

Reported Accommodations and Supports Provided to Secondary and Postsecondary

Students with Disabilities

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Abstract

There is a dearth of information on specific accommodations used by students with disabilities at the secondary and postsecondary levels. Using data from the National Longitudinal Transition Study-2, researchers examined a nationally-representative cohort of 3,190 students with disabilities who reported that they had ever enrolled in a postsecondary program since leaving high school. Analysis of differences in rates of self-disclosure indicated that only 35% of youth with disabilities informed their college of their disability. Whereas 98% received disability-based accommodations at the secondary level, only 24% did so at the postsecondary level. Likewise, 59% received at least one modification at the secondary level, but only 4% did in college. Implications for practice and future research are discussed. These data have important implications for those assisting students with disabilities in the transition to postsecondary education. High school transition –planning teams, including students and students, need to be aware that students will be required to self-disclose their disability to the proper postsecondary contact to receive accommodations and services. In addition, secondary planning teams and parents must understand that although accommodations and modifications are available, their use is far more limited at the college level. Thus, the use of accommodations and modifications at the secondary level should be carefully examined and the student should be involved in discussions related to why each is needed, how it is used, and what benefits it provides. At the postsecondary level, it is essential that schools be aware of the almost two thirds of students with disabilities on their campuses who have chosen not to disclose their disability. It highlights the importance of colleges considering universal design principals in developing curriculum. (Contains 1 table)

Reported Accommodations and Supports Provided to Secondary and Postsecondary
Students with Disabilities: National Perspective

Postsecondary institutions are required by law to provide reasonable academic adjustments and auxiliary aids to otherwise qualified students with disabilities who disclose their disability and request such assistance. Although these services may help level the playing field regarding academic demands (Ofiesh, 2007) and enable the student to better deal with the challenges of college, recent data from the National Longitudinal Transition Study-2 (NLTS2) (Newman et al., 2011) indicate that few students take advantage of such supports. Indeed, NLTS2 data indicate that within 8 years of leaving high school, 67% of students with disabilities who received special education services in the K–12 system had enrolled in postsecondary education, yet only 28% disclosed that they had disabilities in college, and less than 1 in 5 received accommodations (Newman, et al., 2011).

The exact reasons for this low level of self-disclosure are not entirely clear but might be attributable to a range of factors. These include the differing legal mandates from K–12 to postsecondary education and differences in how the terms *modifications*, *accommodations*, and *academic adjustments* are applied in both settings. In addition, significant differences exist between K–12 and postsecondary education in determining eligibility for services, including the need for greater student self-advocacy at the college level. Once a student is found eligible, postsecondary institutions vary widely both in types and availability of services and supports and in how they are provided (Madaus, 2010). Other data from the viewpoint of students point to the importance of self-advocacy and indicate that some do not feel the need to disclose their disability or choose not to

because of fear of being stigmatized (Martin, 2010; Salzer, 2008). This paper discusses each of these factors potentially affecting the receipt of accommodations at the postsecondary level.

Legal Mandates

Secondary education. At the K–12 level, students with disabilities are guaranteed services under the mandates of the Individuals with Disabilities Education Act of 2004 (IDEA; P.L. 108-446). The IDEA requires that local education agencies (LEAs) identify and evaluate students with potential disabilities and, if a disability is determined, to provide them with an individualized education program (IEP). The IEP document must include “a statement of the program modifications ... that will be provided to enable the child” to advance appropriately toward attaining the annual goals (§ 300.320(a)(B)(4)(i)). In addition, the IEP must contain “a statement of any individual appropriate accommodations that are necessary to measure the academic achievement and functional performance of the child on State and districtwide assessments” (§ 300.320(a)(B)(6)(i)). In high school, the use of accommodations and supports is widespread for students with disabilities (McLaughlin, 2012). Typically, a team of educators and the student’s parents are responsible for making decisions related to such accommodations, a point underscored by research indicating minimal student involvement in and understanding of the IEP process (Martin, Portley, & Graham, 2010).

