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Centre des Compétences futures

Making the Invisible Visible

Neurodivergent Students' Experiences in Canadian Higher Education

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The Future Skills Centre – Centre des Compétences futures (FSC-CCF) is a forward-thinking centre for research and collaboration dedicated to preparing Canadians for employment success. We believe Canadians should feel confident about the skills they have to succeed in a changing workforce. As a pan-Canadian community, we are collaborating to rigorously identify, test, measure, and share innovative approaches to assessing and developing the skills Canadians need to thrive in the days and years ahead.

The Future Skills Centre was founded by a consortium whose members are Toronto Metropolitan University, Blueprint, and The Conference Board of Canada.

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Key findings

- Neurodivergent students have diverse learning profiles: 38 per cent report multiple diagnoses; 62 per cent report additional intersectional identities (e.g., lesbian, gay, bisexual, transgender, queer, intersex, and asexual, or LGBTIAQ).
- One-third of neurodivergent students do not have a formal diagnosis, which limits access to educational supports and accommodations.
- Less than half of neurodivergent students disclosed their neurodivergent identity or diagnosis to their educational institution, and 73 per cent of those who did not disclose identified barriers to the process. Yet those who disclosed are significantly more likely to be satisfied with their post-secondary institution.
- Students reported a lack of knowledge of the disclosure process, stigma, and challenges to accessing clinical assessments and documentation as reasons for not disclosing.
- Students report difficulties with executive functioning-skills related to working memory, attention, planning, organization, flexible thinking, and self-management-two to three times more often than any other challenge including mental health, finances, learning, or stigma.
- Wrap-around service models that improve access to clinical diagnoses, mental health supports, one-to-one coaching, and executive function skill building can foster student academic success and inclusion.





Bridging the data gap

Despite increasing enrolment rates, neurodivergent students are less likely to graduate than their neurotypical peers.

Neurodivergent individuals are also under-represented in the Canadian labour force. With the rising demand for skilled workers, it's critical for post-secondary institutions (PSIs) to support the academic success and future employment of neurodivergent individuals.

Canadian PSIs are striving to make post-secondary education (PSE) more inclusive. However, they lack comprehensive data on the number of neurodivergent students attending Canadian PSIs and the experiences and effectiveness of current supports for these students. Our research addresses this gap. We present the findings from the largest ever survey of Canadian neurodivergent post-secondary students. We surveyed 400 Canadian neurodivergent students and recent graduates to understand their experiences in higher education and identify ways to improve their outcomes. (See Appendix A for a detailed methodology.)

We detail how factors such as identity, diagnosis, institution type, and other intersectionalities impact the experiences of neurodivergent students across Canadian PSIs.

This information will help PSIs better understand and support the neurodivergent student population.

Profiles of neurodivergent learners

Exhibit 1

Who are neurodivergent learners?



Source: The Conference Board of Canada

Prevalence

Of the students surveyed, 59 per cent identified attention deficit hyperactivity disorder (ADHD) as either a primary (26 per cent) or co-occurring condition (59 per cent). ADHD is strongly associated with executive function challenges, which can impact students in their everyday life and academic success. Other common diagnoses included mental health diagnoses (46 per cent), autism (24 per cent), and learning disabilities (15 per cent). Less commonly reported diagnoses included: developmental coordination disorder, auditory and sensory processing diagnoses, Tourette's, and acquired brain injury. These conditions were reported by 1 to 4 per cent of respondents. Over a third (38 per cent) of students indicated they had multiple neurodivergent identities and/or clinical diagnoses.

Intersecting realities

The neurodivergent post-secondary student population is highly diverse, 62 per cent of the sample identifying as part of an additional equity-seeking group and 28 per cent identifying as a member of the lesbian, gay, bisexual, transgender, queer, intersex, and asexual (LGBTIAQ) community. This figure is similar to data reported by the Canadian University Survey Consortium on middleyears students, where 7 per cent of students identified as neither a man or woman and 27 per cent identified a sexuality other than heterosexual/straight.

Diagnosis

One in three respondents self-identified as neurodivergent but lacked a clinical diagnosis. Increasing barriers to receiving a formal diagnosis has led to an increase in individuals relying on self-identification of their neurodivergent identity.

Barriers to academic success and inclusion

Executive functioning: The biggest hurdle

Respondents were asked, "In just a few words, what are the biggest barriers (challenges) you've faced, as a neurodivergent student, in post-secondary education?" (See Chart 1.)

