



Accommodation Decision-Making for Postsecondary Students with ADHD: Treating the Able as Disabled

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Abstract

Students with attention-deficit/hyperactivity disorder (ADHD) may be entitled to academic accommodations in postsecondary education. Disability Services Offices (DSOs) in Canada say that objective evidence of functional impairment is required prior to providing academic accommodations. This study set out to determine if postsecondary disability service providers use objective, third-party data when making accommodation decisions. Providers were asked if they would grant extra time accommodations to a fictitious prospective student. The student self-reported attention and academic problems that emerged during COVID restrictions, and that extra time helped her earn better grades and reduced her anxiety. While her neuropsychological report suggested superficial similarity to ADHD and contained accommodation recommendations, it lacked any objective evidence supporting either an ADHD diagnosis or functional impairments that would support extra time accommodation. Despite the lack of current or historical functional impairment, 100% of all DSO decision makers confirmed that they would grant extra time accommodations to this student. Results suggest that DSOs' accommodation decisions are not based on evidence of functional impairment but rely mainly on student self-report and the recommendations of a professional. As such, the current system of determining reasonable accommodations is flawed and inequitable, offering non-impaired individuals access to supports and services that may privilege them over their similarly abled peers. Postsecondary institutions must either develop more defensible methods of disability determination or provide all students with access to accommodations to create a more equitable learning environment.

Keywords Accommodations · ADHD · Assessment · Postsecondary · Adult · Decision-making · Disabilities

Postsecondary students with disabilities such as attention-deficit/hyperactivity disorder (ADHD) may be entitled to reasonable academic accommodations when the functional limitations associated with their disability interfere with their equal participation in a task or activity (Ontario Human Rights Commission, 2018; Roberts, 2012). In Ontario, Canada, these rights are protected by the Ontario Human Rights Code (Human Rights Code, [Ontario], R.S.O. 1990). To receive accommodations at the postsecondary level, students must disclose their condition to the Disability Services Office (DSO) at their college or university. Students must also provide documentation from a qualified health professional (e.g., physician, psychologist) diagnosing the person as disabled and documenting the resulting functional impairments that currently interfere with their equal academic

participation (Condra et al., 2015; Ontario Human Rights Commission, 2018). In fact, it is the functional limitation associated with the disability that must be accommodated, not the disability diagnosis per se (Butzbach et al., 2021; Lovett & Lindstrom, 2021; Roberts, 2012).

For a disorder such as ADHD, the documentation must show how ADHD symptoms substantially limit major life activities compared to most other people of the same age in the general population (American Psychiatric Association [APA], 2013; Banerjee et al., 2020). An ADHD diagnosis alone does not imply the existence of a disability or merit the provision of academic accommodations. The documentation must also show real-world limitations in major life activities related to academic tasks, such as concentrating, learning, thinking, reading, or writing (APA, 2013; Gordon et al., 2015; Lovett & Bizub, 2019). In order to provide accommodations such as extra time on tests, this would require verification that the student has normative impairments in the skills relevant to test-taking (Banerjee et al., 2015). In a postsecondary setting, determination of reasonable

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accommodations is expected to be an individualized process that takes into account the interaction between the documented functional impairments of the student and the specific task demands of each course or program in which the student is enrolled (Ontario Human Rights Commission, 2018; Roberts, 2012).

Accommodation Decision-Making Using Objective Evidence

The documentation required by postsecondary institutions varies considerably, and the processes that disability service providers use to render accommodation decisions are often unclear (Banerjee et al., 2020; Miller et al., 2019). Lindstrom et al. (2015) reviewed information on the DSO websites of a stratified sample of 200 degree-granting institutions in the USA. Almost all (99%) schools required third-party documentation to support students' accommodation requests. Most schools specified that documentation must be provided by a qualified evaluator (80%), include a specific diagnosis (75%), and describe how the student's condition causes a substantial limitation in functioning (73%). Thirty-nine percent of schools provided specific information regarding documentation for ADHD. Nearly all schools with specific ADHD guidelines required students to submit documentation from a qualified evaluator (95%) and most specified that the documentation must be submitted by a psychologist (83%). Documentation must also include a specific ADHD diagnosis (96%), adhere to DSM or ICD criteria (87%), and describe how the student's symptoms substantially impair academic functioning relative to the average person (96%).

A survey of disability service providers highlighted the importance of objective documentation in accommodation decision-making. Wadlington et al. (2017) surveyed disability service providers from 408 postsecondary institutions. Most providers (77%) reported that they sometimes, often, or always review objective documentation when evaluating accommodation requests. Providers identified four sources of information that were most valuable when rendering decisions: a current psychoeducational or psychological assessment report that includes the student's test scores, documentation regarding the student's previous academic accommodations, a description of the student's current academic limitations, and a clear diagnosis. Keenan et al. (2019) recommend that postsecondary students submit a wide range of documentation to support their accommodation requests including their most recent individualized education plan (IEP); a summary of performance (SOP) from high school that provides information about their academic functioning; documentation regarding their history of accommodations; and their most recent psychoeducational or neuropsychological evaluation report.

Many experts in accommodation decision-making also emphasize the importance of objective evidence when determining the need for accommodations. For example, Hamblet (2014) suggests that disability service providers look for evidence that the student experiences significant limitations in academic functioning and that accommodations have mitigated these limitations in the past.

Accommodation Decision-Making Using Assessor Recommendations

Human Rights legislation in Canada requires that postsecondary institutions make individualized determinations of appropriate accommodations based not on a diagnosed condition but on the interaction between the documented functional impairments of the student and the specific task demands of a course (Roberts, 2012). Surveys at Canadian postsecondary institutions, however, suggest that DSO staff may not always make such individualized determinations and may offer accommodations such as extra time in a more general fashion based on the recommendations of professionals.

Harrison and Wolforth (2012) surveyed disability service providers at 122 postsecondary institutions across Canada regarding disability accommodation practices. Although one of the main functions of a DSO is to verify that recommended accommodations are appropriate for a student's chosen courses and do not undermine essential course requirements, 20% of college respondents and 15% of university respondents rated their ability to interpret psychoeducational assessment reports as poor or fair; a similar percentage did not feel able to determine if a requested accommodation violated the essential requirements of a course. Even if they disagreed with the accommodations recommended in a report, over a quarter of respondents felt that they did not have the right to deny an accommodation request made by a professional; this was in spite of the fact that more than half of all advisors surveyed believed the documentation they received for conditions such as Learning Disabilities and ADHD was incomplete or inadequate. Harrison and Wolforth recommended a national consensus be reached regarding how to determine appropriate accommodations at the postsecondary level and to establish objective guidelines as a basis for such decisions.

A Canadian study by Sokal and Wilson (2017) suggests that individualization of accommodations based on functional impairments has been replaced by generic, standardized granting of accommodations such as extra time regardless of the interaction between identified impairments and course requirements. In their pan-Canadian survey of disability service providers at 48 postsecondary institutions, these authors found that 150% extra testing time was by far the most common accommodation granted to students

in the vast majority of cases, despite there being no valid empirical evidence to support this practice. Indeed, granting of extra time accommodations appeared to be a blanket, routine accommodation given automatically to students in over 40% of the schools surveyed, with no additional mechanism in place to monitor or modify this accommodation once awarded. As the authors state, “coupled with a lack of individualization, this lack of monitoring suggests that we are currently unable to ascertain whether accommodations are actually fulfilling their intended purpose for individual students” (Sokal & Wilson, 2017, Discussion, third paragraph), and as such may not be fair or equitable.