Postsecondary education. Upon a student’s graduation or exit from secondary school, section coverage under the IDEA ends. At the postsecondary level, students with disabilities may be eligible for civil rights protections under Subpart E of Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112). According to the legislation,

No qualified handicapped student shall, on the basis of handicap, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any academic, research, occupational training, housing, health insurance, counseling, financial aid, physical education, athletics, recreation, transportation, other extracurricular, or other postsecondary education aid, benefits, or services to which this subpart applies (§104.43(a)).

To ensure that students with disabilities have access to both the physical and instructional environment, colleges must provide academic adjustments (Office for Civil Rights, 2007). These are described in the legislation as “modifications to its academic requirements as are necessary to ensure that such requirements do not discriminate or have the effect of discriminating, on the basis of handicap, against a qualified handicapped applicant or student” (§140.44(a)). The legislation specifically states that in regard to course examinations and evaluation of academic achievement, colleges must use methods that ensure that such evaluation will be based on the student’s achievement level, not the impact of the student’s disability and “impaired sensory, manual, or speaking skills” (§104.43(c)).

A range of possible academic adjustments may be provided, including a reduced course load and extended time on exams (Office for Civil Rights, 2007). Postsecondary institutions must determine which accommodations will be provided on a case-by-case, course-by-course basis to best meet the individual needs of a student (United States Government Accountability Office, 2009). Note that although the term *modifications* is used in the definition of academic adjustments, colleges and universities tend to provide

accommodations, not modifications. McLaughlin (2012) explained that both accommodations and modifications “can be a device, practice, intervention, or procedure provided to a student with a disability that affords equal access to instruction or assessment” (p. 23). However, accommodations neither change the content being taught nor reduce achievement expectations, whereas modifications do make such changes (McLaughlin, 2012).

In addition, postsecondary institutions must provide students with educational auxiliary aids and services. These might include note-takers, taped texts, recording devices, and other adaptive computer equipment. Yet there are important restrictions to these services. For example, institutions are not required to provide services of a personal nature, including readers for studying or attendants. Likewise, services like tutoring need not be provided for students with disabilities unless they are offered to the general student body. If so, then the services must be made available to students with disabilities ((§140.44(d)(2); OCR, 2007).

Student Use of Accommodations and Services

Broad data exist on the types of accommodations provided for students in postsecondary education. In the 1996–98 school years, 72% of 2- and 4-year postsecondary institutions reported enrolling students with disabilities, including 98% of public institutions. Of the institutions that enrolled students with disabilities, 98% reported providing the students with at least one support service or accommodation (Lewis & Farris, 1999). The most common was extended exam time or alternative exam formats (reported by 88% of the institutions), while 77% provided tutors and 69% provided readers, note-takers or scribes. Other reported accommodations and services

were registration assistance (62%), adaptive equipment and technology (58%), textbooks on tape (55%), sign language interpreters (45%), and course substitutions or waivers (42%) (Lewis & Farris, 1999).

More than a decade later—during the 2008–09 academic year—88% of 2- and 4-year institutions enrolled students with disabilities, including 99% of public institutions. Of these institutions, 93% provided extended test time, followed by classroom note-takers (77%), faculty-provided course notes or assignments (72%), assistance with learning strategies and study skills (72%), alternative exam formats (71%), and adaptive equipment and technology (70%). A critical point to consider in examining these data is that these results represent the perspective of institutions that provided the supports, not the proportion of students with disabilities who received them. These percentages do not distinguish between institutions that provided accommodations for only one student with a disability and those where most students with disabilities received supports. Moreover, these percentages represent institutions that were aware of providing services to students who self-identified as having a disability; however, students with disabilities may have been receiving services directly from professors or other campus offices without going through the disability services office (Barber, 2012).

The importance of this point was amplified in a report from the NLTS2 that tracked the postsecondary education experiences of a nationally representative sample of young adults with disabilities for up to 8 years after they left high school (Newman et al., 2011). Compared with institutional data on accommodations, the NLTS2 data provide a picture of student-reported accommodation use. All the students in the sample had received special education services in high school, and 60% had enrolled in some type of

postsecondary school. However, only 28% had disclosed their disability to their college.

