

Employment Outcomes of Canadian Postsecondary Students with Learning Disabilities

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Abstract

The employment outcomes of 35 Canadian postsecondary graduates with learning disabilities (LD) were investigated. It was found that 67.7% of respondents were working full-time, earning salaries comparable to those in the general population of college graduates without LD. While 56.9% of respondents indicated that their work was affected by LD, only 47.1% had ever disclosed their LD in the workplace or requested formal workplace accommodations (11.8%). Most respondents reported employing the use of compensatory strategies in order to overcome obstacles presented by their LD. High ratings of job satisfaction and high perceptions of employment self-efficacy were reported. Implications of the findings in terms of successful individuals with LD and effective transition planning are discussed, as well as limitations and directions for future research.

Abstract

Les résultats du taux d'emploi de 35 diplômés du niveau postsecondaire canadien ayant des troubles d'apprentissage (TA) ont été étudiés. Il a été constaté que

67,7 % des répondants travaillaient à temps plein, gagnaient des salaires comparables à ceux de la population générale des diplômés du collégial sans TA. Alors que 56,9 % des répondants ont indiqué que leur travail a été affectée par leur TA, seulement 47,1 % avaient déjà révélé leur TA dans le milieu de travail ou avaient demandé des accommodations pour leur travail (11,8 %). La plupart des répondants ont déclaré avoir employé l'utilisation de stratégies compensatoires en vue de surmonter les obstacles présentés par leur TA. Des pourcentages élevées de satisfaction au travail et des perceptions élevées d'auto-efficacité au travail ont été signalés. Les implications des données d'individus qui réussissent avec des TA et la planification efficace de la transition sont discutés, ainsi que les limitations et les directions pour la recherche future seront présentées.

Employment Outcomes of Canadian Postsecondary Students with Learning Disabilities

Over the past three decades a large body of research has documented the experiences of students with learning disabilities (LD) within the primary to secondary (K – 12) school system, as well as during the postsecondary (college and university) years. Individuals with LD experience difficulties with learning and academic skills despite having average or better intelligence, and

typically manifest as impairments in reading, writing, and mathematics (American Psychiatric Association, 2013; Learning Disabilities Association of Canada, 2015). Approximately 2.3% of Canadians report having a learning disability (Bizier, Till, & Nicholls, 2015). While an increasing knowledge base has provided insights into the adult outcomes of secondary students with LD (e.g., Holliday, Koller, & Thomas, 1999; Levine & Nourse, 1998; McLaughlin, Speirs, & Shenassa, 2014; Seo, Abbott, & Hawkins, 2008), less research has documented the outcomes for postsecondary students with LD as they transition into adulthood and employment. Because increasing numbers of students with LD are enrolling in postsecondary education programs and earning degrees (Newman et al., 2011; Sanford et al., 2011), it is important to gain an understanding of the outcomes these individuals experience as they transition from postsecondary programs into the workforce. This information would assist postsecondary disability support providers and career counsellors to effectively prepare students for their transition from an academic setting into employment environments.

Research examining the employment outcomes of high school graduates with LD suggests that while they gain employment, they are often found to be underemployed or employed in traditionally low-paying, low-skill work and earning less than

postsecondary graduates with LD (Murray, Goldstein, Nourse, & Edgar, 2000; Newman, Wagner, Cameto, & Knokey, 2009). Small-scale studies of postsecondary graduates with LD often paint an encouraging, although at times inconsistent, picture with respect to employment outcomes. In following 56 college graduates with LD, Adelman and Vogel (1990) found that most graduates with LD were employed in skilled labour industries such as business and education. Many were effectively using compensatory strategies (e.g., time management, use of assistive technology) to overcome language and processing difficulties that affected their work. Similarly, Greenbaum, Graham, and Scales (1996) surveyed 49 adults with LD that had attended university. They found a high percentage of these (83%) were competitively employed in jobs that offered opportunities for advancement and promotion, with 94% of participants indicating that they were satisfied with their job. In a further study, a follow-up of 55 college graduates with LD found that they reported significantly less satisfaction with pay and promotion opportunities, as well as significantly lower ratings of overall job satisfaction than their non-LD peers (Witte, Philips, & Kakela, 1998).