Reliance on a diagnosis, particularly one made using the DSM-5 criteria (APA, 2013), is not sufficient to support either the presence of a disabling condition or the need for academic accommodations (APA, 2013, p. 25). More than this, studies show that a clinical diagnosis of ADHD is often made erroneously based on interview data and symptom report alone (Jachimowicz & Geiselman, 2004). These findings are problematic: current symptoms of ADHD alone are insufficient to make a diagnosis because individual symptoms of ADHD are often present in the general population (Harrison, 2004; Lewandowski et al., 2008; Suhr et al., 2009). Postsecondary students, in particular, endorse a high frequency and severity of symptoms associated with ADHD (Harrison, 2004; Harrison et al., 2013a; Lewandowski et al., 2008), reinforcing the advice that symptom report alone is not sufficient to make this diagnosis in adults.

Although diagnosis of a clinical disorder should be made using accepted diagnostic criteria, a number of recent studies have shown that clinicians rely mainly on student self-report or employ flexible criteria when diagnosing ADHD in young adults (e.g., Harrison, 2017; Joy et al., 2010; Nelson et al., 2019; Weis et al., 2019a). For instance, Joy et al. (2010) reviewed ADHD documentation submitted by 50 medical school students in order to obtain accommodations on a licensing exam. Although all had been given a formal diagnosis of ADHD, only 14% of the reports provided sufficient support for this diagnosis. In a similar study examining 100 psychological reports submitted for postsecondary accommodation eligibility, Nelson et al. (2019) found that fewer than 1% of reports actually confirmed all five DSM-5 criteria for diagnosis of ADHD, relying most often on self-reported symptoms alone. Additionally, most reports included recommendations for academic accommodations despite the fact that the majority had not even evaluated academic functioning. These authors concluded, “Results indicated that psychologists’ documentation practices were typically inadequate for verifying ADHD as a disability and for determining eligibility for postsecondary academic accommodation.” (p. 1786). Similarly, Weis et al. (2019a) reviewed 214 assessment reports submitted by university students in support of their ADHD diagnosis. Here, the authors found that

23.4% of clinicians relied on self-report alone, 14% used written documentation, 10% reviewed educational or medical records of the student, and almost none ruled out other possible causes prior to making a diagnosis. All reports reviewed in these studies diagnosed ADHD despite the lack of evidence of functional impairment, one of the main criteria required for diagnosis of this disorder (APA, 2013). Hence, reliance on conclusions or recommendations made in diagnostic reports is not always an equitable or appropriate way to determine the need for disability-related accommodations at the postsecondary level, particularly when many DSO decision makers may not be able to adequately interpret disability documentation and when the majority of reports diagnosing ADHD may fail to adhere to published diagnostic criteria.

Accommodation Decision-Making with an Emphasis on Student Self-Reports

An alternative approach to accommodation decision-making comes from the recommendations of the Association on Higher Education and Disability (AHEAD), an organization for disability service professionals. In the past, AHEAD (2004) identified best practices regarding disability determination in higher education. Disability service providers were instructed to evaluate students’ requests for accommodations on an individual basis by integrating information provided by the student with documentation showing current limitations in academic functioning. Several types of documentation were considered essential to support students’ accommodation requests including a clear diagnostic statement made by a licensed professional, a description of the methodology used to arrive at the diagnosis including criteria and test scores, a description of the student’s current functional limitations, and a description of the student’s current and previous accommodations.

AHEAD (2012) replaced these best practices with new guidance to facilitate students’ access to accommodations. The new guidance was created in light of changes to the ADA, which provided a broader conceptualization of a disability and the provision that determination of a disability should usually not require extensive scientific, medical, or statistical evidence (Keenan et al., 2019). The AHEAD guidance recommends that disability service providers rely on three levels of “documentation” (AHEAD, 2012, p. 2) when evaluating accommodation requests.

Primary documentation consists of the student’s narrative about his or her disability, perceived academic limitations, and recall of past accommodations. Self-reports are described as having “inestimable value” when rendering accommodation decisions (Axelrod et al., 2019). A student’s self-reports alone “may be sufficient for establishing a need for an accommodation” (AHEAD, 2012, p. 2).

Secondary documentation includes the disability service provider's impressions of the student's narrative. Providers are encouraged to "utilize observations of students' language, performance, and strategies as appropriate metrics for validating the student's self-report" (Axelrod et al., 2019, p. 5). Providers are instructed to "trust your instincts and commonsense abilities" when rendering accommodation decisions (Meyer et al., 2020, p. 3).

Tertiary documentation includes all information about the student's functioning provided by other informants. Third-party evidence includes educational, medical, or psychological records showing previous diagnoses, symptoms, or impairment; norm-referenced educational or psychological test data showing limitations compared to other individuals in the general population; reports or ratings from other informants such as parents, teachers, or employers that describe the student's functioning at home, in school, or in employment settings; documentation regarding the provision or effectiveness of previous accommodations; and data regarding the provision or effectiveness of treatment.

The AHEAD guidance emphasizes the importance of self-reports and the provider's impressions and downplays objective third-party data when rendering accommodation decisions (Downs, 2020). The authors of the guidance assert, "no third-party information may be necessary to confirm the disability or evaluate requests for accommodations...and no specific language, tests, or diagnostic labels are required" (p. 4). A separate document that describes a step-by-step approach to implementing the guidance reiterates the importance of self-reports and impressions over third-party data: "Depending on the student's experiences and fluency and the disability professional's knowledge and observations, there may be no or limited need for external documentation following a complete student interview" (Meyer et al., 2020, p.1). The authors add, "Before requesting additional third-party documentation, ask yourself how it will assist in your decision making. Will it really be a difference-maker in the end?" (Meyer et al., 2020, p. 3).

It is unclear, however, which decision-making method is employed by disability service providers in Canada: whether they rely mainly on self-report and a diagnostic label, or whether they require objective evidence of functional impairment when making accommodation decisions.

The Importance of Objective, Third-Party Data

Empirical research supports the practice of using third-party data to corroborate student's self-reported attention and academic problems (Lovett & Lindstrom, 2021; Lovett et al., 2015). At least five findings have emerged in the research literature with respect to adult ADHD assessment.

First, the base rate of ADHD symptoms in postsecondary students without ADHD is quite high (Murphy & Schachar,

2000; Sollman et al., 2010), and this has only worsened since the COVID-19 pandemic (e.g., Son et al., 2020). Harrison (2004) assessed self-reported ADHD symptoms in a large sample of undergraduates without ADHD. Thirty percent of these non-diagnosed students nevertheless reported attention problems in the clinically significant range, suggesting that such symptoms are commonly reported by university students. Similarly, Lewandowski et al. (2008) surveyed a large sample of postsecondary students with and without ADHD. Many students without ADHD endorsed symptoms such as fidgetiness (55%), distractibility (54%), feeling "on the go" (38%), restlessness (37%), concentration problems (33%), and a lack of attention to details (31%).

