2)	18.0	(5.8 - 43.7)	0.0	(0.0 - 0.0)
75 years +	99.8	(98.3 - 100.0)	0.2	(0.0 - 1.7)	0.0	(0.0 - 0.0)
Gender						
Male	54.4	(43.6 - 64.9)	31.9	(22.2 - 43.4)	13.7	(7.9 - 22.8)
Female	60.4	(48.7 - 71.1)	35.1	(24.5 - 47.3)	4.5	(2.2 - 9.0)
Race						
White non-Hispanic	58.0	(49.3 - 66.1)	32.3	(24.5 - 41.3)	9.7	(5.9 - 15.5)
Black non-Hispanic	61.1	(38.3 - 79.9)	28.7	(12.4 - 53.5)	10.2	(2.8 - 31.0)
Education						
Less than HS	72.7	(40.1 - 91.4)	12.3	(3.0 - 39.1)	15.0	(3.7 - 44.7)
HS Graduate	31.2	(19.3 - 46.2)	53.7	(37.2 - 69.4)	15.1	(6.2 - 32.3)
Some college	57.2	(41.9 - 71.3)	32.3	(18.9 - 49.4)	10.5	(5.0 - 20.5)
College graduate	71.2	(61.4 - 79.3)	25.0	(17.3 - 34.8)	3.7	(1.5 - 9.0)
Income						
Less than \$20,000	57.3	(30.6 - 80.3)	34.7	(14.6 - 62.3)	8.1	(2.6 - 22.3)
\$20,000-34,999	38.7	(23.7 - 56.2)	38.4	(21.8 - 58.1)	22.9	(10.0 - 44.3)
\$35,000-49,999	68.6	(47.8 - 84.0)	19.8	(9.4 - 36.9)	11.6	(3.3 - 33.1)
\$50,000-74,999	54.0	(34.8 - 72.1)	37.2	(19.4 - 59.3)	8.8	(3.0 - 23.1)
\$75,000+	62.1	(49.5 - 73.3)	33.9	(23.1 - 46.7)	4.0	(1.3 - 11.3)
City/Out-County						
City of Kalamazoo	54.3	(39.2 - 68.6)	41.4	(27.0 - 57.3)	4.3	(1.7 - 10.5)
Rest of County	56.2	(45.0 - 66.7)	31.0	(21.2 - 42.9)	12.8	(7.5 - 21.2)
Within City of Kalamazoo						
White in City	53.2	(35.0 - 70.6)	44.4	(27.0 - 63.2)	2.5	(1.0 - 5.9)
Black in City	63.9	(35.7 - 84.9)	24.1	(7.2 - 56.5)	12.1	(2.9 - 38.5)