Another large-scale study of student accommodation use by Mamiseishvili and Koch (2011) examined data from the Beginning Postsecondary Students Longitudinal Study to determine the factors related to first-to-second-year persistence of college students with disabilities. Key findings indicated that course substitutions, readers, and note-takers or scribes were significantly related to student retention. Salzer, Wick, and Rogers (2008) presented the results of a survey of 508 current and former postsecondary students with mental illness regarding their accommodation use in college and found that 75% reported using at least one. The most commonly reported accommodations or informal services were individual meetings with teachers (46%), extended time to complete assignments (44%), receiving an incomplete grade rather than an F during a relapse (29%), and extended test time (29%).

As these studies described, some colleges provide students with disabilities academic supports in study skills and learning strategies. These are typically considered “enhanced or more comprehensive services” that exceed what is required by the mandates of Section 504, but some institutions provide them (Madaus, 2006; McGuire, 2010; United States Government Accountability Office, 2009, p. 16). Troiano, Liefeld, and Trachtenberg (2010) examined the connection between students’ use of such an academic support program and their grade point averages and graduation rates. The results indicated that students who regularly attended scheduled academic support program sessions had higher GPAs; in addition, consistent attendance predicted college graduation in 68% of the students. Conversely, students with inconsistent session attendance had the largest concentration of GPAs below 1.5.

Rationale for the Present Study

Despite the widespread discussion about the importance of accommodations in postsecondary education, relatively little is known about what specific accommodations students use at the secondary level and subsequently at the postsecondary level. As noted, statistics on the prevalence of accommodation use are reported primarily from the institutional rather than student perspective. How the receipt of accommodations differs between high school and postsecondary school for specific students is even less clear. NLTS2 provides the data to fill this dearth of information because the data set allows tracking of information on the services students with disabilities received in high school and comparison of this with the services the students said they actually were receiving in college.

Funded by the U.S. Department of Education in 2000 with an initial sample of more than 11,000 students, the NLTS2 has produced the only national database on the characteristics, experiences, and post-high school outcomes of secondary school-age students with disabilities. NLTS2 is uniquely suited to contributing to a better understanding of the experiences of postsecondary students with disabilities because it is the only nationally representative database that generalizes to the full U.S. population of such students. Only slightly more than a quarter of the postsecondary school students with disabilities reported informing their postsecondary schools of their disability and disability-related needs (Newman et al., 2011). Because most studies of postsecondary students with disabilities rely on student's self-identification, they completely overlook the more than 70% of postsecondary students with disabilities who are under the radar. Only by using data from NLTS2, a study that followed students with disabilities

longitudinally from high school, where their school district identified them as having a disability, to college can the experiences of the complete population of postsecondary students with disabilities be more fully understood.

The present paper is intended to extend the research presented by Newman et al. (2011), based on NLTS2 data. Although that study reported data on rates of accommodation receipt at the postsecondary level, it did not link the data for receipt of specific types of accommodations, modifications, and supports to the student's rate of receipt at the secondary level, which would allow for direct comparisons between the settings. Nor did the Newman et al. study break out rates of receipt of accommodations, modifications, supports, and services by type of postsecondary institution. In addition, the present analysis used a broader sample than that in the prior report. The 2011 report included only those who had responded to the Wave 5 parent/youth interview/survey, whereas this paper includes respondents across all NLTS2 data collection waves who reported ever having attended a postsecondary institution. Finally, the current paper is based on a more stringent definition of postsecondary enrollment than the 2011 report, which is more fully described in the methods section.

Thus, the present study was designed to answer the question of the extent to which the receipt of accommodations, modifications, supports, and services differs between high school and postsecondary school for youth with disabilities. It also addresses the question of the extent to which the receipt of accommodations, modifications, and services varies across types of postsecondary schools. Specifically, the rate of receipt of accommodations, modifications, and program services was measured at the secondary level and compared with levels of receipt at the postsecondary level overall

and at 2-year/community colleges, 4-year colleges/universities, and postsecondary career and technical education (CTE) schools.

Key Terms

The following terms were used for the purposes of this investigation: *accommodation*, *modification*, and *program services*. Each is defined below.

