In their own words: The career planning experiences of college students with ASD

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Revised/Accepted January 2014

Abstract. This article describes results of structured interviews with college students on the autism spectrum concerning their career planning experiences. Participants attended community colleges and/or universities in Virginia and ranged from freshmen through graduate school. Results describe four emerging themes based on students’ knowledge of, and participation in, career related services and supports. These are choosing a major, using career centers, self-disclosure, and career related services and supports. Authors also sought to obtain students’ perspectives on what information, services, and resources they need to better prepare for their careers.

Keywords: Autism spectrum disorder, career planning, higher education, college students

1. Introduction

As a result of increasing numbers of students with disabilities entering and completing postsecondary education programs, the field of higher education and disability is learning more about the career planning experiences of these students as they prepare to enter professional careers (Briel & Getzel, 2009; Wolf, Brown, & Bork, 2009). In the current economy, individuals with disabilities, including those who pursue advanced degrees, face high rates of unemployment and underemployment. Recent estimates show that individuals with disabilities who have at least a bachelor’s degree are two times more likely to be unemployed than their counterparts without disabilities (Murray, 2010). Now more than ever it is increasingly important that college students with disabilities engage in the full range of career activities and services offered on campus to be competitive in today’s workforce.

Yet, there are a number of issues concerning the number of students with disabilities who access career-related activities on campus (Briel & Getzel, 2005; Getzel, Stodden, & Briel, 2001; Rumrill, Koch, Murphy, & Jannerone, 1999). While career issues faced by students with disabilities are at times differentiated by their specific disability (Roessler & Schriner, 1991; Rumrill, 2001), there are trends in the career planning and preparation process that are faced by students with disabilities in general. For example, students with disabilities (including students with ASD), are less likely to register with their campus career centers than their peers without disabilities, do not generally participate in career-related student or professional organizations (Getzel et al., 2001), and significantly underutilize experiential learning opportunities such as university co-op programs or internships (Perner, n.d.; Rumrill et al., 1999; Wolf et al., 2009). It is important not only to address specific issues that students with disabilities face based on individual differences, but also to recognize similarities in career planning and preparation needs of all college students with and without disabilities.

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A study funded by the National Institute on Rehabilitation Research (NIDRR) focused on identifying the effective components of a collaborative career planning model for college students with ASD. As part of the identification of these components, researchers sought input and feedback from college students with ASD, vocational rehabilitation counselors, college disability service providers, and college career center counselors. This article describes the experiences of 18 college students with ASD as ascertained through a structured interview process. Overall, the interviews focused on students’ current status in career planning and preparation, use of campus services and supports, and their satisfaction with these services. It is believed that the viewpoints of these students with ASD, who are experiencing the day-to-day challenges, issues, and successes of college, will increase our understanding of their unique needs and further our work in developing effective career preparation strategies and methods to enable college students on the autism spectrum to prepare for their selected careers.

2. Methods

2.1. Participant selection

We used a purposive sampling procedure to select study participants (Morgan, 1998; Patton, 1990). In this procedure, we sought to include matriculating postsecondary level students with ASD who were receiving support services related to their disability. To ensure we were selecting students meeting this definition, researchers asked personnel from Disability Support Services Offices across the state to send out information about the study to any students with ASD they were serving. As part of their postsecondary education experience, these students had self-disclosed that they had a disability and provided documentation of their disability in order to be eligible to receive accommodations through the university. This method assisted the researchers in identifying college students with a documented diagnosis of ASD who were receiving services at the college and university level based on this diagnosis.

As a result of this statewide recruitment effort, 18 students with ASD were interviewed for this initial phase of the study. Their ages ranged from 18 to 24, with a majority (n = 17) between the ages of 18 and 24. Fifteen of the participants were male and three female. The students were Caucasian with the exception of one individual who was African American and another who was Hispanic. Participants included one graduate student, five juniors, five sophomores, and five freshmen, in addition to two students with ASD who were recent graduates (one month before the interview) from a four-year higher education institution. Grade point averages for these students ranged from 2.0 to 3.76. Fifteen students attended a four-year college or university, with all but three enrolled full-time. Three participants were enrolled full-time at a two-year college, with plans to transfer to a four-year program. When asked about career majors, five participants indicated they were interested in pursuing a degree in humanities and sciences (history, math, psychology, or English), three in the arts (music, art, photography or film), two in international studies, one in social work, one in teacher preparation, one in communications, one in business administration and four were undecided.

