

7. THE LEISURE ACTIVITIES, SOCIAL INVOLVEMENT, AND CITIZENSHIP OF YOUTH WITH DISABILITIES AFTER HIGH SCHOOL

By Mary Wagner

Analyses of the leisure activities and social involvement of youth with disabilities during high school concluded that “A look at youth with disabilities ages 13 through 17 and their activities in their nonschool hours reveals youth involved in a wide variety of activities both at home—listening to music, watching television, using a computer, doing homework, talking on the phone with friends—and outside the home—getting together with friends, participating in sports, taking part in organized groups, working. Thus, the majority of youth with disabilities appear to be ‘typical teens’ outside of school in many ways” (Wagner, 2003, p. 7-1).

But for both youth with disabilities and youth in the general population, leaving high school could occasion changes in the ways they spend their leisure time and time with friends. For example, the demands of homework associated with their high school classes may come to an end for youth who do not continue on to postsecondary school, freeing their time for other pursuits. Further, many high school students participate in organized group activities both at school and in the community, such as sports teams or performing groups. Not only do such group activities engage youth in their nonschool hours, but students may spend several hours a week working out, practicing an instrument, or rehearsing dramatic or choral productions associated with those groups. Leaving high school could put an end both to those kinds of group activities and to the demands for practicing the skills they entail. Finally, school hours provide a structured time during which students are assured of seeing many of their friends; without the structure of high school, the frequency and nature of youth’s friendship interactions could well change.

This chapter examines changes in the following kinds of leisure activities and social involvement since high school of youth with disabilities who have been out of high school up to 2 years:

- Use of free time
- Interactions with friends
- Participation in extracurricular activities in the community.

In addition to these aspects of the lives of out-of-school youth with disabilities, the chapter also describes indicators of two aspects of their citizenship, one positive and one negative. The positive aspect of citizenship involves the extent to which youth with disabilities who are at least 18 years old are registered to vote. The negative aspect concerns involvement with the criminal justice system, including whether youth ever have:

- Been stopped and questioned by police, other than for a traffic violation
- Been arrested
- Spent a night in jail
- Been on probation or parole.

Descriptive findings are reported for youth with disabilities as a whole for whom data are available for both Waves 1 (2001) and 2 (2003) of NLTS2 and for those who differ in their primary disability classification while in secondary school, selected demographic characteristics, and school-leaving status when significant.¹ In addition, a more in-depth analysis is reported regarding two important aspects of the quality of life of out-of-school youth with disabilities, one positive and one negative: having an active social life that involves seeing friends regularly, and violating the norms of society to such a degree that it results in arrest. Results of logistic regression analyses identify the characteristics of youth and their households that are associated with these experiences.²

Uses of Leisure Time

Youth with disabilities or their parents³ were asked “during the past few weeks, how [have you/has (youth)] spent most of [your/his/her] time when [you weren’t/he/she wasn’t] working or going to school?” Youth or parents responded in their own words with one or more activities they perceived occupied “most” of youth’s free time.⁴

Leaving high school has occasioned little change in some of the ways youth with disabilities spend their leisure time. For example, more than one-third of Wave 2 youth (36%) spend “most” of their time visiting with friends or going out on dates, the very same rate of this leisure-time activity as 2 years earlier. Neither is a significant difference observed over time in the rate at which youth with disabilities spend much of their free time visiting with friends (13% in Wave 2); doing homework or chores around the house (20%); or playing sports, shopping, or hanging out at the mall, or participating in organized groups (between 3% and 7% of Wave 2 youth with disabilities spend most of their leisure time in each of these pursuits). There also has been no change reported in the likelihood that youth with disabilities spend time taking lessons or classes outside of school (e.g., music lessons, enrichment activities).

However, many out-of-school youth with disabilities are much less likely to spend most of their time in a variety of fairly passive leisure activities (Exhibit 7-1), including reading for pleasure or doing hobbies; talking on the phone with friends; watching TV or videos; listening to music; and using a computer for games, the Internet, or communication. Whereas at Wave 1, 46% of youth with disabilities were spending most of their leisure time watching TV or videos, 16% do so in Wave 2 ($p < .001$). Similarly, in Wave 1, 36% of youth with disabilities were spending most of their time using a computer and 28% were spending most of their leisure time listening to music; those rates are 15% and 10% in Wave 2 ($p < .001$). Only 6% of youth spend a good deal of leisure time doing hobbies or reading for pleasure in Wave 2, and 5% spend most of

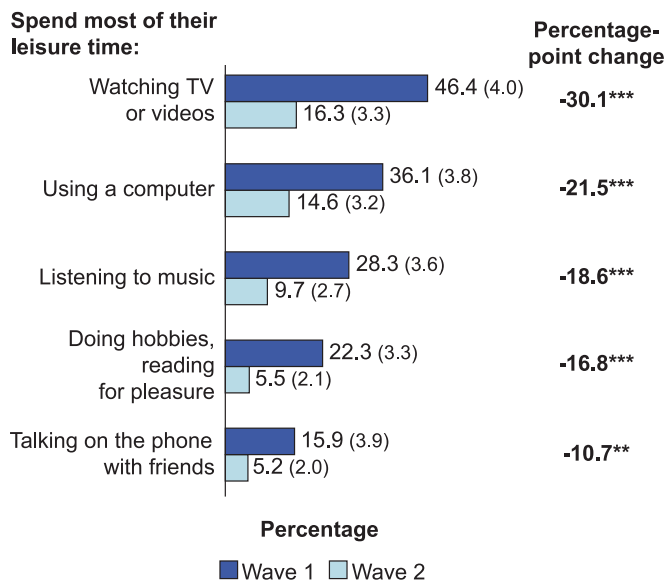
¹ The experiences of out-of-school youth with disabilities represented in NLTS2 are not compared here with those of youth represented in the original NLTS because age differences in the two samples make straightforward comparisons misleading. A subsequent report will present findings of analyses that include the analytic adjustments necessary for accurate comparisons between NLTS and NLTS2.

² Multivariate analyses do not include factors related to youth’s school programs because complete data on those programs are not yet available.

³ Parents were respondents in Wave 1. Both parents and youth were respondents to this item in Wave 2. Youth’s responses are reported if available; parents’ respondents are used if youth did not complete a Wave 2 interview.

⁴ Note that the question addressed the ways youth spent “most” of their time, and respondents could name more than one activity. If more than one activity was named, each is counted here as an activity in which youth spent most of their time. It is unknown how well informed parents were of the ways in which youth spent their free time.

**Exhibit 7-1
CHANGES IN USES OF LEISURE TIME BY
YOUTH WITH DISABILITIES**

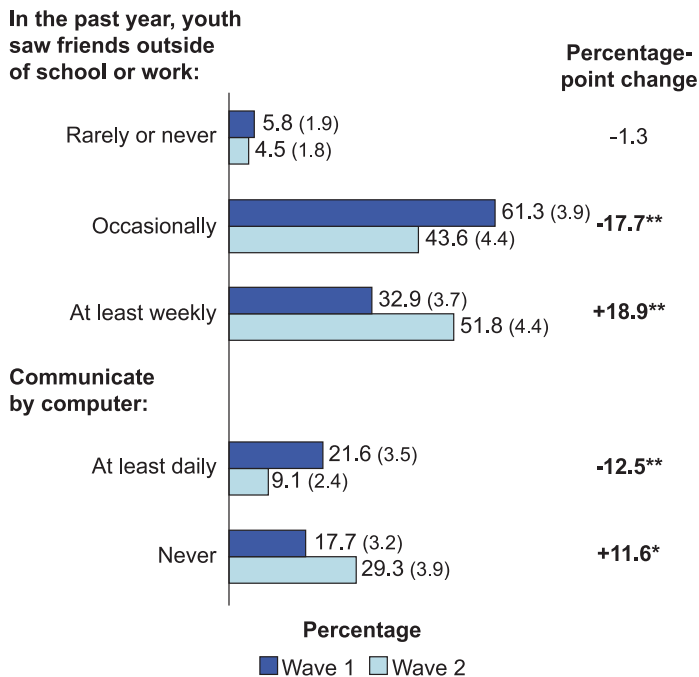


Sources: NLT2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels: **p<.01; ***p<.001.

Standard errors are in parentheses.

**Exhibit 7-2
CHANGES IN FRIENDSHIP INTERACTIONS OF
YOUTH WITH DISABILITIES**



Sources: NLT2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels: *p<.05; **p<.01.

Standard errors are in parentheses.

their leisure time on the phone with friends, declines of 17 and 11 percentage points from rates of engaging in those activities 2 years previously (p<.001 and p<.01).

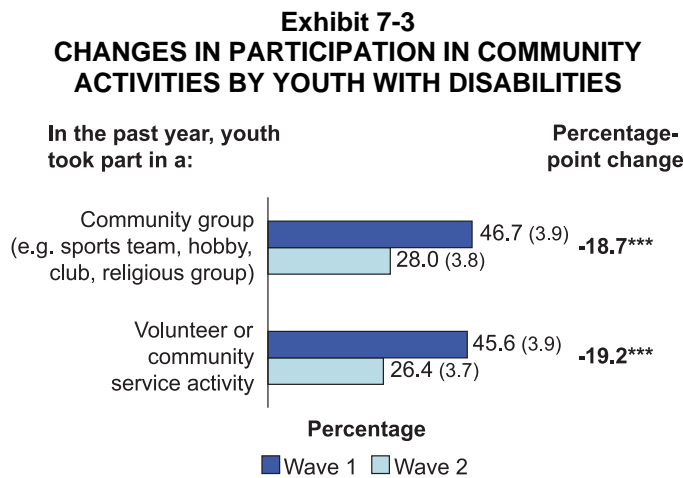
Friendship Interactions

Findings reported above regarding use of leisure time by youth with disabilities when they leave high school suggest that youth are no more or less likely to spend *most* of their leisure time seeing friends, which might lead one to expect a reduction in the *frequency* with which youth see friends. However, the opposite is the case; in Wave 2, youth with disabilities are seeing friends more frequently than they were 2 years earlier (Exhibit 7-2), although that increased frequency apparently does not increase the rate of reporting that friendships occupy “most” of youth’s time. Specifically, there has been a 19-percentage-point increase in youth with disabilities seeing friends at least weekly outside of school or work, so that in Wave 2, more than half (52%) are doing so. In contrast, the findings reported in the preceding section regarding use of leisure time suggest that youth are less likely to spend much time on the phone with friends, yet there is no change for youth with disabilities overall or for any subgroup in the frequency with which they were reported to receive phone calls from friends (calls made by youth themselves were not reported). The reduction in frequent leisure-time use of computers noted in the preceding section is mirrored in reports that youth with disabilities are much less likely in Wave 2 than

in Wave 1 to communicate frequently by computer (i.e., e-mail, instant messaging, or chat rooms); whereas more than one in five (22%) communicated frequently by computer at least daily in Wave 1, fewer than half as many are doing so in Wave 2 (9%, $p < .01$).