Students reported challenges related to executive functioningskills such as working memory, attention, planning, organization, and self-management-two to three times more often than any other barriers to academic success (35 per cent). Frequent responses coded to this category included difficulty with focus and concentration during long lectures, managing time and deadlines, and staying motivated.

The second highest reported theme was challenges related to the pace of classroom learning (15 per cent), which affects their ability to take notes, process information, and participate in activities. Additional classroom challenges reported were coded under pedagogy and included non-inclusive teaching methods, assessment structures, and unclear expectations from faculty (3 per cent).

Challenges accessing a clinical diagnosis and documentation, and social and communication barriers were equally reported barriers (14 per cent each). Respondents identified communication barriers with faculty and peers, difficulties in making friends, participating in social activities, and completing group work. Students who identified social and communication challenges as their biggest barriers reported feeling like they didn't belong, they struggled to fit in, and they felt misunderstood. Mental health challenges (13 per cent), experiences of discrimination (10 per cent), and attendance requirements (5 per cent) were additional barriers reported by more than 5 per cent of respondents.

Chart 1

Thematically coded student responses to open-ended question on biggest barrier faced as a neurodivergent student

Q: In just a few words, what are the biggest barriers (challenges) you've faced as a neurodivergent student in post-secondary education? (per cent, n = 370)



Source: The Conference Board of Canada.

The disclosure dilemma

Disclosure varies by institution type

Disclosure in the PSE system involves a student notifying their institution that they have a medical, physical, or mental disability and require accommodation. To receive accommodations after the disclosure process, students are required to have documentation of their disability and/or functional impairments.

Respondents were asked if they had chosen to disclose their diagnosis or identity to their institution. Disclosure rates varied by institution type, with universities having the lowest disclosure rates (38 per cent) compared to colleges (47 per cent) and polytechnics (67 per cent).

Lower disclosure rates among university students (compared to college and polytechnic students) may stem from internalized ableism where students who meet academic requirements to enter into university may resist conceptualizing their learning or inclusion needs as a disability, for fear of discrimination from teaching faculty and peers.

Clinical diagnoses linked to disclosure and seeking accommodations

The disclosure process remains a barrier for many neurodivergent post-secondary students. Less than half of survey respondents (43 per cent) disclosed their diagnosis or neurodivergent identity to their PSI.

Students with a formal diagnosis (54 per cent) were more likely to disclose compared to those who self-identified (20 per cent) as neurodivergent. Those with multiple identities or diagnoses were the most likely to disclose (59 per cent). (See Chart 2.) These results suggest students with multiple diagnoses face the greatest challenges in navigating PSE and may be less willing or have the mental resources to mask their neurodivergence.

Chart 2

Disclosure rates by neurodivergent identity/diagnosis

Q: In just a few words, what are the biggest barriers (challenges) you've faced as a neurodivergent student in post-secondary education? (per cent, n = 400)



Source: The Conference Board of Canada.

Students who chose not to disclose (n = 230), were asked why they did not complete the disclosure process via a multiple-choice question. Of these students, 48 per cent responded that they did not disclose because they did not require supports or accommodations.

Although the 48 per cent of students who did not disclose mentioned that they did not require supports or accommodations, many also indicated barriers toward disclosing. In fact, 73 per cent of those who did not disclose indicated at least one of the following barriers:

- stigma (28 per cent)
- a lack of documentation or diagnosis (27 per cent)
- · fear or anxiety about the process (26 per cent)
- a lack of clarity on who qualifies for accommodations (20 per cent)
- a lack of knowledge of the benefits of disclosing (15 per cent)

Additionally, 15 per cent of these students reported choosing to take a 'wait and see' approach and attempting to complete their PSE without accommodations. (See Chart 3.) These findings may reflect a perception among students that accommodations are only for those who "can't manage without them" rather than as an equity measure for neurodivergent students in PSE. Of the 170 respondents who disclosed their neurodivergent identity/ diagnosis, 82 per cent were able to receive accommodations through their PSI's accessibility services.

Students who completed the disclosure process but were unable to receive accommodations identified similar barriers to the students who chose not to disclose, including: a lack of documentation (29 per cent), trouble accessing medical professionals (26 per cent), and funding for assessments (23 per cent), or their self-identification was not considered valid (16 per cent). (See Chart 3.)

Chart 3

Most respondents who chose not to disclose reported at least one barrier to the disclosure process

Q: Why did you choose not to disclose? Check all that apply. (per cent, n = 230)



Source: The Conference Board of Canada.