Source: Kalamazoo County 2009 Behavioral Risk Factor Survey

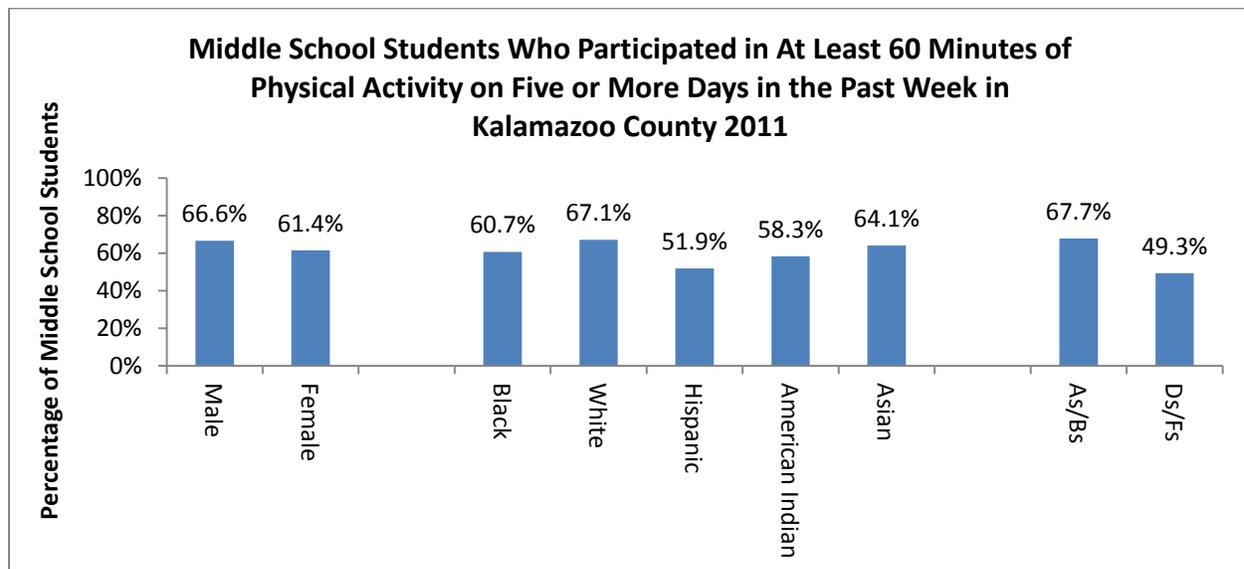
4.2.4 Youth Physical Activity Status

Middle school and high schools in Kalamazoo County participated in a Michigan Department of Education Survey during the 2011-2012 school year called the Michigan Profile for Healthy Youth (MIPHY) survey.¹⁶ This is an online survey conducted in grades 7, 9, and 11 every other year, and collects information on health risk behaviors including substance use, violence, physical activity, nutrition, sexual behavior, and emotional health. The survey also measures risk and protective factors most predictive of alcohol, tobacco, and other drug use and violence.

This report summarizes MIPHY results for Kalamazoo County in the area of physical activity. Results are presented for demographic subgroups: sex, race and ethnicity, and academics (students who receive mostly As and Bs compared with students who receive mostly Ds and Fs). Although American Indian, Arab/Chaldean, and Asian student results are included in tables, these populations were relatively small compared with other race and ethnicity groups and so results are less reliable than for larger subpopulations.

Data for Kalamazoo County students is available over two school year survey cycles (2009-2010 school year and 2011-2012 school year).

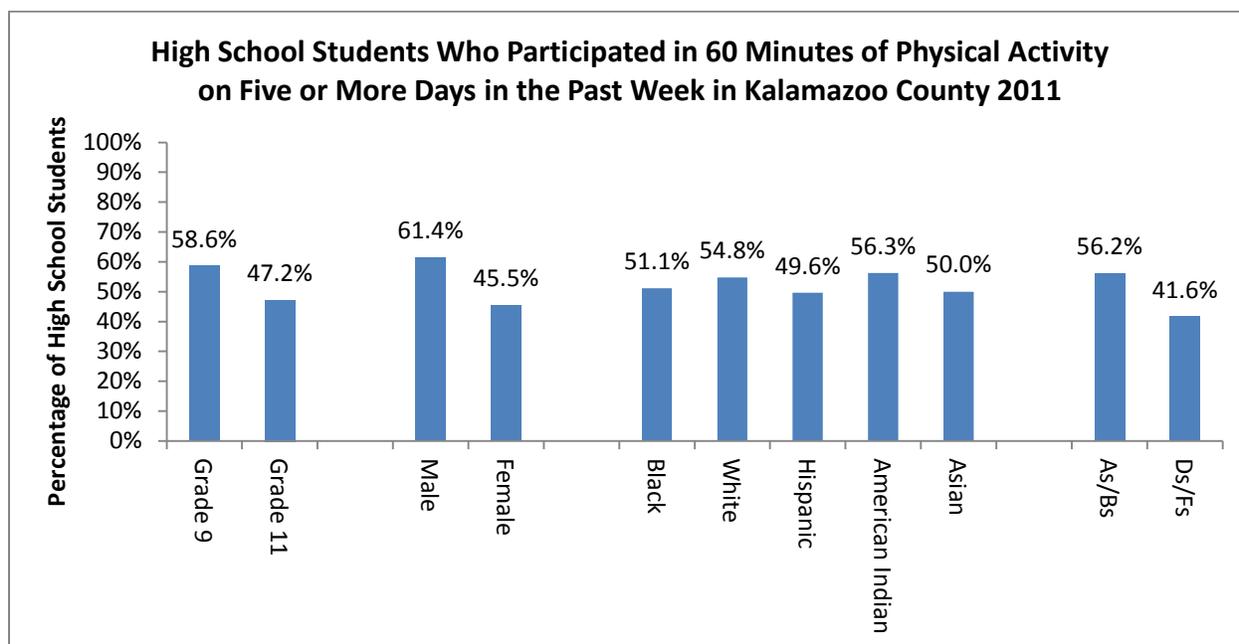
Among Kalamazoo County 7th graders surveyed in the 2011-2012 school year, 63.9% reported they participated in at least 60 minutes of physical activity on five or more days in the past week. Male students, white students, and students receiving As/Bs for grades had higher proportions reporting this level of activity than other demographic groups.