Participation in Community Activities

It is reasonable to expect that the early post-high-school years would see a reduction in youth with disabilities participating in organized community activities. For example, youth who leave their communities after high school for college or military service necessarily discontinue their participation in community-sponsored extracurricular activities in their home communities. Even among those who remain at home, increased work or school responsibilities could make participation in organized groups more difficult. In fact, there has been a 19-percentage-point



Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following level: *** $p < .001$.

Standard errors are in parentheses.

decrease over time in youth with disabilities participating in community-based group activities (Exhibit 7-3); 47% of youth did so in Wave 1, compared with 28% who are doing so in Wave 2 ($p < .001$). Participation in volunteer or community service activities has declined by a similar amount (from 46% to 26%, $p < .001$), perhaps because some portion of their earlier community service activities had been sponsored by youth's secondary schools. Interestingly, these two aspects of involvement in the community are related; youth with disabilities who are group members are more than twice as likely also to participate in volunteer or community service activities than nonmembers (44% vs. 20%, $p < .01$).

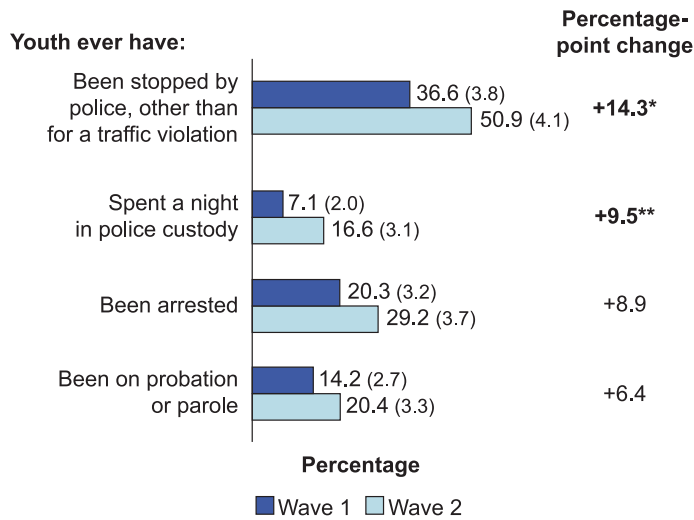
Citizenship

As noted above, NLTS2 examines two aspects of the citizenship of youth with disabilities. The positive aspect of their citizenship concerns whether age-eligible youth are registered to vote; almost two-thirds (64%) are registered voters in Wave 2, a rate very similar to that of 18- to 24-year-olds in the general population (Lopez & Kirby, 2003).

The negative aspect of youth's citizenship concerns their involvement in the criminal justice system (i.e., parents or youth reported incidents of youth being stopped by police other than for a traffic violation, being arrested, spending a night in jail, or being on probation or parole at any time). Because the items indicate whether these experiences have ever occurred, the passage of time would be expected to result in a higher rate of positive responses in Wave 2 than in Wave 1.

In fact, significant increases are noted in youth with disabilities engaging in activities that result in their being stopped by police (other than for traffic violations) and spending a night in jail (Exhibit 7-4). In Wave 1, more than one-third of youth with disabilities (37%) had been

Exhibit 7-4
CHANGES IN CRIMINAL JUSTICE SYSTEM INVOLVEMENT
BY YOUTH WITH DISABILITIES



Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels:

* $p < .05$; ** $p < .01$.

Standard errors are in parentheses.

stopped by police; a 14-percentage-point increase results in more than half having had that experience by Wave 2 (51%, $p < .05$). A 10-percentage-point increase is apparent in youth with disabilities spending a night in jail; 17% have done so by Wave 2. No significant increases are noted in the arrest rate or the rate at which youth with disabilities have been convicted of an offense that ended with probation or parole. Nonetheless, by Wave 2, 29% of out-of-school youth with disabilities have been arrested, not significantly different from the 23% arrest rate of same-age youth in the general population.⁵

Disability Differences over Time in Leisure Activities, Social Involvement, and Citizenship

The changes in leisure activities and social involvement described above are not experienced equally by youth in different disability categories.

Uses of leisure time. Significant declines in youth spending most of their leisure time doing hobbies or reading for pleasure affect more categories of youth (seven) than do declines in spending time playing sports or talking on the phone with friends (two and three categories, respectively; Exhibit 7-5). Four categories of youth share in the decline in computer use taking most of their free time, and five categories of youth show declines in watching TV or videos and listening to music. Watching television or videos is the activity most likely to take most of youth's leisure time at this point in their lives and also the activity with the largest significant decline over time (ranging from 26 to 33 percentage points). The smallest significant declines are noted for talking on the phone with friends (10 to 18 percentage points), which is the least likely to be reported as taking most of youth's leisure time.

⁵ Calculated from the National Longitudinal Survey of Youth (NLSY) 2000, for 15- through 19-year-old out-of-school youth.

Exhibit 7-5
CHANGES IN USES OF LEISURE TIME, BY DISABILITY CATEGORY

	Learning Disability	Speech/ Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities
Percentage spending most of their leisure time:											
Watching TV/videos											
Wave 1	44.9 (5.6)	45.8 (8.2)	60.1 (7.7)	43.0 (5.6)	45.2 (7.0)	57.4 (9.6)	60.5 (8.2)	46.5 (5.6)	59.9 (9.6)	50.5 (10.2)	57.3 (9.7)
Wave 2	11.8 (4.2)	18.3 (6.8)	41.0 (8.4)	17.1 (5.0)	32.4 (7.6)	35.0 (10.2)	40.2 (9.3)	15.6 (4.4)	43.9 (10.2)	31.2 (11.3)	28.4 (9.6)
Percentage-point change	-33.1***	-27.5**	-19.1	-25.9***	-12.8	-22.4	-20.3	-30.9***	-16.0	-19.3	-28.9*
Using a computer											
Wave 1	36.6 (5.4)	36.9 (8.0)	33.2 (7.4)	33.4 (5.3)	43.6 (7.0)	38.4 (9.4)	54.6 (8.4)	35.0 (5.3)	59.0 (9.7)	38.3 (9.9)	34.9 (9.4)
Wave 2	12.5 (4.3)	24.3 (7.5)	13.5 (5.9)	20.7 (5.4)	38.6 (7.9)	22.1 (8.9)	29.0 (8.6)	12.8 (4.1)	49.0 (10.3)	25.0 (10.5)	18.0 (8.2)
Percentage-point change	-24.1***	-12.6	-19.7*	-12.7	-5.0	-16.3	-25.6*	-22.2***	-10.0	-13.3	-16.9
Listening to music											
Wave 1	26.7 (5.0)	32.9 (7.8)	43.5 (7.8)	25.1 (4.9)	26.0 (6.2)	40.3 (9.5)	40.4 (8.2)	31.2 (5.2)	41.1 (9.7)	36.4 (9.8)	22.2 (8.2)
Wave 2	8.4 (3.6)	9.1 (5.0)	18.7 (6.7)	5.4 (3.0)	18.1 (6.2)	19.2 (8.4)	24.2 (8.1)	13.5 (4.2)	17.1 (7.8)	18.0 (9.3)	15.1 (7.7)
Percentage-point change	-18.3**	-23.8*	-24.8*	-19.7***	-7.9	-21.1	-16.2	-17.7**	-24.0	-18.4	-7.1
Doing hobbies, reading for pleasure											
Wave 1	22.7 (4.7)	30.9 (7.6)	23.0 (6.6)	20.4 (4.6)	20.7 (5.7)	24.2 (8.3)	28.9 (7.6)	15.5 (4.0)	30.9 (9.1)	29.5 (9.3)	20.9 (8.0)
Wave 2	4.9 (2.8)	11.2 (5.5)	4.7 (3.6)	5.8 (3.1)	13.1 (5.5)	21.2 (8.7)	15.0 (6.8)	4.6 (2.6)	8.2 (5.7)	3.8 (4.6)	12.1 (7.0)
Percentage-point change	-17.8**	-19.7*	-18.3*	-14.6**	-7.6	-3.0	-13.9	-10.9*	-22.7*	-25.7*	8.8
Talking on the phone with friends											
Wave 1	15.8 (4.1)	21.7 (6.8)	20.5 (6.3)	14.4 (4.0)	15.1 (5.1)	24.4 (8.3)	10.2 (5.1)	10.6 (3.4)	5.8 (4.6)	15.3 (7.3)	23.2 (8.3)
Wave 2	5.5 (2.9)	3.8 (3.3)	9.2 (5.0)	1.8 (1.8)	7.0 (4.1)	6.4 (5.2)	2.4 (2.9)	2.9 (2.1)	2.7 (3.3)	3.7 (4.6)	6.4 (5.2)
Percentage-point change	-10.3*	-17.9*	-11.3	-12.6**	-8.1	-18.0	-7.8	-7.7	-3.1	-11.6	-16.8
Playing sports											
Wave 1	24.2 (4.8)	29.2 (7.5)	29.0 (7.1)	25.8 (4.9)	24.6 (6.1)	23.2 (8.2)	13.9 (5.8)	24.7 (4.8)	21.7 (8.1)	20.4 (8.2)	16.5 (7.3)
Wave 2	21.5 (5.3)	10.6 (5.4)	16.3 (6.3)	25.0 (5.8)	23.2 (6.8)	7.0 (5.5)	9.8 (5.7)	12.0 (4.0)	16.8 (7.7)	13.5 (8.3)	17.4 (8.1)
Percentage-point change	-2.7	-18.6*	-12.7	-8	-1.4	-16.2	-4.1	-12.7*	-4.9	-6.9	+9

Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels: *p<.05; **p<.01; ***p<.001.

