Introduction
Throughout the late twentieth century, and into the twenty-first, postsecondary education increasingly has become a prerequisite for most Americans who seek quality employment. More and more, competitive jobs require academic skills and competencies that extend beyond the offerings of traditional high school education (Department of Labor, 2000). We know that employment outcomes are improved when students complete some type of postsecondary education after high school. Past research also suggests that accessing higher education and attaining a four-year college or university degree may be particularly important for students with disabilities (Horn & Berktold, 1999).

And yet, post-school employment rates and earnings for students with disabilities fall substantially below those of their non-disabled counterparts (McNeil, 2000). Only those students with disabilities who persisted during their postsecondary education and attained four-year degrees demonstrated comparable employment rates and median earnings. Unfortunately, the majority of students with disabilities fail to meet this milestone. Many also drop out within their first year, or fail to gain access to any amount of postsecondary education.

To better understand this disparity in the education and employment of individuals with disabilities, accurate and timely information regarding the postsecondary education of students with disabilities is needed. Past national surveys of postsecondary students have included disability questions, yet these questions were limited in structure and scope. That is, these surveys typically relied on self-identification of disability status alone rather than considering functional capacities and a full range of disabling conditions (Horn & Berktold, 1999; Henderson, 1999). While prior research has suggested that students with disabilities encounter numerous barriers to postsecondary education, the particular factors that may inhibit or facilitate postsecondary success are less clear. Research and policy issues related to academic preparation, economic and social independence, financial aid, and services, accommodations, and supports for students with disabilities are especially important in this context. New data are also needed to understand and improve the efficacy of disability specific programs such as vocational rehabilitation (VR), Supplemental Security Income (SSI), and Social Security Disability Insurance (SSDI) as they relate to postsecondary education. Finally, planning for the reauthorization of the Higher Education Act and the Individuals with Disabilities Education Act would be better informed if current, policy-relevant research was available.

Revised questions in the National Postsecondary Student Aid Survey (NPSAS) provide key opportunities to gain information that may better inform policy decisions regarding higher education and disability. The NPSAS 2000 is a nationally representative survey of students attending postsecondary education institutions during the 1999-2000 academic year. Samples included approximately 50 thousand undergraduate students and 11 thousand graduate students, representing about 16.5 million and 2.3
million students, respectively. Financial aid, sociodemographic, employment, and related postsecondary education topics are encompassed within the survey. NPSAS 2000 revisions also included new disability screening questions, expanded disabling condition categories, and questions focusing on vocational rehabilitation and other disability specific programs, services, and accommodations.

This brief provides an initial view of NPSAS 2000 data relating postsecondary students with and without disabilities, and specifically examines disability prevalence estimates and sociodemographic characteristics. Findings are discussed in the context of previous research and future research needs.

**NPSAS 2000 Disability Questions**

NPSAS 2000 disability-screening questions were modeled after those designed for the Census 2000. Following an introduction about the need for increased understanding of educational services for students with disabilities, all respondents were asked whether they had a long-lasting condition such as blindness, deafness, or a severe vision or hearing impairment. The next screening question asked whether respondents had a condition that substantially limited one or more basic physical activities such as walking, climbing stairs, reaching, lifting, or carrying. A third question was then asked to determine whether respondents had any other physical, mental, or emotional condition lasting six months or more. For all screening questions, interviewers were instructed to include intermittent conditions that may be long lasting (e.g., episodic mental illness). If a respondent answered affirmatively to any of these questions, detailed follow-up questions were presented.

Subsequent questions addressed activity limitations, main disabling conditions, and other disability related issues. Respondents were also asked if their long-lasting condition resulted in activity limitation or difficulties with: “(1) learning, remembering, or concentrating; (2) dressing, bathing, or getting around inside your home or dormitory; (3) getting to school to attend class; (4) getting around on campus; or (5) working at a job.”

Respondents were then provided a list of impairments and conditions and asked to identify their main condition. The list of impairments included hearing impairment (i.e., deaf or heard of hearing); blind or visual impairment that cannot be corrected by wearing glasses; speech or language impairment; orthopedic or mobility impairment; specific learning disability or dyslexia; attention deficit disorder (ADD); health impairment or problem; mental illness or emotional disturbance; developmental disability; brain injury; or “other.” Subsequent survey questions addressed services that students needed and received and student participation in disability specific programs.

**Data Analysis**

For analysis purposes, disability status was indicated for respondents who answered affirmatively to either of the first two screening questions. For the third screening question, only students reporting one or more activity limitations or difficulties were considered disabled. Using this definition, disability prevalence and the distribution of main conditions were examined. Sociodemographic characteristics such as sex, race, age, marital status, dependent children, and parent education levels were then analyzed. In addition, income characteristics of independent and dependent students (i.e., those relying on parent income), and enrollment characteristics such as institution type, attendance intensity, and delayed enrollment were compared between students with and without disabilities. Using Data Analysis System (DAS) software that accounts for the NPSAS 2000 survey design (U.S. Department of Education, 2002), disability prevalence estimates were generated for undergraduate students attending less than two-year, two-year, and four-year postsecondary institutions during the 1999-2000 academic year. Weighted estimates and standard errors produced through DAS were used to calculate confidence intervals and tests of significance. Statistical differences were determined using a .05 alpha level.
Highlights

- Students reporting disabilities represented 9.3% of all undergraduates, or 1.53 million students.

