

# College Success of Students with Psychiatric Disabilities: Barriers of Access and Distraction

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## Abstract

This study explored the barriers to success experienced by students with psychiatric disabilities (PD) enrolled in college programs. The students in the PD group were compared to a matched group of students with learning disabilities (LD) on graduation rates, endurance levels, grade point averages, self-assessment of cognitive, academic, and student skills, on integration into the disability support system, and on the character, number, and severity of the distractors which they experienced. Students with PD were found to have significantly lower graduation rates than students with LD. There were no significant differences between the groups in endurance levels and in grade point average (GPA). In self-assessment of cognitive, academic, and student skills there were very few differences between the groups. There were, however, significant differences in the degree to which each group was integrated into the disability support system, an access barrier associated with the interaction between the disability-related experiences of the PD group, and the model of disability support offered by the college. There were also significant differences between the groups in the number and in the severity of the distractors which they experienced. These results suggest that distractor barriers reduce the time which PD students are able to commit to the academic requirements of their program. A number of recommendations for further research are made.

*Keywords: Psychiatric disability, education, postsecondary, young adults, barriers*

Postsecondary students fall into the highest risk age-group for psychiatric disabilities (Ontario College Health Association [OCHA], 2009). Concurrent research showed more students with psychiatric disabilities are now entering college and university (Gallagher, 2011; University of Waterloo, 2011a). Using Canadian data, Adlaf, Demers, and Gliksman (2005) reported gender and geographic differences in incidence at postsecondary institutions. Similarly, Gallagher (2011) reported gender and ethnicity differences in incidence across a variety of psychiatric disabilities (PD) parameters. As well, this report found better outcomes for affected students at smaller institutions.

A comprehensive body of research has established that a diagnosis of a PD is highly correlated with lower achievement and leaving school early among students in postsecondary education (PSE). This has been found to be true across a variety of geographical locations, in different levels of education, and in students with different forms of PD. British university students (Andrews & Wilding, 2004) and American

university students (Eisenberg, Golberstein & Hunt, 2009) who expressed symptoms of depression have been shown to earn lower grade point averages (GPA) than other students. Canadian students with a PD diagnosis, enrolled in university courses through distance education (Moisey, 2004), and Australian students with a PD diagnosis enrolled in vocational education and training courses (Cavallaro, Foley, Saunders & Bowman, 2005), completed fewer courses than any other disability group. Compared with non-disabled students, poorer academic outcomes have been found for students with schizophrenia or other psychotic disorder (Waghorn, Still, Chant, & Whiteford, 2004), mood disorders (American College Health Association [ACHA], 2012; Hunt, Eisenberg, & Kilbourne, 2010; Hysenbegasi, Hass & Rowland, 2005), eating disorders (Eisenberg, Golberstein & Gollust, 2007), anxiety disorders (ACHA, 2012), and substance abuse disorders (Hunt et al., 2010).

The high drop-out rate for students with PD has also been documented. Analyzing the results of na-

tional surveys of the U.S. adult population, Breslau, Lane, Sampson and Kessler (2008) and Hunt et al. (2010) found drop-out rates of 43% and 52.4% respectively. Unger, Pardee and Schafer (2000) put the withdrawal rate for students with PD studying as part-time students at 78.1%, Collins and Mowbray (2005) report the drop-out rate to be 86%, and Moisey (2004) measured the course completion rate at 40.4%. Finally, for students with a co-morbid PD diagnosis the possibility of completing college was "... as low as 1%" (Breslau et al., 2008, p.713).