Source: Michigan Profile for Healthy Youth, Kalamazoo County 2011-2012

¹⁶ Results are publicly available for the county overall (not by individual districts or schools) here: <https://mdoe.state.mi.us/MIPHYADMIN/reports/CountyReport.aspx>.

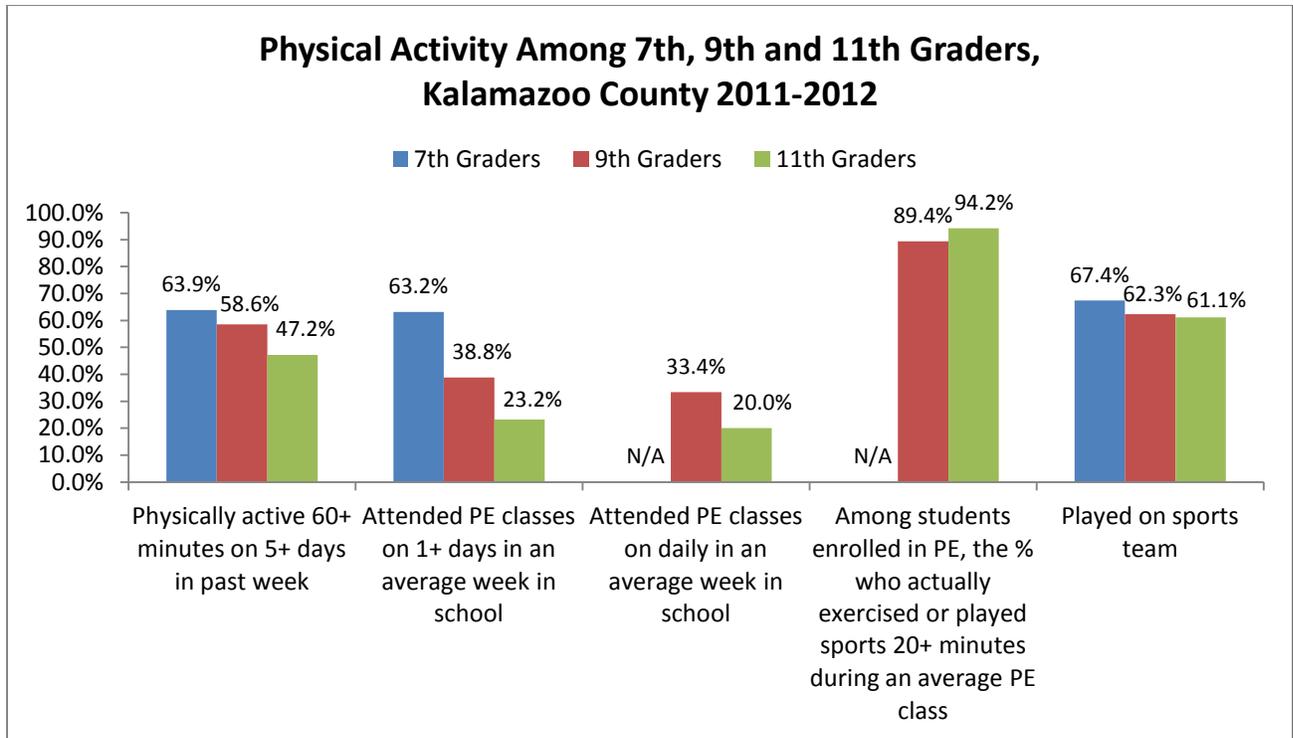
Among 9th and 11th graders in Kalamazoo County surveyed during the 2011-2012 school year, 53.5% of students reported they participated in at least 60 minutes of physical activity on five or more days in the past week. The greatest difference among groups was between male and female high school students: 61.4% of male students compared with 45.5% of female students reported this level of physical activity.



