Employment and Career Development Concerns of Postsecondary Students with Disabilities: Service and Policy Implications

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Abstract

The purpose of this study was to (a) examine the employment concerns of postsecondary students with disabilities and (b) develop strategies for improving their post-graduation employment outcomes. Utilizing an established methodology grounded in the ideals of participatory action research, the researchers surveyed a 208 students with various disabilities in four states, representing seven colleges and universities, regarding their views on employment concerns. Once data from the survey were collected, the researchers convened focus groups of university faculty members, student service professionals, rehabilitation professionals, and students with disabilities to assist in interpreting of results and formulating of strategies for improving career services for students with disabilities.

American colleges and universities have made tremendous strides over the past 30 years in providing educational opportunities for students with disabilities. Thus, the number of students with disabilities enrolled in postsecondary educational programs tripled between 1978 and 1994 (Henderson, 1995). Today, an estimated 9% of the American collegiate student body has documented disabilities (American Council on Education, 1999). These students have maintained grade-point averages and completion rates comparable to those of nondisabled students (Stodden, Whelley, Chang, & Harding, 2001), which underscores the effectiveness of laws such as Section 504 of the Rehabilitation Act and Title II of the Americans with Disabilities Act (ADA), which require postsecondary institutions to equalize opportunities for students with disabilities.

Many colleges and universities focus their responsibility to students with disabilities on providing reasonable accommodations according to the requirements of Section 504 of the Rehabilitation Act and the ADA. Rumrill (2001) cautioned against this narrow, minimalist emphasis on classroom accommodations, noting that the spirit of the Rehabilitation Act and the ADA implies that students with disabilities should have equal access to all amenities and benefits of life on campus—including effective career services. Indeed, student disability services providers have a vested interest in ensuring that postsecondary students with disabilities make a successful transition to the world of work (Wehman, 2005), even if they see their primary role as providers of academic supports to meet legal mandates.

Increased enrollment and satisfactory progress in postsecondary education bodes well for the futures of many students with disabilities. Compared to individuals who never attended college, college graduates have greater lifetime earning potential (Bureau of Labor Statistics, 1998) and higher levels of perceived quality of life (Rumrill, Roessler, & Fitzgerald, 2004). Furthermore, a college education makes a person with a disability three to five times more likely to be employed than a person with a disability who never attended college (Disability Institute, 2000; United States Department of Labor, Employment and Training Administration, 2004).

Although students with disabilities are enjoying unprecedented access and success in the postsecondary arena, and although a college degree improves their chances for employment compared to people with disabilities who have less formal education, they are not achieving the same employment and career outcomes after graduation as their nondisabled peers. Specifically, a college graduate with a disability is 8-12 times more likely to be unemployed than a college graduate without a disability (American Council on Education, 2000; Bureau of Labor Statistics, 1998). Unemployment rates for college graduates with disabilities range from 33% to 45% (DeLoach, 1992; Disability Institute, 2000; Rumrill, Koch, Murphy, & Jannerone, 1999) which compares very unfavorably to the 3-4% unemployment rates of working-age college graduates without disabilities (Bureau of Labor Statistics, 1998; United States Department of Labor, Employment and Training Administration, 2004).

Moreover, college graduates with disabilities who do obtain employment after graduation experience significant problems obtaining on-the-job accommodations (Roessler & Rumrill, 1995; Rumrill et al., 1999), planning their next career steps (Getzel, Stodden, & Briel, 2001), and maintaining employment over time (Gibbs, 1990). In addition, employed college graduates with disabilities are over-represented in jobs whose requirements fall below their qualifications (Bureau of Labor Statistics, 1998; DeLoach, 1992), in jobs unrelated to their degrees (Rumrill et al., 1999), and in temporary or part-time jobs (Disability Institute, 2000). It should be noted that career issues facing students with disabilities are sometimes differentiated according to disability type. For example, Rumrill (2001) noted that students with learning disabilities and attention deficit hyperactivity disorder (AD/HD) often place a premium on concealing their disabilities from faculty members and prospective employers. Students with physical and sensory disabilities often raise issues related to transportation to and from work and accessibility of the workplace (Roessler & Schriner, 1991).

Overprotectiveness on the part of parents and family members (Livneh, Martz, & Wilson, 2001) and the general lack of pre-career content in U.S. elementary education are factors contributing to the non-normative career growth experiences of many children with disabilities (Wehman, 2005). The consequence is that children with disabilities often do not form early work identities that serve to prompt and guide their subsequent career exploration and acquisition efforts (Moran, McDermott, & Butkus, 2001). Therefore, career services and supports for postsecondary students with disabilities must allow for the possibility that some students may need assistance convincing themselves that employment and career success are viable and realistic goals.