A variety of internal, external, and systemic barriers to success have been identified to explain these findings. Factors internal to the student included weak study skills and inconsistent academic knowledge (Corrigan, Barr, Driscoll & Boyle, 2008); negative self-perception (Atkinson, Bramley, & Schneider, 2009); high anxiety (Adalf et al., 2005; Corrigan et al., 2008; University of Waterloo, 2011a); weak neurocognitive processes including verbal fluency, working memory, executive control, and mental speed (Keefe & Fenton, 2007; Wexler & Bell, 2005;); the cyclical nature of PD; and the side effects of psychotropic medication (Loewen, 1993; Mowbray, Bybee & Collins, 2001). Factors external to the student that acted as serious distractors included lack of transportation (Corrigan et al., 2008) and difficulties with finances and housing (MacKean, 2011; Mowbray et al., 2001; OCHA, 2009). Multiple systemic barriers were noted: the lack of coordination among the service providers (Loewen, 1993; Mental Health Commission of Canada [MHCC], 2009; Ministry of Health and Long Term Care [MOHLTC], 2009; OCHA, 2009; University of Waterloo, 2011b), misunderstanding by faculty and others (Blacklock, Benson & Johnson, 2003; Eisenberg, Downs, Golberstein, & Zivin, 2009; Martin, 2010), departmental and professional barriers (OCHA, 2009; University of Waterloo, 2011b), issues of confidentiality (Haas et al., 2008; University of Waterloo, 2011a), and the lack of information and easy access to support services (Atkinson et al., 2009; Blacklock et al., 2003; Megivern, 2002; Mental Health Commission of Canada [MHCC], 2009; Ministry of Health and Long Term Care [MOHLTC], 2009; OCHA, 2009). The University of Waterloo (2011a) also noted a suite of operational concerns related to "... risk management, ethics, responsibility and accountability, service delivery approach, confidentiality and privacy issues, and cost of support in the context of limited resources" (p. 1, 'Background and Context' webpage).

Other research showed that academic outcomes were negatively impacted by factors such as the interaction between the barrier and the disability, the existence of a comorbid diagnosis, and by the severity of the disability. When university students who were diagnosed with depression encountered financial difficulties, their depression increased and exam performance deteriorated (Andrews & Wilding, 2004). Holmes, Silverstri, and Kostakos (2011) and Kessler, Foster, Saunders, and Strang (1995) have shown that academic difficulties increased when there is a comorbid diagnosis, and Eisenberg, et al. (2009) reported a negative relationship between the severity of depression and the GPA among college students.

It is postulated (Corrigan et al., 2008; Weiner & Wiener, 1996) that there are barriers in postsecondary education that are unique to students with psychiatric disabilities. According to Corrigan et al., barriers such as financial problems, poor study skills, or inadequate transportation are issues shared by all students, whereas issues of stress management, and the need for educational coaches may be specific to students with PD. In a Canadian context, First Nations students (MHCC, 2009), recent immigrants, and international students (OCHA, 2009) have been identified as PSE subpopulations with language barriers and cultural norms that may impede them from seeking or receiving timely and effective mental health services.

This exploratory study focused on the success rates of students with PD in postsecondary education and on the identification of potential barriers to success that are unique to these students. The educational experiences of one group of students with PD were tracked from the point at which they first made contact with the disabilities services (DS) unit in the college to the point where they graduated or left the college. Their success rate and their self-assessment of their cognitive, academic, and student skills were documented. A review of the extensive database of contact notes made by the staff in the DS unit provided insight into the nature and extent of the barriers experienced by students with PD. The experiences of the PD group were compared with an equal sized Fall 2007 cohort of incoming students with learning disabilities (LD). Contrasting the types of barriers experienced by two groups of students with disabilities was the approach used to address the research question of whether students with PD do face "unique and extensive barriers to completing academic programs" (Holmes et al., 2011, p. 4).

## Methods

### Selection of Groups

The PD group consisted of every student with a documented psychiatric disability ( $N = 28$ ) who made a self-referral to the college DS unit for the Fall 2007 semester and was enrolled in a first-year program as a full-time student. In this group 42.9% had a mood disorder, 32.1% an anxiety disorder, 17.9% a dual mood-anxiety disorder, and 7.1% a psychotic disorder. For three students in the PD group there was documentation of a secondary disability (i.e., medical, ADHD and LD). Using the same selection criteria (i.e., first-year, full-time student in the Fall 2007 semester), 28 subjects in the LD study group were randomly assigned from the cohort of Fall 2007 students with a documented (LD) who also made a self-referral to the DS unit. One of these students had a secondary diagnosis of a PD.

### Support Services Through Disabilities Services Unit

In Canada, the supreme document guaranteeing the right to protection from discrimination for persons with disabilities is the Canadian Charter of Rights and Freedoms (Department of Justice 1982). Section 15 (1) of the Charter establishes that every person with a mental disability has the right to equal benefit of the law without discrimination. In the province of Ontario, the educational rights of persons with psychiatric disabilities have been clarified further by the Ontario Human Rights Code (1990; Ontario Human Rights Commission, 2013) which establishes that service providers – of which education is one such provider – have the duty to accommodate those with disabilities. More recently, the Accessibility for Ontarians with Disabilities Act (Ministry of Community and Social Services, 2005) requires that educational institutions regularly document their progress in identifying, removing, and preventing barriers for people with disabilities. To help postsecondary institutions meet their human rights obligations, the Ontario Government, through the Ministry of Training, Colleges and Universities, provides grants that support the institutions' DS units.