Such early studies of the employment outcomes of college graduates with LD often utilized small, homogeneous samples or different methodologies, often yielding inconsistent results and making it difficult to generalize their findings to the LD population as a whole. More recently, large-scale quantitative follow-up studies of postsecondary graduates with LD from several institutions

across the United States have yielded a rich data source to assess the employment outcomes of postsecondary graduates with LD (Madaus, Foley, McGuire, & Ruban, 2001; Madaus, Foley, McGuire, & Ruban, 2002; Madaus, Ruban, Foley, & McGuire, 2003; Madaus, 2006; Madaus, 2008; Madaus, Zhao, & Ruban, 2008). In a follow-up survey of 500 graduates with LD, Madaus (2006) found that employment rates exceeded those of non-LD adults who have not completed high school or graduated from college. Levels of income and benefits also were comparable to those found in the general workforce. Additionally, high levels of employment satisfaction were reported among the sample, along with strong feelings of *employment self-efficacy* (defined as feelings of confidence in one's ability to perform work-related tasks or behaviours successfully), which were found to be highly predictive of job satisfaction (Madaus et al., 2008).

While such research provides insight into the transition to employment outcomes for postsecondary students with LD in the United States, what is less well known is whether these results are representative of the employment outcomes of postsecondary students with LD in Canada. To date, three qualitative studies on LD and employment have been conducted in Canadian samples. Shessel and Reiff (1999) found Canadian employees with LD experienced work dissatisfaction due to a lack of appropriate accommodations in the workplace. Similarly, Price, Gerber and Shessel (2002) found a lack of reasonable work accommodations made available to employees with LD due to a lack of self-advocacy. Finally, a comparison of the work experiences of employees with LD

in the U.S. and Canada revealed that both Americans and Canadians generally have positive work experiences, with opportunities for advancement and promotion (Gerber, Price, Mulligan, & Shessel, 2004).

While these studies provide a useful snapshot of the experiences of some Canadian adults with LD in the workforce, only a limited amount of quantitative data is available regarding the employment experiences of adults with LD in a Canada. In 2011, Holmes and Silvestri [2011] examined the employment experiences of 98 postsecondary graduates with LD in the Canadian province of Ontario. They found that 69.1% of respondents reported being employed either full- or part-time and expressed high levels of job satisfaction, despite 71.9% indicating that LD impacted performance in the workplace to some degree.

Thus, the current study sought to extend the Canadian literature base by conducting a follow-up survey of postsecondary students with LD in Canada. The study sought to answer the following questions:

1. What are the employment outcomes of postsecondary students with LD in Canada?
2. How do Canadian postsecondary students with LD rate their employment experiences in terms of job satisfaction and feelings of employment self-efficacy?
3. At what rate do Canadian postsecondary students with LD self-disclose their disability or ask for accommodations in the workplace?

Determining the employment experiences of adults with LD in

Canada will be helpful to educators and providers of support services in designing programs that will effectively aid students with LD make a smooth transition from postsecondary settings into the workforce.

Method

Participants came from a pool of 98 students with LD that had attended a small liberal arts university in Eastern Canada. All potential participants had received services from an on-campus support centre for students with LD. In order to be eligible to receive support services, students were required to have a thorough psychoeducational assessment conducted by a qualified psychologist that confirmed the presence of a LD.

Data was obtained by asking participants to complete an online survey form that they could access via computer over the Internet. Since most potential participants had valid email addresses, an Internet-based survey was favoured over a traditional mail-based survey based on evidence that the response speed and completion rates for Internet-based surveys are higher than for written mail-based surveys, while still maintaining similar response rates (Kongsved, Basnov, Holm-Christensen, & Hjollund, 2007; Truell, Bartlett, & Alexander, 2002). Names and contact information of potential participants eligible for the study were compiled from the records of the campus support centre. Potential participants were invited to participate in the study via several waves of email invitations over the course of seven months. Data collection was completed in October of

2007. Of the 98 individuals that were invited to participate in the study, 41 responded by completing the survey, yielding a response rate of 42%. Upon review, it was determined that 6 respondents did not graduate from a postsecondary institution and were removed from the analysis.