Missed opportunities for career identity formation can have a negative impact on the career exploration activities of students. Youth with disabilities are less likely than their nondisabled peers to engage in such career exploratory activities as part-time jobs after school, summer employment, and community-based vocational training (Griffin & Targett, 2001; Moran et al., 2001). Even college-bound students with disabilities are less likely to attend college fairs than nondisabled students, and they tend to select postsecondary institutions based on proximity to their homes and availability of support services rather than on the type or quality of programming at those institutions (Gartin, Rumrill, & Serebreni, 1998; Sharpe & Johnson, 2001; Stodden et al., 2001).

Once they arrive on college and university campuses, students with disabilities continue to "under-explore" their career options. For example, they register with career services offices about one third as often as non-disabled students (Getzel et al., 2001), rarely participate in Co-Op and other internship programs (Rumrill et al., 1999), tend not to engage in part-time or work study employment (especially if they are receiving Supplemental Security Income; Burgstahler, 2001; Wehman, 2005), and infrequently join career-related student or professional organizations (Getzel et al., 2001). Compounding this limited engagement in career exploration activities are perceptions on the part of students with disabilities that faculty advisors lack knowledge of disability issues, that student disability services personnel lack expertise in employment and career development, and that career services personnel lack expertise regarding the needs of students with disabilities (Rumrill et al., 1999).

Several developmental and environmental barriers continue to impede the career success of students, and information is needed pertaining to students' current employment concerns and career service needs. This study examined the following questions: what do postsecondary students with disabilities regard as their most and least

important employment concerns and what recommendations do key stakeholders have to preserve top-priority employment strengths and remedy top-priority employment weaknesses?

Method

This study of the employment concerns of postsecondary students with disabilities utilized a participatory action research strategy (PAR; Bellini & Rumrill, 1999; Graves, 1991). Students, faculty, and support staff at seven institutions in the northeastern, midwestern, and southern United States (University of Akron in Ohio, Keene State College in New Hampshire, Kent State University-Stark Campus in Ohio, Kent State University-Kent Campus, Northwest Arkansas Community College, the University of Arkansas, and Clarion College in Pennsylvania) participated in various phases of the study, from instrument construction and to interpretation of the results.

Participants

The total respondent sample consisted of 208 students with disabilities from seven postsecondary educational institutions in four states. The demographic characteristics of the sample are presented in Table 1.

Table 1

Sample Demographic Characteristics

Characteristic	%
Gender	
Male	40.4
Female	59.1
Transgender	0.5
Age	
18 to 21 years	34.8
22 to 25	26.0
26 to 29	5.8
30 to 33	3.9
34 to 37	5.3
38 to 41	3.9
42 or older	20.2
Race/Ethnicity	
African American	6.9
American Indian or Alaskan Native	2.5
Asian or Pacific Islander	0.5
Caucasian	87.2
Hispanic	0.5
Other	2.5
Class Standing	
Freshman	20.7
Sophomore	22.6
Junior	23.1
Senior	20.7
Graduate	13.0
Enrollment Status	
Full-time	76.4
Part-time	23.6

continues

Table 1 continued

Characteristic	%
Type of Institution	
Two-year	20.3
Four-year	79.7
Classroom Accommodation Usage	
Past	72.1
Current	69.1
Employment Status	
Full-time	15.3
Part-time	33.7
Not Employed for Pay	51.0
Disability Benefits	
Social Security Disability Insurance	14.9
Supplemental Security Income	11.1
Long-Term Disability Insurance	1.4
Veteran's Benefits	4.3
Participation in State Vocational Rehabilitation Services	39.1
Disability Type	
Learning	32.3
ADHD/ADD	25.3
Medical/Chronic Health	8.9
Visual Impairment/Blindness	6.3
Heard of Hearing/Deaf	9.5
Mobility	5.3
Traumatic Brain Injury	3.7
Psychiatric	0
Physical (non-mobility; includes orthopedic)	8.4

Instrumentation

The instrument was a 58-item questionnaire with fixed and open response sets. The procedures used to identify items for the questionnaire are delineated under Procedures. Sections of the questionnaire included participants' demographic characteristics and employment concerns items. The 40 employment concerns items addressed such issues as access to information on accommodations, discrimination in hiring and retention practices of employers, employment protections under major legislation, the quality of rehabilitation and employment services, access to assistive technology, support for obtaining work, and planning for the future. In responding to these items, respondents indicated on a 4-point Likert scale how important they considered the concern to be to them (1 = very unimportant, 2 = unimportant, 3 = important, 4 = very important) and how satisfied they were that the concern was being addressed by their colleges and universities (1 = very dissatisfied, 2 = dissatisfied, 3 = satisfied, 4 = very satisfied). For these items, the 4-point scale was chosen to create a forced-choice response set without a neutral option.