Education institutions (Mynatt, Gibbons, & Hughes, 2013). Wehman, Smith, and Schall (2009) describe this pervasive developmental disorder as characterized “by severe deficits in social interaction and communication, by limited range of activities and interests, and often by the presence of repetitive, stereotyped behaviors.” (p. 5). Specific behaviors exhibited by individuals with autism can range from very mild to severe (Wehman et al., 2009).

Educating young adults with ASD in postsecondary education settings is an emerging trend in the field of higher education and disability. However, there is limited research in the literature on the postsecondary experiences of these students (Briel & Getzel, 2009; Volkmar, Lord, Bailey, Schultz, & Klin, 2004; Wolf, Brown, & Bork, 2009). As with other students with disabilities, there is an increasing awareness that students with ASD are in need of postsecondary options and support to further their career goals and promote long-term independence (Hewitt, 2011; Rubin, 2007). Grandin and Duffy (2004) found that career growth, well-developed technical skills, and successful employment experiences become more significant for people with ASD who often define themselves by their employment instead of their social network. It is therefore critical that college students with ASD access opportunities to understand how their academic accommodations or supports transfer to the employment setting, and learn how to network with professionals in their fields to build a successful resume of experiences as they move from postsecondary education into their chosen careers (Briel & Getzel, 2009; Mynatt et al., 2013; VanBergeijk, Kim, & Volkmar, 2008; Wolf et al., 2009).

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2.2. Instrument

A two-part instrument was developed for the structured interviews. The first part gathered basic information such as participant demographics (e.g., major, gender, year in school, grade point average) along with some short answer questions addressing supports and services used on campus and in the community, resources needed for career planning, and satisfaction with the services received. Participants were given a choice of completing the first section prior to the interview, at the interview independently or at the interview with research staff asking questions and recording responses. Participants could complete this section online or by hand.

The second part of the survey consisted of seven open-ended questions and prompts that were designed for the face-to-face interview. This format elicited more freedom in responding and allowed interviewers to go more in-depth with the participants concerning their individual career preparation process, their perspective on important career planning experiences, the support services that were desired, but lacking, and specific examples of what they determined to be most helpful in their overall college experience. Prior to beginning the structured interview, the participant and interviewer reviewed responses in the first section allowing the interviewer to clarify any information if needed.

2.3. Data collection

Disability support services offices in two- and four-year private and public colleges and universities were sent information regarding the study. They were asked to provide information and the researchers’ contact information to students with ASD. Once students contacted researchers expressing interest in the study, information about the study, its purpose, and a consent form were emailed to each individual. Upon receipt of the consent form, researchers emailed the interview questions to each participant prior to their scheduled meeting to assist them in preparing for the interview. Researchers believed that having participants receive information prior to the interviews could potentially ease concerns about the interview and what information we were seeking. Student participants were provided a $25 stipend for completing the interview.

Face-to-face interviews were conducted in a location mutually agreed upon by the participant and interviewer. For example, interviews were conducted in a campus library, a disability support services office, or the interviewer’s office. All participants, except for one, were able to complete the interview in one session. One participant asked to end the interview during the middle of the session, and rescheduled another time to complete it. Most interviews were completed within 60 to 90 minutes. During the first part of the interview, information completed by the participant prior to the interview was reviewed by the researcher to clarify information and to assist in establishing rapport.

The second part of the interview consisted of seven open-ended questions. Topics discussed included how they decided on their major; who helped them the most in preparing for their career; what additional information or strategies were needed to help them get a job; any concerns they had regarding their academic and career path; and how career-related services could be improved on campus. We determined that the open-ended questions would be the focus of the interview to ensure a reasonable interview time, and to allow the researcher to ask for any clarification of responses given by the participants.

Once interviews were completed, the interviewer reviewed field notes, and added any impressions about the interview related to the student’s ability to respond appropriately to questions, maintain eye contact, and other nonverbal skills such as body language, proximity, voice tone, volume, and facial expression. These informal observations provided a glimpse of the social skill deficits the students face (Winner, 2001-2002). One researcher was used to conduct all interviews using the same sequenced questions in the protocol. This was done to address concerns about reliability, similar to a study conducted by Price, Gerber, and Mulligan (2003). Other study staff reviewed results and discussed them with the interviewer to ensure there were no issues or concerns with study protocol (Price et al., 2003; Yin, 1994).