Standard errors are in parentheses.

Youth with learning disabilities or speech or other health impairments have experienced declines in more activities (five) than other categories of youth. Youth with visual or hearing impairments show no significant changes in the likelihood of their spending most of their time in any of the leisure pursuits investigated in NLTS2, and those with orthopedic impairments, autism, traumatic brain injuries, or multiple disabilities have experienced declines in only one activity. Youth with mental retardation or emotional disturbances show declines in three and four activities, respectively.

In Wave 2, youth in different disability categories vary markedly in the activities they pursue in their leisure time. For example, youth with learning disabilities are the least likely to watch television or videos with most of their free time (12%) and among the least likely to use a computer a great deal in their free time (12%), but they are among the most likely to spend most of their free time playing sports (22%). In contrast, 40% or more of youth with mental retardation, orthopedic impairments, or autism reportedly spend most of their time watching TV or videos ($p < .01$ compared with youth with learning disabilities). Youth with orthopedic impairments are the most likely to spend much of their leisure time listening to music (24%) and youth with emotional disturbances the least likely (5%, $p < .05$).

Friendship interactions. The significant increase in seeing friends at least weekly that is evident among youth with disabilities as a whole occurs primarily among youth with learning disabilities and other health impairments (23 and 16 percentage points, respectively, $p < .05$; Exhibit 7-6). Only youth with learning disabilities show the significant decline in computer communications (15 percentage points, $p < .05$) that is evident for youth with disabilities as a whole. Youth with learning disabilities or emotional disturbances have the most active

Exhibit 7-6
CHANGES IN FRIENDSHIP INTERACTIONS, BY DISABILITY CATEGORY

	Learning Disability	Speech/ Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities
In the past year, percentage who saw friends outside of school or work at least weekly											
Wave 1	33.5 (5.4)	32.1 (7.7)	31.2 (7.3)	36.5 (5.4)	18.1 (5.4)	26.5 (8.6)	11.5 (5.4)	30.5 (5.1)	8.4 (5.5)	19.4 (8.1)	16.6 (7.3)
Wave 2	56.2 (6.1)	46.3 (8.8)	30.6 (7.9)	51.6 (6.6)	31.9 (7.5)	41.8 (10.4)	30.4 (8.4)	46.5 (6.0)	19.2 (8.1)	24.4 (10.1)	21.9 (9.0)
Percentage-point change	+22.7*	+14.2	-.6	+15.1	+13.8	+15.3	+18.9	+16.0*	+10.8	+5.0	+5.3
Percentage communicating by computer at least daily											
Wave 1	22.9 (5.1)	31.1 (8.1)	8.8 (4.8)	32.1 (6.8)	24.0 (8.4)	29.2 (8.0)	21.5 (4.7)	7.0 (5.2)	13.9 (8.2)	13.8 (6.8)	27.7 (8.9)
Wave 2	8.1 (3.4)	21.9 (7.2)	3.1 (2.9)	17.6 (5.9)	16.7 (7.5)	19.7 (6.8)	14.1 (4.1)	17.1 (7.5)	7.4 (6.0)	7.4 (5.2)	33.3 (11.4)
Percentage-point change	-14.8*	-9.2	-5.7	-9.1	-14.5	-7.3	-9.5	-7.4	+10.1	-6.5	-6.4

Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following level: * $p < .05$.

Standard errors are in parentheses.

friendships, with more than half seeing friends often outside of school or work. In contrast, about one-fifth of youth with autism or multiple disabilities and one-fourth of those with traumatic brain injuries see friends often. However, youth with multiple disabilities are the most likely to communicate by computer at least daily (33%), and those with mental retardation are the least likely to do so (3%, $p < .05$).

Participation in community activities. Significant decreases among youth with disabilities as a whole in the likelihood of their participating in a community group or a volunteer or community service activity after high school are not widespread across disability categories (Exhibit 7-7). Three categories of youth—those with learning disabilities, emotional disturbances, or other health impairments—show significant declines in membership in a community group (18 to 28 percentage points, $p < .05$ and $p < .001$). These three categories of youth are joined by those with speech impairments in recording significant declines in volunteer or community services activities (18 to 25 percentage points, $p < .05$ and $p < .01$).

In Wave 2, youth with speech, hearing, or orthopedic impairments are the most likely to take part in organized community groups; 42% and 45% of them do so, compared with about half as many youth with mental retardation, emotional disturbances, traumatic brain injuries, or multiple disabilities ($p < .05$ comparing youth with orthopedic impairments with youth with

Exhibit 7-7
CHANGES IN PARTICIPATION IN COMMUNITY ACTIVITIES, BY DISABILITY CATEGORY

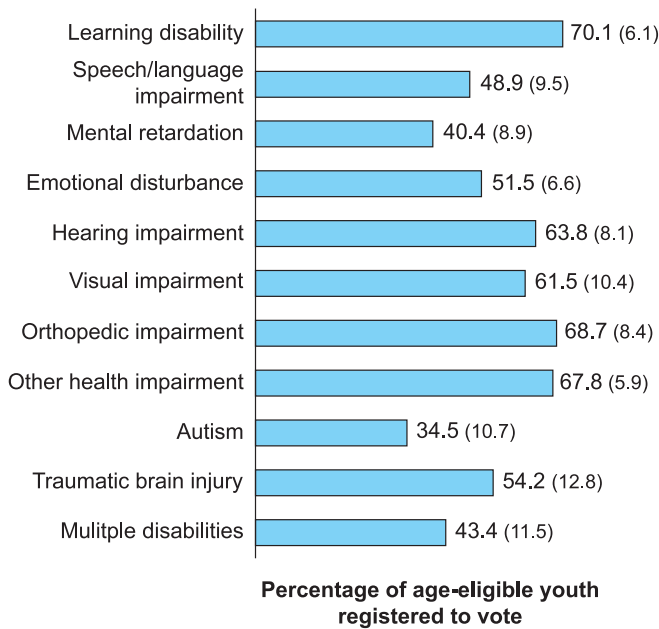
	Learning Disability	Speech/ Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities
In the past year, percentage who took part in a:											
Community group (e.g., sports team, hobby club, religious group)											
Wave 1	48.4 (5.6)	51.4 (7.8)	39.1 (7.6)	39.6 (5.3)	49.0 (6.9)	51.2 (9.6)	50.5 (8.2)	54.1 (5.5)	53.4 (9.6)	38.4 (10.1)	47.1 (9.5)
Wave 2	28.9 (5.4)	41.7 (8.5)	23.8 (7.1)	22.0 (4.9)	41.8 (7.5)	37.2 (9.5)	45.5 (8.6)	26.5 (5.1)	33.1 (9.3)	19.6 (8.8)	22.7 (8.4)
Percentage-point change	-19.5*	-9.7	-15.3	-17.6*	-7.2	-14.0	-5.0	-27.6***	-20.3	-18.8	-24.4
Volunteer or community service activity											
Wave 1	46.5 (5.6)	55.9 (7.8)	42.1 (7.7)	37.9 (5.3)	54.9 (6.9)	62.5 (9.3)	55.7 (8.2)	55.5 (5.5)	40.4 (9.4)	36.6 (10.0)	38.6 (9.3)
Wave 2	26.8 (5.4)	32.7 (8.2)	22.7 (7.1)	20.3 (4.8)	46.9 (7.7)	47.0 (10.2)	39.5 (8.4)	30.2 (5.4)	30.6 (9.4)	36.3 (10.8)	28.7 (9.3)
Percentage-point change	-19.7*	-23.2*	-19.4	-17.6*	-8.0	-15.5	-16.2	-25.3**	-9.8	-3	-9.9

Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels: * $p < .05$; ** $p < .01$; *** $p < .001$.

Standard errors are in parentheses.

**Exhibit 7-8
VOTER REGISTRATION STATUS OF YOUTH
WITH DISABILITIES**



Source: NLTS2 Wave 2 parent/youth interviews.
Standard errors are in parentheses.

Considering the negative aspect of citizenship, an increased likelihood of being involved with the criminal justice system as youth with disabilities age is most apparent among youth with other health impairments (Exhibit 7-9). They show a 19-percentage-point increase in having been stopped by police other than for a traffic violation, a 17-percentage-point increase in having been arrested, and a 14-percentage-point increase in having spent a night in police custody ($p < .05$). With these increases, more than half (52%) of youth with other health impairments have been stopped by police, more than one-third (34%) have been arrested, and more than one-fifth (21%) have spent a night in police custody. These rates are higher than those of any other category of youth, with the exception of youth with emotional disturbances. Although for this latter group of youth, criminal justice system encounters have increased only with regard to spending a night in police custody (15 percentage points, $p < .05$), out-of-school youth with emotional disturbances have significantly higher rates of all aspects of criminal justice system involvement than youth with other health impairments, the category with the next-highest rates of such involvement ($p < .01$ or $p < .001$ for all comparisons). For example, by the time youth with emotional disturbances have been out of high school up to 2 years, 58% have been arrested at least once, compared with 34% of youth with other health impairments ($p < .01$) and 6% to 29% of youth in other disability categories ($p < .05$ compared with youth with traumatic brain injuries; $p < .001$ for all other comparisons).

traumatic brain injuries). Youth with hearing or visual impairments are the most likely to take part in volunteer or community services activities (47%), and youth with mental retardation or emotional disturbances are the least likely to do so (23% and 20%, respectively, $p < .05$ and $p < .01$ compared with youth with hearing impairments).

Citizenship. Some youth in each disability category who are at least 18 years old are registered to vote (Exhibit 7-8). About two-thirds or more of age-eligible youth with learning disabilities or orthopedic or other health impairments are registered to vote, as are 64% and 62% of youth with hearing or visual impairments, respectively. In contrast, about one-third of youth with autism, 40% of those with mental retardation, and 43% of those with multiple disabilities are registered to vote ($p < .05$ or $p < .01$ compared with youth with learning disabilities).