Second, many college students without ADHD report academic problems characteristic of students with the disorder. Lewandowski et al. (2008) found that many students without ADHD reported problems with reading comprehension (53%), a need to work harder than others to earn high grades (48%), problems taking standardized tests (45%), problems completing assignments (30%), and trouble finishing timed tests (29%). Wang et al. (2006) found that healthy, nondisabled university students frequently complain of symptoms such as taking longer to think (60.3%), poor concentration (58.7%), and forgetfulness (45.5%). Similar limitations were reported by another sample of college students without ADHD, including a tendency to daydream during class (54%), difficulty planning and organizing daily activities (45%), difficulty completing tasks and assignments (39%), and overall impulsive behavior (26%; Jansen et al., 2017). Hence, self-reports of academic struggles alone are not diagnostic of ADHD or indicative of the need for accommodations.

Third, adults without ADHD often report a history of ADHD symptoms in childhood. In one study, 80% of adults without ADHD recalled symptoms occurring at least occasionally in childhood and 25% recalled symptoms occurring very often, despite no history of the disorder (Murphy et al., 2000). Researchers have found limited evidence supporting the validity of retrospective accounts of childhood ADHD symptoms and academic problems (Breda et al., 2020; Loney et al., 2007). Overall, adults' recall of ADHD symptoms is unrelated to their actual childhood symptom severity, and is influenced mainly by their current functioning (Miller et al., 2010). In contrast, the reports of other informants provide a more accurate picture of adults' ADHD symptoms and impairment in childhood (Sibley et al., 2012; von Wirth et al., 2020).

Fourth, students' perceived attention and academic problems may be explained by factors other than ADHD. Harrison et al. (2013a) assessed ADHD symptoms in students attending a university health and counseling center. Although none of the students had a history of ADHD or were seeking services for this condition, 30% reported clinically significant ADHD

symptoms. Students' self-reported ADHD symptoms correlated with their degree of self-reported anxiety, depression, and stress. Moreover, students' levels of distress accounted for a significant proportion of the variance of their inattentive symptoms. In a second study, Alexander and Harrison (2013) found that students' anxiety, depression, and stress mediated the relationship between negative life events and their self-reported attention problems. These findings are consistent with a large study examining the relationship between neuropsychological test scores, self-reported impairment, and levels of psychological distress in adults referred for testing (Miller et al., 2013). Adults' reports of their functioning correlated more strongly with their current level of psychological distress ($r = -0.62$) than their actual impairment ($r = 0.18$). Indeed, 57% of the variance in self-reported functioning was explained by patients' degree of distress. Recent stresses affecting postsecondary students appear to be creating similar problems. For example, during the COVID-19 pandemic, Son et al. (2020) found that 89% of 195 previously undiagnosed university students now reported difficulty concentrating and 82% reported increased concerns regarding academic performance. These symptoms appeared tied to increased levels of stress and anxiety surrounding the pandemic.

Fifth, a high percentage of college and university students seeking ADHD evaluations provide noncredible data. Some students deliberately feign ADHD in order to gain access to medication, accommodations, or other tangible benefits (Harrison et al., 2012; Musso & Gouvier, 2014). Other students magnify the severity of their ADHD symptoms or degree of impairment (Suhr, 2016; Suhr & Wei, 2017). Because the symptoms of ADHD have high face validity, and most young adults are familiar with them, students can easily report clinically significant ADHD symptoms (Cook et al., 2018) and impairment (Suhr et al., 2020; Suhr et al., 2017) without coaching (Edmundson et al., 2017). Base rates for noncredible responding among students referred for ADHD evaluations range from 17 to 48% (Harrison & Edwards, 2010; Suhr et al., 2008; Sullivan et al., 2007), which is higher than the actual base rate of ADHD in the adult population (Harrison et al., 2021). For these reasons, it is imperative that clinicians administer symptom or performance validity tests to identify noncredible responding (Wallace et al., 2019).

The above points illustrate clearly why objective, third-party data, including validity testing, are critical when determining whether a student's self-reported problems are normative, objectively-verifiable, or impairing. Without such objective information, DSOs cannot be certain that the symptoms reported by their client constitute a significant functional impairment relative to most other young adults.

How Are Accommodation Decisions Made in the Postsecondary Sector?

Three models for accommodation decision-making have been offered: (a) integration of multimethod, multi-informant data to corroborate current functional impairment in academic skills; (b) automatic granting of whatever a professional recommends, regardless of actual functional impairment; and (c) emphasis on subjective self-reports and impressions. The purpose of the current study was to determine whether DSO decision makers use third-party, objective evidence of functional impairment when determining disability accommodations, or whether they rely mainly or exclusively on professional recommendations and the self-reported needs of the student.

Empirical research has identified pitfalls associated with the exclusive reliance on students' self-reports (Lovett & Lindstrom, 2021; Lovett et al., 2015), and granting of generic accommodations fails to uphold the requirement for individualization of accommodations based on the interaction between functional impairments and current task demands. Research has also shown that clinicians frequently diagnose ADHD based on inadequate or flexible criteria, and recommend academic accommodations without objective test data that demonstrate functional impairment (see Harrison, 2017 for a review). Consequently, we expected disability service providers to corroborate students' self-reported need for accommodations with objective data provided in third-party documentation when rendering accommodation decisions. Such an approach would support the validity of accommodation decisions by providing assistance only to those who have demonstrated objective evidence of functional impairment. On the other hand, DSO staff may feel that they must provide whatever a professional recommends and feel unable or unwilling to challenge such advice even when the documentation is incomplete, inadequate, or fails to demonstrate functional impairment. It is also possible that some DSO staff might adhere more closely to the AHEAD guidance and emphasize students' self-reports and their own impressions over data from objective tests. Such an approach would likely result in the granting of accommodations based on subjective need, regardless of whether objective functional impairment was present.

Method

This project was approved by the General Research Ethics Board at Queen's University prior to data collection. The main contact email addresses of the Disability Services Offices (DSOs) at each of the publicly funded postsecondary institutions in Ontario, Canada, were obtained from the

provincial government's online Transition Resource Guide. Because some institutions have more than one major campus, this resulted in 50 contact emails (25 community colleges, 25 universities).

The design of this study resembled previous audit research used in the social sciences to test decision-making when survey and interview questions induce social desirability bias (Gaddis, 2018). We sent an email from the parents of a fictitious prospective undergraduate to the main DSO contact email at each institution, requesting that staff review the student's neuropsychological evaluation report and determine if it was sufficient for her to receive additional time accommodations at their school. To ensure that the individual respondents cannot be identified, only general information about the email is shared here. The gist of the email was that the parents were writing on behalf of their daughter who was about to complete high school and hoped to attend their institution. She had only recently been told she had ADHD and had been receiving extra time accommodations informally at her high school since then. The parents wanted to ensure that their daughter chose a school that would continue to offer her 50% extra time and asked that the DSO please review the attached neuropsychological assessment report to see if it was sufficient to secure this accommodation going forward. The parents concluded by asking if their daughter needed updated testing, saying that they would undertake such additional testing if required.