Source: Michigan Profile for Healthy Youth, Kalamazoo County 2011-2012

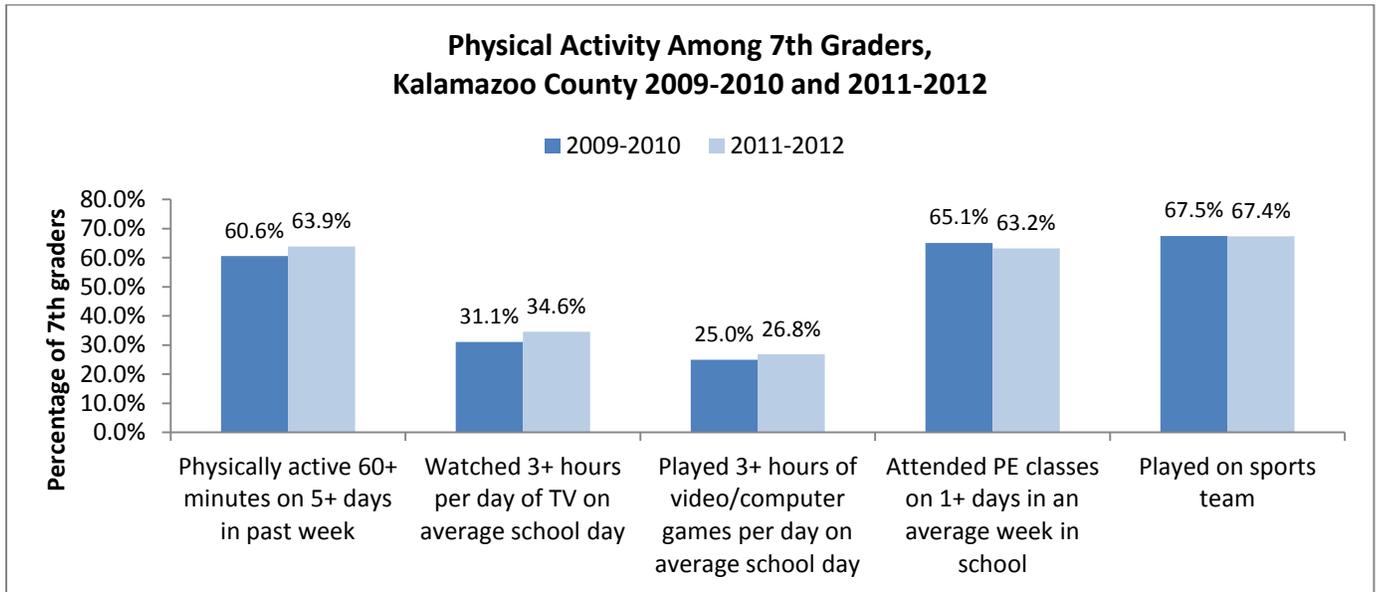
Among most comparable indicators of physical activity between 7th, 9th and 11th graders surveyed, as grade level increased the proportion reporting the physical activity indicator decreased (meaning more physical activity reported for younger students compared with older students). The statistic that differed the most between 7th graders compared with older students was the proportion reporting participation in physical education classes (PE) on at least one day per week during an average week in school. Almost two out of three 7th graders (63.2%) reported this, compared with one out of three high school students (31.7%).