Exhibit 7-9
CHANGES IN CRIMINAL JUSTICE SYSTEM INVOLVEMENT, BY DISABILITY CATEGORY

	Learning Disability	Speech/ Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities
Percentage who ever have:											
Been stopped by police other than for a traffic violation											
Wave 1	34.5 (5.4)	10.0 (4.9)	20.9 (6.4)	66.0 (5.2)	16.4 (5.2)	16.6 (7.2)	16.9 (6.3)	32.6 (5.2)	13.1 (6.5)	35.4 (9.8)	14.5 (6.7)
Wave 2	50.0 (5.9)	27.2 (7.5)	28.6 (7.3)	76.6 (4.7)	28.3 (6.7)	24.0 (8.4)	23.6 (7.2)	51.8 (5.6)	16.0 (7.2)	52.6 (11.2)	19.7 (7.8)
Percentage point change	+15.5	+17.2	+7.7	+10.6	+11.9	+7.4	+16.7	+19.2*	+2.9	+17.2	+5.2
Been arrested											
Wave 1	17.5 (4.3)	4.0 (3.2)	7.5 (4.1)	47.2 (5.5)	7.0 (3.6)	1.6 (2.4)	8.8 (4.7)	17.8 (4.2)	4.6 (4.0)	18.6 (7.9)	5.6 (4.4)
Wave 2	26.1 (5.2)	12.4 (5.6)	13.2 (5.6)	57.6 (5.5)	12.0 (4.9)	5.5 (4.5)	16.8 (6.4)	34.5 (5.4)	6.6 (4.9)	29.4 (10.2)	7.4 (5.2)
Percentage-point change	+8.6	+8.4	+5.7	+9.6	+5.0	+3.9	+8.0	+16.7*	+2.0	+10.8	+1.8
Spent a night in jail											
Wave 1	3.7 (2.1)	2.9 (2.7)	4.5 (3.3)	27.3 (4.9)	.0	1.1 (2.0)	.7 (1.4)	6.9 (2.8)	.0	1.9 (2.8)	1.5 (2.3)
Wave 2	12.5 (3.9)	6.9 (4.3)	11.8 (5.3)	41.9 (5.6)	2.9 (2.5)	2.3 (2.9)	1.3 (1.9)	20.8 (4.7)	1.8 (2.6)	9.4 (6.5)	4.4 (4.1)
Percentage-point change	+8.8	+4.0	+7.3	+14.6*	+2.9	+1.2	+6	+13.9*	+1.8	+7.5	+2.9
Been on probation or parole											
Wave 1	12.2 (3.7)	3.3 (2.9)	4.2 (3.2)	35.0 (5.3)	1.8 (1.9)	.0	4.2 (3.4)	10.2 (3.3)	.0	11.5 (6.5)	4.1 (3.8)
Wave 2	18.3 (4.6)	8.9 (4.8)	8.0 (4.5)	42.7 (5.6)	4.2 (3.0)	1.2 (2.1)	6.1 (4.1)	20.6 (4.6)	.0	21.0 (9.1)	5.7 (4.6)
Percentage-point change	+6.1	+5.6	+3.8	+7.7	+2.4	+1.2	+1.9	+10.4	.0	+9.5	+1.6

Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.
Statistically significant difference in a two-tailed test at the following level: *p<.05.
Standard errors are in parentheses.

School-Leaving Status Differences in Changes in Leisure Activities, Social Involvement, and Citizenship

Youth with disabilities who complete high school⁶ experience greater change in most aspects of their leisure activities and social involvement in the early postschool years than do youth who drop out.

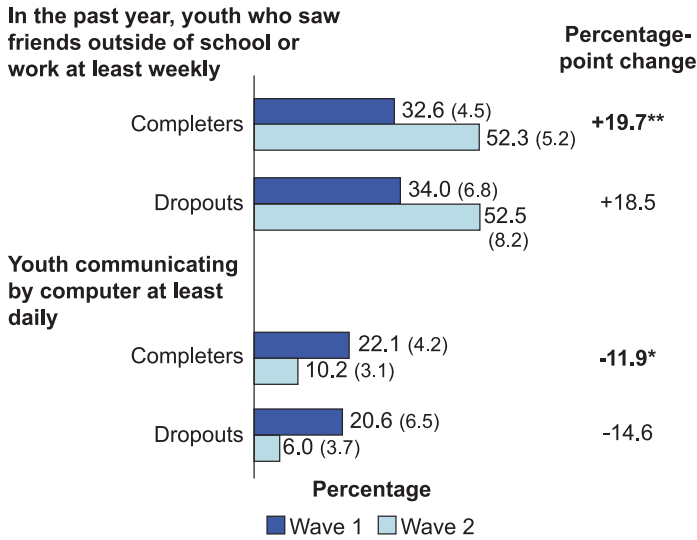
Exhibit 7-10		
CHANGES IN USES OF LEISURE TIME BY YOUTH WITH DISABILITIES, BY SCHOOL-LEAVING STATUS		
	<u>Completers</u>	<u>Dropouts</u>
Percentage spending most of their leisure time:		
Watching TV or videos		
Wave 1	47.1 (4.8)	45.3 (7.1)
Wave 2	16.4 (3.9)	15.6 (6.2)
Percentage-point change	-30.7***	-29.7**
Using a computer		
Wave 1	39.9 (4.7)	27.0 (6.3)
Wave 2	17.0 (4.0)	7.8 (4.6)
Percentage-point change	-22.9***	-19.2*
Listening to music		
Wave 1	29.4 (4.4)	25.3 (6.2)
Wave 2	9.7 (3.2)	10.0 (5.1)
Percentage-point change	-19.7***	-15.3
Doing hobbies, reading for pleasure		
Wave 1	23.3 (4.1)	19.2 (5.6)
Wave 2	4.6 (2.2)	8.2 (4.7)
Percentage point change	-18.7***	-11.0
Talking on the phone with friends		
Wave 1	17.1 (3.6)	13.1 (4.8)
Wave 2	5.6 (2.5)	4.2 (3.4)
Percentage-point change	-11.5**	-8.9
Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.		
Statistically significant difference in a two-tailed test at the following levels: *p<.05; **p<.01; ***p<.001.		
Standard errors are in parentheses.		

Uses of leisure time.

Although both high school completers and dropouts with disabilities have experienced sizable declines over time in the likelihood that most of their leisure time is spent watching TV or videos (31 and 30 percentage points, $p<.001$ and $p<.01$; Exhibit 7-10) or using a computer (23 and 19 percentage points, $p<.001$ and $p<.05$), all other changes in leisure activities are apparent only among high school completers. Significant declines, ranging from 12 to 20 percentage points, are apparent in high school completers with disabilities spending most of their leisure time talking on the phone with friends, listening to music, and doing hobbies or reading for pleasure. Despite differences in changes over time, in Wave 2, there are no significant differences in leisure-time pursuits between high school completers and dropouts with disabilities.

⁶ Seventy-two percent of the out-of-school youth with disabilities represented in this report completed high school by graduating or receiving a certificate of completion.

Exhibit 7-11
CHANGES IN FRIENDSHIP INTERACTIONS OF YOUTH WITH DISABILITIES, BY SCHOOL LEAVING-STATUS

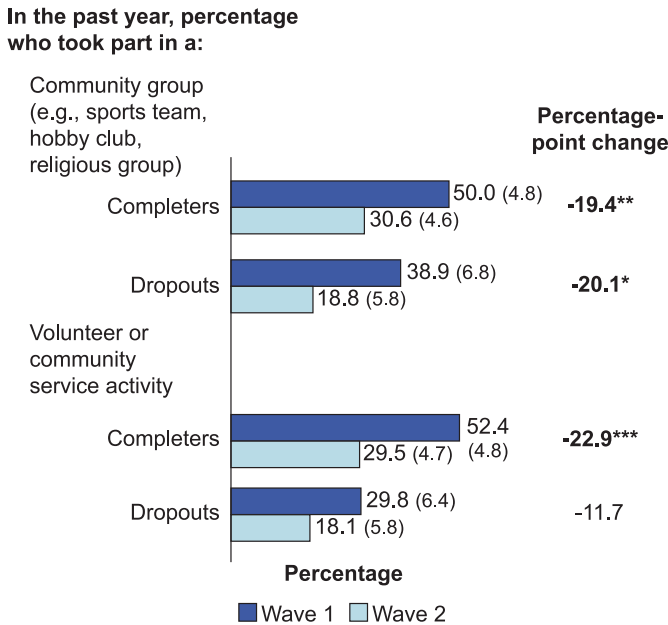


Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels: *p<.05; **p<.01.

Standard errors are in parentheses.

Exhibit 7-12
CHANGES IN EXTRACURRICULAR ACTIVITIES OF YOUTH WITH DISABILITIES, BY SCHOOL-LEAVING STATUS



Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

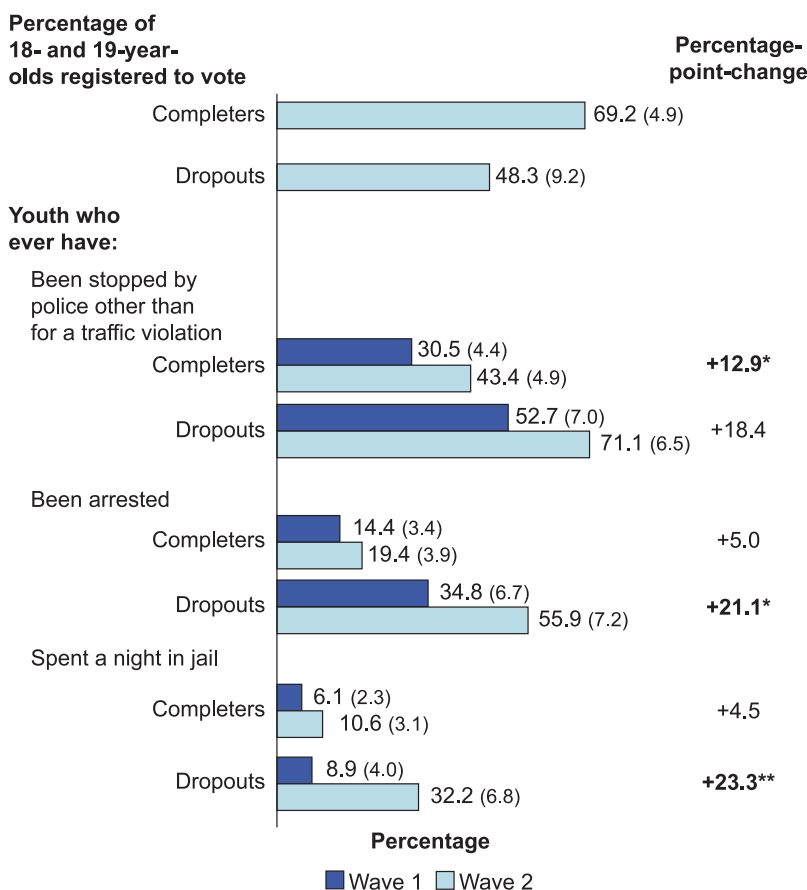
Statistically significant difference in a two-tailed test at the following levels: *p<.05; **p<.01; ***p<.001.