This was the scaling procedure used by Schriner and Roessler (1990) in their seminal employment concerns study. The current researchers replicated their approach to facilitate comparisons between the present findings and Schriner and Roessler's results. Because the primary purpose of this study was to differentiate among high- and low-importance items and high-and low-satisfaction items, the 4-point scale required respondents to rate each item as either unimportant (i.e., a 1 or a 2) or important

(i.e., a 3 or a 4) and as either unsatisfactory (i.e., a 1 or a 2) or satisfactory (i.e., a 3 or a 4). The Cronbach alpha coefficient for respondents' importance ratings on the employment concerns items was .91. The Cronbach's alpha coefficient for satisfaction ratings was .74.

Procedures

Items were developed following procedures recommended in the concerns report method (CRM; Fawcett et al., 2000; Nary, White, Budde, & Vo, 2004; Roessler et al., 2003; Roessler & Schriner, 1991; Schriner & Fawcett, 1988). The first CRM step involved consultation with a working group of students with disabilities who attended Kent State University (which later took part in the tri-regional survey). This group included 10 students, 2 men (20%) and 8 women (80%), 4 undergraduates and 6 graduate students, who ranged in age from 19 to 45 years (*M* = 26, *SD* = 9).

The working group was convened twice during the first session, the researchers asked participants to rate, on a scale of 1 – 5 (1= not worth including, 3 = worth considering, 5 = absolutely must include), the relevance of a pool of 65 employment concerns and policy-related items for inclusion in the tri-regional survey. This pool was derived from a larger bank of 143 items related to the employment of people with disabilities used in previous research (Roessler et al., 2003; Schriner & Roessler, 1990). With input from two nationally prominent rehabilitation researchers who have extensive experience developing, implementing, and evaluating, career development programs for students with disabilities, the researchers reduced the 143 item bank to the 65-item pool, eliminating items judged to be least relevant to the employment concerns of postsecondary students with disabilities. During the second working group meeting, participants further reduced the 65-item pool to the 40 most relevant items from their perspectives (i.e., items with the highest mean endorsement values from the first session). The working group was encouraged to nominate other items for the survey, but they reported that the final set of 40 items, with minor editing, adequately represented their highest-priority concerns.

Following survey development, the research team identified six additional colleges and universities to participate in the survey. These institutions were included in an attempt to increase the number of possible respondents and the geographic representation of students with disabilities. The selected colleges and universities had well-established service programs for students with disabilities, represented a range of campus settings (i.e., rural, urban, suburban, two and four year programs), and had an interest at the administrative level in career development issues facing postsecondary students with disabilities. The directors of each student disability services office were asked to generate a list of students registered with their offices. The directors were then instructed to randomly choose approximately one out of every five students on each institution's student disability services registry to participate in the study. A total of 1,186 students with disabilities were selected using this method.

Questionnaires were sent to all 1,186 members of the target sample. Two weeks prior to mailing the questionnaires, student disability service directors at each institution sent a pre-notice explanatory letter (Dillman, 2000) to the target sample. This letter included the reason for pursuing the research topic, notification of approval by the Human Subjects Review Board (with contact information), and contact information for the researchers in case the participating students had any questions regarding the upcoming survey. The actual questionnaires included another explanatory letter signed by the research team, accompanied by self-addressed, stamped return envelope. The letter from the research team informed the target sample that participation in the study was entirely voluntary. Four weeks after the questionnaires had been mailed, the research team provided the participating institutions with "reminder/thank you" postcards (Dillman, 2000) to send to the target sample. Thus, participants received a total of three mailings: the pre-notice letter, the questionnaire and letter, and the reminder/thank-you postcard.

A total of 196 (17%) questionnaires were returned as undeliverable, reducing the available target sample to 990 college students with disabilities. Two hundred and eight members of the target sample returned questionnaires, resulting in a response rate (208/990) of 21%.

The final step in the investigation involved a focus group phase (Bogdan & Biklin, 2003) consisting of six focus groups in three states (Ohio, Florida, and Arkansas). The six groups included faculty members (one group, *N*=20), students with disabilities (two groups, *N* = 34), student disability service providers and rehabilitation professionals (two groups, *N* =20), and attendees of the 2004 national conference of the Association on Higher Education and Disability (*N* =20). The focus groups averaged 15.7 participants, substantially exceeding Bogdan and Biklin's (2003) recommended minimum of 6-8 participants per focus group. During the focus group sessions, research team members elicited comments from participants regarding strategies for preserving strengths and remeding weaknesses revealed in the survey results.