The community college in which this research was conducted offers primarily certificate or diploma programs in trades, services, technology, and arts for approximately 14,000 full-time students. The on-site DS unit is staffed by seven full-time counsellors who, along with eight support staff, provide services to approximately 1,500 students with a range of disabilities.

The DS unit offers a variety of services including academic, personal, and accommodation counselling, a computer lab equipped with an array of specialized adaptive technology, a dedicated test-writing facility, and support staff who administer the bursary process, provide training on adaptive technology, and organize notetaking and other support services. A government-funded bursary program provides individual students with a maximum of \$10,000 per year to cover the cost of purchasing computer and other adaptive technology and to pay for subject tutors, notetakers, coaches, and specialized counselling. The financial means test attached to the bursary is not onerous, with most students qualifying.

The DS unit operates on a self-advocacy model<sup>1</sup>, one in which students are expected to be able to understand how their disability affects their learning, to identify the accommodations they need, and to self-advocate with faculty and others (Alberta, 2002). Before any accommodations are provided by the DS unit, students are required to make a proactive self-referral to the unit and to provide documentation of a disability from a qualified health professional. This reactive approach expects “students to recognize their own mental health problems, including the onset of major psychiatric disorders, decide whether treatment is indicated, and actively seek out services” (Mowbray et al., 2006, p. 231). It is the model found in provincial mental health services (MOHLTC, 2009) and most postsecondary institutions in Ontario (OCHA, 2009) and across North America (Gallagher, 2011).

### Sources of Information

The information used in this study came from a review of the student records housed in the DS unit and in the secure college database. There was no direct student contact. On the pre-admission intake form submitted to the DS unit (Appendix A) students rated their skills in a variety of academic (e.g., reading, written language), cognitive (e.g., memory, concentration), and student skill areas (e.g., attending class, do-

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1 The responsibility for providing appropriate education for students with disabilities in elementary and secondary schools in Ontario rests with the school authorities who are required by the regulations emanating from The Education Amendment Act (1980; Ministry of Education, 2013) to identify the learning abilities of students, to provide special education programs and services, and to develop an Individual Education Plan for students who have been identified as exceptional. These provisions, however, do not apply to postsecondary education where the responsibility for identification shifts from the institution to the individual student who must self-advocate for services.

ing group work, submitting assignments). The paper files and the college database contained records of the category of disability, the date of disability diagnosis, whether an assessment and/or an Individual Education Plan (IEP) was submitted as proof of disability, the date of graduation from secondary school, and whether the student had previously attended university.

The DS database also housed the contact notes created by DS staff to document the purpose, the content, and the outcome of each significant interaction with students. In general, the contact notes reflect an approach in which a problem is identified, a range of options are discussed, and a response plan is implemented. Contact notes also include emails, summaries of interactions with third parties, and records of administrative transactions. For this study, contact notes were identified as a unique source of information describing the lived experiences of students with disabilities in postsecondary education, particularly the barriers and challenges they faced. Developing a method for capturing and categorizing those experiences proceeded in two steps. First, a pilot study involved a review of the entire body of contact notes of six students who were not part of this study. This provided the list of 32 categories shown in Appendix B. Descriptively, three categories presented: (a) the range of emotions expressed by the student and recorded by the staff member (e.g., angry, sad, anxious, suicidal); (b) people (e.g., family, professor, doctor), institutional services (e.g., financial aid office, academic program office), or community services (e.g., hospital, therapy, housing) referenced in the notes; and (c) academic interventions including hiring notetakers, arranging equipment training, and organizing tutors. In DS practice, the 32 categories logically grouped into four overarching themes or factors: (1) academic (involving registration, program, or classroom concerns); (2) internal to the student (feeling such as anxiety, depression, or anger); (3) external to the student (including family, housing, doctors, and relationships); and (4) accommodations (bursaries, technology, notetakers, and other disability related accommodations). These are detailed in Appendix B.

The DS database showed 1,870 separate contact notes for the 56 students included in the study. Each contact note was screened by the first author for instances of each of the 32 descriptive categories. Only the first instance of a particular category was coded in each contact note. For example, when several references to the financial aid office were recorded in a note, the

category “financial aid” was coded once. However, if the financial aid office, the register’s office, and the student’s anger were all noted in the contact note, then those three categories were coded. In total 4,043 instances of the 32 categories were coded for the 56 participants.