Standard errors are in parentheses.

Friendship interactions. High school completers with disabilities and their peers who did not complete high school experience similar changes in friendship interactions, although these achieve statistical significance only for the larger group of completers (Exhibit 7-11). High school completers demonstrate a 20-percentage-point increase in the likelihood that they see friends often outside of work or school and a 12-percentage-point decline in electronic communications (p<.01 and p<.05). The rates of participating in these activities for the two groups are similar in Wave 2.

Participation in community activities. Both high school completers and dropouts have experienced declines after high school in the likelihood that they participate in an organized community group (19 and 20 percentage points, p<.01 and p<.05; Exhibit 7-12). Participation in these activities is not significantly different between the two groups at Wave 2. However, high school completers have experienced a drop in their participation in volunteer or community service activities after high school (23 percentage points, p<.001) that is not shared by dropouts with disabilities. The larger decline among completers eliminates the large difference between them in Wave 1 (52% vs. 30%, p<.01).

**Exhibit 7-13
CHANGES IN CITIZENSHIP OF YOUTH WITH DISABILITIES,
BY SCHOOL-LEAVING STATUS**



Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.
 Statistically significant difference in a two-tailed test at the following levels: *p<.05;
 **p<.01.
 Standard errors are in parentheses.

Citizenship. High school completers with disabilities who are at least 18 years old are significantly more likely than dropouts to be registered to vote (69% vs. 48%, p<.05; Exhibit 7-13). This pattern is consistent with the general population, in which higher educational attainment also is related to a higher voter registration rate (Center for Information and Research on Civic Learning and Engagement, 2002).

Regarding criminal justice system involvement, neither high school dropouts nor graduates have experienced a significant increase over time in having been on probation or parole. However, on other measures, dropouts with disabilities demonstrate more serious criminal justice system involvement as they age. They show significant increases in the likelihood of both being arrested (21 percentage points, p<.05) and spending a night in jail

(23 percentage points, p<.01). High school graduates with disabilities, too, have greater involvement with the criminal justice system over time, but their increase is apparent in being stopped by police for something other than a traffic violation (13 percentage points, p<.05). Despite this increase, graduates have lower rates of criminal justice system involvement of all kinds than do dropouts with disabilities. For example, up to 2 years out of high school, 56% of dropouts have been arrested and 34% have been on probation or parole, compared with 19% and 16% of high school graduates with disabilities (p<.001 and p<.05).

Demographic Differences in Changes in Leisure Activities, Social Involvement, and Citizenship

The changes in leisure and social activities described above are not experienced equally by youth with disabilities who differ in age, gender, household income, or racial/ethnic background.

Age

Uses of leisure time. Older youth with disabilities have experienced greater changes in their use of leisure time over a 2-year period than younger students (Exhibit 7-14). All five of the leisure activities for which there is a significant decline among youth with disabilities as a whole are apparent among those who are 19 years old at Wave 2. Declines range from 15 percentage points (talking on the phone with friends, $p < .01$) to 38 percentage points

(watching TV or videos, $p < .001$). Declines in four of the activities are apparent among 18-year-olds with disabilities, but with the exception of doing hobbies and reading for pleasure, the declines are smaller than those noted among 19-year-olds and range from 17 to 24 percentage points ($p < .01$ and $p < .05$). The significant downward change in leisure activities among older youth is not apparent among youth with disabilities ages 15 through 17, those who have left high school most recently.

	Age at Wave 2:		
	15 through 17	18	19
Percentage spending most of their leisure time:			
Watching TV or videos			
Wave 1	37.9 (10.4)	44.2 (6.0)	50.5 (6.0)
Wave 2	16.3 (8.6)	19.7 (5.5)	12.8 (4.6)
Percentage-point change	-21.6	-24.5*	-37.7***
Using a computer			
Wave 1	38.4 (10.4)	28.0 (5.4)	43.5 (6.0)
Wave 2	15.9 (8.5)	10.3 (4.2)	18.6 (5.4)
Percentage-point change	-22.5	-17.7**	-24.9**
Listening to music			
Wave 1	26.1 (9.4)	25.1 (5.3)	32.1 (5.6)
Wave 2	8.9 (6.6)	8.6 (3.9)	10.9 (4.3)
Percentage-point change	-17.2	-16.5*	-21.2**
Doing hobbies, reading for pleasure			
Wave 1	20.2 (8.6)	20.9 (4.9)	24.3 (5.2)
Wave 2	5.4 (5.2)	3.9 (2.7)	7.0 (3.5)
Percentage-point change	-14.8	-17.0**	-17.3**
Talking on the phone with friends			
Wave 1	16.6 (8.0)	13.9 (4.2)	17.7 (4.6)
Wave 2	11.8 (7.5)	5.5 (3.2)	3.0 (2.3)
Percentage-point change	-4.8	-8.4	-14.7**

Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels:
* $p < .05$; ** $p < .01$; *** $p < .001$.

Standard errors are in parentheses.

Friendship interactions. There is less consistency in changes across age groups regarding friendship interactions than is apparent for leisure activities (Exhibit 7-15). The increased likelihood that youth see friends often outside of school or organized groups that is apparent for youth with disabilities as a whole results largely from an increase among those who are 18 years old at Wave 2 (23 percentage points, $p < .01$). In contrast, the decline in daily computer communication is most evident among 19-year-olds (18 percentage points, $p < .01$). As with leisure activities, 15- through 17-year-olds do not evidence either of these changes. However, despite experiencing different changes over time, the three age groups do not differ in the frequency of their friendship interactions in Wave 2.

**Exhibit 7-15
CHANGES IN FRIENDSHIP INTERACTIONS
OF YOUTH WITH DISABILITIES, BY AGE**

	Age at Wave 2:		
	15 through 17	18	19
	In the past year, percentage who saw friends outside of school or work at least weekly		
Wave 1	37.6 (10.3)	29.7 (5.5)	34.9 (5.8)
Wave 2	41.9 (7.3)	53.0 (6.7)	51.2 (6.7)
Percentage-point change	+12.5	+23.3**	+16.3
Percentage communicating by computer at least daily			
Wave 1	16.6 (10.4)	18.0 (5.0)	24.9 (5.6)
Wave 2	15.7 (9.4)	10.7 (4.0)	6.8 (3.3)
Percentage-point change	-.9	-7.3	-18.1**

Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following level: **p<.01.

Standard errors are in parentheses.

**Exhibit 7-16
CHANGES IN COMMUNITY ACTIVITIES OF
YOUTH WITH DISABILITIES, BY AGE**

	Age at Wave 2:		
	15 through 17	18	19
	In the past year, percentage who took part in a:		
Community group (e.g., sports team, hobby club, religious group)			
Wave 1	49.1 (10.2)	49.3 (6.0)	43.6 (5.9)
Wave 2	30.7 (10.1)	23.5 (5.4)	31.7 (6.0)
Percentage point change	-18.4	-25.8**	-11.9
Volunteer or community service activity			
Wave 1	42.7 (10.2)	43.5 (5.9)	48.4 (6.0)
Wave 2	27.4 (10.0)	33.3 (6.0)	19.3 (5.1)
Percentage-point change	-15.3	-10.2	-29.1***

Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels: **p<.01; ***p<.001.

Standard errors are in parentheses.

Participation in community activities. Similar to the changes in friendship interactions, 18- and 19-year-olds with disabilities experience different changes in participation in community activities over a 2-year period (Exhibit 7-16). Eighteen-year-olds at Wave 2 are the only group to experience a significant decline in their participation in organized community groups (26 percentage points, p<.01), whereas a significant decline in participation in volunteer or community service activities is evident only among 19-year-olds with disabilities (29 percentage points, p<.001). Age groups do not differ significantly in their rates of participation in Wave 2.

Citizenship. As out-of-school youth with disabilities age, they are more likely to be registered to vote. The rate of voter registration is 73% among 19-year-olds, compared with 55% among 18-year-olds (p<.05).

There are no differences between age groups of youth with disabilities in changes over time in the likelihood of most aspects of criminal justice system involvement; levels of involvement and changes in those levels over time are not significantly different for youth ages 15 through 17, 18, or 19. Only with regard to spending a night in jail is a difference apparent, with 18-year-olds

**Exhibit 7-17
CHANGES IN USES OF LEISURE TIME BY
YOUTH WITH DISABILITIES, BY GENDER**

	Boys	Girls
Percentage spending most of their leisure time:		
Watching TV or video		
Wave 1	47.7 (4.8)	43.7 (7.0)
Wave 2	15.6 (4.0)	17.4 (5.8)
Percentage-point change	-32.1***	-26.3**
Using a computer		
Wave 1	39.2 (4.7)	29.9 (6.5)
Wave 2	17.4 (4.2)	9.7 (4.5)
Percentage-point change	-21.8***	-20.2*
Listening to music		
Wave 1	30.6 (4.4)	23.8 (6.0)
Wave 2	8.6 (3.1)	11.5 (4.9)
Percentage-point change	-22.0***	-12.3
Doing hobbies, reading for pleasure		
Wave 1	20.2 (3.9)	26.6 (6.2)
Wave 2	4.6 (2.3)	6.9 (3.9)
Percentage point change	-15.6***	-19.7**
Talking on the phone with friends		
Wave 1	16.3 (3.6)	15.1 (5.0)
Wave 2	2.5 (1.7)	9.9 (4.6)
Percentage-point change	-13.8***	-5.2

Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels: *p<.05; **p<.01; ***p<.001.