For the purposes of extension and replication of previous research, the survey instrument used in the study was adapted from that developed by Madaus et al. (2001), which contained three main sections. The first section consisted of respondent demographic information, educational experiences, employment information, career experiences, and work experiences in relation to LD. The second and third sections were comprised of job satisfaction and employment self-efficacy scales, respectively, in which respondents rate their perceptions on a 5-point Likert scale. The internal consistency of the Job Satisfaction scale is .90 and .94 for the Employment Self-Efficacy as reported by Madaus et al. (2008).

Results

Participant Characteristics

Of the 35 postsecondary graduates who responded, 20 were male and 15 were female. In terms of demographic variables the majority of respondents reported being White/Caucasian (94.3%). The majority of participants were currently living in North America (80%) with most residing in the Canadian provinces of Ontario (40%), Nova Scotia (11.4%), and British Columbia (8.6%). One participant reported having attention-deficit hyperactivity disorder in addition to LD. All

participants indicated that English was their first language.

Educational Experiences

Over half of respondents reported that their LD was first identified while in elementary school (61.8%), followed by being diagnosed after high school (14.7%) or during middle or high school (11.8%). Over two-thirds of respondents (76.5%) indicated that the availability of LD support services influenced their decision to attend the post-secondary institution in question and almost all respondents (97%) graduated from the same institution. Year of graduation covered a period of 20 years, with a mean of 6.1 years (SD = 4.01) since graduation at the time of survey. The majority of graduates completed a Bachelor of Arts degree (75.8%), followed by Bachelor of Commerce (12.1%), Bachelor of Science (6.1%), Bachelor of Fine Arts (3%), and Bachelor of Music (3%). While graduates reported pursuing a wide variety of major fields of study, the most common majors were Geography (25%) and History (22%), and Marketing (9.4%). Approximately 41.2% of respondents indicated that they went on to graduate from an additional postsecondary institution to pursue degrees in education, law, or technical diplomas, for example. While the highest degree obtained reported by the majority of respondents was a bachelor's (75.8%), some went on to complete master's (9.1%), or doctorate-level (3%) degrees.

Employment and Career Outcomes

At the time of questionnaire, 67.7% of those responding indicated that they were employed full-

Type of employment	N	%
Education	8	30.7
Business	6	23.1
Technology	4	15.4
Factory/Industry	3	11.5
Provincial/State/Local Government	1	3.9
Social Services	1	3.9
Other	4	15.4