Note that these terms are used interchangeably at times in the literature and may be used differently in various settings (e.g., K–12 v. postsecondary education).

Accommodation. As described by McLaughlin (2012, p. 23):

An accommodation can be a device, practice, intervention, or procedure provided to a student with a disability that affords equal access to instruction or assessment. Its purpose is to reduce or eliminate the impact of the student's disability so that he or she can achieve a standard. A key point is that an accommodation does not change the content being taught, nor does it reduce learning or achievement expectations.

Modification. Also as described by McLaughlin (2012, pp. 23-24):

A modification may also be a device, practice, intervention, or procedure. However, in this case a teacher is changing the core content standard or the performance expectation.

Program services. Program services are features, supports or assistance provided for students with disabilities.

Data Sources/Methods

NLTS2 is the largest and richest dataset available that generalizes nationally to the experiences and outcomes of youth with disabilities as they transitioned from high

school to adulthood. This study was conducted by SRI International for the U.S. Department of Education, with data collected in five Waves, two years apart, from 2001 to 2009. The initial sample included more than 11,000 high school students ages 13 through 16 and receiving special education services on December 1, 2000. Each student's eligibility for special education services was determined by the school district or special school from which the student roster was sampled. The NLTS2 two-stage sampling plan first randomly sampled local educational agencies (LEAs) and state-supported special schools stratified by region, district enrollment, and wealth. Students receiving special education services were randomly selected from rosters of LEAs or special schools in order to yield nationally representative estimates.

The present study includes NLTS2 sample members who had at least one wave of data from a parent or youth interview after the youth had left high school, so that measures of postsecondary enrollment were available. Results are weighted so that findings are nationally representative of youth in the NLTS2 age range and time frame, using a cross-wave cross-instrument weight, (Wt_AnyPYPHS) appropriate for analyzing multiple waves of NLTS2 data (Valdes et al., 2013).

The NLTS2 database includes data collected from interviews and/or surveys of parents and youth across five waves of data collection (conducted every other year beginning in 2001 and ending in 2009), high school transcripts, surveys of students' high school teachers, and direct assessments of students' academic achievement. For this paper, data about postsecondary school enrollment and accommodations, modifications, and services received from postsecondary schools were constructed based on data from parents and/or youth's responses to survey items in parent and youth interview/surveys

conducted in Waves 2 (2003) through 5 (2009). In identifying the sample for this paper, youth responses were given priority if parent and youth responses differed in a specific wave. For example, if a parent in Wave 3 said that the youth had attended a 2-year college in the past 2 years, but the youth responded s/he had not attended college, the youth was coded as not having attended a 2-year college in that wave. This differed from the approach used to create the postsecondary sample included in the Newman, et.al. (2011) report, where either a parent or youth affirmative response would have been considered as a “yes” response to postsecondary enrollment for that wave. Postsecondary enrollment rates reported in this paper will be lower than those in Newman, et. al. (2011) because of these differences in sample definition.

The analysis sample for this paper included approximately 3,190 postsecondary students. Postsecondary enrollment data were collected for each of three types of postsecondary schools: 2-year or community colleges (approximately 2,230 students), 4-year colleges or universities (approximately 1,110 students), and CTE schools (approximately 1,280 students). Students reported to have been enrolled in each of these types of schools were included in the sample for that type of school. Because students may have attended several types of postsecondary institutions, they may be included in more than one type of postsecondary school sample; however, they are included only once in the full postsecondary sample. Unweighted sample size numbers reported here are rounded to the nearest 10, as required by the restricted data use agreement with the U.S. Department of Education.

We examined 23 measures of disability-related supports received from postsecondary and high schools, divided into four categories: accommodations,

modifications, academically-focused program or individualized services, and other program or individualized services. Postsecondary students who reported disclosing a disability to their postsecondary school and asking for services, accommodations, or other help had been asked an open-ended follow-up question about the types of supports received from the school; responses were coded based on a long list of predetermined categories. Probe questions were asked of those who had not responded to a category of items. For example, if a respondent had not indicated he or she had received testing accommodations, the follow-up question was, "Have you had any accommodations in how you take tests, like more time to take tests or a different setting to take tests?" To create a percentage of the full postsecondary student body with disabilities, we constructed zero-filled versions of these items, with those who had not disclosed a disability or requested accommodations included as a *no*.