A neuropsychological report was attached that described the results of an evaluation conducted 19 months earlier. This fictitious report was prepared by a licensed neuropsychologist and resembled the type of documentation frequently provided to DSOs. According to the report, the student was self-referred for an ADHD evaluation because her parents believed she was "having problems keeping up with her classmates academically" and that her "problems with attention and concentration might compromise her overall grades and ability to perform well in school and on the International Baccalaureate exams." These problems first surfaced in high school at the start of the COVID-19 pandemic and the subsequent online learning requirements. All data regarding the student's history and current functioning were based on the family's narrative rather than any objective information (e.g., no school report cards or other historical documents were reviewed). The parents identified two main problems currently: the student "sometimes rushes through exam questions, making careless mistakes, or fails to complete all exam questions in the allotted time," and "she reports problems with attention and concentration while completing her homework; she is usually unable to study for long periods of time." Some of her high school teachers have informally allowed her extra time to complete assignments and exams to reduce her anxiety and improve her test scores.

Despite these self-reported problems, the report provided no objective, third-party evidence of the following:

1. A history of ADHD symptoms or ADHD-related impairment in childhood. According to the report, the student first began experiencing attention and concentration problems one year before this assessment (at the end of grade 10), coinciding with the province-wide move to online learning due to COVID-19. Prior to this, she was said to have been an A student. This age of onset is inconsistent with the DSM-5 diagnostic criteria for ADHD, which require childhood symptom onset and the conceptualization of ADHD as a neurodevelopmental disorder that emerges prior to age 12 (APA, 2013; Breda et al., 2021).
2. Significant ADHD symptoms. Besides the student's self-reported problems with sustained attention, careless mistakes on exams, and distractibility, the report contains no other mention of DSM-5 ADHD symptoms. Results from the Behavior Rating Inventory of Executive Function (BRIEF), completed by the student and both parents and shown directly in the report (Table 1), demonstrate that all ratings fell within the normal range (e.g., $T \leq 59$). The Brown ADD scales, completed by the student and shown in tabular form in the report (Table 2), yielded scores that were all within normal limits (i.e., $T \leq 59$) suggesting no attention problems compared to other individuals her age. Observations during testing indicated no problems with attention, hyperactivity, or impulsivity. In fact, the behavioral observations section specifically noted that her attention and concentration were typical for her age, that she gave prompt and careful responses to questions, and worked persistently without evidence of distraction.

Table 1 Scores for Behavior Rating Inventory of Executive Function (BRIEF) presented in report

Index/scale	Self	Informant	
		Mother	Father
Inhibit	50	52	54
Shift	49	48	52
Emotional Control	51	46	56
Self Monitor	52	50	52
Initiate	58	55	52
Working Memory	56	59	55
Plan/Organize	59	58	50
Organization of Materials	58	55	56
Task Monitor	58	56	59
Metacognition Index	58	58	57
Global Executive Composite	56	55	56

Results are reported as standardized *T* scores

3. Current ADHD-related impairment. The student is not experiencing low academic achievement, poor grades, or substantial limitations in academic functioning. On the contrary, she was reportedly earning high grades (all As) in all her International Baccalaureate (IB) courses even before the assessment took place. The current academic concerns described in the report reflect the perceptions of many high school students: needing to spend more time on assignments than she did in elementary school; reluctance to study for long periods of time; a tendency to be distracted by television, music, and social media while studying (starting after the imposition of on-line learning due to COVID-19 restrictions); needing to study on weekends to maintain high grades in a demanding program; needing to reread passages and double-check work during tests; and a tendency to worry about assignments and exams. The student believes she must study longer and harder to earn the same grades as her high-achieving classmates in the IB program. However, there is no objective evidence provided to support that she experiences problems compared to other students her age in the general population.
4. Formal accommodations, academic support, or treatment. Because of her self-reported difficulty with testing, the report notes that teachers have recently allowed the student to have informal extra time on exams. However, the student has no history of receiving formal accommodations in school and the report specifically notes that the student did not receive additional time on any of the mandatory provincial (Education Quality and Accountability Office) exams and yet still achieved good scores. There are also no educational, medical, or psychological records showing concerns about attention or academic problems, the provision of accommodations or special education, or participation in treatment for ADHD.
5. Test data indicating significant symptoms or impairment of any kind. The evaluation report includes the results of several neuropsychological measures of attention and executive functioning as well as overall cognitive and

academic performance: the Behavior Rating Inventory of Executive Function, Brown Attention Deficit Disorder Scales, Woodcock-Johnson Tests of Cognitive Abilities and Achievement, Integrated Visual and Auditory Continuous Performance Test, and the Wide Range Assessment of Memory and Learning. All test scores were provided in tabular form within the report and included percentile and standard scores (or *T* scores). In all cases, the student's scores are within the normal range (i.e., standard scores = 91–109; *T* scores ≤ 59). Moreover, the tables included in the report (see Tables 1, 2, 3, 4, 5, and 6) specifically noted that there were no significant discrepancies between any test scores.

The report concluded with the statement that the student's presentation was "most consistent with a presence of Attention Deficit Hyperactivity Disorder", that she "would benefit from" additional time on exams, and recommends 50% extra time be given in all classes. It is noteworthy that the report did not indicate that the student met any specific diagnostic criteria for a diagnosis of ADHD. While the report says that extra time would be beneficial, nowhere does it state that additional time is required to mitigate any disability-related functional limitations.

Procedure

Unlike previous studies, which asked DSOs to describe their accommodation decision-making criteria or practices (Banerjee et al., 2015; Madaus et al., 2010; Miller et al., 2019), the present study relied on a performance-based measure to assess the decisions made by DSO staff. Performance-based assessment allowed us to guard against potential social desirability effects on the part of participants, to reduce demand characteristics associated with data collection, and to increase the ecological validity of our findings (Kazdin, 2017).

As noted above, an individual email was sent to the identified contact email at each institution at the start of a work week near the end of the winter school term. The timing of the study was chosen to coincide with a less-busy time of year for DSOs. Just over half of the institutions (28) replied within the first 3 h after the email was sent, and 11 more replied by the end of the first day. Of the remaining institutions, all but three replied within the first week. For those who did not respond to the query within one week, we followed up with a second email requesting a response. Two more respondents replied during the second week, and one institution never responded. After completion of the study, each office was contacted by email and informed of the purpose of the study, the need

Table 2 Score from Brown ADD Scales presented in report

Scale/description	Standard score (T)
Organizing, Prioritizing, and Activating to Work	58
Focusing, Sustaining, and Shifting Attention to Tasks	59
Regulating Alertness, Sustaining Effort, and Processing Speed	59
Managing Frustration and Modulating Emotions	52
Utilizing Working Memory and Accessing	51
Monitoring and Self-Regulating Action	53

Table 3 Cluster scores from Woodcock-Johnson-III Test of Cognitive Abilities and Tests of Achievement provided in a table in the report

Woodcock-Johnson Cluster Score	Standard score	Percentile
General Abilities Index	105	63
Verbal Ability	108	71
Thinking Ability	107	68
Cognitive Efficiency	99	47
Comprehension-Knowledge	108	71
Long-term retrieval	106	65
Visuo-Spatial Thinking	105	63
Auditory Processing	104	61
Fluid Reasoning	106	66
Processing Speed	95	38
Short-term Memory	103	57
Phonemic Awareness	102	55
Working Memory	104	59
Broad Attention	101	54
Cognitive Fluency	94	35
Executive Processes	101	53
Knowledge	109	73
Oral Language (Ext)	105	64
Oral Expression	108	71
Listening Comprehension	102	55
Broad Reading	100	49
Broad Math	106	65
Broad Written Language	103	59
Basic Reading Skills	102	55
Reading Comprehension	108	69
Math Calculation Skills	105	63
Basic Writing Skills	105	63
Written Expression	100	49
Academic Skills	109	73
Academic Fluency	96	39
Academic Applications	106	66
Academic Knowledge	109	72
Phoneme/Grapheme Knowledge	98	43

for deception, a brief summary of the results, and offered the option to withdraw from participation. No institutions chose to withdraw consent.