Table 1. Current employment industries reported by respondents

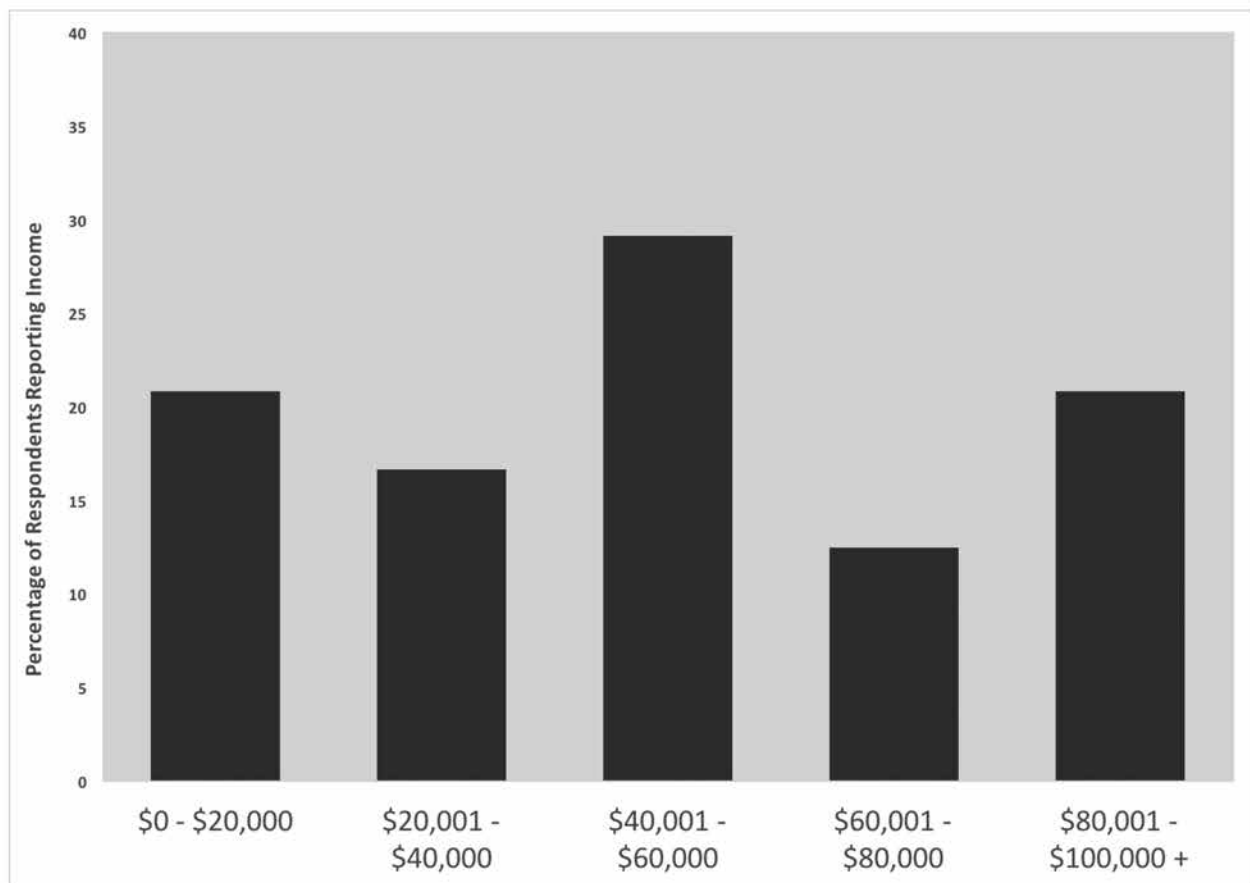


Figure 1. Percentage of Respondents Reporting Income Categories.

time (35 or more hours per week), with 8.9% indicating they were employed part-time (21 – 34 hours per week) and 23.5% reported being unemployed. When asked why they were employed part-time, responses included caring for children, working part-time while searching for full-time employment, or caring for the household. Interestingly, 87.5% of those respondents who were not employed at the time of the survey were not seeking employment. The most common reasons cited for not seeking employment were because they were pursuing further education (71.4%), or were caring for a child or family-member (28.6%).

Respondents reported having an average of 2.8 jobs since graduation ($SD = 1.9$). Over half of the participants had held their current job for 1 – 2 years (30.8%) or less than 1 year (42.3%). The most common industries that employed respondents reported working in were education (30.8%), business (23.1%), technology (15.4%), and factory/industry (11.5%). See Table 1 for a complete list of employed respondents' industries. The most common salary range for employed respondents was \$10,001 - \$20,000 ($n = 4$), \$30,001 - \$40,000 ($n = 4$), and \$40,001 - \$50,000 ($n = 4$), representing 50% of respondents who reported their income. The distribution of salary range is depicted in Figure 1. Over half of all employed respondents indicated that they received full benefits from their employers (61.5%), with 19.2% receiving partial benefits, and 19.23% reporting no benefits at all. Over a quarter of respondents (26.5%) indicated that they had been laid off from a job before, the most common reason being company

downsizing or budget reductions ($n = 6$). Only one respondent indicated that they were laid off for performance-based reasons.

