RUNNING HEAD: PSYCHOLOGY GRADUATE STUDENT TRAINING

Psychology graduate student training in developmental disability: A Canadian survey

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Abstract

Psychology graduate student training in developmental disability has received very little attention in North America, and no study has examined the state of training for clinical and counselling psychologists in Canada, despite their involvement in the controlled act of diagnosis and their use of standardised instruments used regularly with this population. This study sought to examine psychology graduate student training in the area of developmental disability across Canada. We invited students from every Canadian Psychological Association accredited Clinical Psychology, Clinical Neuropsychology, and Counselling Psychology program to participate in an online survey, distributed through university email lists. Three hundred and three students reported on the developmental disability content within their training and coursework, their perception of the adequacy of that content, and their ideas for program improvement. Results indicated that the majority of students believed it important to have training in developmental disability, yet struggled to obtain adequate didactic and experiential opportunities. The lack of sufficient training was most pronounced for students whose training was adult-focussed, but was also high for students with a lifespan or child focus. We discuss different possibilities for increasing developmental disability training opportunities, including integrating its content within courses on assessment and diagnosis, psychotherapy, and ethics, and providing students with supervision from psychologists who work with this population.

Keywords: graduate training, clinical psychology, developmental disability, intellectual disability

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Much attention has been paid to diversity training in clinical and counselling psychology programs, which includes training psychologists to work with "people with handicapping conditions; of differing ages, genders, ethnic and racial backgrounds, religions, and lifestyles; and from differing social and individual backgrounds (American Psychiatric Association [APA], 1979, pp. 4, as cited in Harris-Bluestone, Stokes, & Kuba, 1996)". Authors have discussed the need for diversity training in psychology with regard to sexual orientation, urban versus rural settings, age, and cultural background (Alderson, 2004; Brooks, Mintz, & Dobson, 2004; Dana, Aguilar-Kitibutr, Diaz-Vivar, & Vetter, 2002; Fouad, 2006; Harowski, Turner, LeVine, Schank, & Leichter, 2006; Hertzsprung & Dobson, 2000; Zweig, Siegel, & Sunder, 2006). The importance of diversity training is underscored by its required presence in the Canadian Psychological Association Accreditation Standards (Standard III/IV, CPA, 2002) and American Psychological Association Accreditation Domains (Domain D, APA, 2009). However, these standards do not explicitly indicate that training in developmental disability (DD) is required. This is in sharp contrast to training in the U.K., where each doctoral student in clinical psychology completes a 6-month placement in a DD community team (British Psychological Society, 2005). To our knowledge, only one article exists with regard to graduate student training in DD, which was from the perspective of professional paediatric psychologists (La Greca, Stone, Drotar, & Maddux, 1988).

The global definition of developmental disability that we adopted for this project is that put forth by a Canadian national coalition of service providers, advocates, and researchers, which notes that:

> "Children, youth and adults who have significantly greater difficulty than most people with intellectual and adaptive functioning and have had such difficulties from a very

> early age (or the developmental period prior to age 10). Adaptive functioning means carrying out everyday activities such as communication and interacting with others, managing money, doing household activities and attending to personal care. This definition of developmental disability also includes children, youth and adults with developmental disorders such as Fetal Alcohol Spectrum Disorders or Autism Spectrum Disorders (National Coalition on Dual Diagnosis, 2009, pp. 2)."

Approximately 1-3% of Canadians are thought to have a DD (American Psychiatric Association, 2000; Ouellette-Kuntz et al., 2005; Oullette-Kuntz & Paquette, 2001), and these lifelong disorders require psychological assessment and treatment across the lifespan, impacting not only the person with the disability, but their family and paid caregivers. The majority of individuals with DD now live in local communities rather than in separate institutions for people with DD (Oulette-Kuntz et al., 2005), and there is a strong network across the country that advocates for full inclusion in schools and communities (Canadian Association of Community Living, 2008).