Disclosure linked to student satisfaction

Under half (41 per cent) of neurodivergent students reported being very satisfied with their post-secondary institution. (See Chart 4.) An additional 52 per cent reported moderate levels of satisfaction. Students with a single neurodivergent identity or diagnosis were more likely to be very satisfied with their institution compared to those with multiple identities or diagnoses. Students with only a mental health identity or diagnosis were the most likely to be very satisfied.

Chart 4

Student satisfaction with post-secondary institution, by identity/diagnosis type Q: On a scale from 1 (very dissatisfied) to 10 (very satisfied), indicate your level of overall satisfaction with your post-secondary institution? (per cent, n = 400)

Verv dissatisfied Relatively satisfied Very satisfied Mental health only Autism only Single other identity/diagnosis Overall ADHD only Multiple identities/diagnoses 0 10 20 30 40 50 60

Note: Satisfaction with PSI was assessed on a scale from 1 to 10 and recoded as "very dissatisfied" (scores from 1 to 3), "relatively satisfied" (scores from 4 to 7), and "very satisfied" (scores from 8 to 10). Source: The Conference Board of Canada.

Students who disclosed their neurodivergent identity were more likely to report being very satisfied with their PSI compared to those who did not disclose. (See Chart 5.)

Chart 5

Satisfaction with post-secondary institution by respondent disclosure status Q: On a scale from 1 (very dissatisfied) to 10 (very satisfied), indicate your level of overall satisfaction with your post-secondary institution? (per cent, n = 400)



Note: Satisfaction with PSI was assessed on a scale from 1 to 10 and recoded as "very dissatisfied" (scores from 1 to 3), "relatively satisfied" (scores from 4 to 7), and "very satisfied" (scores from 8 to 10). Source: The Conference Board of Canada.

What works? Levers for success

Learning preferences: Flexibility takes the lead

When asked about their preferred modality for program or course offerings, respondents overwhelmingly chose hybrid and in-person programs. Only 16 per cent preferred fully online programs. (See Chart 6.) Preferences for in-person or online learning can vary greatly based on communication needs, mental health considerations, and course evaluation requirements. As a result, hybrid courses are likely to best meet neurodivergent students' varied learning and inclusion needs.

Chart 6

Student preference for course or program modality Q: What is your preferred program or course modality (how/where the course or program is offered)? (per cent. n = 400)



Source: The Conference Board of Canada.

Supportive relationships make the difference

Respondents were asked, "In just a few words, what are the most impactful supports you've received, as a neurodivergent student, in post-secondary education?" (See Chart 7.)

Friends, family, and supportive peers were reported as the most impactful supports by respondents (20 per cent). Supportive teaching faculty (12 per cent), accessibility and academic advisors (6 per cent), and mental health supports (6 per cent) were also listed in the top seven highest rated supports. These responses demonstrate the important role that supportive relationships have on neurodivergent student experiences in PSE. Other highly rated supports included extra time for exams and assignment extensions (16 per cent) and alternate exam location (8 per cent).

Executive function challenges were the highest reported area of challenge for neurodivergent students, yet very few (1 per cent) of students reported executive function supports as impactful. This finding suggests that neurodivergent students may be unaware that executive function coaching and supports exist and that these supports can be leveraged to address challenges in these areas.

Chart 7

Thematically coded student responses to open-ended question on most impactful support in PSE

Q: In just a few words, what are the most impactful supports you've received as a neurodivergent student in post-secondary education? (per cent. n = 362)



Source: The Conference Board of Canada.

Accessible mental health supports are in demand

Respondents were asked if they had accessed supports or programs created for neurodivergent students at their institution. Just over a third of students indicated they had accessed supports (35 per cent), with 68 per cent of respondents reporting not having accessed supports or programs for neurodivergent students.

To find out which services or programs neurodivergent students would use if offered, respondents were asked to indicate "yes," "no," or "unsure" for each potential option via a multiple choice question. Chart 8 reports the answer of "yes" for each item, grouping students based on their neurodivergent identity/diagnosis. Counselling supports was the most desired offering (over 65 per cent for students in the multiple diagnosis, single other identity, and mental health only groups). Students with multiple identities were more than twice as likely to indicate "yes" to sensory refuge areas (62 per cent) than students with a single other diagnosis (25 per cent), or students in the mental health only (51 per cent), autism only (38 per cent), or ADHD (35 per cent) only groups.