Impact of Learning Disabilities and Self-Disclosure in the Workplace

Over half of respondents (55.9%) indicated that their LD impacted their work in some way. When asked how often their work was affected, 32.4% indicated that their work was affected occasionally, while 11.8% felt that LD affected their work frequently. The most common areas affected were reported to be in writing skills (38.2%), rate of processing information (23.5%), time management (20.6%), organizational skills (14.7%), oral communication skills (14.7%), mathematics computation (14.7%), and reading comprehension (11.8%). See Table 2 for a complete list of workplace skills affected by respondents' LD.

While over half of the respondents felt that their LD affected their work in some way, only 11.8% ever asked for formal workplace accommodations. Respondents reported utilizing a variety of strategies and accommodations in order to overcome the challenges of their job. See Table 3 for a complete list of strategies and accommodations utilized by respondents.

In terms of self-disclosure, 47.1% of respondents indicated that they had disclosed their LD in the workplace, most commonly disclosing to supervisors (41.2%), and co-workers (20.6%). The most common reasons cited for self-disclosing was to make either their supervisors (29.4%) or their co-workers (17.7%) aware of their LD. Of those who did not disclose, the

most common reason was that they felt there was no need to disclose their LD (45.2%). However, some chose not to disclose because they did not want to it to affect their relationships with supervisors (25.8%), co-workers (16.1%), and clients (12.9%), or felt it might affect their job security (16.1%). Of the group of respondents who did choose to disclose their LD, 15.4% reported experiencing negative effects as a result of self-disclosure, although respondents did not provide any additional information when asked for specific examples of negative outcomes they experienced.

Employment Satisfaction and Self-Efficacy

Respondents reported high levels of employment satisfaction ($M = 4.12$, $SD = .85$). The mean scores from the Employment Satisfaction Scale ranged from 3.65 to 4.47 on a 5-point Likert scale. Respondents felt they worked well with their colleagues ($M = 4.47$, $SD = .62$), that their work was valued by their employer/supervisor ($M = 4.38$, $SD = .74$), and they worked in a job that gives them a feeling of accomplishment ($M = 4.17$, $SD = .90$). Respondents also felt their employment allowed them to learn new skills and provided them with an appropriate amount of independence ($M = 4.23$, $SD = .81$).

Respondents also reported having a strong sense of employment self-efficacy. The mean scores on the Employment Self-Efficacy Scale ranged from 3.61 to 4.67 on a 5-point Likert scale. Respondents felt that they were able to interact well with their co-workers ($M = 4.67$, $SD = .54$), take the initiative for carrying out

Area Impacted	N	%
Writing Skills	13	38.2
Rate of Processing Information	8	23.5
Time Management	7	20.6
Organizational Skills	5	14.7
Mathematics Computation	5	14.7
Oral Communication	5	14.7
Reading Comprehension	4	11.8
Social Interactions with Colleagues	3	5.9
Social Interactions with Supervisors	2	5.9
Other	2	5.9

Table 2. Workplace skills impacted by respondents' LD.

Strategy/Accommodation	N	%
Goal and priority setting	21	70.0
Time management	18	60.0
Arrive early at work	18	60.0
Use of proofreaders	16	53.3
Support from family/significant others	10	36.7
Quiet work environment	10	33.3
Staying late	10	33.3
Time outside of work	10	33.3
Assistive technology	9	30.0
Problem solving/brainstorming	9	30.0
Use of graphic organizers	3	10.0
Self-advocating	2	6.7
Positive attitude	1	3.3
Delegation of difficult tasks	0	0.0

Table 3. Compensative strategies and accommodations utilized by respondents in the workplace.

an important project (M = 4.49, SD = .67), make good use of their strengths, skills, and abilities (M = 4.46, SD = .62), exercise leadership in the workplace (M = 4.42, SD = .66), and assume challenges related to their job (M = 4.36, SD = .55).