Information about the receipt of accommodations, modifications, and services by postsecondary students when they were in high school came primarily from the high school program surveys conducted in 2002 and 2004. These surveys were completed by the staff member most knowledgeable about the student's high school experiences. Respondents to the high school program survey were provided with a list of accommodations, modifications, and academic services and asked to indicate which the student received as part of his or her IEP or 504 plan. The high school program survey did not include items about other-than-academic program or individualized services. That information was collected from the parent interview/surveys conducted when postsecondary students included in this paper were in high school. We limited these responses to the subset of respondents who also had school program survey data.

Data Analysis

Analyses involved descriptive statistics (e.g., percentages and means) and bivariate relationships (cross tabulations), excluding cases with missing values. A standard error is presented for each mean and percentage. All statistics were weighted to be representative of a larger population of postsecondary students with disabilities; no imputation of missing values was conducted. Comparisons between students in the different types of postsecondary schools were conducted using a two-sample *t* test with unequal variances. Comparisons between postsecondary students receiving accommodations, modifications, services at two time points (when they were in high school and when they were in postsecondary school) were conducted using paired *t* tests. Paired *t* test comparisons excluded cases with missing values at either time point. In addition, responses for those missing one of the time-point values were compared with those who had both values in a two-sample *t* test with unequal variances. Respondents who were missing one time-point value did not differ significantly in their rate of receipt of accommodations, modifications, or services from those who did not, with two exceptions. Postsecondary students with high school data were more likely to receive more time on tests and learning strategies/study skills assistance than those without (23% vs. 15%; $p < .05$, and 2.4% vs. 0.5%).

Results

Postsecondary Attendance

In total, 51% of young adults with disabilities ever attended a postsecondary school within 8 years of leaving high school. The largest number (36%) attended a 2-year institution, followed by 23% who attended a CTE school, and 15% who attended a 4-year

institution. As noted, because students could attend multiple types of institutions, they may be included in more than one type of postsecondary school sample.

Disability Type

Students with learning disabilities constituted more than two-thirds (69%) of the population of students with disabilities in postsecondary schools. Those in four other disability categories accounted for approximately 25% of that population: students with emotional disturbances, 9%; intellectual disabilities, 6%; other health impairments (the federal disability category that includes students with attention deficit/hyperactivity disorder), 5%; and speech/language impairments, 5%. Students in the seven remaining federal disability categories represented less than 6% of those who attended a postsecondary school. Thirty-six percent of postsecondary students with disabilities were reported to have ADD/ADHD in addition to their other disability. This breakdown was consistent across types of postsecondary institutions, with students with learning disabilities representing 69% at both 2- and 4-year colleges and 67% at CTE schools, followed by students with emotional disturbance (10% at 2-year colleges, 7% at 4-year colleges, and 12% at CTE schools).

Demographic Characteristics

English was the primary language of 91% of the students with disabilities who attended postsecondary school. Students with disabilities at postsecondary schools were more likely to be male than female (62% vs. 38%, $p < .001$), reflecting the disproportionate number of males (two-thirds; Wagner et al., 2003) in the population of youth with disabilities. In terms of race/ethnicity, white students accounted for 66% of the population of students with disabilities who had ever attended any type of

postsecondary school, compared with 18% who were African American ($p < .001$) and 14% who were Hispanic ($p < .001$). Students with disabilities from families with parental incomes of more than \$50,000 made up 43% of those with disabilities ever attending postsecondary school, and approximately 29% were from households with incomes of \$25,000 or less. These patterns in demographic differences were apparent across types of postsecondary schools, with white males from higher SES families more likely to attend all types.