The varied responses to desired supports based on diagnosis/ identity type suggests that students with multiple diagnoses have considerably different support needs than students with a single diagnosis, impacting the supports they desire or are willing to try.

Chart 8

Students who responded "yes" to using the following programs or supports if available by identity/diagnosis type

Q: Would you use or participate in the following opportunities for neurodivergent students if they were available at your institution? (per cent. n = 400)



Source: The Conference Board of Canada.

Conclusion and recommendations

This research offers the first national overview of neurodivergent students in post-secondary education. Understanding their experiences is crucial for improving the neuroinclusivity of PSE. PSIs can take the following actionable steps to better support neurodivergent students:

- Provide targeted neurodiversity training for all campus employees and leadership including faculty, administrative staff, and service areas, including security, residence staff, and peer mentors, to reduce instances of stigma and discrimination on campus.
- Increase student and faculty/staff awareness of role of executive function skills for learning and ways of leveraging assistive technology and artificial intelligence (AI) to support academic success.
- Use multiple and diverse channels to introduce all new students to their institution's accessibility services and the role that disclosure and accommodations play in supporting neurodivergent students.
- Create diverse opportunities for neurodivergent students to connect and build community such as social groups, support groups, and peer mentorship programs.
- Offer a mixture of in-person and hybrid course options in each faculty so neurodivergent students can find pathways to their desired employment sector regardless of attendance needs.





Appendix A Methodology

Background

This project was developed to better understand the barriers and enablers to neurodivergent students' participation and inclusion in PSE. A comprehensive national survey, which included multiple choice, Likert scale, and open-ended questions, was completed by 400 current neurodivergent post-secondary students and recent graduates from Canadian PSIs. The survey was developed to understand the experiences of neurodivergent students navigating PSE and their perspectives on barriers and enablers to full inclusion and supports, mechanisms, and/or approaches that they believe can or could be most effective in supporting an inclusive learning experience in Canadian PSIs.

The research design and protocols were reviewed and approved by Veritas, a third-party ethics review organization.

Research questions

- 1. What institutional policies and practices do neurodivergent students identify as barriers or enablers to meaningful inclusion at their PSI?
- 2. What challenges are Canadian PSIs facing in the provision of inclusive and accessible education for neurodivergent students?
- 3. What innovations are currently being implemented to support neurodivergent students in Canadian PSIs?

Survey sample

To be eligible to participate in the survey, respondents were required to:

- have a clinical diagnosis or self-identify as neurodivergent. For this study, neurodivergent identities and diagnoses are understood to include, for example:
- autism
- ADHD
- specific learning disability
- sensory or auditory processing disorder
- developmental coordination disorder
- Tourette syndrome
- mental health disorders
- be aged 18 to 65
- attend a Canadian post-secondary institution or have graduated from a Canadian post-secondary institution within one year

At the completion of the survey, respondents were:

- 301 neurodivergent students
- 99 recent neurodivergent graduates (under one year post-graduation)

The survey was administered by Leger, a Canadian market research firm, in English and French. The survey sample size was determined in consultation with Leger, with the goal of achieving statistical power and representing the population of interest (i.e., neurodivergent post-secondary students in Canada).

Leger reached out to PSE students and recent graduates and obtained a sample of 400 qualified neurodivergent respondents. The survey was designed to collect large scale data on the experiences of neurodivergent students navigating PSE, focusing on identifying barriers they encounter and supports that improve their educational journey. In total, 31 questions were asked in the survey. The demographics collected are standard for The Conference Board of Canada and include gender, age, ethnicity, disability status, and region.



The survey was administered to be representative of the population of neurodivergent students in PSE. Quotas were established based on age, gender, region, type of neurodivergent identity, type of diagnosis, type of post-secondary institution, type of program, field of study, and enrolment status (student vs. recent graduate). We sought respondents from all provinces and territories, but did not receive responses from participants residing in the territories. This is likely due to their smaller population size and fewer PSIs. Weights were provided by Leger to ensure that the data represented the neurodivergent post-secondary student population in Canada. This cross-sectional sample was collected from March 18 to 28, 2024. The survey was pre-tested among 40 respondents before to ensure its external validity and to identify any wording problems. The survey was administered online.

The research team cleaned and analyzed the survey data using RStudio. Reflexive thematic analysis was used to analyze open-ended survey questions. Findings are reported based on the frequency of responses.

Exhibit 2

Survey participants by province (per cent, n = 400)



Source: The Conference Board of Canada.



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