Data Analysis

Given the descriptive nature of this investigation, the quantitative portion of this study utilized frequencies, percentages, means, and standard deviations. Categorical variables such as gender, disability type, and employment status are expressed as frequencies and percentages. The 40 employment concerns items are described along the two dimensions of importance and satisfaction using means and standard deviations as well as a collapsed categorical scale that yields an overall "Importance Rating" and a "Satisfaction Rating" for each item. Specifically, the Importance Rating is the percentage of respondents who evaluated a given item as either "important" or "very important" (i.e., a 3 or a 4 on the 4-point scale). Similarly, the Satisfaction Rating reflects the percentage of respondents who were either "satisfied" or "very satisfied" with a particular item (i.e., a 3 or a 4 on the 4-point scale). For items that were considered "weaknesses" in employment services and policies, the researchers inverted the Satisfaction Ratings into "Dissatisfaction Ratings," whereby a percentage was calculated for respondents who were either "very dissatisfied" or "dissatisfied" with a particular item (i.e., a 1 or a 2 on the 4-point scale).

Results and Discussion

Global results from the tri-regional survey are presented in terms of a composite table (see Table 2) delineating both the Importance And Satisfaction Ratings on all 40 employment concerns items by survey respondents. All items were rated as important by the vast majority of the group. Specifically, 84% or more indicated that each of the items was either important or very important to college students with disabilities (i.e., a 3 or a 4 on the 4-point scale). Therefore, the Satisfaction Ratings were solely used to differentiate strengths and weaknesses.

Table 2

Employment Concerns Ranked by Importance with Satisfaction Ratings

Importance			Item	Satisfaction		
%	*M*	*SD*		*%*	*M*	*SD*
94	3.65	.76	Can receive adequate health insurance from employers.	59	2.63	.99
94	3.64	.74	Are well prepared to enter the world of work.	70	2.83	.83
94	3.60	.73	Have up-to-date, marketable job skills.	73	2.90	.81
93	3.72	.80	Are treated fairly by employers in the hiring process.	63	2.75	.92
93	3.66	.81	Receive the same pay after graduation as would a person without a disability.	67	2.85	.85
93	3.59	.78	Know what to do if they encounter discrimination at work.	57	2.61	.89
93	3.56	.79	Understand the employment protections in the Americans with Disabilities Act.	58	2.60	.95
93	3.52	.82	Are encouraged to seek professional-level jobs.	77	2.95	.81
93	3.51	.77	Are expected by employers to succeed in the workplace.	78	2.97	.79

Importance			Item	Satisfaction		
%	*M*	*SD*		%	*M*	*SD*
92	3.65	.83	Are treated fairly when they apply for work.	65	2.79	.89
92	3.61	.81	Can present themselves positively in job interviews.	80	3.02	.79
92	3.58	.81	Know how to discuss their job accommodation needs with employers.	62	2.70	.88
92	3.56	.79	Know how to develop professional resumes.	69	2.83	.82
92	3.53	.80	Have access to adequate job placement services.	63	2.76	.91
92	3.53	.78	Know how to conduct informational interviews with employers.	63	2.74	.84
92	3.52	.80	Know about available employment and social services.	64	2.69	.79
92	3.49	.80	Can identify accommodations needed in the workplace.	74	2.86	.82
91	3.54	.79	Understand the risks and benefits of disclosing disability status to employers.	60	2.68	.82
91	3.52	.80	Obtain jobs with advancement potential.	68	2.76	.83
91	3.51	.78	Know how to inform employers of their ongoing accommodation needs.	64	2.74	.82
91	3.50	.83	Can respond appropriately to employer's criticism of job performance.	68	2.78	.77
91	3.49	.81	Can choose from a wide variety of jobs.	65	2.73	.87
91	3.48	.82	Know their rights regarding job-related physical examinations.	56	2.59	.84
91	3.44	.85	Can negotiate with employers to implement accommodations that are useful in classroom settings.	68	2.79	.82
90	3.52	.81	Are helped to find employment for which they are prepared.	65	2.72	.83
90	3.51	.85	Receive reasonable accommodations and assistive technology in the workplace.	65	2.79	.84

continues

Table 2 continued

Importance			Item	Satisfaction		
%	*M*	*SD*		*%*	*M*	*SD*
90	3.46	.84	Know about jobs that are in high demand.	61	2.72	.83
90	3.45	.84	Have access to good career counseling services.	68	2.79	.82
90	3.44	.82	Can evaluate the effectiveness of on-the-job accommodations.	74	2.90	.78
89	3.48	.87	Have transportation to and from work.	74	2.91	.87
89	3.45	.81	Participate in work-related Co-op and internship experiences.	64	2.76	.85
89	3.44	.86	Know how to make realistic career choices.	73	2.86	.83
89	3.44	.86	Have access to adequate information 59 about Social Security programs.	2.65	.89	
89	3.41	.89	Have their needs considered in the development of Social Security regulations.	59	2.63	.88
89	3.40	.84	Understand the Health Insurance Portability and Accountability Act.	47	2.39	.94
88	3.41	.83	Receive accommodations during Co-op and internship experiences.	64	2.73	.79
88	3.39	.83	Can cope with the demands of job-related travel.	70	2.79	.82
87	3.37	.87	Are equal partners in planning vocational rehabilitation services.	62	2.68	.87
87	3.34	.85	Inquire about employee benefits during job interviews.	70	2.78	.75
84	3.28	.87	Are expected by their family to succeed in the world of work.	87	3.11	.72

Employment Strengths

For the purposes of this study, an employment strength is defined as an item that at least 73% of the respondents evaluated as either satisfactory or very satisfactory (i.e., a 3 or a 4 on the 4-point scale). Results revealed nine employment strengths (see Table 3) among the 40 survey items.