Self-Disclosure

Although 100% of the students received special education services in secondary school, only 35% informed a postsecondary school of their disability. Half (50%) reported that they did not consider themselves to have a disability, whereas 14% indicated that they considered themselves to have a disability but chose not to disclose this to their postsecondary school. Findings were similar across types of postsecondary institutions, with rates of disclosure ranging from 28% at CTE schools to 33% at 2- and 4-year colleges. Approximately 56% at 2- and 4-year colleges and 54% at CTE schools reported that they did not consider themselves as having a disability and an additional 12% at 2-year and 10% at 4-year colleges, and 19% at CTE schools identified as an individual with a disability, but had opted not to disclose that disability to their postsecondary school.

Receipt of Disability Accommodations or Modifications

When they were in high school, 98% of the postsecondary students in the study received at least one type of accommodation, modification, or service because of a

disability (Table 1). In contrast, only 24% did at the postsecondary level—a 71 percentage point decrease ($p < .001$). At the time they were surveyed, 6% of postsecondary students reported requesting, but not yet receiving some type of disability-related support from their institution. Receipt of disability-related accommodations, modifications, and services ranged from 16% at CTE schools to 22% at 4-year colleges and 25% at 2-year or community colleges.

Specific types of disability-related accommodations, modifications, and services reported as being received are based on the definitions provided earlier and presented below.

Accommodations. When postsecondary students with disabilities were in high school, more than 95% received at least one accommodation from their school. In contrast, only 23% ($p < .001$) received any accommodations from their postsecondary school. This pattern of lower rates of accommodation receipt at the postsecondary level was apparent across types of schools—23% at 2-year institutions, 22% at 4-year institutions, and 15% at CTE schools—as well as across types of accommodations. The most frequently received type at both the secondary and postsecondary levels was testing accommodations, including extended time and different settings for test taking. Almost 88% received this accommodation support in high school, compared with 21% ($p < .001$) in postsecondary school overall; (21% at 2-year colleges; 20% at 4-year colleges; 12% at CTE schools). Additional time to complete assignments was the second most frequently received accommodation (72% in high school vs. 6% in postsecondary school, $p < .001$; 5% at 2-year colleges and CTE schools; 3% at 4-year colleges), followed by a reader for tests or assignments (47% in high school vs. 4% in postsecondary school, $p < .001$; 4% at

2-year colleges; 2% at 4-year colleges; 3% at CTE schools), use of a calculator for activities not allowed other students (33% vs. 6%, $p < .001$; 5% at 2-year colleges; 4% at both 4-year colleges and CTE schools), disability-related computer use (23% vs. 4%, $p < .001$; 3% at 2-year colleges; 4% at 4-year colleges; 1% at CTE schools), and books on tape (15% vs. 2%, $p < .001$; 2% at both 2-year and 4-year colleges; 1% at CTE schools). Rates of accommodation receipt did not differ significantly by type of postsecondary school.

Modifications. Results indicated that while 59% of postsecondary students with disabilities had received at least one modification at the secondary level, only 4% ($p < .001$) did so in postsecondary school. This pattern was evident across types of modifications, including modified or alternative tests (37% in high school vs. 1% in postsecondary school, $p < .001$; 1% at 2-year colleges; .2% at 4-year colleges and CTE schools), shorter or different assignments (30% vs. 3%, $p < .001$; 2% at 2-year colleges; 1% at 4-year colleges; 4% at CTE schools), and modified grading standards (29% vs. >1%, $p < .001$; .> 1% at each type of school.) Rates of modification receipt did not differ significantly by type of postsecondary school.

Academically-focused services. At the high school level, 80% of the sample were reported to have received at least one academically-focused program or individualized service. As with other types of supports, the rate of receipt decreased significantly at the postsecondary level, with only 12% ($p < .001$) of students with disabilities who ever attended a postsecondary institution receiving any academically-focused program or individualized service, with this rate ranging from 7% of those at 4-year colleges, to 8% at CTE schools, to 13% at 2-year colleges. Academic services

included a support person to monitor progress and manage school workloads (68% in high school vs. 1% in postsecondary school, $p < .001$; and approximately 1% at each type of school), assistance with learning strategies (43 vs. 2%, $p < .001$; 2% at 2-year colleges; <1% at 4-year colleges and CTE schools), tutoring (31% vs. 2%, $p < .001$; 10% at 2-year colleges; 6% at 4-year colleges, and 7% at CTE schools), or a teacher aid or instructional assistant (26% vs. 3%, $p < .001$; 3% at 2-year colleges; 1% at 4-year colleges and CTE schools).