Standard errors are in parentheses.

at Wave 2 showing a significant increase over time (from 7% to 21%, p<.05) that is not shared by younger or older peers (from 9% to 12% among 15- to 17-year-olds, from 6% to 12% among 19-year-olds).

Gender

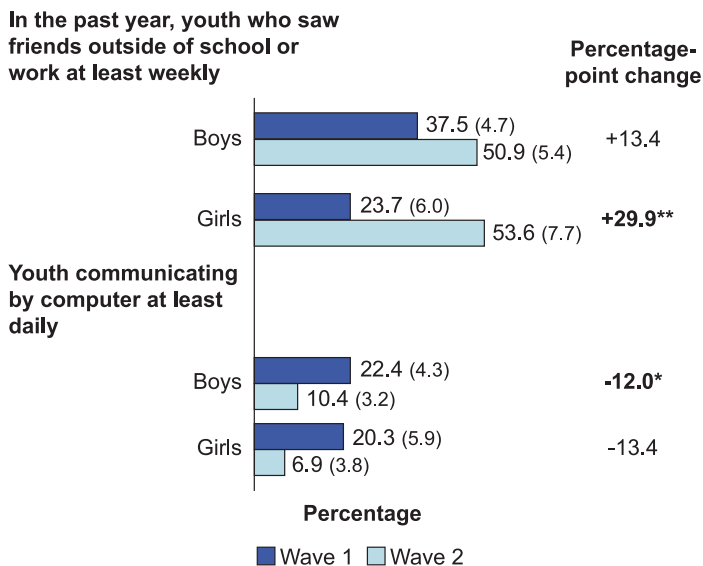
Some aspects of uses of leisure time, social activities, and citizenship change differently for boys and girls with disabilities when they leave high school.

Uses of leisure time. Boys with disabilities experience changes in their use of leisure time after high school in ways that girls do not when it comes to listening to music (22-percentage-point decline, p<.001) and talking on the phone with friends (14-percentage-point decline, p<.001; Exhibit 7-17). However, boys and girls with disabilities have similar patterns in spending most of their leisure time using a computer (declines of 22 and 20 percentage points, p<.001 and p<.05) and doing hobbies or reading for pleasure (declines of 16 and 20 percentage points, p<.001 and p<.01). They also share the decrease in TV or video watching (declines of 32 and 26 percentage points, p<.001 and p<.01). Despite these differences in changes over time, there are no significant differences in uses of leisure time between boys and girls with disabilities in Wave 2.

Friendship interactions. Frequent friendship interactions increase markedly for girls with disabilities after high school (Exhibit 7-18). Girls show a 30-percentage-point increase in the

likelihood of seeing friends at least weekly (p<.01), eliminating the large difference between the genders that was evident in Wave 1. A 12-percentage-point decline in frequent computer use has occurred among boys with disabilities (p<.05). However, these differences in changes over time do not result in differences between the levels of friendship interactions of boys and girls in Wave 2.

Exhibit 7-18
CHANGES IN FRIENDSHIP INTERACTIONS OF
YOUTH WITH DISABILITIES, BY GENDER

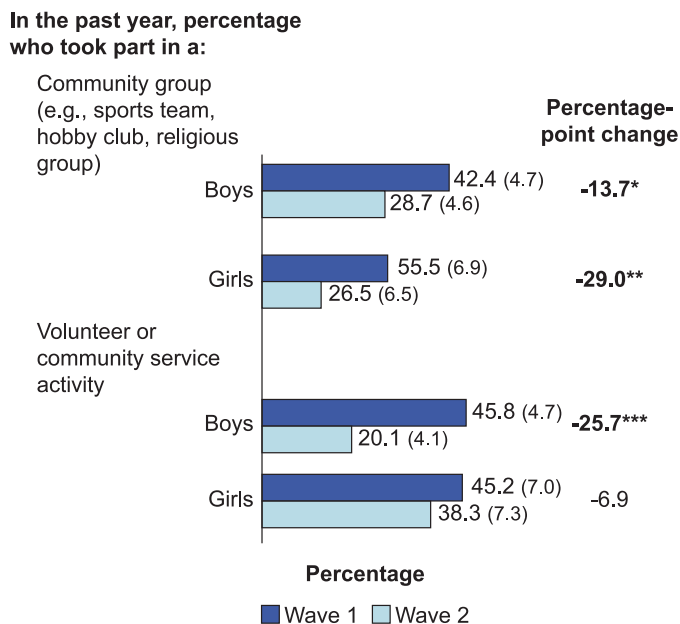


Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels: *p<.05; **p<.01.

Standard errors are in parentheses.

Exhibit 7-19
CHANGES IN COMMUNITY ACTIVITIES OF YOUTH
WITH DISABILITIES, BY GENDER



Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels: *p<.05; **p<.01; ***p<.001.

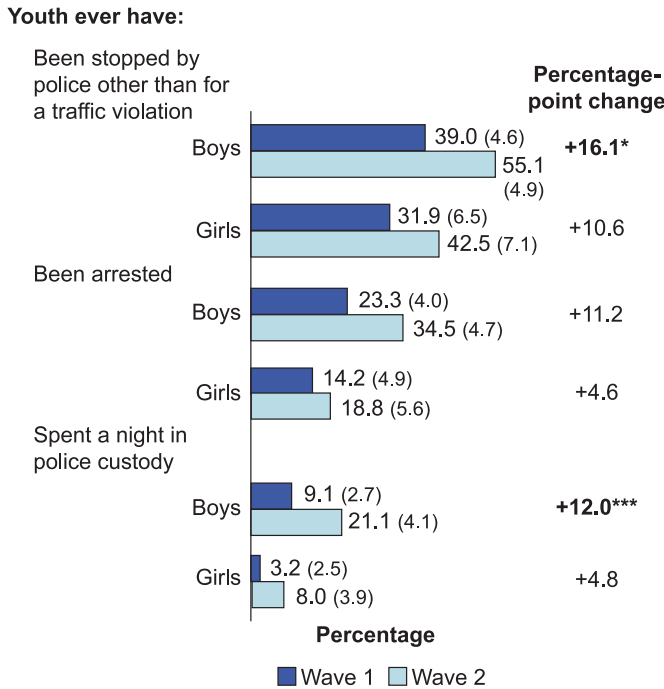
Standard errors are in parentheses.

Participating in community activities. Both boys and girls with disabilities show a decrease in participation in organized community groups (Exhibit 7-19), although the decline among girls (29-percentage points, p<.01) is more than twice that of boys (14-percentage points, p<.05). In contrast, only boys show a significant decline in participation in volunteer or community service activities (26 percentage points, p<.001). Whereas boys and girls had similar rates of participation in such activities in Wave 1, the decline among boys results in their participation rate being significantly lower than that of girls in Wave 2 (20% vs. 38%, p<.05).

Citizenship. Young men and women with disabilities do not differ in their likelihood of being registered to vote; 62% of 18- and 19-year-old men are registered to vote, as are 68% of their female peers.

The significant increase in the likelihood of being stopped and questioned by police other than for a traffic violation and of spending a night in jail that is evident among youth with disabilities as a whole occurs solely among boys (Exhibit 7-20). Boys are 16 percentage points more likely to have been stopped by police at some time by Wave 2 than previously (p<.05), a change not observed for girls. By Wave 2, more than half of boys with disabilities (55%) and 42% of girls have exhibited behavior at least once that has led to them being stopped and questioned by police. Similarly, boys show a significant increase in the likelihood

**Exhibit 7-20
CHANGES IN CRIMINAL JUSTICE SYSTEM
INVOLVEMENT BY YOUTH WITH DISABILITIES,
BY GENDER**



Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels: * $p < .05$; *** $p < .001$.

Standard errors are in parentheses.

the decline is fairly uniform across income groups (25 to 32 percentage points, $p < .05$ to $p < .001$), but larger among African-American youth with disabilities (44 percentage points, $p < .001$) than among white (24 percentage points, $p < .001$) or Hispanic peers (34 percentage points, $p < .05$). A decline in doing hobbies or reading for pleasure also affects all racial/ethnic groups but is largest among Hispanic youth (34 percentage points, $p < .01$, compared with 10 and 25 percentage points for white and African-American youth, $p < .05$ and $p < .01$). The decline in spending a good deal of leisure time on the phone with friends is evident only for middle-income and white youth (14 and 10 percentage points, respectively, $p < .05$). Nonetheless there are no significant differences in uses of leisure time across income or racial/ethnic groups in Wave 2.

that they have spent a night in jail (12 percentage points, $p < .05$), whereas there is no significant change among girls. Their different degrees of change result in boys being significantly more likely than girls to have stayed overnight in jail (21% vs. 8%, $p < .05$). Although neither gender demonstrates a significant increase in ever having been arrested, boys with disabilities are significantly more likely than girls to have had that experience (34% vs. 19%, $p < .05$).

**Household Income and
Racial/Ethnic Background**

Youth with disabilities who differ in the income level of their households and/or their racial/ethnic background have experienced changes in uses of leisure time, social activities, and citizenship differently in the early years after high school.