Employment Weaknesses

Employment weaknesses are items with which 40% or more of the sample were either very dissatisfied or dissatisfied (i.e., a 1 or a 2 on the 4-point scale). Using the 40% dissatisfaction standard, eight of the items qualified as relative employment weaknesses. The researchers used the term relative to qualify these weaknesses

Table 3

Employment Strengths: Items with Satisfaction Ratings ≥ 73%

Item	Satisfaction Rating (%)
Are expected by their family to succeed in the world of work	87
Can present themselves positively in job interviews	80
Are expected by employers to succeed in the workplace	78
Are encouraged to seek professional-level jobs	77
Have transportation to and from work	74
Can identify accommodations needed in the workplace	74
Can evaluate effectiveness of on-the-job accommodations	74
Have up-to-date, marketable skills	73
Know how to make realistic career choices	73

because, as shown in Table 4, only one of the eight weaknesses had a dissatisfaction rating of greater then 50%.

Comments and Recommendations from Focus Group Participants

Twenty university faculty members, 34 students with disabilities, 20 disability service providers and rehabilitation professionals, and 20 members of AHEAD comprised the focus groups (a total of 94 participants from all focus groups). Their insights regarding strategies for preserving employment strengths and resolving employment problems are incorporated in the following paragraphs.

Discussion of Employment Strengths

The nine employment strengths can be thematically organized into three categories: expectations, access and accommodations, and job-seeking and technical skills. The paragraphs to follow present recommendations that focus group members made to preserve strengths, illustrated with selected literature.

Expectations. The three employment strengths that reflect the expectations of others are "students with disabilities are encouraged by their family to succeed in the world of work," "… are expected by employers to succeed in the workplace," and "… are encouraged to seek professional-level jobs." When asked to recommend strategies for preserving the strength item related to family expectations, focus group members recommended that colleges and universities incorporate self-determination and self-advocacy principles into on-campus family events so that parents can support students' desires to make their own career decisions and advocate for them-

Table 4

Employment Weaknesses: Items with Dissatisfaction Ratings ≥ 40%

Item	Dissatisfaction Rating (%)
Understand the Health Insurance Portability and Accountability Act	53
Know their rights regarding job related physical examinations	44
Know what to do if they encounter discrimination at work	43
Understand the employment protections in the Americans with Disabilities Act	42
Have their needs considered in the development of Social Security regulations	41
Can receive adequate health insurance from employers	41
Have access to adequate information about Social Security programs	41
Understand the risks and benefits of disclosing disability status to employers	40

selves. The self-determination model advanced by Wehmeyer and colleagues (2003) and self-advocacy models advanced by Palmer (1998) and Roessler, Rumrill, and Brown (1998) could provide content for program planners seeking to implement this strategy.

AHEAD members recommended that career services and disability services offices provide formal orientations for parents. Another service provider recommended formal parent alliances like those undertaken on behalf of children with developmental disabilities (Condeluci, 1999). Finally, students with disabilities identified the need for a website for parents on disability issues in higher education. This set of recommendations, in particular, could be difficult to implement in that the college years are a time when students are expected to rely less on family members and develop independence in decision-making skills. However, members of the focus groups reported the importance of continued family involvement and advocacy on behalf of the student.

The strength items related to employer expectations and the encouragement of students with disabilities to seek professional-level jobs prompted several valuable recommendations. For example, rehabilitation professionals recommended fact sheets for employers on how to interview people with disabilities and on tax incentives for hiring people with disabilities, which is consistent with Gilbride, Stensrud, Ehlers, Evans, and Peterson's (2000) observations that employers have more positive

attitudes toward people with disabilities when they have current knowledge regarding the ADA along with financial incentives for hiring people with disabilities. In every focus group, participants emphasized the need for formal mentoring programs that link students with disabilities and community business leaders (Boen, Brown, & Roessler, 1994). In the interests of preserving employers' high expectations and seeking professional-level jobs, one student noted the value of conducting informational interviews with employers even before applying for jobs. Several rehabilitation professionals noted that direct services to employers such as helping them (a) identify reasonable accommodations for workers with disabilities and (b) employment provisions and protections in the ADA might entice employers to participate in on-campus programs (Gilbride et al., 2000; Jenkins & Strauser, 1999; Sumner, 1995; Unger, 2002).