Results

Replies were received from 49/50 target institutions. Respondents fell into two categories: (1) decision makers (e.g., people with titles such as accessibility specialists/advisor, disability counsellor/advisors, learning strategist, accommodation specialist, co-ordinator, manager) and (2) non-decision makers (e.g., people with titles such as secretary, receptionist, administrative assistant, support services

Table 4 Subtest scores from Woodcock-Johnson III Tests of Cognitive Abilities and Tests of Achievement provided in a table in the report

Woodcock-Johnson Subtest	Standard score	Percentile
Verbal Comprehension	108	70
Visual-Auditory Learning	107	69
Spatial Relations	105	62
Sound Blending	103	58
Concept Formation	106	66
Visual Matching	96	31
Numbers Reversed	105	62
Incomplete Words	99	48
Auditory Working Memory	101	53
Visual-Auditory Learning Delayed	102	56
General Information	108	71
Retrieval Fluency	99	46
Picture Recognition	103	57
Auditory Attention	104	60
Analysis-Synthesis	104	61
Decision Speed	96	39
Memory for Words	100	51
Rapid Picture Naming	94	35
Planning	104	60
Pair Cancellation	96	38
Letter-Word Identification	106	67
Reading Fluency	96	38
Story Recall	101	54
Understanding Directions	101	54
Calculations	108	71
Math Fluency	97	43
Spelling	106	67
Writing Fluency	98	44
Passage Comprehension	103	57
Applied Problems	106	64
Writing Samples	105	64
Word Attack	97	41
Picture Vocabulary	109	72
Oral Comprehension	102	56
Editing	102	54
Reading Vocabulary	109	72
Quantitative Concepts	105	64
Academic Knowledge	109	72
Spelling of Sounds	99	46
Sound Awareness	100	50
Punctuation & Capitals	109	73

assistant, front desk). Two research assistants independently reviewed and categorized responses as (1) approved accommodations, (2) denied accommodations, (3) requested additional documentation, or (4) required the student to participate in an interview prior to rendering a decision. The

Table 5 Table provided in report documenting Integrated Visual/Auditory Continuous Performance Test (IVA-CPT) scores and subscales

Composite	Standard score	Percentile	
Auditory Response Control Quotient	96	40	
Visual Response Control Quotient	100	50	
Full Scale Response Control Quotient	97	42	
Auditory Attention	92	30	
Visual Attention	100	50	
Full Scale Attention Quotient	94	34	
Sustained Auditory Attention Quotient	91	27	
Sustained Visual Attention Quotient	98	45	
Fine Motor Hyperactivity	None		
	Standard Score		Description
Subscale	Auditory	Visual	
Prudence	92	102	Impulsivity and capacity for behavioral inhibition
Consistency	98	100	Reliability and variability of response times, ability to stay on task
Stamina	96	98	Reaction time from first 200 to last 200 trials, sustained attention and effort
Vigilance	92	101	Omissions, inattention
Focus	98	104	Variability in mental processing speed for correct responses
Speed	91	97	Reaction time for all responses

Table 6 Scores from Wide Range Assessment of Memory and Learning – Second Edition (WRAML-2) presented in a table in the report

Composite	Standard score	Percentile
Verbal Memory Index	97	42
Visual Memory Index	108	70
General Memory Index	105	63
Working Memory Index	102	55
Verbal Recognition	98	45
Visual Recognition	104	61
General Recognition	101	53
Core Subtests	Scaled Score	Percentile
Story Memory	9	37
Verbal Learning	8	25
Design Memory	11	63
Picture Memory	12	75
Finger Windows	10	50
Number Letter	11	63
Optional Subtests		
Story Memory Recall	9	37
Verbal Learning Recall	9	37
Story Memory Recognition	11	63
Verbal Learning Recognition	10	50
Design Memory Recognition	10	50
Picture Memory Recognition	12	75
Verbal Working Memory	8	25
Symbolic Working Memory	11	63
Sentence Memory	9	37

researchers also independently reviewed the category into which the respondents were classified. There was no disagreement between raters.

Overall, responses were received from 23 decision makers (12 from a university, 11 from a college), with the remainder received from non-decision makers. All 23 decision makers (i.e., 100%) confirmed that they would provide the student with extra time accommodations based on the submitted documentation. Typical responses from the decision makers indicated that they had thoroughly reviewed the submitted documentation and that it was more than sufficient to verify the need for extra time. Two respondents indicated that the student could receive up to 100% extra time if she wanted, while three indicated that the amount of extra time awarded might be less than 50% depending on the information the student provided to them in an intake interview. Seven decision makers also suggested providing additional academic accommodations that were not requested by the student or mentioned in the report, including testing in a separate, distraction-reduced setting ($n=6$); access to the bursary for students with disabilities ($n=4$); classroom note-taker, ($n=4$); extensions for assignments deadlines ($n=4$); a reduced courseload ($n=2$); and memory aids ($n=1$).

Of the 26 non-decision makers who replied, two indicated that they had asked a decision maker at their institution to review the documentation and confirmed that an extra time accommodations would most certainly be given based on the submitted documentation, and a third respondent said that their institution always provides interim accommodations for

one term to students who had been given accommodations previously (i.e., that the student would get extra time for at least one term). Responses from the remaining non-decision makers (23/26) stated that the documentation would need to be reviewed by a decision maker at their institution, and that an appointment would need to be made with the student to discuss her current needs. Many offered reassurance that extra time was a common accommodation given to students at their school.

Responses were mixed regarding whether the student would need to obtain updated documentation. Of those who addressed this issue specifically, some said the documentation was sufficient, some said the student would need to obtain an updated assessment within 3–5 years, and five assured the parents that once their daughter was reassessed after age 18 her diagnosis would be valid for life and never again need updating.

Despite the fact that the tests listed in the report all have adult-age norms (e.g., 16+), one respondent informed the family that the testing was performed using child scales and so would need to be re-administered using adult scales some time before she started at their school.

Discussion

The present study was a performance-based evaluation of the criteria by which DSO staff determine whether academic accommodations should be awarded to postsecondary students. Looking not at what they say but what they do, we wanted to see whether objective evidence of actual functional impairment was required in order to approve extra time accommodations, or whether DSO staff rely simply on the recommendations of a health professional and the self-reported needs of the student.