There are obvious contextual differences between categories that may impact both student well-being and outcome. For example, a suicide attempt has potentially more serious ramifications than does anxiety prior to a mid-term test. A list of nine serious distractors was developed to contextualize and capture such risk (see Appendix C). Mirroring the initial coding procedure, the first author screened the contact notes and coded the first instance of each serious distractor (i.e., up to a total of nine unique distractors per student) recorded in the notes.

Length of stay in the college, cumulative GPA, and graduation was recorded for each student in the study. Leaving school early was identified and recorded when a non-graduating student failed to register for two semesters in succession. In calculating GPA, the college uses a traditional four-point scale. Where the cumulative GPA was not available from student records, the average of GPA across semesters was used in analysis. A GPA of 0 was assigned to students who left the college without earning any grades. Students were defined as having academic difficulty if they were required to re-apply to a program or if they were placed on academic probation. In this study, success was defined as graduating with a certificate or a diploma.

### Statistical Analysis

The PD group and the LD group were first compared on demographic, intake, self-reported skill levels, academic success rates, and DS outcomes using chi squares for the categorical variables, and t tests for the continuous variables. Second, an ANOVA compared the PD and LD groups on the four themes arising from the contact notes. This study was approved by the Ethics Review Board of the college.

### Results

Table 1 shows that the PD Group was older than the LD group and there were significant between-group differences in: the number of years since graduation from secondary school, the percentage who made a self-referral to the DS unit prior to the beginning of the semester, whether the diagnosis of the disability had

been made before or after the completion of secondary school, whether an assessment was submitted as documentation, whether the student had an IEP from secondary school, and whether the student had previously attended university. There was no significant difference in the percentage of females in each group.

There was not a significant difference between the groups in the mean number of contact notes per student generated in the database. Two students in the PD group were responsible for 276 and 385 contact notes respectively. When these two outliers were removed from the analysis, the mean number of contact notes per student between the groups was similar (i.e., PD group: mean = 24.69, median = 15.50, SD = 20.45; LD group: mean = 21.39, median = 13.0, SD = 16.79). However, there was a significant difference between the groups in the mean number of categories per note (i.e., PD group: mean = 2.64, SD = .91; LD group: mean = 1.79, SD = .63;  $t(54) = 4.05$ ,  $p < .001$ ) and in the mean number of serious distractors recorded in the contact notes (PD group: mean = 2.32, SD = 1.517; LD group: mean = .71, SD = 1.013;  $t(54) = 4.66$ ,  $p < .001$ ).

Of the three outcome measures of student success, only the difference in graduation rate reached significance (PD group: mean = 25%; LD group: mean = 60.5%;  $\chi = 7.29$ ,  $df = 1$ ,  $p < .01$ ). In the PD group only seven students (i.e., 25%) graduated. Because of the small number of PD graduates no further analyses of graduation was conducted. Between-group differences in cumulative GPA, the average number of semesters engaged in academic study, and the percentage of students with serious academic difficulties as recorded on their transcript, did not reach statistical significance.

### Program Enrollment

The students enrolled in a range of programs at the certificate (i.e., two semesters), diploma (i.e., four semesters), and advanced diploma (i.e., six semesters) level. Academic streams included service industries (26.8%), human services (25.0%), health (12.5%), construction (10.7%), general arts (10.7%), business (7.1%), and technology (7.1%). The pattern of program selection ( $\chi = 2.829$ ,  $df = 6$ ,  $p = .830$ ) and the length of the programs (i.e., two, four or six semesters) did not differ significantly between the groups ( $\chi = 3.949$ ,  $df = 3$ ,  $p = .267$ ).

### Self-ratings of Academic, Cognitive and Student Skills

Chi square comparisons of the self-ratings of the PD group and LD group in academic (reading, oral language, listening, written language, mathematics), cognitive skills (attention, memory, organization, time management), and student skills (group work, note taking, study skills, submitting assignments, test writing, attending class) reached significance in three areas: reading (rating of difficulty: PD = 60%, LD = 85.5%,  $\chi = 3.833$ ,  $df = 1$ ,  $p = .05$ ); attending class (PD = 69.2%, LD = 21.4%,  $\chi = 12.476$ ,  $df = 1$ ,  $p < .001$ ); and in test writing (PD = 45%, LD = 88.5%,  $\chi = 10.085$ ,  $df = 1$ ,  $p < .01$ ). No other comparison was significant.