The exception to this trend of more physical activity among younger students versus older students was the proportion of students reporting that they spent 20 minutes or more during an average PE class actually exercising or playing sports. The proportion was slightly higher among 11th graders than 9th graders (this was not asked of 7th graders).

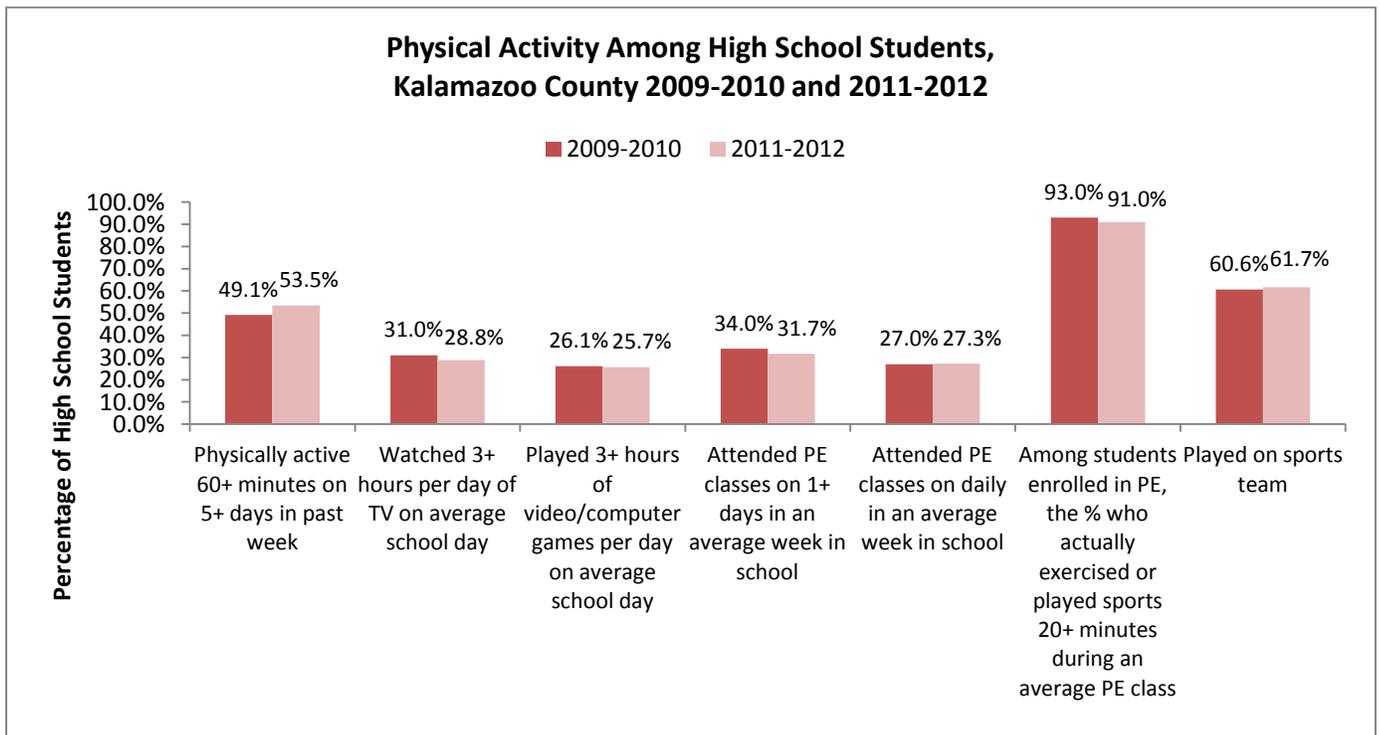


Source: Michigan Profile for Healthy Youth, Kalamazoo County 2011-2012

Indicators of physical activity among middle school students and high school students were similar over the two survey year periods (2009-2010 school year and 2011-2012 school year).