When provided with a description of self-reported concerns and a report with recommendations for an extra-time accommodation that would “benefit” the client, we found that 100% of decision makers at Ontario DSOs granted the requested accommodation of extra time. This accommodation was granted despite the fact that no actual DSM-5 or ICD-10 diagnosis was given in the report, and that not a single score on any performance, parent- or self-report measure (displayed clearly in the report) fell outside of the normal range. Not a single institution questioned the results or denied the accommodation. Although the student subjectively reported problems with attention and having to work hard to keep up with her high-achieving classmates academically, there was no objective documentation supporting her perceived problems. The report provided no educational, medical, or psychological records showing a history of attention problems; no history of formal accommodations or academic support in school; and no evidence

of current problems with attention and academic achievement. On the contrary, data provided in the neuropsychological report contraindicated both an ADHD diagnosis and a need for accommodations. For example, the student reported no ADHD symptoms prior to the start of the COVID-19 pandemic (near the end of her grade 10 year in high school); all informants rated the student’s current symptoms of ADHD and executive functioning as being within normal limits; and the student earned no atypical scores on any of the academic, behavioral, neuropsychological, or formal measures of attention and vigilance. Moreover, the student’s perceived academic limitations were based on her comparison with other high-functioning classmates in a highly specialized program (International Baccalaureate) rather than most other students her age.

Given that no evidence of actual impairment (historical or current) was confirmed in the report, it seems likely that respondents granted accommodations based largely on the psychologist’s conclusion that her client’s presentation was “most consistent with the presence” of ADHD. This is not actually a clear diagnostic statement, but could be taken as such by a layperson. Use of such pseudodiagnostic statements is a problem that has been identified previously (e.g., Lilienfeld, 2018). In fact, the AHEAD (2012) guidance specifically states, “Clinicians’ training or philosophical approach may result in euphemistic phrases rather than specific diagnostic labels” (p. 4), leaving both the client and DSO staff unaware that an actual diagnosis has not been made. Even when an actual DSM-5 disorder has been diagnosed, however, this label alone is not sufficient to imply the existence of a disability or support the need for academic accommodations (APA, 2013; Lovett et al., 2016; Roberts, 2012). Even so, many DSOs require students seeking accommodations for ADHD to provide documentation with a diagnosis (Lindstrom et al., 2015). Finding from the present study suggests that a diagnosis, even if assigned tentatively or inaccurately, is enough to provide sufficient evidence to support a student’s request for extra time accommodation.

Offering More than What Was Asked

Not only did decision makers unanimously grant extra time accommodations in the absence of objective evidence of impairment, but seven also offered additional accommodations and supports that were neither recommended in the report nor requested by the parents of the student. These extra offerings included some accommodations that may not provide any academic benefit to nondisabled students (e.g., testing in a separate, distraction-reduced setting; classroom notetaker) and others that clearly offer an advantage to the accommodated student (e.g., access to a \$24,000/year bursary for students with disabilities, extensions for assignment deadlines, a reduced course load, and memory aids). Note

that these additional accommodations were offered despite the fact that no scores in the report identify problems with attention, distractibility, writing speed, multitasking, working memory, or long-term memory, and that by history alone the student could not meet the DSM-5 diagnostic criteria for ADHD. The actions of these seven decision makers are a clear violation of both the intent and spirit of the Human Rights Code and can be seen as discriminating against students without disabilities who would also benefit from the aforementioned accommodations and financial offerings.

Disconnect Between Functional Impairments and Supported Accommodations

Accommodations are supposed to be provided only when a person with a disability has functional impairments that interfere with their equal participation in a particular setting. Faculty members receive little or no training in how best to accommodate specific functional impairments, and so rely on the DSO to recommend reasonable and appropriate accommodations (Trachtenberg, 2016). However, despite decision makers stating that they reviewed the submitted documentation carefully, none made note of the fact that every score in the report was normal. Hence, this was not a student with any objective functional impairments that required accommodations. Furthermore, instead of making individualized accommodation decisions based on the interaction between identified functional impairments and the specific demands of each course, or understanding that current research fails to show that those with ADHD require extra test taking time (see Harrison et al., 2022 for a review of this literature), all decision makers agreed that extra time would be provided to this student. This finding appears to support the conclusions of Sokal and Wilson (2017), in that while DSOs say they carefully review requested accommodations, in practice they offer blanket accommodations in all courses regardless of demonstrated need. It is therefore no wonder that some professors are skeptical of the accommodation decision-making process (Trachtenberg, 2016).

DSO decision makers seemed to rely largely on student's narrative, the recommendation of the professional, and their own impressions when rendering accommodation decisions. Their responses are consistent with the AHEAD guidance, which ranks self-report data and providers' impressions over third-party evidence when determining the need for accommodations. The authors of the guidance assert, "It is often possible to evaluate whether a requested accommodation is reasonable or not with minimal reliance on external documentation. This is true even if the student has never received formal accommodations or recently acquired a disability" (AHEAD, 2012; p. 3). Our findings indicate that DSO providers explicitly or implicitly appear to follow this

guidance in practice, and fail to understand that the AHEAD guidance does not apply to disorders like ADHD (since the DSM-5 diagnostic criteria specifically require early onset of functionally impairing symptoms). DSO providers do not require objective evidence of functional impairment, simply a professional's recommendation and a student's self-report of difficulties.

Disability for Life?

Some DSO decision makers appear to have provided incorrect information about the lifelong nature of non-visible disabilities such as ADHD, telling the parents that once their daughter was diagnosed after age 18 that her disability would be permanent and never again be questioned or need updating.

All people change, and up to half of those diagnosed with ADHD in childhood have outgrown the condition by the time they are in their 20's (see Caye et al., 2016 for a review). As Mapou (2022) notes, brains and frontal lobes continue to mature and develop into the late 20's, which can result in improved executive functioning and academic skills. Furthermore, given the research reviewed here regarding how often ADHD diagnoses are given inaccurately based on self-report alone, it is highly possible that the true reason for the earlier-reported attention problems may be discovered (and successfully treated) at a later time. Rosenblum et al. (2010) showed clearly that the stability of a previous diagnostic opinion rests entirely on whether the original testing was comprehensive and followed agreed-upon diagnostic standards. Finally, once someone has been incorrectly told that they have symptoms of ADHD, it increases the likelihood that they will self-report having more symptoms of ADHD when tested again, even when they are otherwise normal (Privitera et al., 2015; Suhr & Wei, 2017). Hence, simply getting a diagnosis after age 18 is not sufficient to confirm a lifelong, intractable disorder, especially when the base rate of non-comprehensive assessments that fail to follow DSM-5 standards is so high and there are so many other proximal conditions that can cause people to report ADHD-like symptoms. It therefore seems misleading and unethical for DSO staff to be informing parents of something that is outside of both their scope of expertise and contrary to the existing research.

Why Might Decision Makers Be Granting Accommodations to Non-impaired Students?