### Contact Notes Analysis

Table 2 provides the mean, standard deviation, and range for the proportion of the total issues committed to each of the four themes by the two experimental groups. A one-way analysis of variance (ANOVA) was conducted with Group (PD group, LD group) as the independent variables, and Academic, Internal, External and Accommodations as the dependent variables. The analysis revealed a significant main effect for internal ( $F(1, 54) = 19.776$ ,  $p < .001$ ,  $r = .518$ ); for external ( $F(1.54) = 45.471$ ,  $p < .001$ ,  $r = .676$ ); and for accommodation ( $F(1.54) = 42.196$ ,  $r = .662$ ). There was not a significant between-group effect for academic ( $F(1.54) = 2.196$ ).

### Discussion

In two important ways, this study expanded the existing body of research dealing with students with PD in postsecondary education. The research hypothesis that students with PD face a different set of barriers than students with other types of disabilities was supported. First, students with PD were significantly less likely to graduate than students with LD. Second, a comparison of the archival records of the two groups found students with PD experienced two unique barriers, those of access and distraction. Following a discussion of each finding, directions for further research are proposed.

The overall graduation rate among college students in Ontario is reported at approximately 70% (Finnie, Childs & Qiu, 2010). The 2010 graduation rate at this study's college was almost identical to the provincial average. In the study population, the graduation rate for the LD group in this study was over 60% as compared to 25% for students with PD. This difference

Table 1

*Comparisons of PD and LD Groups: Demographics, Success, Intake & Outcomes*

Variable	PD	LD	df	t	chi	sig
<b>Demographics</b>						
Age	23.61	20.18	54	2.489		p < .05
% Female	64.3%	60.7%	1		.076	ns
<b>Academic success</b>						
Semesters in College	2.84	2.55	30	.512		ns
Cumulative GPA	2.20	2.39	54	1.03		ns
Graduation Rate	25%	60.5%	1		7.29	p < .01
<b>Intake</b>						
Yrs. since SS Grad.	4.52	1.14		2.905		p < .01
Proactive Self-referral	39.3%	67.9%			4.595	p < .05
Diagnosis after SS Grad.	75%	7.1%			26.635	p < .001
Assessment Provided	10.7%	96.4%			41.354	p < .001
IEP Provided	7.1%	96.4%			44.700	p < .001
University Attendance	25%	3.6%			5.250	p < .05
<b>Disabilities Services Outcomes</b>						
# contact notes	45.46	21.32	54	1.571		ns
Mean # categories per note	2.64	1.79	54	4.046		p < .001
# serious distractors	2.32	.71	54	4.663		p < .001
Academic difficulty	35.7%	50%	1		1.167	ns

*Note.* Proactive = Students whose first contact with the DS unit was prior to 1 Sept 2007  
 SS = Secondary School. IEP = Individual Education Plan

in graduation rates replicated findings of Cavallaro et al. (2005) and Moisey (2004). Both studies reported students with PD in postsecondary education were less successful than any other disability group. The reason may be that students with PD experience barriers that have not been adequately recognized or accommodated by educational institutions. To distinguish between generic and unique barriers, the experiences of PD and LD students were compared on a variety of variables including academic skills, endurance and drop-out pattern, cognitive and student skills, integration into the existing disability support system, and the number and severity of the distractors experienced by each group.

Results did not support the hypothesis that the poorer graduation rate among students with PD, as compared to students with LD, was the result of weaker

academic skills in the PD group. There were no significant between-group differences in cumulative GPA (i.e., PD = 2.20, LD = 2.39); in percentage of students whose transcript recorded serious academic difficulties (i.e., PD = 35.7%, LD = 50%); or the proportion of issues raised in the academic theme of the contact notes (i.e., typically, notes were made only when the student was experiencing classroom or program difficulties). With the exception of reading (on which the PD group rated themselves higher than the LD group) there were no significant differences between the groups in self-ratings of their abilities in oral language, listening, written language, and mathematics. This is consistent with the findings of Mowbray and Megivern (1999) who reported that only 13.4% of PD students in their study listed academic difficulties as