In terms of preparation for professional-level jobs, focus group members emphasized the value of professional networking (e.g., joining professional associations and attending conferences during the college years). One university faculty member, who was also the parent of a college student with a disability, recommended that public school-based transition programs for youth with disabilities allow for professional-level employment as a viable postsecondary option. One student exhorted her peers to be realistic in their career choices, and another recommended that student disability services offices establish training to prepare students with disabilities for job-related travel. Faculty members and AHEAD members suggested increased training for faculty on (a) the employment issues facing students with disabilities, (b) longitudinal research on the career advancement patterns of college graduates with disabilities (e.g., DeLoach, 1992); (c) the role of rehabilitation professionals in career planning on campus; and (d) implementation of student-centered career plans to guide students' post-graduation job searches (see Burgstahler, 2001).

Access and accommodations. The three employment strengths that reflect access and accommodations are "students with disabilities have transportation to and from work," "… can identify accommodations needed in the workplace," and "… can evaluate the effectiveness of on-the-job accommodations." Respondents were confident that they could travel to and from work and, once at work, they believed they could participate in two important phases of the ADA's Title I reasonable accommodation process, namely, identifying on-the-job accommodations and evaluating whether those accommodations are effective (Equal Employment Opportunity Commission, 2003; Feldblum, 1991).

It is not surprising that transportation was a top-priority strength given that 33% of the respondent sample had learning disabilities and 25% had AD/HD – conditions that usually do not interfere with the ability of adults to travel independently. Because the incidence of these two conditions in the sample is roughly equivalent to the proportion of postsecondary students nationwide who identify those conditions (Brinckerhoff, McGuire, & Shaw, 2002), these data suggest that a large number of college students with disabilities are satisfied with their ability to travel independently or with their access to transportation services. Of course, satisfaction with transportation resources is different for students with physical disabilities, and one student with a physical disability called for improved paratransit services for travel to and from internships and other career preparatory activities. A rehabilitation professional made the valuable suggestion of researching companies and cities that are user-friendly regarding accessible transportation as part of the students' job search activities.

Related to the issue of identifying accommodations needed in the workplace, one member of AHEAD stressed the need to train students with disabilities on requesting classroom accommodations, with a focus on how classroom accommodations may be transferred into the workplace. Roessler and Kirk (1998) described a method for assessing the technology transfer concerns of students with disabilities, that could be useful in developing training materials in this area. One rehabilitation professional noted the value of establishing linkages with the Job Accommodation Network, while faculty members called for the use of assessment tools for identifying on-the-job accommodations (e.g., the Work Experience Survey; Roessler, 1995).

Job-seeking and technical skills. The three strengths identified by respondents that reflect job seeking and technical skills are "students with disabilities can present themselves positively in job interviews," "… have up-to-date, marketable skills," and "… know how to make realistic career choices." In terms of students' abilities to present themselves positively in job interviews, focus group members in all of the sessions advocated mock interviews as necessary components of career planning workshops. Many focus group members saw Faculty advisors as important resources in preparing students with disabilities to interview for Co-Op experiences, internships, and jobs after graduation. As a precursor to interview skills training programs, one student disability services professional suggested offering self-awareness workshops to allow students with disabilities could examine their career goals, strengths, limitations, and relevant experiences within the context of job requirements in their chosen fields.

In response to the strength item that students with disabilities have up-to-date, marketable job skills, one faculty member suggested providing formal measures that would enable students to compare their skills with the requirements of their chosen career fields, (i.e., transferable skills analysis) (Dunn, 2001; Sleister, 2000). Several service providers stressed the importance of encouraging students to participate in activities offered by professional organizations. Other important professional development activities noted by focus group members include job fairs, career days, and special interest groups within professional associations. Finally, faculty members and service providers emphasized the need to provide training and retraining in the use of both general and assistive technology (Wehman, Brooke, & Inge, 2001).

Discussion of Employment Weaknesses

The eight employment weaknesses were items with dissatisfaction ratings of 40% or higher. These weaknesses can be thematically organized into three categories: health insurance coverage, ADA implementation, and Social Security.

Health insurance coverage. The two employment weaknesses that reflect health insurance coverage are "students with disabilities understand the Health Insurance Portability and Accountability Act" and "… can receive adequate health insurance from employers." Essentially, the HIPAA provides employees who change jobs the legal right to maintain continuous health insurance coverage without being subjected to pre-existing condition exclusions (United States Department of Labor, Employment, and Training Administration, 2004). With regard to HIPAA, several service providers recommended issuing a fact sheet on the key provisions of this law that could be distributed in both hard copy and electronic formats. Several focus group members underscored the need for workshops on the HIPAA to educate employers, rehabilitation professionals, and people with disabilities. One student suggested establishing a listserv for students with disabilities providing information on their employment rights. Student service professionals discussed the possibility of establishing an "Exit Interview" program that includes information on employment laws and health insurance coverage.