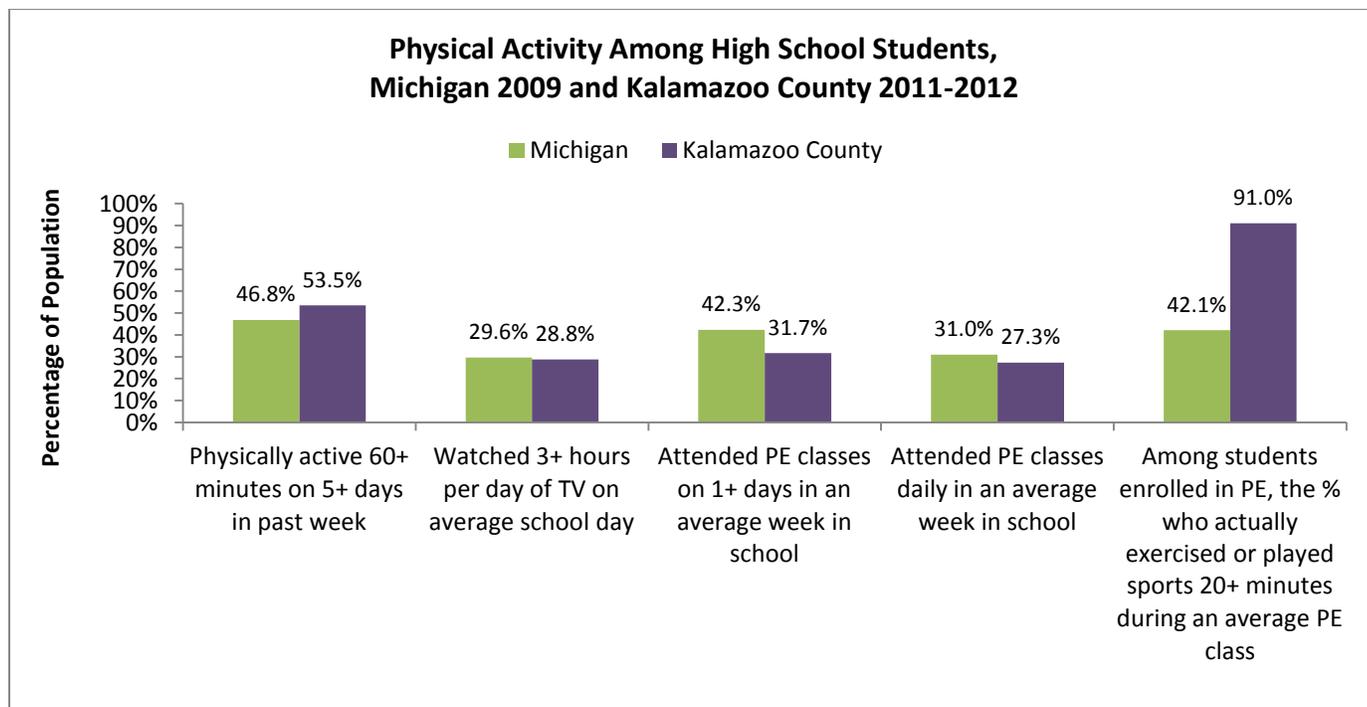


Source: Michigan Profile for Healthy Youth, Kalamazoo County 2011-2012



Source: Michigan Profile for Healthy Youth, Kalamazoo County 2011-2012

Compared with all Michigan high school students (as surveyed during the 2009 Youth Risk Behavior Survey)¹⁷, a higher proportion of Kalamazoo County high school students was physically active on five or more days in the past week (46.8% of Michigan students and 53.5% of Kalamazoo County students reported this). A lower proportion of Kalamazoo County high school students than Michigan students reported participation in PE at least one day per week in an average week (42.3% of Michigan students and 31.7% of Kalamazoo County student reported this). Among those who were enrolled in PE, however, a much higher proportion of Kalamazoo County students reported actually exercising or playing sports for at least 20 minutes during an average PE class (91.0% of Kalamazoo County students reported this compared with 42.1% of Michigan students).