2.4. Data analysis

Responses provided to open-ended questions used during the structured interviews were qualitatively analyzed based on the following: (a) time the student spent discussing his or her answer; (b) depth of knowledge about a particular topic; (c) awareness and use of campus and community resources; and (d) outcomes such as GPA and career related work experiences. By reviewing information from both sections of the interview instrument, emergent themes were identified by the interviewer and another member of the study team. Participants did not express specific categories in their
responses (Madaus, 2006; Patton, 1987). Descriptive statistics were used for analyzing demographic items and short answer responses.

3. Results

A majority of the upperclassmen were able to articulate their thoughts concerning their career preparation experiences, such as how they identified a major, the type of job they would seek upon graduation, what experiences helped them prepare for their careers and what services they felt they still needed. Students often spoke very passionately about their interests and future careers. Several participants had difficulty answering the open-ended questions about what helped them the most with their career planning or how career preparation services could be improved. In part, these difficulties might have been a result of these participants lacking a knowledge base from which they could draw to form opinions about specific campus or work environments (Wolf et al., 2009). For example, one participant had never held a job throughout high school and college, and was seeking admission into a graduate school program. When asked about what type of employment or career she was thinking about (i.e., working in an office, the type of activities she would like to see herself doing), her response was that she did not know until she got into the program and started taking some classes. The participant had a knowledge base about taking classes in a college setting, but had no knowledge base to determine what work environment or employment activities would best suit her.

As the study team members reviewed the responses of the participants, several themes emerged similar to those reported by other groups of college students with disabilities (Briel & Getzel, 2005; Getzel, Briel & Kregel, 2000; Getzel, Stodd, & Briel, 2001). However, a number of differences were also apparent, unique to college students with ASD. It is important that higher education professionals understand such differences to determine effective strategies, services and supports that will benefit these students as they prepare for employment (Perner, n.d.; Wolf et al., 2009).

3.1. Choosing a major

Participants received career information from multiple sources. Family members were most frequently cited (n = 15), followed by college faculty (n = 10), high school guidance counselors (n = 8), secondary education teachers (n = 8), disability support service providers (n = 7) and college career counselors (n = 4). Family members often provided advice regarding the student’s strengths and potential job market. One dad pointed out the student’s writing ability and thought he would be good at computer programming. Another parent discouraged a student from pursuing a “risky” acting career and suggested being a teacher instead. Other parents researched various careers to guide their son or daughter, making connections to arrange summer work experiences as well. One sibling was influential in introducing anime (Japanese animated cartoons) to a student who later pursued a major in international studies.

Although families were often a source of information about careers, when asked what helped students most in preparing for a career, student answers varied from talking with faculty and employers, supportive parents, personal research through the internet or watching documentaries, classes in high school and college, and onsite work experiences. For undeclared majors or those who felt unprepared for their careers, students did not know what questions they should be asking.

Students also varied in their reported level of work experiences. About one third of the students secured volunteer, part-time or internship experiences related to their majors. Two students had no volunteer or work experience; five had entry level part-time work unrelated to their major, for example as grocery store clerks or pet sitters; and four undeclared majors had a few volunteer and part-time entry level job experiences. Seven of the participants had significant volunteer and paid experiences that impacted their career decisions. One photography and film major worked in the summer as a production assistant. Another student double majoring in math and computers secured two internships, one at NASA and another at GE through talking to a project leader at Lockheed Martin. One student who knew he was better in languages and liberal arts majored in international studies. His extensive volunteer experiences at hospitals, clinics and pharmacies further defined his direction to global healthcare. He also valued his conversation with a surgeon in the military and ruled out that direction since they do not get to work with children.

Several students’ interests were sparked through documentaries, films, and television paired with individual research on the internet. One student selected broadcast journalism based on years of watching sports on TV and listening to games on the radio. Another student researched teaching English as a Second Language, and
combined with information obtained through talking with his sister, decided on this as a career goal.

### 3.2. Use of career centers

When asked about their experiences with or use of career centers, less than half of the students (n = 8) had visited their college career center once or twice and participated in workshops related to interview skills, developing a resume, or searching for a part-time job. An even smaller number of those who visited the career center had met with a career counselor or participated in any career assessment, skill building, or career fairs. Contact with campus career centers by participants was, at most, obtaining general information. One student who visited her career center felt that the staff seemed very busy and therefore did not initiate making an individual appointment with a career counselor.