Other services. As was the case with academically related services, the rate of receipt of other programs or individualized services decreased significantly from the secondary to the postsecondary school level. Of postsecondary students with disabilities, 78% received at least one such service while in high school, whereas less than 6% ($p < .001$) did in postsecondary school. The most frequently received supports in high school considered as other services were case management (47% in high school vs. 1%, $p < .001$ in postsecondary institutions; 2% at 2-year colleges; <1% at 4-year colleges and CTE schools), mental health/behavior management (18% vs. 2%, $p < .001$; 1% at each type of postsecondary school), occupational therapy or life skills training (13% vs. <1%, $p < .001$; <1% at all types of postsecondary schools), social work services (11% vs. 1%, $p < .001$; <1% at 2- and 4-year colleges, 2% at CTE schools), medical nursing for evaluation diagnosis (11% vs. <1%, $p < .001$; <1% at all types of postsecondary schools), and transportation services (9% vs. 1%, $p < .001$; <1% at 2-year colleges and CTE schools, 2% at 4-year colleges).

Discussion/Implications

As noted, 100% of the postsecondary students in our study had received special education services on the basis of a disability while in high school. However, by the time they were college age, 50% no longer considered themselves to have a disability and only 35% chose to disclose a disability to their postsecondary school. It is not clear whether this is a result of students finding a good match between their postsecondary studies and their strengths and therefore not feeling the implications of the disability. Nor is it clear if this is a result of students not fully understanding the nature of their disability or the rationale for the accommodations and supports they received in secondary school. It is also not clear if it is because students are generally unaware of the differences in legal rights and responsibilities between high school and postsecondary school. However, the existing literature points to the last reason. When postsecondary students who had not received accommodations and supports in postsecondary school were asked about their perceptions of the need for assistance with schoolwork, approximately 50% of those in 2- and 4-year colleges and more than 30% of those in vocational, technical, and business schools asserted that it would have been helpful (Newman et al., 2011). Other studies indicate that students often lack the self-advocacy skills to properly disclose their disabilities and request accommodations and supports (Hadley, 2006); do not understand the impact of their specific disability, accommodation needs, and legal rights (Denhart, 2008); and frequently fear a potential stigma from disclosure (Barnard-Brak & Sulak, 2010; Denhart, 2008). Independent of students' reasoning, the results point to the importance of fostering student self-determination and understanding of their strengths, preferences, and needs, as well their understanding of the change in legal responsibilities from secondary to postsecondary institutions. Additional research on student disability-

related self-perceptions would be invaluable in clarifying these questions and enhancing student decision making related to disclosure and accommodation request.

Without disclosure, postsecondary institutions are not required to provide services and reasonable accommodations and supports on the basis of a disability. The results clearly and strikingly reveal that although receipt of accommodations and other supports is common in secondary school, it is much less prevalent at the postsecondary level. For example, 98% of the students with disabilities received some sort of accommodation, modification, or related service in high school, but only 24% did at the college level.

Regarding accommodations specifically, 95% of students were reported to have received these types of supports in secondary school, but only 23% did in postsecondary school. As with disclosure, this may be because some students found a good fit and did not have a need for accommodations. Yet some students might not understand the need for or benefit of such accommodations and might not seek them out. Even more striking is the disparity in receipt of modifications between the secondary and postsecondary school. Whereas 59% of all the students with disabilities in this study received at least one modification in high school, only 4% did in postsecondary school. Moreover, this figure fell to 2% for students with disabilities who attended 4-year institutions.

Recommendations for Practice

The data related to self-disclosure and accommodation use have important implications for those assisting students with disabilities in the transition to postsecondary education. High school transition-planning teams, including parents and students, need to be aware that students will be required to self-disclose their disability to the proper postsecondary contact in order to receive accommodations and services. They

should also be aware that although this is the student's responsibility, it is also his or her right to make a decision in this regard. The decision must be weighed carefully with knowledge of the disability and its accompanying strengths and weaknesses, as well as with knowledge of the implications of not disclosing. As noted, without disclosure, there is no responsibility for the institution to provide accommodations and services.