Table 2

*Percent of Contact Notes Devoted to Four Themes*

Themes	PD Group			LD Group		
	M	SD	Range	M	SD	Range
Academic	14.80%	8.13	4.44 - 33.82	11.53%	8.35	0 - 29.63
Internal	15.72%	9.25	0 - 32.14	5.34%	8.19	0 - 30.56
External	27.46%	11.63	5.56 - 48.00	8.76%	8.96	0 - 27.27
Accommodations	42.03%	19.14	10.71 - 81.11	74.37%	18.10	36.36 - 100

a barrier. It should be stressed, however, that these are self-ratings and lack of accurate self-awareness or self-confidence may be reflected in the relatively poor ratings of the PD group. These self-ratings were also inconsistent with the fact that a significantly greater percentage of the PD group, as compared to the LD group, had previously attended university where admission requirements are more stringent than are the requirements for college enrollment.

Endurance, measured by the average length of stay for the non-graduates, did not differ significantly between the study groups. The average stay was 2.84 semesters for the PD group as compared to 2.55 semesters for the LD group. Neither was there a significant difference in the pattern of drop-out, with 52.4% of the PD group and 63.6% of the LD group leaving before the beginning of the second year. This pattern is typical of students in postsecondary education (Finnie et al. 2010).

In general, students with PD and students with LD rate their cognitive and student skills as being similarly weak. Results found no significant differences in the self-ratings between PD and LD groups in the areas of attention, memory, organization, and time management. When asked to rate themselves on a series of student skills, there was no difference between the groups in group work, notetaking, study skills, or submitting assignments. The PD group self-

reported significantly greater difficulty in maintaining class attendance as compared to the LD group. The LD group self-rated their test taking skills as significantly weaker than the PD group.

As compared to LD students, the profile of PD students that emerged from this study is one of marginalization – students functioning on the periphery of the established disability support system. It should be noted that only 28 PD students entering the college as full-time students in the Fall 2007 semester, out of a first year class of 6,574 students (Fanshawe College, 2008), made a self-referral to the DS unit at any time during the semester. For over 60% of the PD group, self-referral came after the beginning of classes and, in some cases, late in the semester when the individual's potential for success was in serious jeopardy.

The difficulty that students with PD have in accessing and utilizing services is a significant and unique barrier rooted in the interaction between the disability-related experiences of the two groups and the DS self-advocacy model used by the college. LD students typically arrive at college with an extensive history of support for their disabilities. The symptoms of a learning disability, defined as a difficulty in acquiring and using verbal and nonverbal information (Learning Disabilities Association of Canada [LDAC], 2002), are most often diagnosed in childhood. Governments

across North America have enacted legislation to identify, remediate, accommodate, and monitor the school needs of children and adolescents with LD. Powerful support groups such as the Learning Disabilities Association of Canada (America) advocate or lobby for improved services for their client group. Teaching the skills of self-advocacy – including awareness of rights to accommodation, understanding one’s learning style, and how to effectively request appropriate accommodations – is standard training for LD students preparing for PSE (Alberta, 2002). It is not surprising, therefore, that over 96% of the LD group in this study entered the college with an extensive history of supports already in place, including full psychoeducational assessments and IEPs detailing the compensatory accommodations appropriate for each student. This prior self-advocacy training, along with systemic support for these norms, is one major reason that significantly more of the LD group made proactive self-referrals to the DS unit as compared to the PD group.

The pre-PSE situation for the PD group was very different. Because 75% of these students did not have their illness diagnosed until after they had left secondary school, they had little experience with DS services or supports. Less than 11% had completed any form of assessment or IEP when they arrived at the college. As a group, these PD students had been out of secondary school for an average of 4.5 years and lacked access to the transition supports typically provided for students moving from secondary school to PSE. Furthermore, as newly diagnosed individuals, they may have felt stigmatized (Blacklock, 2003; Martin, 2010; OCHA, 2009), experienced fear of disclosure (Collins & Mowbray, 2005; Haas et al., 2008; University; Megivern, Pellerito, & Mowbray, 2003; of Waterloo, 2011a), questioned whether a psychiatric disability warrants support (Megivern et al., 2003, Weiner & Wiener, 1996;), or they may have been skeptical about the quality of available support (Eisenberg et al., 2007).