- Among students reporting disability, those with orthopedic impairments represented the largest main condition category (29.4%), followed by those with mental illness (17.1%), health impairments (15.1%), and “other” impairments or conditions (13.2%).

- As compared to nondisabled students, students with disabilities were more often female, white, and married with dependent children.

- The parents of students with disabilities were more often likely to have less than a high school education than parents of students without disabilities.

- Students with disabilities were more often financially independent than nondisabled students, 63.3% versus 48%.

- As compared to nondisabled students, students with disabilities were less likely to attend four-year colleges. Fifty nine percent of students with disabilities attended postsecondary institutions with two-year programs or less than two-year programs.

- The majority of students with disabilities attended full time, 60.3%. However, students with disabilities more often reported half time attendance than nondisabled students.

- Students with disabilities were older when first enrolled in postsecondary education and, on average, entered postsecondary education nearly three years later than students without disabilities.

Discussion

The NPSAS 2000 disability questions differed substantially from prior surveys. Therefore, caution is required when comparing resulting data with previous NPSAS data sets. For example, the NPSAS 1996 used a single screening question, “Do you have any disabilities, such as hearing, speech, mobility impairment or vision problems that cannot be corrected by glasses?” with a consequent disability rate of 5.5% of 16.7 million undergraduates, or 919 thousand students with disabilities (U.S. Department of Education, 1997). Estimates produced using NPSAS 2000 resulted in a disability rate nearly double that of the NPSAS 1996: 9.3% of all undergraduates, or 1.53 million students. These higher figures do not necessarily reflect an increase in the numbers of students with disabilities. Rather, the revised questions focusing on impairment, functional limitation, and disability were likely more sensitive, providing more opportunity to identify a heterogeneous population of students with disabilities. Differences in screening questions between postsecondary surveys should thus be carefully considered when interpreting disability prevalence and distribution estimates.

Differences in disability categories should also be considered. Between NPASAS 1996 and 2000, the types of disabling conditions increased from six to 11 categories. For the NPSAS 1996, there were only six disability categories as compared to 11 categories provided with the NPSAS 2000. Of these new categories, attention deficit disorder (ADD) and mental illness displayed substantial representation when observing main conditions, and this may have influenced the overall distribution of other reported conditions. For example, students with learning disabilities represented 29% of the disabled population with the NPSAS 1996 (Horn & Berktold, 1999), but only 5% of for the NPSAS 2000.
Keeping in mind that the NPSAS and other postsecondary studies (Henderson, 1999) rely on self-reported information, data presented here do not reflect co-occurring disabilities. That is, 9% of students with orthopedic or mobility impairments, 17% of students with blindness or vision impairments, 37% of students with hearing impairments, and 63% of students with ADD also reported having learning disabilities, and these secondary conditions are not aggregated within the main condition categories.

Another factor that may influence these estimates may be that, while capturing more students reporting disability, the modified screen questions were perhaps less sensitive for identifying the existence of learning disabilities. Still another possibility is that the prevalence of learning disabilities may have changed to some extent between survey periods.

Notwithstanding these differences and possible explanations, sociodemographic and enrollment findings regarding undergraduates with disabilities were generally consistent with previous research. Similar to other postsecondary surveys, students with disabilities were more likely than nondisabled students to be white, female, older, and have dependent children (Horn & Berktold, 1999). Delayed enrollment of one year or more after high school occurred more often for students with disabilities than their nondisabled counterparts. Financially, students with disabilities were likewise less dependent on parental income and reported lower income when compared to students without disabilities. As such, financial aid through grants, loans, and work-study arrangements is important for many students with disabilities.

Students with disabilities were less likely to enroll in four-year colleges and universities than nondisabled students, and more likely to attend as half-time students.

Prior research has shown that part-time enrollment, financial independence, delayed enrollment, and having dependent children pose significant risks to persistence in postsecondary education (i.e. continuing toward completion of a four-year degree [Horn & Berktold, 1999]). Even when controlling for such factors, disability by itself represented a substantial risk to obtaining a degree from a four-year college or university.

With revised disability-related questions, the NPSAS 2000 provides increased opportunities for disability and postsecondary education research. Disability issues focusing on academic preparedness, financial assistance, employment experiences, and program participation among students with disabilities need further examination. Vocational rehabilitation and programs such as SSI and SSDI should also be studied as they relate to these important disability issues. And more immediately related to this study, future research should examine the apparent differences between study findings in the context of reported disabilities and the extent to which students need and receive services and accommodations during their postsecondary education experiences.

References


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