In addition, secondary planning teams and parents must understand that although accommodations are available based on specific disability need, their use is far more limited at the college level. Thus, the use of accommodations at the secondary level should be carefully examined and the student should be involved in discussions related to why each is needed, how it is used, and what benefit it provides.

It is also imperative that secondary planning teams and parents understand that modifications, including modified exams, shorter assignments, and modified grading standards, are unlikely to be available at all at the college level. Despite the short-term benefit of such modifications at the secondary level, special education teams must also take a long-term perspective that promotes the use of learning strategies and self-awareness over modifications.

The need for secondary school programs to foster student growth in self-monitoring and learning skills also was illustrated by the findings on the receipt of academically focused programs or services. At the secondary level, 68% of students with disabilities received the support of a staff member monitoring progress and workload, however only 43% received support in learning strategies and study skills. These rates fell to less than 2% for both areas at the postsecondary level. Clearly, it becomes vital for students to learn these skills during secondary school while such supports are available

and before postsecondary attendance when they are likely to need to manage these tasks independently.

At the postsecondary level, it is essential that schools be aware of the almost two-thirds of students with disabilities on their campuses who have chosen not to disclose their disability. This speaks to the importance of colleges evaluating the policies and procedures they use to make disability services and information about accessing supports more widely available to the broader student population. It also highlights the importance of colleges considering universal design principals in developing curriculum (Hall, Meyer, & Rose, 2012).

Limitations

Information about receipt of accommodations, modifications, and supports was provided by different respondents at the high school and postsecondary school levels and in both cases could not be independently verified. At the high school level, school staff provided information about receipt, whereas postsecondary rates of receipt were based on parent and postsecondary student self-report. Thus, postsecondary rates may be underreported because parents and youth may be less aware of the types of postsecondary supports received. In addition, these findings do not report the frequency or extent of receipt of each type of accommodation, modification, and support at the high school or postsecondary level because they were not measured in NLTS2.

Areas for Future Research

Additional research on student disability-related self-perceptions would be invaluable in clarifying these issues and enhancing student decision making related to disclosure and accommodation request. These findings indicate the need for more

research related to the factors that drive who receives supports, who discloses a disability, and the impact of receipt of these supports on school completion and persistence. Given the importance of completing college on employment and earnings and given current data showing that students with disabilities are less likely to complete postsecondary education than their general population peers, it is imperative to understand the link between accommodations, supports, and help with schoolwork and postsecondary education outcomes for students with disabilities.

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Table 1

Receipt of Disability-Related Accommodations, Modifications, or Services, by School Type

Receipt of at least one:	Across											
	High school				Percentage-point difference ^a	2-year college		4-year college		CTE school		
	%	SE	%	SE		%	SE	%	SE	%	SE	
Accommodation, modification, or service	97.7	0.80	24.4	3.23	-70.6***	24.7	4.14	22.4	4.88	15.9	3.85	
Accommodation	95.4	1.02	22.7	3.28	-70.6***	22.8	4.18	21.5	4.97	15.1	3.96	
Modification	59.1	3.67	3.5	0.86	-56.7***	2.4	0.95	1.5	0.63	3.7	1.78	
Academically-focused service	79.6	2.35	12.4	2.61	66.5***	13.3	3.18	6.8	3.09	8.0	3.07	
Other service	78.4	3.05	5.7	1.69	-71.1***	5.5	2.06	4.6	1.40	5.1	2.89	
Unweighted N	2,230		2,810			1,940		1,000		1,060		

Note. Unweighted sample size numbers reported here are rounded to the nearest 10 as required by the restricted data use agreement with the U.S. Department of Education. CTE= career and technical education.

^aPercentage-point comparisons (difference and level of significance) are reported for the subset of postsecondary respondents who also had high school data. Postsecondary respondents who had high school data did not differ significantly in their rate of receipt of other program or individualized services from those who did not.

*** $p < .001$.