With regard to the adequacy of health insurance coverage, several members of AHEAD suggested providing benefits planning services for students with disabilities either in person or through mailings. Students suggested posting information on health insurance coverage on student disability services and career services websites and developing a CD-ROM on health insurance issues. One student stressed the need for current information on Medicare and Medicaid, and another student called for programs to help uninsured students with disabilities join or create health insurance groups. Finally, faculty members urged postsecondary personnel to encourage students with disabilities to choose employment options based on the availability of health insurance and other benefits

ADA implementation. The four weaknesses related to ADA implementation are "students with disabilities know their rights regarding job-related physical examinations," "... know what to do if they encounter discrimination at work," "… understand the employment protections in the Americans with Disabilities Act," and "… understand the risks and benefits of disclosing disability status to employers." One student recommended exit interviews as a strategy for sharing information with students on job-related physical examinations, and several service providers discussed the development of mailing lists, listservs, and website resources on the topic of job-related physical examinations. Faculty members recommended a workshop for students, employers, and examining physicians on job related medical examinations.

In terms of the weakness associated with knowing how to redress employment discrimination, rehabilitation professionals and students called for fact sheets, brochures, resources, and legal assistance addressing the process that the EEOC uses to redress employer discrimination. Facts underscore the need for people with disabilities to better understand what to do in the event of employer discrimination. Over half of the Title I ADA complaints received by the EEOC from 1993 to 2002 were found to have no reasonable cause; another 17% were dismissed for administrative reasons after charging parties did not follow through with the EEOC's investigative process (EEOC, 2003). One student with a disability called for attorney referral lists so that people with disabilities can obtain satisfactory legal counsel: "Employers and the EEOC already have the deck stacked against us. We need lawyers to help us fight back."

Concerning to students' understanding the ADA in general, focus group members in several of the sessions recommended a credit-bearing course on ADA implementation for consumers. One student service professional described a brochure entitled "College Students' Guide to the ADA" that could accompany the curriculum of the academic course on the same subject. Topics that should be considered in developing such a course and such a brochure include history and enactment of the ADA, definition of key terms in Title I (Employment), protected parties, covered employers, specific prohibitions, exceptions and exclusions, enforcement and compliance procedures, and recourses and remedies. Student services professionals identified ADA compliance officers as valuable resources on campus to improve student awareness

of the ADA. Other recommendations to enhance awareness of the ADA in general on the part of postsecondary students with disabilities included the development of a comprehensive list of Internet resources related to the employment provisions of the ADA and offering workshops on the ADA jointly attended by employers and students with disabilities.

In terms of the weakness item related to disclosure of disability status, student service professionals recommended written materials comparing and contrasting the disclosure requirements of the ADA and the Family and Medical Leave Act (FMLA; McMahon & Domer, 1997). Rehabilitation professionals suggested developing brochures regarding the role that disclosure plays in the reasonable accommodation process (EEOC, 2003). Faculty members emphasized the importance of disclosure as a topical issue in mentoring activities involving employers and students with disabilities. Rehabilitation professionals discussed providing written information on how to document disability if called upon to do so by employers. Finally, one student disability services professional advocated developing electronic and written materials on disclosure issues for students with hidden disabilities and a separate set of electronic and written materials on disclosure issues for students with obvious disabilities.

Social Security. The two weaknesses addressing Social Security include "students with disabilities have their needs considered in the development of Social Security regulations" and "… have access to adequate information about Social Security programs." It is somewhat surprising that Social Security issues represented a top priority weakness in this study, given that students with LD and ADHD/ADD (who collectively comprised 57.9% of the respondent sample) are infrequent recipients of Social Security disability benefits (Hennessey, 2004). Nonetheless, several students suggested that colleges and universities provide forums for students with disabilities to express their concerns about Social Security to political leaders and government officials. Several rehabilitation professionals recommended providing information on the Ticket to Work and other work incentives and on Supplemental Security Income (SSI) and Social Security Disability Insurance (SSDI) on student disability services and career services websites (Marini, 2003). Further, tudent services professionals suggested inviting Social Security representatives to speak at career preparatory functions such as job fairs and career days and encouraging students to link to the Social Security Administration's website, www.ssa.gov.

Limitations of the Present Study and Implications for Future Research

Limitations of the present study include the relatively small number of participating institutions; the convenience nature of the method by which institutions were selected; the lack of representation of institutions from the southwestern, northwestern, and mountain regions of the United States; the low return rate; and the overrepresentation of Caucasians in the respondent sample. Another acknowledged limitation of the study is the relatively restricted range of respondents' "Importance" and "Satisfaction Ratings".