Uses of leisure time. Youth in all income and racial/ethnic groups have experienced significant decreases in spending most of their leisure time watching TV or videos (Exhibit 7-21);

Exhibit 7-21
CHANGES IN USES OF LEISURE TIME BY YOUTH WITH DISABILITIES,
BY HOUSEHOLD INCOME AND RACE/ETHNICITY

	Income			Race/Ethnicity		
	Lowest	Medium	Highest	White	African-American	Hispanic
Percentage spending most of their leisure time:						
Watching TV or videos						
Wave 1	49.8 (6.9)	44.1 (8.0)	45.5 (7.1)	41.8 (4.8)	59.8 (8.8)	46.4 (12.0)
Wave 2	17.8 (5.8)	19.5 (7.1)	13.2 (5.3)	17.5 (4.2)	16.3 (7.5)	12.1 (8.4)
Percentage-point change	-32.0***	-24.6*	-32.3***	-24.3***	-43.5***	-34.3*
Using a computer						
Wave 1	23.9 (5.9)	37.6 (7.8)	47.7 (7.2)	37.9 (4.7)	33.6 (8.5)	32.0 (11.2)
Wave 2	8.6 (4.2)	12.7 (6.0)	18.0 (6.0)	17.9 (4.2)	8.0 (5.5)	8.8 (7.3)
Percentage-point change	-15.3*	-24.9*	-29.7**	-20.0**	-25.6*	-23.2
Listening to music						
Wave 1	29.1 (6.3)	23.0 (6.8)	29.7 (6.6)	25.7 (4.2)	33.6 (8.5)	28.9 (10.9)
Wave 2	11.0 (4.7)	9.1 (5.2)	10.5 (4.8)	8.5 (3.1)	14.2 (7.1)	8.7 (7.3)
Percentage-point change	-18.1*	-13.9	-19.2*	-17.2***	-19.4	-20.2
Doing hobbies, reading for pleasure						
Wave 1	19.1 (5.5)	25.1 (7.0)	20.9 (5.8)	17.2 (3.7)	26.8 (8.0)	39.4 (11.7)
Wave 2	4.7 (3.2)	3.6 (3.3)	8.2 (4.3)	6.9 (2.8)	2.1 (2.9)	5.0 (5.6)
Percentage point change	-14.4*	-21.5**	-12.7	-10.3*	-24.7**	-34.4**
Talking on the phone with friends						
Wave 1	9.7 (4.1)	17.0 (6.1)	16.2 (5.3)	14.4 (3.4)	20.4 (7.3)	14.8 (8.5)
Wave 2	5.9 (3.6)	3.3 (3.2)	6.3 (3.8)	4.6 (2.3)	10.3 (6.2)	.5 (1.8)
Percentage-point change	-3.8	-13.7*	-9.9	-9.8*	-10.1	-14.3

Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels: *p<.05; **p<.01; ***p<.001.

Standard errors are in parentheses.

Friendship interactions. An increase in the likelihood of seeing friends often outside of school or work has occurred only among the upper-income group (31 percentage points, p<.01; Exhibit 7-22), which has a significantly higher rate of seeing friends often than youth in the lowest-income group (64% vs. 42%, p<.05). An increase in frequent friendship interactions also is apparent among both white and African-American youth with disabilities (17 and 26 percentage points, p<.05). In contrast, the reduction in use of computers for communication reaches statistical significance for none of the income groups and only for white youth among the racial/ethnic groups (13 percentage points, p<.05).

Exhibit 7-22
CHANGES IN FRIENDSHIP INTERACTIONS OF YOUTH WITH DISABILITIES,
BY HOUSEHOLD INCOME AND RACE/ETHNICITY

	Income			Race/Ethnicity		
	Lowest	Medium	Highest	White	African-American	Hispanic
In the past year, percentage who saw friends outside of school or work at least weekly						
Wave 1	25.0 (6.0)	41.6 (7.9)	32.9 (6.8)	39.1 (4.7)	25.2 (7.9)	16.4 (8.9)
Wave 2	41.9 (7.3)	45.7 (8.9)	64.0 (7.5)	56.4 (5.3)	50.8 (10.1)	33.7 (12.2)
Percentage-point change	+16.9	+4.1	+31.1**	+17.3*	+25.6*	+17.3
Percentage communicating by computer at least daily						
Wave 1	7.7 (4.2)	23.0 (7.0)	27.6 (6.6)	24.2 (4.4)	13.6 (6.9)	17.1 (9.7)
Wave 2	2.0 (2.1)	15.0 (6.2)	12.1 (4.8)	11.2 (3.3)	3.5 (3.6)	9.1 (7.4)
Percentage-point change	-5.7	-8.0	-15.5	-13.0*	-10.1	-8.0

Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels: *p<.05; **p<.01.

Standard errors are in parentheses.

Participation in community activities. Low-income and Hispanic youth with disabilities have not experienced the decreased participation in community groups after high school that is evident among middle- and upper-income youth and both white and African-American youth (Exhibit 7-23). Declines of 27 and 22 percentage points for middle- and upper-income youth with disabilities (p<.05) result in very similar levels of involvement in community groups across income levels (23% to 30% participate in Wave 2). A similar pattern is evident in the decline in volunteer or community service activities (30 and 24 percentage points for middle- and upper-income youth, p<.01 and p<.05). Eighteen- and 32-percentage point declines in community group participation among white and African-American youth with disabilities result in greater similarity in rates of participation across racial/ethnic groups in Wave 2 (18% to 31%), down from the 20-point spread in Wave 1 (29% to 49%). In contrast, only white youth with disabilities show a significant decline in volunteer or community service activities (28 percentage points, p<.001), which has eliminated the significant difference between groups in Wave 1.

Exhibit 7-23
CHANGES IN COMMUNITY ACTIVITIES OF YOUTH WITH DISABILITIES,
BY HOUSEHOLD INCOME AND RACE/ETHNICITY

	Income			Race/Ethnicity		
	Lowest	Medium	Highest	White	African-American	Hispanic
In the past year, percentage who:						
Took part in a community group (e.g., sports team, hobby club, religious group)						
Wave 1	36.3	50.2	51.3	48.8	49.4	29.1
	(6.6)	(8.0)	(7.1)	(4.8)	(8.7)	(10.8)
Wave 2	28.6	23.3	29.5	30.9	17.6	27.0
	(6.4)	(7.2)	(6.7)	(4.7)	(7.2)	(11.0)
Percentage-point change	-7.7	-26.9*	-21.8*	-17.9**	-31.8**	-2.1
Took part in volunteer or community service activities						
Wave 1	33.7	56.2	54.3	53.6	32.6	28.6
	(6.5)	(7.9)	(7.0)	(4.8)	(8.3)	(10.8)
Wave 2	26.2	26.1	30.5	25.2	33.3	22.5
	(6.4)	(7.5)	(6.9)	(4.5)	(9.0)	(10.4)
Percentage-point change	-7.5	-30.1**	-23.8*	-28.4***	+7	-6.1

Sources: NLTS Wave 1 parent interviews and Wave 2 parent/youth interviews.

Statistically significant difference in a two-tailed test at the following levels: *p<.05; **p<.01, ***p<.001.

Standard errors are in parentheses.

Citizenship. Regarding income groups, upper-income youth with disabilities are significantly more likely than middle-income peers to be registered to vote in their early years out of high school (74% vs. 51%, p<.05; Exhibit 7-24). They also have a pattern of lower criminal justice system involvement. Although none of the changes over time in indicators of negative citizenship are significant for any income group, there are marked differences between them in Wave 2. By that time, youth with disabilities in the middle-income group are significantly more likely to have been stopped and questioned by police other than for a traffic violation (56%) than either lower-income or upper-income youth (34% and 30%, respectively, p<.05 and p<.01). Similarly, they are more likely than both other groups to have been arrested (49% vs. 28% and 17%, p<.05 and p<.001) and on probation or parole (42% vs. 18% and 9%, p<.05 and p<.001). Upper-income youth with disabilities are the least likely to have experienced these kinds of interactions with police, as well as being significantly less likely than the other groups to have spent a night in police custody (7% vs. 22% and 23% for lower- and middle-income youth, respectively, p<.05). There are no significant changes over time in citizenship for any racial/ethnic group, nor are there differences in Wave 2 between them in the likelihood that they are registered to vote or reported to have been involved at some point with the criminal justice system.

**Exhibit 7-24
CHANGES IN CITIZENSHIP OF YOUTH WITH DISABILITIES,
BY HOUSEHOLD INCOME**

	\$25,000 or Less	\$25,001 to \$50,000	More than \$50,000
Percentage of 18- and 19-year-olds registered to vote (Wave 2)	60.2 (8.0)	51.0 (9.2)	73.7 (6.9)
Percentage who ever have:			
Been stopped by police other than for a traffic violation			
Wave 1	33.7 (6.5)	56.5 (7.9)	29.7 (6.5)
Wave 2	48.5 (7.0)	71.0 (7.5)	40.4 (7.1)
Percentage-point change	+14.8	+14.5	+10.7
Been arrested			
Wave 1	19.9 (5.5)	36.7 (7.7)	9.3 (4.1)
Wave 2	28.5 (6.3)	49.2 (8.3)	16.6 (5.4)
Percentage-point change	+8.6	+12.5	+7.3
Spent a night in police custody			
Wave 1	10.9 (4.3)	10.4 (4.9)	2.4 (2.2)
Wave 2	22.2 (5.8)	23.4 (7.0)	7.2 (3.8)
Percentage-point change	+11.3	+13.0	+4.8
Been on probation or parole			
Wave 1	14.9 (4.9)	25.6 (7.0)	6.2 (3.4)
Wave 2	17.8 (5.4)	41.7 (8.2)	9.1 (4.2)
Percentage-point change	+2.9	+16.1	+2.9

Sources: NLTS2 Wave 1 parent interviews and Wave 2 parent/youth interviews.
Standard errors are in parentheses.

Individual and Household Factors Related to Variations in Social Involvement and Citizenship

The discussion thus far has demonstrated that a variety of aspects of the use of leisure time and social involvement differ for out-of-school youth with different primary disability classifications, modes of school leaving, and demographic characteristics. However, several of these characteristics are intertwined. For example, the proportion of youth who are male is much higher in some disability categories (e.g., emotional disturbance and autism) than others (e.g., hearing or visual impairments) (Marder, Levine, et al., 2003). Similarly, African-American youth are larger proportions of youth with mental retardation than of those with other health impairments (Marder, Levine, et al., 2003). Thus, it is difficult to determine how

much of the variation in the experiences of youth with disabilities after high school relates to the nature of their disabilities or to other differences between them.