There are several possible explanations for the high rate of accommodation-granting seen in our study. First, disability service providers may lack the time or expertise to carefully

review accommodation requests. The number of undergraduates with disabilities has almost doubled in the past decade. In 2012, approximately 11.1% of students identified as having at least one disabling condition compared to 19.5% of students today. The prevalence of ADHD has also increased from 2.4 to 5% of undergraduates during this same period (National Center for Education Statistics, 2020). Unfortunately, DSOs are often understaffed, with provider-to-student ratios ranging from 1:94 at small colleges to 1:159 at large universities (Scott, 2019). Some providers may lack the resources to thoroughly evaluate each accommodation request, especially if it comes from a student not yet enrolled in their institution. However, in almost all cases, the replies received in the present study indicated that the decision maker had carefully reviewed the submitted documentation, and the study took place during one of the less-busy time periods for DSOs. Even if they have the time to devote to a review, many DSO advisors report lacking the ability to interpret data contained in submitted reports (e.g., Harrison & Wolforth, 2012). For example, we know that only about 25% of DSO advisors has received any type of formal documentation evaluation training, with the vast majority learning on the job (Banerjee et al., 2015; Madaus et al., 2010). This may explain the one inaccurate response from a DSO advisor suggesting that the student needed updated testing using adult-normed tests. As a result, some decision makers may not actually know what data to evaluate when determining impairment.

Second, common cognitive and emotional biases may lead to accommodation decision-making errors. Confirmatory bias is a form of selective thinking in which perceptions are influenced by prior beliefs, thoughts, and experiences (Kazdin, 2017). When a student reports academic problems, disability service providers may look for evidence consistent with the existence of a disability and minimize data to the contrary. For example, a student's statement that she is a "slow test-taker" might be used as evidence to support the need for additional time despite the fact that she earned a high score on prior tests taken under standard time conditions. Affective bias is a form of wishful thinking in which perceptions are influenced by goals, motives, or emotions (Lilienfeld, 2018). DSO staff might be motivated to grant accommodations with limited third-party evidence because they want to help students achieve their educational objectives and they (DSO staff) derive satisfaction from providing this support. For example, a DSO provider might award accommodations to alleviate a student's anxiety or discomfort with testing, to help her avoid academic probation or the loss of a scholarship, or to increase her chances of becoming the first person in her family to graduate from higher education. Myside bias occurs when people evaluate evidence, generate evidence, and test hypotheses in a manner biased toward their own prior beliefs, opinions, and attitudes (Stanovich, 2021). In the process, they evaluate evidence more favorably if it supports a member of

their own group. In the case of DSOs who have chosen to help those with disabilities (or if they themselves are disabled, or self-identify as disabled), it is likely that they would be biased toward any evidence that would support accommodations. In the current study, a few respondents actually reassured the family that they, too, had ADHD and so understood the supports required in postsecondary.

Third, some disability service providers may grant accommodations based on a misunderstanding of the key provisions of the disability legislation that applies in the postsecondary sector (e.g., Provincial Human Rights Codes). In Ontario, the Human Rights Code (Human Rights Code, [Ontario], R.S.O. 1990) is designed to protect adults with disabilities from discrimination by providing them with equal access to educational opportunities. In contrast, the Education Act (Education Act [Ontario], RSO 1990) provides K-12 students with academic support and special education to maximize their educational outcomes. Whereas children with ADHD may be entitled to services to promote their academic success, adults are only entitled to accommodations that give them equal access (Lovett, 2014). The Ontario Human Rights Commission agrees, saying that accommodations at the postsecondary level are not implemented in order to guarantee success (Ontario Human Rights Commission, 2018). Nevertheless, DSO decision makers may mistakenly believe that the goal of accommodation is to maximize academic success, which may explain why seven decision makers offered this student even more accommodations and supports than had been requested.

Finally, similar to the findings of Harrison and Wolforth (2012), it is possible that decision makers in DSOs may not feel empowered to deny accommodation requests that are recommended by a qualified health professional, or may have been told by a superior to do so regardless of their opinion about the documentation. For instance, financial incentives may lead postsecondary institutions to prioritize actions that lead to increased enrollment and retention (see Johnson, 2016), and this overarching goal may be communicated (directly or indirectly) to DSO staff. Whatever the reason, it may be that the DSO staff feel compelled to provide whatever is recommended by a professional, regardless of whether or not any objective evidence of functional impairment exists. If true, then this is extremely problematic and potentially undermines the validity and credibility of accommodation decisions made in DSOs. It also undermines the requirement that students must undergo expensive (re)assessments in order to obtain accommodations and access to disability funding if all one needs is simply the recommendation of any professional regardless of any evidence of actual impairment.

Requiring a diagnosis from a clinician is not sufficient evidence of the need for accommodations, because the clinician may have used flexible criteria when writing their report. For instance, we know from several recent

investigations (e.g., Joy et al., 2010; Nelson et al., 2019; Weis et al., 2019a, b) that many postsecondary students have been given a diagnosis of ADHD even though they failed to meet diagnostic criteria for this condition and show no evidence of normative impairment. This may not be surprising given that previous studies demonstrated many clinicians view their role in an assessment process as one of advocacy. Harrison et al. (2013a, b) found that the majority of psychological assessors in Ontario did not understand how to confirm functional impairments required to support an accommodation request, 45% believed that the purpose of a clinical evaluation was to secure accommodations for their clients, and 14% admitted that they would bend or ignore published diagnostic criteria in order to secure accommodations for their postsecondary-aged clients. After reviewing all published literature on the validity of LD and ADHD diagnoses given to postsecondary students, Harrison (2017) concluded that:

simply having the diagnosis of ADHD or SLD in a psychoeducational assessment report does not guarantee that a postsecondary student meets real criteria for a permanent disability. A diagnostic statement alone does not ensure that the student suffers from impairments that would cause an unequal opportunity to participate academically relative to most other people, the benchmark by which academic accommodations are determined at the postsecondary level. Many clinicians employ flexible criteria for making these diagnoses and students can also manipulate the assessment process in order to obtain a desired diagnosis. All of this makes it extremely difficult for DSO staff at postsecondary institutions to determine whether disability-related accommodation and financial support requests are reasonable and equitable (p. 145).

We also know that most physicians are not taught objective methods to determine functional impairment. Indeed, Harrison et al. (2018) surveyed all medical schools in Ontario and found that most doctors do not receive any training in how to determine functional impairment in their postsecondary-aged clients. The most common method of determining accommodations was clinical opinion or the wishes of the client, neither of which is an objective method of determining actual impairment. Hence, opinions given by physicians regarding impairments may not be accurate or objectively obtained.

The Risks of Indiscriminate Accommodation-Granting

Some readers may wonder why the provision of accommodations to students without objective evidence of ADHD or academic impairment is problematic. After all, if a student

with self-reported symptoms might benefit from accommodations, why not provide these? The answer is that provision of academic accommodations to students without disabilities can have immediate, real-world consequences (Lovett & Harrison, 2020; Suhr & Johnson, 2022). Students who are given additional time on exams, the accommodation granted in this study, may have an unfair advantage over their peers who are not afforded this accommodation because they now have more time to access all the questions (Lovett, 2010, 2020; Spenceley et al., 2020). Even those with well-documented ADHD do not require extra time to complete tests. Miller et al. (2015) investigated the effects of additional time on exam performance among students with and without ADHD. They found no differences in the reading comprehension test scores of students with and without ADHD under standard time conditions. However, all students attempted more items and earned higher scores when given additional time. Students (disabled and not) who were allowed 100% additional time attempted roughly twice as many items and answered twice as many items correctly as students (disabled and not) who completed the test under standard time limits. Hence, if a student with ADHD is given extra time then they have the opportunity to answer many more questions on a time-limited test than do those writing under regular time conditions. Other studies suggest that students without ADHD may benefit more from additional time than students with this condition (Lewandowski et al., 2007; Lovett & Leja, 2015). Hence, an otherwise unimpaired student who is given extra test time on an exam will have greater access to test items than their non-disabled peers, potentially allowing for higher marks when taking timed tests or exams. Human rights legislation strives for equal, not enhanced access.