In addition to limiting access to available DS, the self-advocacy model may have the unintended effect of narrowing the categories of students with PD who self-refer to the DS unit. Over 90% of the students in the PD group in this study had a mood, an anxiety, or a dual mood/anxiety diagnosis, proportions comparable to those found by Holmes et al., (2011) and by Collins and Mowbray (2008). In a recent American study, however, Hunt et al. (2010) reported substance abuse disorders were more prevalent than were mood

and anxiety disorders among a very large sample of adults who had some college education. Prior research on Canadian campuses showed the same predominance of substance abuse over mental health issues (Adlaf et al., 2005). Students who would qualify for support, such as those with substance abuse disorders or eating disorders, may not be aware of their right to accommodations and other types of support, a barrier “in the college environment [which] can prevent students from taking full advantage of their rights” (Collins & Mowbray, 2008, p. 91).

This study further highlighted the ongoing interference associated with multiple distracters experienced by students with PD. While some distractors (e.g., finances, relationships, sadness) are common to many students, it is the number and the severity of the distractors experienced by the PD group that makes this a unique barrier. As can be seen in Table 2, almost 75% of the categories recorded in the contact notes for the LD group focussed on developing accommodations, including hiring tutors and notetakers, or purchasing adaptive hardware and software – factors directly linked to academic success. In contrast to the LD group, the PD group spent a significantly greater proportion of time dealing with internal and external issues including their anxiety and depression, social relationships, housing, and the ongoing necessity of dealing with support agencies and medical groups – issues that acted as distractions and interfered with their ability to function successfully as students. Not only did the PD group experience more distractors, the distractors were potentially more debilitating as they commonly involved suicide ideation, homelessness, serious interpersonal conflicts, and hospitalizations (Gallagher 2011).

It can be argued that distractors do not interfere directly with basic academic skills such as the ability to read with understanding or to express one’s ideas on paper. Rather, the distractors interfere with one’s ability to perform the basic student functions of attending classes, reading assignments, or submitting papers on a consistent and long-term basis. Since “time on task” (Carroll, 1963) is central to academic success, the potential interference of these distractors – especially as they increase in severity – is a unique barrier to success for students with PD.

## Limitations

This study had several limitations. The small sample size, and the fact that the study was limited to students who attended one community college as first year students during the autumn semester of 2007, limits the generalizability of the findings. Second, the students in the study represented only those who made self-referrals to the DS unit. They were also a select group representing primarily those with mood or anxiety disorders; there were no students with addiction disorders, eating disorders, or personality disorders who may reflect a more accurate view of students with PD in postsecondary education. The 75% “leaving school early” figure in the PD group includes students who may have transferred to another college. Nor does it take into account the fact that some of these students may return to complete their education at a later date. The fact that only seven students (i.e., 25%) of the PD group graduated prevented any analysis of causal relationships between barriers and graduation. A further limitation was that the data on the academic, cognitive, or study skills of the participants was highly subjective. Self-reporting of skills taken on intake may be compromised by self-esteem and other subjective issues. The College enrolment includes a large number of First Nations (~350 in 2011) and International students (~1400 in 2011). The small sample size precluded differentiating study participants on an ethnicity dimension, so we cannot address incidence, usage, or outcomes for these students. Finally, the fact that the coding of the contact notes was performed solely by the first author opens the possibility of bias.

## Conclusions

Findings from this study further support the argument that many PD students in postsecondary education are not well served by the self-advocacy model of service delivery. For students with PD, especially those in transition to PSE or in immediate post-diagnosis stage of their disability, a more comprehensive, responsive, and supportive model may be more effective for successful postsecondary retention, credential completion, and labour force integration.

Current and future postsecondary mental health policy directions primarily focus on health promotion initiatives and early intervention strategies for students entering postsecondary streams (MHCC, 2009;

MOHLTC, 2009; University of Waterloo, 2011a; World Health Organization [WHO], 2003). Comprehensive and integrated initiatives designed for the postsecondary environment can ultimately lead to significant population-level improvements in health and well-being in the most cost-effective manner. That said, the documented growing population of entering/returning students who already have serious PD could remain largely marginalized even with the most effective self-advocacy approaches for postsecondary populations.

Two categories of barriers experienced by students with PD in postsecondary education were identified in this study. The first barrier is one of access and results from the interaction between the symptomology of the illness, the lack of experience with the disability support system, and the reactive model of DS used in many postsecondary institutions. The second barrier results from the significant external and internal distractors experienced by students with PD. These findings suggest students are detracted from, or unable to effectively implement, timely self-advocacy to ensure their postsecondary success, even if necessary services are available. In many cases and in spite of resource commitment, the current DS service model falls short in the provision of timely and effective service for students with serious and/or persistent PD. Basically, these students face a high number of internal and external distractors and are much less likely to partake in self-advocacy that leads to services. Adopting current community-based mental health policy to deliver effective services to these students suggests the need for college/community collaborations that involve intensive case management services (CMHA, 2012; Western Ontario Therapeutic Community Hostel [WOTCH], 2012; WHO, 2003).