Discussion

This study sought to examine the employment outcomes of postsecondary students with learning disabilities in a Canadian sample. While some studies have examined employment outcomes of postsecondary students with

LD (e.g., Adelman & Vogel, 1990; Greenbaum, Graham, & Scales, 1996; Witte, Philips, & Kakela, 1998), limited research has been conducted in the Canadian population (Gerber, Price, Mulligan, & Shessel, 2004). Additionally, the majority of these studies are not uniform with respect to research design and methodologies. Therefore, this study utilized measures previously used in a large-scale follow-up of university graduates with LD in the United States (Madaus, 2006) so as to have a point of reference for comparison in a Canadian sample.

Compared with previous research, the full-time employment rate of 67.7% postsecondary students with LD in the current sample was consistent with that observed by studies conducted in U.S. samples (83%; Greenbaum et al., 1996; 75%; Madaus, 2006). While the rate of unemployment in the current sample was higher than that observed by Madaus (2006), the majority of those unemployed in the current sample were not seeking employment due to other responsibilities such as caring for family responsibilities or completing additional education,

rather than not being able to find suitable employment. Indices of job stability were also similar between Canada and the U.S., with 26.5% of respondents in the Canadian sample reporting ever being laid off from a job, compared to 24.2% among U.S. graduates with LD (Madaus, 2006). The primary reason cited for of lay-offs in the Canadian sample was related to company downsizing or budget reductions and not as a result of poor performance or lack of ability.

As can be seen from Figure 1, the annual earnings of respondents in the current study are consistent with those in the general Canadian population. The median income range in the current study was \$40,001 - \$60,000 compared to the median salary of \$40,362 for university graduates without disabilities holding a bachelor's degree in Canada (Statistics Canada, 2006). In terms of receiving benefits, 80.7% of respondents in the Canadian sample reported receiving either full or partial benefits, which is comparable to rates reported by Madaus (85%; 2006).

As was reported by Madaus et al. (2008), and consistent with previous research of postsecondary students with LD (e.g., Adelman & Vogel, 1990; Greenbaum et al., 1996; Gerber et al., 2004), respondents in the Canadian sample reported high levels of job satisfaction. Canadian respondents particularly felt that they worked well with their colleagues, had a sense of accomplishment in their work, and that their work was valued by their employers or supervisors. Since Madaus et al. (2008) found that feelings of employment self-efficacy were highly predictive of job satisfaction, it came as no surprise that participants in the current study also

had strong feelings of employment self-efficacy. Respondents felt strongly that they were able to interact well with co-workers, work effectively with colleagues, and exercise leadership in the workplace. These feelings of having a sense of accomplishment and satisfaction with one's job represent what social cognitive learning theorists refer to as *self-evaluative outcome expectations* (Bandura, 1986). The theory suggests that individuals may indeed have confidence in their ability to perform a given task (i.e., self-efficacy) but in the absence of a feeling of pride or accomplishment that accompanies accomplishing a given task (i.e., self-evaluative outcome expectations), individuals may not choose to engage in that task (Panagos & DuBois, 1999). It would appear that many of the respondents in the current study have achieved both feelings of self-efficacy and positive self-evaluative outcome expectations, creating high levels of job satisfaction.

Overall respondents strongly felt that they were able to make good use of their strengths, skills, and abilities. Helping students with LD learn how to exploit their strengths while minimizing their weaknesses has been identified as a goal of effective transition planning (Cummings, Maddux, & Casey, 2000). Respondents in the current study may have achieved a degree of what researchers have termed as *goodness of fit*. In a study of 46 highly successful adults with learning disabilities, Gerber, Ginsberg, and Reiff (1992) identified *goodness of fit* as finding environments where skills and abilities can be optimized. Many of the highly successful adults in the study had sought out or specifically created work environments that gave them the flexibility they needed and

allowed them to capitalize on their strongest attributes. Adelman and Vogel (1990) reported that some graduates with LD had changed jobs as a compensatory strategy, in order to find a better fit for their skill set. Given that 73.1% of participants in the current study reported that they had been in their current job for 2 years or less and had held an average of 2.8 jobs since graduation, it is possible that some respondents had also changed jobs as a compensatory strategy in order to find a good fit for their strengths in the workplace. A focus of future research could include an investigation of how adults with LD achieve *goodness of fit* in the workplace to optimize performance and success.