Even though only a small number of students used their campus career center, a majority of these students expressed satisfaction with these services. However, almost all of the students interviewed (n = 14) expressed a need for information and opportunities for work experiences, such as informational interviews, job shadow opportunities, participating in internships and career exploration. For example, one study participant was aware of the importance of networking skills in securing employment and was concerned about his abilities in this area.

In addition, many participants (n = 13) also expressed interest in learning how to develop a disclosure plan for employers. Many participants (n = 9) were unaware of the resources available at campus career centers and how they would be useful to them. One student wanting to major in film stated, “Why should I go to the career center? I know what I want to be”. Another student wished that there were opportunities to speak with potential employers more directly about his career interests. He was unfamiliar with the career fairs and informational interviewing opportunities available through the career centers. One freshman commented, “I see the emails from the Career Center but I don’t read them.”

Yet, when participants were asked how prepared they felt to enter the workforce, half of the respondents felt unprepared with a number of questions concerning their career choice. One individual commented that he did not even know what questions to ask. Even those who felt prepared reported having unanswered questions. Information that they felt would help them along with work experiences or internships included how to conduct an informational interview (n = 14), how to develop a disclosure plan for employers (n = 13), resume development (n = 13), learning job search strategies (n = 10), practicing interview skills (n = 9), and receiving information on the ADA (n = 8).

### 3.3. Self disclosure

Although each participant had registered as a student with a disability at the Disability Support Services Office and two-thirds were using classroom accommodations, only one student disclosed her disability to her employer at a grocery store. Regarding accommodations on the job, the student reported receiving no accommodations. With further prompting, the student shared, “Sometimes my boss would explain how I misinterpreted cues and would diffuse the situation. It was nothing really”. Two students with multiple disabilities disclosed their physical disabilities to an employer, but not their disability on the autism spectrum. Less than half of the students (n = 8) wanted to learn more about their disability, yet a majority (n = 13) expressed interest in knowing how to develop a disclosure plan and what accommodations they could ask for on a job.

### 3.4. Career related services and supports

Best practices indicate that students with disabilities should choose a major that aligns with their strengths (Graetz & Spampinato, 2008; Grandin & Duffy, 2004; Reiff, Gerber, & Ginsberg, 1997). Clearly half of the students followed this reasoning and selected majors based on subjects in which they excelled in high school, or areas of strong interest. One student who always liked math and excelled in accounting class was pursuing a degree in business administration. Her high school teacher had previously validated her potential by saying, “you could be a good accountant.” Others had positive experiences acting, directing, or writing scripts for their high school drama clubs, which led to a major in English and/or film making.

A majority of students in this study (n = 13) overwhelmingly identified a need for information on solving problems and managing stress. Learning to make decisions (n = 9) and how to set goals (n = 7) also received high interest. Half of the participants expressed a need for social skills programs, training or information on making friends. Several students stated it is easier to communicate with their superiors versus their peers, and expressed concern over working with co-workers and attending work related social events.
Overall, students reported interest in receiving information on a wealth of career and personal management skills. When asked about formats for obtaining information, although many of the students mentioned searching the internet, blogging, and using the computer as preferred activities in their spare time, only two students mentioned web resources, videos or online communication as strategies to acquire new career related skills or information. The majority of participants preferred to learn new information in small groups or one-on-one sessions. One student commented, “I like to read and go on the computer in my free time”; yet regarding new training, he said, “I don’t do online processes unless someone helps me.”

4. Discussion

The results of these interviews provide critical insights into the career preparation needs of students with ASD. Although the study participants were in different phases of their educational and career preparation process (freshmen to graduate school) and attending college in various higher education programs across the state, they shared common experiences and support needs.

Most of the participants did seek input about careers from a variety of individuals, including family members and high school and college staff. However, it became apparent that career centers were the least likely source for information and support. Campus career centers can provide a wealth of resources and information including job search skills, career advising, interview preparation, career development workshops and on-campus interviewing. As a result, it is important that college campus service providers work together with students with ASD to help them better utilize these types of services, and to assist career center staff on how best to serve students with ASD especially since these students typically have limited work readiness skills (Wolf et al., 2009). Van-Bergeijk and colleagues (2008) emphasize the need for support service staff, in particular career center staff, to provide information that is clear and precise and to offer opportunities to practice the range of job seeking skills.