Self-reported need for extra time is also not an equitable way to determine the need for accommodations. Postsecondary students both with and without disabilities believe that additional time accommodations can significantly improve their academic performance (Lewandowski et al., 2014) and most empirical research supports students' desire to obtain these accommodations if they can. Hence, offering extra time to an otherwise nondisabled student while her classmates write within regular time limits is unfair and discriminatory, as it allows enhanced access to a timed test.

Studies on the effectiveness of other accommodations for students with ADHD have yielded mixed results (Jansen et al., 2017). In theory, test accommodations should yield more accurate estimates of students' knowledge and skills by removing construct-irrelevant variance from test scores (Sireci et al., 2018). In practice, however, we do not yet know the effects of many accommodations on student performance or test validity. For example, testing in a separate, distraction-reduced setting may not improve exam access or performance for most students with ADHD (Lovett et al.,

2019) and may actually lower test scores on high-stakes exams (Weis & Beauchemin, 2020). Other accommodations may fundamentally alter the construct that the exam is designed to assess (Dembitzer & Kettler, 2018). For example, allowing some students to complete exams using memory aids; providing students with a word bank on a recall test; or modifying the grading system so that students are not penalized for certain errors, can compromise test validity.

The provision of accommodations to students without disabilities also has financial costs. In many cases, universities and colleges must pay disability service staff or invigilators to administer additional time and separate room accommodations. Institutions may also pay notetakers and provide instructional technology such as recording, reading, and transcribing devices. A recent survey of DSOs in the USA showed that modal annual budgets ranged from \$100,000 for very small colleges to \$3,000,000 for large universities (Scott, 2019). Moreover, postsecondary students in Canada are eligible to obtain up to \$24,000/year in government-funded bursary and equipment grants, as well as tuition rebates, tax credits, and student loan forgiveness if their DSO confirms that they have a permanent disability (Harrison, 2022). Results from the current and others studies suggest that the process of disability accommodation decision-making is not undertaken equitably or objectively, and so students with no bona fide impairments may easily obtain access to such costly supports. When DSOs confirm that otherwise normal students require these supports it adds to the financial burdens of both postsecondary institutions and the Canadian taxpayers.

Accommodation-granting based on self-reports and impressions can also hurt students themselves. Students without ADHD who receive academic accommodations may have little impetus to develop their notetaking, time-management, or test-taking skills (Advokat et al., 2011; Mapou, 2022). Similarly, students who misattribute their academic difficulties to ADHD may not address other possible causes for their symptoms, such as poor sleep hygiene, maladaptive substance use, or any undiagnosed anxiety or mood disorder. Perhaps most seriously, disability service providers who rely on their own impressions, rather than actuarial data to judge the validity of students' narratives, may introduce their own implicit biases into the decision-making process (FitzGerald & Hurst, 2017). To the extent that accommodation decisions are made based on subjective impressions, a process designed to reduce discrimination in higher education may actually increase the likelihood of its occurrence.

Limitations and Recommendations

Although the audit method of data collection used in this study has strong ecological validity, it has several limitations. The chief limitation is that it does not allow us to

explore the reasons for disability service providers' decisions. Although it is possible that providers explicitly or implicitly follow the AHEAD guidance and grant accommodations based largely on recommendations of professionals or the student's self-report, other factors could have also influenced their decisions. A second limitation is that we were also unable to systematically study which types of third-party data providers find most useful when rendering accommodation decisions. For example, would providers grant accommodations if the student did not report a history of informal accommodations in high school, did not have any diagnostic label assigned, or only provided a brief letter from a physician or nurse practitioner to support her request? A third limitation is that the external validity of our study is limited by the fact that we only obtained the opinion from decision makers at just over half of the total number of institutions. It is possible that these other institutions may have more rigorous criteria for accommodation-granting. Future research should replicate and extend our research at other schools across Canada.

Where Do We Go from Here?

Despite these limitations, our findings have several important implications. The most direct implication is that the current method of determining the need for extra time accommodations in postsecondary education is flawed and inequitable. The office tasked with determining reasonable accommodations is not making individualized accommodation decisions based on objective evidence of functional impairment and current task requirements. New policies and procedures therefore need to be developed at the postsecondary level to help determine whether students have substantial impairments that interfere with their equal participation in a course or program. It is inequitable to offer blanket accommodations of extra time to someone who self-reports ADHD symptoms, especially when their documentation demonstrates no historical or current functional impairments and when research has failed to support the need for extra test time due to ADHD (e.g., Miller et al., 2015).

If DSO staff lack the technical skill or ability to interpret disability documentation, then postsecondary institutions could rely on a committee of experts or consultants when reviewing accommodation requests. Approximately 80% of disability service providers report that requests are typically reviewed by only one individual at their college or university (Miller et al., 2019). In less than 10% of cases, providers consult with experts such as professors of clinical or school psychology, professionals at the university medical or counseling center, or psychologists outside their institution. We would recommend that these experts come from outside a DSO's institution to reduce the possibility of bias in granting,

or denying, a request for accommodations. Consultation with psychologists outside the institution who are familiar with DSM-5 criteria, psychoeducational and neuropsychological testing, and the interpretation of standard scores would increase the validity of accommodation decisions.

If DSOs and their institutions are not prepared to carefully and critically evaluate disability documentation that was extremely costly for the student to obtain, then the practice of requiring such assessments should be stopped immediately. If all an office requires is a statement from a professional making accommodation recommendations then it is abusive and discriminatory to make students and their families undergo an assessment that costs between \$3,000 and \$10,000 and where the DSO staff do not evaluate the legitimacy of the recommendations contained in the report. However, asking a professional for an opinion may not be equitable either given that many physicians are not trained in how to objectively determine functional impairments in postsecondary students (e.g., Harrison et al., 2018) and psychological service providers do not always make accommodation recommendations based on objective evidence of functional impairment (Harrison, 2017).

Moving forward, results from this study should spur postsecondary institutions to embrace Universal Design for Learning principles (e.g., La et al., 2018) and either do away with time limits or offer extra time and other accommodations to any student who feels they could benefit from them. Courses should be designed so that all students can obtain sufficient time to finish a test, and courses should be captured virtually so that those who require a notetaker can use the closed captioning feature instead. Students with demonstrated financial need should all be able to obtain funding to purchase laptops and other learning supports to help them participate optimally in a postsecondary environment, and all students should be given the option of using a word processor or assistive technology to complete essay-type tests. All of this is reasonable because most non-disabled students would also benefit from such supports and, as shown in this study, there is currently no guarantee that the students who are offered these accommodations or financial benefits in a postsecondary setting are truly disabled.

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