To address these limitations, research is needed to assess the employment concerns of students with disabilities from the regions mentioned above. Ideally, a true national survey should be conducted, perhaps with a random cluster sample of institutional members of the AHEAD that represents all regions of the United States. In that effort, care should be taken to include vocational/technical colleges, community colleges, private liberal arts colleges, large and small state colleges and universities, institutions located in urban settings, and historically Black colleges and universities. One broad-based sampling plan used in conjunction with the concerns report method (CRM; Schriner & Fawcett, 1988) may be found in Schriner and Roessler's (1990) survey, which included 87 postsecondary institutions in 39 states.

Even though there are many precedents of published surveys with low return rates in the field of disability studies (Clark & Crewe, 2000; Koch, 2001; Roessler, Rumrill, & Hennessey, 2002; Rumrill et al., 1999), the low return rate in this study is a major limitation. The researchers' response-induction techniques such as a prenotice letter signed by the director of each institution's student disability services office, an explanatory cover letter and a real stamp on the business reply envelope accompanying the questionnaire, as well as a reminder/thank-you postcard – all proven strategies presented by Dillman (2000) in his authoritative survey design text – failed to entice 79% of the target sample to complete and return their questionnaires. In their text on research design in rehabilitation counseling, Bellini and Rumrill (1999) noted that, in comparison to non-respondents, survey respondents are often from higher socioeconomic strata, tend to be overrepresented by Caucasians and people with less severe disabilities, and report higher levels of quality of life. Therefore, the 21% of the target sample who completed questionnaires may be characteristically different from the 79% who did not.

To raise return rates to more representative levels, future researchers might consider monetary compensation in the form of a small amount of cash accompanying every mailed questionnaire, a more substantial compensation only for those who complete and return questionnaires, or a lottery for all respondents that results in prizes (Dillman, 2000). Dillman also suggested posting surveys on the Internet as a means of increasing return rates; it is possible that some students with disabilities would prefer that format over the large-print, Braille, and computer disk versions of the questionnaire that were made available in this study. Enlisting the assistance of student advocacy groups in marketing the survey might further raise return rates over the 21% rate in this study, which relied on institutionalized student disability services offices to publicize and mail the questionnaires.

Future researchers could survey more racially and ethnically representative samples of American postsecondary students with disabilities by considering several strategies to involve traditionally underrepresented groups. First, researchers should endeavor to include colleges and universities in urban settings, which have higher proportions of minority students than institutions located in suburban or rural settings (National Center for Education Statistics, 2004). Including Historically Black Colleges and Universities would also likely increase representation of African Americans. In addition, targeting postsecondary institutions located in states with large Hispanic/Latino communities (e.g., Florida, Texas, Arizona, California) would likely result in greater numbers of Hispanic/Latino respondents. Institutions located in Los Angeles, New York, San Francisco, and Seattle, to name a few metropolitan areas, would possibly result in higher percentages of Asian respondents.

To further increase minority response, future researchers might consider coordinating survey recruitment efforts with both minority affairs offices and minority student groups, actively targeting minority students who have disabilities. Stratified sampling procedures (McMillan, 2000) could also be employed, whereby target samples would be actively sought to approximate the representation of racial and ethnic minorities that is found in the general population of American postsecondary students with disabilities. Researchers might also consider stratifying samples according to disability type, which would reduce the likelihood of the eventuality found in this study where no respondents indicated having a psychiatric disability. If stratification did not result in a representative sample, a future researcher could consider case weighting procedures (Hsieh, 2004), whereby information provided by underrepresented respondents is weighted in proportion to the desired representation of people with those characteristics, in affect overemphasizing the responses of underrepresented groups and underemphasizing the responses of overrepresented groups.

Finally, future researchers may wish to consider whether and to what extent postsecondary students with different disabling conditions report different career concerns. Such a differential analysis exceeds the scope of the present study, but it could yield useful information that could inform career-related programs on college campuses nationwide.

Conclusion

Survey respondents identified nine "strengths" in employment policies and practices clustering in the themes of employment-related expectations, access and accommodations, and job-seeking and technical skills. Eight "weaknesses" were organized in themes such as health insurance, the Americans with Disabilities Act, and Social Security. Students with disabilities, faculty members, and service providers recommended policy and practice initiatives calling for action such as information provision, research, services and curriculum, self-advocacy and self-determination, and involvement of key stakeholders.

The career-related interventions that result from this study could take many forms, including credit-bearing coursework, written materials on employment laws and policies, self-advocacy training, group and individual career counseling, community-based internship programs, mentoring from student and business leaders, job-seeking skills training, and interview skills training. Referrals to existing community resources such as the state Vocational Rehabilitation program are also key components of career services for students with disabilities.

The recommendations presented by focus group members to preserve top-priority strengths and remedy top-priority weaknesses in employment policies and practices represent the basis for a broad-based agenda to improve the employment outcomes of postsecondary students with disabilities. In implementing this agenda, findings from this research will enable consumer-minded career service and student disability service professionals to ground their program development efforts in the stated concerns of a representative sample of postsecondary students with disabilities.

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