Multivariate analysis approaches are appropriate for disentangling the complexities of these kinds of relationships. This section focuses on one positive and one negative measure of youth's experiences after high school—whether youth see friends outside of school and organized group activities at least weekly and whether they have ever been arrested. Analyses address the question “What individual and household characteristics and experiences are associated with variations in the likelihood that youth with disabilities have active and positive social lives in their early years after high school?”⁷ Because these measures are dichotomous, logistic regression analysis is the appropriate multivariate analysis approach. It estimates the magnitude

⁷ Please see Appendix B for descriptions of the independent variables used in these analyses.

and direction of relationships to the social involvement measure of numerous independent variables,⁸ statistically holding constant the other factors in the analysis.

Only a few of the several factors related to youth's disabilities, demographics, and experiences have significant relationships to the probability that out-of-school youth with disabilities have active social lives or have been subject to arrest (Exhibit 7-25). Regarding regularly seeing friends, the only relationships involve the youth's primary disability and functioning. Relative to youth with learning disabilities, those with orthopedic impairments, autism, or multiple disabilities are between 14 and 21 percentage points less likely to see friends outside of school and organized groups at least weekly ($p < .05$ and $p < .01$), independent of other differences between them. Youth in other disability categories and those with ADD/ADHD are no more or less likely to be socially active than youth with learning disabilities. Further, independent of the nature of the disability, disabilities that affect a larger number of domains reduce the likelihood that youth will be socially active by about 4 percentage points. In contrast, having high social skills ratings is associated with an 8-percentage-point higher likelihood of seeing friends often than having poor social skills. These relationships are similar to those found in analyses of frequent friendship interactions among secondary school students with disabilities (Marder, Wagner, & Sumi, 2004).

No demographic factors are related to the likelihood of out-of-school youth with disabilities seeing friends frequently, including income, which could be expected to support a more active social life. These findings are somewhat different from similar analyses of secondary school students with disabilities, in which boys were more likely than girls to see friends often (Marder et al., 2004). The fact that there is no independent gender difference among out-of-school youth with disabilities is consistent with the sizable increase between Waves 1 and 2 in frequent friendship interactions noted earlier for girls. Active informal friendships do not appear to be affected by the way in which youth leave school or the length of time youth have been out of high school, at least in the brief 2-year period addressed in these analyses. Further, neither holding a job nor going to postsecondary school is associated with the frequency of friendship interactions. Thus, active informal friendships appear to be a complement to engagement in the community.

In contrast to relationships noted above, disability and functioning factors are less strongly related to the likelihood that youth with disabilities have been subject to arrest. Only youth with traumatic brain injuries differ significantly from those with learning disabilities in the likelihood of arrest; other factors being equal, youth with traumatic brain injuries are 18 percentage points more likely to have been arrested ($p < .05$). Among the indicators of functioning, only the level of social skills is related to arrest, with youth who have high social skills being 15 percentage points less likely to be arrested than youth with low social skills ($p < .001$), controlling for other differences between them.

⁸ The following variables are included in the logistic regression analysis simultaneously: dichotomous variables for disability category; whether the youth has ADD/ADHD; the number of functional domains affected by disability; scores on the self-care, functional cognitive, and social skills scales; age; gender; dichotomous variables indicating whether the youth is African-American or Hispanic; household income; head of household education; school-leaving status; year of school leaving; and whether the youth has a job or is enrolled in a postsecondary school. Appendix B has a discussion of the measurement of these variables and the rationale for their inclusion in the analysis.

Exhibit 7-25
DIFFERENCES IN SOCIAL INVOLVEMENT ASSOCIATED WITH INDIVIDUAL AND HOUSEHOLD CHARACTERISTICS OF YOUTH WITH DISABILITIES^a

	Estimated Percentage-Point Difference in Probability of:		Comparison Categories
	Seeing Friends at Least Weekly	Ever Having Been Arrested	
Disability and Functioning			
Speech/language impairment	-3.0	.0	vs. learning disability ^a
Mental retardation	-7.9	-.6	vs. learning disability
Emotional disturbance	-2.2	10.0	vs. learning disability
Hearing impairment	-3.9	9.9	vs. learning disability
Visual impairment	0.3	-3.0	vs. learning disability
Orthopedic impairment	-14.4*	3.4	vs. learning disability
Other health impairment	-2.5	9.0	vs. learning disability
Autism	-21.1**	.5	vs. learning disability
Traumatic brain injury	-5.3	18.4*	vs. learning disability
Multiple disabilities/deaf-blindness	-17.0**	-2.4	vs. learning disability
ADD/ADHD	3.1	.2	Yes vs. no
Number of problem domains	-4.1*	-2.2	3 vs. 1 domain
Self-care skills	3.8	8.8	High vs. low (8 vs. 4)
Functional cognitive skills	2.1	11.7	High vs. low (15 vs. 7)
Social skills	7.6*	-14.6***	High vs. low (27 vs. 17)
Demographics			
Age at Wave 2	2.5	-2.1	19 vs. 17
Gender	-5.1	8.4*	Male vs. female
African-American	4.4	-1.0	vs. white
Hispanic	-1.9	4.2	vs. white
Household income	2.0	-.8	\$55,000 to \$59,999 vs. \$20,000 to \$24,999
Head of household education	4.2	1.5	Bachelors degree or more vs. not a high school graduate
Youth's Experiences			
Completed high school	-4.5	-10.2*	Yes vs. no
Left secondary school in 2002-03	-2.2	-6.1	Yes vs. no (2002-2003 vs. earlier)
Attends postsecondary school	1.3	-8.1	Yes vs. no
Currently has a paid job	4.3	2.9	Yes vs. no
Ever was suspended or expelled from school	NA	7.5*	Yes vs. no
Ever was retained at grade level	NA	15.0***	Yes vs. no

Exhibit reads: The probability of seeing friends outside of school and organized activities at least weekly of youth with orthopedic impairments is 14.4 percentage points lower than the probability of youth with learning disabilities, other factors being equal. The probability of having been arrested is 15 percentage points higher for youth who ever were retained at grade level.

^a Multivariate analyses require that for categorical variables, each category be compared with another specified category. Learning disability was chosen as the category against which to compare the relationships for other disability categories because it is the largest category and, therefore, most closely resembles the characteristics of youth with disabilities as a whole.

NA: Not included in analysis.

*p<.05; **p<.01; ***p<.001.

In addition, demographic and experiential factors come into play. As is true in the general population (Snyder, 2002), young men with disabilities are 8 percentage points more likely than young women to have been arrested ($p < .05$), other factors held constant. Contrary to hypotheses, neither household income, head of household education, nor racial/ethnic minority status is related to variations in the likelihood of arrest.

However, three measures of youth's prior school experiences relate to the likelihood of arrest. Having had academic and disciplinary problems in school both bode ill for criminal justice system involvement. Those who ever were suspended or expelled from school are more likely to have gotten into trouble with the law, independent of other factors (8 percentage points, $p < .05$), and those who have been held back one or more grades in school are more likely to have been subject to arrest (15 percentage points, $p < .001$). Interestingly, this measure of academic difficulty has twice as much impact on the likelihood of arrest as the measure of behavioral difficulties at school. Finally, high school completers are significantly less likely than youth with disabilities who did not finish high school to have been arrested (10 percentage points, $p < .05$).

The relationships noted here may help explain why the high rate of arrest among youth with emotional disturbances that is noted in bivariate analyses is not supported in multivariate analyses. Youth with emotional disturbances tend to have lower social skills than youth in other disability categories and are more likely to be male and a high school dropout; analyses suggest that it is these factors that relate to the likelihood of arrest, rather than the classification of emotional disturbance itself.

Finally, it is important to note that although the factors related to active friendships and arrests explain a statistically significant portion of the variation in these experiences (PI=.12 for frequent friendship interactions and .30 for arrests⁹), they still leave much of the variation in those experiences unexplained. As noted above, all the explained variation in the likelihood of frequent friendship interactions is attributable to factors related to disability and functioning; these factors account for .19 of the .30 portion of variation explained in the likelihood of arrest. Adding household demographics increases the PI for arrests to .23, and adding youth's experiences increases it to .30.

Summary

The focus of this report—the 2-year time period during which most youth with disabilities considered here left high school—is associated with several changes in their leisure and social lives. Passive uses of leisure time, such as watching television or videos and listening to music, have declined, as have electronic forms of communication. These changes are most evident for youth with learning disabilities or other health impairments, as well as youth who completed high school rather than dropping out. In contrast, out-of-school youth with disabilities are seeing friends regularly outside of school or group activities much more often than they were 2 years earlier. However, this move toward more active informal friendships is not shared by youth with

⁹ Because logistic regression analyses do not produce the typical measure of explained variation (r^2), an alternative statistic was calculated for the friendships and arrests analyses, which indicates the “predictive improvement,” or PI, that can be obtained by adding an independent variable to a logistic regression. Possible PI values range from 0 to 1 in a similar way to conventional r^2 statistics. See Appendix A for a more complete description of PI.

orthopedic impairments, autism, or multiple disabilities, who are much less likely to see friends often than are youth with learning disabilities, other differences between them held constant. Only between 20% and 30% of out-of-school youth in these categories see friends outside of school or work at least weekly. No differences are apparent for youth who differ in functional abilities or demographic characteristics.

At the same time that informal friendships have become more active, participation in the community in the form of organized community groups has declined, particularly for youth with learning disabilities, emotional disturbances, or other health impairments and among girls. A marked drop in volunteer and community service activities also is noted. However, most youth with disabilities are accepting a particularly important responsibility of citizenship; 64% of those 18 or older are registered to vote, including more than two-thirds of those with learning disabilities or orthopedic or other health impairments. Voter registration rates are below 50% for out-of-school youth with speech impairments, mental retardation, autism, or multiple disabilities and for youth with disabilities who did not complete high school.

Unfortunately, positive forms of social interaction and citizenship are offset for youth with disabilities who have been involved with the criminal justice system. By the time they have been out of secondary school up to 2 years, 29% have been arrested at least once and 20% have been convicted and are on probation or parole. The likelihood of arrest is particularly high for those with low social skills, boys, youth who did not finish high school, and those who had both academic and behavioral difficulties while in high school—characteristics common to youth with emotional disturbances, who have the highest rate of arrest of any disability category.