College students with ASD reported limited work experience and career related activities to explore how their interests and strengths could be applied to other employment settings. In other words, these students, for the most part, lacked a knowledge base or context (Wolf et al., 2009) that could assist them in selecting their career choice, and a better understanding of the potential work environments they would be entering. Study participants did, however, express a need for more experiential learning opportunities through informational interviews, job shadowing or mentoring opportunities, internships, or work experience. Having on-site work experiences, such as talking with professionals or job shadow experiences, can further define and confirm career interests and can help students with ASD understand the working environment in terms of their differences and similarities (Wolf et al., 2009). These career-related activities are critical for all students with disabilities, but are extremely important for students with ASD as they transition from college into the work environment.

Several of the students interviewed were acutely aware of their limitations in social situations, and the impact of their limitations in the work environment. The social challenges these students face have a significant impact on their ability to understand different work environments and the expectations of employers within these environments. As one student commented, “I need more internship opportunities. I need someone to tell me what I should not be doing; how to be professional, how to get along with people on the job and manage my reactions. I need someone to help me get a second chance when I fail.” Kysor and Pierce (2000) report that college students who engage in several career-related work experiences in college, including internships, are able to secure employment more quickly after graduation, are more likely to be employed within their field of study, and are generally more satisfied with their work positions than graduates with no career related experience. It is critical to develop strategies that assist college students with ASD in exploring their interests, strengths, and opportunities to apply academic knowledge in a practical way prior to entering their profession.

Not only do career related work experiences assist in further exploring career opportunities, they are also beneficial in developing “soft skills” that employer seek. These skills focus on effective verbal and written communication, interpersonal and teamwork skills, which are viewed as enhancing an employee’s desirability (Price, Gerber, & Mulligan, 2003; National Association of Colleges and Employers, 2004). One survey (Hart Research Associates, 2013) cited employers prioritizing critical thinking, communication, and complex problem-solving skills over a job applicant’s major when deciding whom to hire. These employment related activities would not only expose students with...
ASD to potential career paths, but also confirm career directions and assist these students in learning more about work environments, particularly communicating with co-workers and supervisors, and understanding roles and responsibilities (Briel & Getzel, 2005; Wolf et al., 2009).

A majority of respondents expressed the need to develop a disclosure plan to use in the workplace and the desire to gain a better understanding of what accommodations they could request. Disclosure is a critical decision on the part of individuals seeking a job or internship, and can be especially difficult for college students with ASD due to existing challenges with social skills and how to present oneself in an unfamiliar situation or setting (Wolf et al., 2009). One of the most important aspects of disclosing is an understanding of one’s strengths and limitations, and how to describe what accommodations are needed based on the requirements of the position. Yet, less than half of the students interviewed were interested in learning more about their disability. Clear and concise information is needed to assist students to prepare for disclosure, even if they are not sure if they will disclose or not.

There are some limitations of the study that should be noted. Further research is needed to validate the information provided by these students. The study participants represent a small number of students with ASD attending two- and four-year higher education programs in Virginia. A larger scale study is needed to substantiate information gathered through the interviews, and to determine and analyze any differences in colleges and universities regionally or nationally.

Another potential limitation is the format used to gather information from this population. With communication skills being a primary challenge for individuals on the autism spectrum, conducting an interview could potentially curtail the responses we received. To address concerns around conducting interviews with these study participants, we divided the interview into two sections, allowing participants to complete concrete information such as demographic and short answer questions (Graham, 2008) prior to the face-to-face interview, in which open-ended questions were used in an attempt to expand on the initial information provided. The use of other research designs to elicit information from college students with ASD could offer more effective methods than the design used in this study.

Despite these limitations, this study addresses a critical area in the higher education and disability field. There is little comprehensive research on effective strategies and supports to assist college students with ASD in their career planning process. The results of this study are an initial step to gaining a better understanding of the expressed challenges, needs and supports of college students on the autism spectrum. Their voices are a critical part in the development and implementation of career-related activities on college campuses for these students as they enter an increasingly competitive workforce.

Acknowledgments

Preparation of this manuscript was funded by Grant # H133A080027 from the U.S. Department of Education, National Institute on Disability and Rehabilitation Research. The opinions expressed herein, however, do not necessarily reflect those of the funding agency. The authors would like to thank the college students with ASD who so willingly shared their personal experiences in pursuing their chosen careers.

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