Coordinating management of mental health cases in community settings has been in practice since the 1960s (Marshall, Gray, Lockwood & Green, 2004). Various models have been developed and documented in practice (Bond, 2002; Hanagan, 2006), all with the expressed intent of maintaining regular contact between patients and an array of health services (Marshall & Lockwood, 2004). Considerable evidence of effectiveness of these approaches has been documented, most notably in meta-analyses (Marshall & Lockwood, 2004). Current direction in policy and practice of most postsecondary institutional action on student mental health was first exemplified by Cornell University’s Mental Health Framework (Cornell University, 2004;

Eells, Marchell, Corson-Rikert, & Dittman, 2012). This public health model of practice is the leading choice in the development of mental health strategy frameworks at prominent Canadian postsecondary institutions (Hanlon, 2012).

Shared advocacy is at the core of this approach, with community-based case managers coordinating treatment and rehabilitation support, including common life areas such as housing, budgeting, relationship-building, skills development, community involvement, physical and mental wellness and involve additional community service providers as required – some of the key barriers identified in this study. Ontario's Community Mental Health Evaluation Initiative ([CMHEI]; 2004) has shown this intensive and integrative approach significantly improved the stability and trajectory of long-term health outcomes and social reintegration of adults with serious mental health issues.

Several key factors can be delineated for DS practice in a shared advocacy model. These include (a) developing an aggressive outreach program targeting current and prospective students, ensuring students are aware of their right to the service; (b) providing integrated support services between postsecondary and community mental health (a wrap-around model of care); (c) coupling front-end loaded supports like functional academic and psychosocial assessments with proactive academic planning for students who are unaware of how their disability impacts their learning; (d) implementing early-stage contingency planning for times of individual student crisis; and (e) developing disability-specific accommodations and supports, particularly around the multiple serious distracters that interfere with academic progress. In this approach, responsibility for advocacy is shared between the student and the DS staff, an approach based on the realization that these are students who are new to disability support services and who need active and assertive support while they master the skills of self-advocacy.

Future research requires larger sample sizes from multiple postsecondary institutions to confirm the existence of barriers of access and distraction and test causal relationships between these barriers and academic success for students with PD. Further, we suggest close collaboration with community partners to evaluate intensive case management systems with this population. Standardized outcome measures are systematically available to evaluate the degree to which targeted accommodations are able to mitigate the effect of these barriers.

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## Appendix A

### Self-Rating of Academic, Cognitive & Student Skills from Intake Form

Do you have problems with the following academic demands?                      Yes                      No

#### **Academic**

Putting your thoughts into words when speaking

Understanding what you read

Math calculations

Written Expression

Listening

#### **Cognitive**

Memorization

Time Management

Attention or Concentration

Organization

#### **Student Skills**

Attendance

Note Taking

Test Taking

Completing Assignments

Group Work

Study Skills

## Appendix B

### Categories from Contact Notes Grouped by Themes

#### Internal

- Self-harm
- Feeling bad
- Sad/lonely
- Stress/anxiety
- Depression
- Anger
- Psychotherapy

#### External

- Finances
- Relationships
- Family
- Housing
- Employment
- Medications/Doctors
- Drugs/alcohol
- Community Agencies

#### Accommodation

- Study skill training
- Accommodation Sheet
- Test writing
- Tutor/coach
- Technology
- Course load
- College policies
- Assignments
- Career/Psych test
- Groups/clubs
- Referral outside
- Bursary/Financial Aid Office
- Administration DS Unit

#### Academic

- Registration Office
- Program Office
- Course Work
- Faculty/Staff

## Appendix C

### Serious Distractors from Contact Notes

Theme	Serious Distractor
Academic	Registration in program which was not first choice or which student expressed active dislike Serious and persistent conflicts with faculty over classroom behaviours
Internal	Student described (either by staff or by student) as being overwhelmed or in crisis Student expresses suicide ideation or makes suicide attempt
External	Homelessness Financial need (student given food vouchers by college) Serious, ongoing family or relationship conflicts Hospitalization
Accommodation	Unresolved delays in accessing equipment or accommodations