Source: Source: Michigan Profile for Healthy Youth (MIPHY), Kalamazoo County 2011-2012 and Michigan Youth Risk Behavior Survey (YRBS) 2009

¹⁷ Youth Risk Behavior Survey can be accessed online at <http://www.michigan.gov/yrbs>.

Physical Activity Among Middle School Students, Kalamazoo County 2011-2012

Demographic Characteristic		Students who were physically active for a total of at least 60 minutes per day on five or more of the past seven days	Students who attended physical education (PE) classes on one or more days in an average week when they were in school	Students who played on any sports team	Students who watched three or more hours per day of TV on an average school day	Students who played video or computer games or use a computer for something that is not school work three or more hours per day on an average school day
Total		63.9%	63.2%	67.4%	34.6%	26.8%
Gender						
	Male	66.6%	67.4%	70.6%	34.5%	34.0%
	Female	61.4%	59.4%	64.2%	34.6%	20.2%
Race/Ethnicity						
	Black	60.7%	69.8%	62.7%	61.3%	40.6%
	White	67.1%	59.8%	70.7%	27.2%	21.7%
	Hispanic	51.9%	68.4%	60.4%	38.1%	36.8%
	American Indian	58.3%	69.4%	62.9%	33.3%	22.2%
	Asian	64.1%	71.8%	63.2%	16.2%	8.1%
Academics						
	As/Bs	67.7%	63.5%	73.1%	29.3%	22.2%
	Ds/Fs	49.3%	68.2%	38.2%	56.7%	50.0%

Source: Michigan Profile for Healthy Youth, Kalamazoo County 2011-2012

Physical Activity Among High School Students, Kalamazoo County 2011-2012

Demographic Characteristic		Students who were physically active for a total of at least 60 minutes per day on five or more of the past seven days	Students who watched three or more hours per day of TV on an average school day	Students who played video or computer games or use a computer for something that is not school work three or more hours per day on an average school day	Students who attended physical education (PE) classes on one or more days in an average week when they were in school	Students who attended physical education (PE) classes daily in an average week when they were in school	Among student enrolled in physical education (PE) class, the percentage who actually exercised or played sports more than 20 minutes during an average PE class	Students who played on any sports team
Michigan 2009		46.8%	29.6%	N/A	42.3%	31.0%	42.1%	N/A
County Total		53.5%	28.8%	25.7%	31.7%	27.3%	91.0%	61.7%
Grade	Grade 9	58.6%	31.4%	27.2%	38.8%	33.4%	89.4%	62.3%
	Grade 11	47.2%	25.6%	23.8%	23.2%	20.0%	94.2%	61.1%
Gender	Male	61.4%	29.0%	28.7%	41.3%	36.2%	92.4%	64.6%
	Female	45.5%	28.3%	22.5%	22.2%	18.4%	88.4%	58.9%
Race/Ethnicity	Black	51.1%	48.0%	35.3%	42.4%	35.8%	86.7%	56.5%
	White	54.8%	25.2%	23.8%	31.0%	27.0%	91.9%	63.1%
	Hispanic	49.6%	32.5%	26.1%	34.1%	25.9%	85.7%	54.4%
	American Indian	56.3%	40.6%	18.7%	33.3%	33.3%	N/A	62.5%
	Asian	50.0%	17.9%	27.4%	18.2%	16.2%	100.0%	72.4%
Academics	As/Bs	56.2%	24.5%	21.6%	29.5%	25.9%	92.2%	68.2%
	Ds/Fs	41.6%	45.8%	47.7%	45.4%	35.4%	79.3%	39.9%

*2009 Michigan Youth Risk Behavior Survey. For additional information on the YRBS results, please go to www.michigan.gov/yrbs.

Source: Michigan Profile for Healthy Youth, Kalamazoo County 2011-2012