Another factor of success that emerges out of the current study is the use of self-regulatory strategies. While over half of respondents (55.9%) reported that their LD impacted their work in multiple domains, many respondents made use of a variety of compensative strategies to overcome obstacles (see Table 3). Gerber et al. (1992) referred to *learned creativity* as various strategies, techniques, and other mechanisms devised by highly successful adults with LD to enhance their ability to perform well. Self-regulation strategies, such as goal setting and managing time were among the most utilized strategies reported by respondents in both Madaus (2006) and in the current study, suggesting that making use of these strategies minimized areas of weaknesses. This may have made it unnecessary for some individuals to request formal workplace accommodations, which only 11.8% of respondents in the current study reported doing.

A trend that emerges from not only the current study, but also

from other studies examining the employment outcomes of adults with LD, is a significant lack of self-disclosure and failure to request accommodations in the workplace. While over half of respondents felt that their LD affected their work in some way, only 47.1% of respondents reported ever self-disclosing their LD in the workplace in the current study. Madaus (2006) reported a self-disclosure rate of 55%, with only 12.4% having ever requested accommodations. Greenbaum et al. (1996) observed a similar reticence, with only 20% disclosing during the job application process, and 43% after being hired. Witte et al. (1998) reported that only 5% of graduates with LD self-disclosed or requested workplace accommodations. Similarly, Gerber et al. (2004) found that the majority of both American and Canadian adults with LD did not self-disclose or request accommodations prior to or during the course of their employment.

The most common reason respondents gave for not choosing to self-disclose their LD in the current study and in Madaus (2006) was that they felt no need to do so (45.2% and 61%, respectively). However, fear of discrimination emerges as a primary reason for lack of self-disclosure in other studies (Greenbaum et al., 1996; Gerber et al., 2004) and it is echoed in the current study with similar rates compared to Madaus (2006). Respondents in these studies expressed concern that self-disclosure may affect important relationships in the workplace or might affect job security, even though self-disclosure entitles one to rights under the Americans with Disabilities Act in the U.S. and the Canadian Charter of Rights and Freedoms in Canada (Gerber

et al., 2004). This suggests that perhaps there is still a general lack of knowledge about LD among employers and among individuals with LD with respect to their rights under legislation as a person with LD. Future research would do well to delineate under which conditions individuals with LD are most likely to self-disclose and what methods most effectively educate employers and human resource personnel as to the issues and misconceptions surrounding LD.

Limitations of the current study pose restrictions to the generalizability of these findings. First, as with previous investigations of the employment outcomes of postsecondary students with LD, the current sample represents a small, homogenous sample that makes it difficult to generalize the findings to the LD population as a whole. There is a need for a larger scale study to establish the certainty of the reported results. However, it should be noted that many of the findings and incidence rates of the current study are consistent with those reported by Madaus (2006) and Madaus et al. (2008) in a nationwide sample of 500 graduates with LD in the United States. Additionally, the findings of the current study may be overly optimistic due to response bias on the part of respondents. It was noted both by Adelman and Vogel (1990) and Greenbaum et al. (1996) that those students who had graduated from one of the institutions affiliated with the respective studies were more likely to participate in the studies than those who had not graduated. Of those who responded to participate in the current study, 97% had graduated from the institution in question. Thus, it raises the issue of whether those students who were most successful and had the most

positive educational experiences were more likely to agree to participate in the study. A further directive to undertake in future research would be to recruit those who did not complete their degree program or felt less indebted to the institution for one reason or another.

Despite these limitations, the overall employment outlook for postsecondary students with LD appears to be encouraging. Many of these adults are gainfully employed in jobs that provide competitive compensation, and allow opportunities for growth and promotion while providing a fair measure of satisfaction and feelings of accomplishment. Researchers and educators are encouraged to make further investigations into the employment outcomes of postsecondary students with LD, as well as the factors and variables that lead to successful employment outcomes, so that appropriate transition planning may be put in place such that all adults with LD can make a smooth transition from the demands of postsecondary studies to the demands of the workplace.

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