Psychology training in DD is important for a number of reasons. The most obvious way that psychologists are relevant to this population is in making a diagnosis of either pervasive developmental disorder or intellectual disability. Psychologists are responsible for the assessment of the cognitive and adaptive behaviour skills that are defining criteria of intellectual disability (referred to as Mental Retardation in the DSM-IV-TR; APA, 2000), and that have been identified as part of Canadian best practices in the assessment and diagnosis of autism spectrum disorders (Nachshen et al., 2008). Therefore every psychologist who administers intelligence tests should know how to make a diagnosis of intellectual disability, and arguably cannot conduct diagnostic assessments of either intellectual disability or autism spectrum disorder without being familiar with the other, given the degree of overlap between the two.

However, psychologists also play an important role in assessing and treating behaviour problems and mental health issues in this population. People with DD are known to have a

higher risk of developing mental health problems or problem behaviours compared to peers without DD across the lifespan, with large-scale studies suggesting point prevalence rates of mental health problems at approximately 40% (Beange, McElduff, & Baker, 1995; Cooper, Smiley, Morrison, Williamson, & Allan, 2007; Emerson & Hatton, 2007; Tonge & Einfeld, 2000). There are many examples of applied behavioural interventions used to treat problems in people with DD (e.g., Carr et al., 1999; Didden, Duker, & Korzilius, 1997; Prout & Norwick-Drabik, 2003; Rush & Frances, 2000), and there is an increasing recognition of the usefulness of conventional psychotherapy (most often cognitive behaviour therapy; e.g., Taylor, Novaco, Gillmer, & Thorne, 2002; Taylor, Novaco, Gillmer, Robertson, & Thorne, 2005). As well, families of individuals with DD experience significant levels of stress and many would benefit from counselling and psychotherapy to help them manage their situation and support their family member as best as possible (Davis & Carter, 2008; MacDonald, Hastings, & Fitzsimons, 2010; Nachshen, Garcin, & Minnes**,** 2005).

Unfortunately, the mental health needs of individuals with DD are often unmet (Lennox, Beange, & Edwards, 2000; Linehan, Noonan Walsh, van Schrojenstein Lantman-de Valk, & Kerr, 2004), due to a lack of sufficiently trained psychologists and psychiatrists who are able or willing to provide this population with care. Authors from many industrialized nations, including Canada, have identified mental health care in this population as an addressable health inequity (Dekker & Koot, 2003; Irish College of Psychiatrists, 2004; Krauss, Gulley, Sciegaj, & Wells, 2003; McCarthy & Boyd, 2002; Ouellette-Kuntz, 2005; Oullette-Kuntz et al., 2005).

Psychologists have a critical role to play in addressing this health inequity. With the ongoing closure of institutional residences for people with DD across the country, these individuals are expected to live within mainstreamed community settings, and receive

community-based services. Similar to the experience of medical physicians and psychiatrists (Goldberg, 1996; McCreary, 1991, 2001), the emphasis on full inclusion and normalisation will require that community-based psychological service providers understand the mental health needs of this population. Indeed, although psychological service provision to individuals with DD was traditionally considered a highly specialized area, removed from general practice, the increasing trend away from segregation and towards full inclusion suggests that general practitioners will have an increasing role to play in the future.

It is important that we begin to assess the needs of Clinical and Counselling Psychology graduate students from across Canada if we are to develop the capacity to assist people with DD across the life span. Recent research has examined the training experiences in DD of Canadian medical students (Burge, Ouellette-Kuntz, Isaacs, & Lunsky, 2008) and psychiatric residents (Burge, Ouellette-Kuntz, McCreary, Bradley, & Leichner, 2002; Leichner, 1977, 1987). In polling 196 upper year undergraduate medical students (i.e., clerks) from two Canadian medical schools, Burge and colleagues (2008) found that 85% noted receiving some didactic education on DD, but that half of this group also noted that the quantity was inadequate. The majority (93%) noted that more clinical training was needed with patients with DD. In their survey of 60 psychiatry residents writing a Canadian preparatory exam, Burge and colleagues (2002) found that for the majority of training topics (e.g., diagnosis of DD, psychotherapy for people with DD, etc.), most noted their clinical training with patients with DD to be inadequate, findings consistent with earlier studies of psychiatric resident training (Leichner, 1977, 1987).

The purpose of the current study was to understand the perspectives of graduate students in Clinical and Counselling Psychology programs across Canada on their didactic and clinical training in DD. We were interested in assessing their current experiences and in gauging the

additional training students would like to have. Based on the results from surveys of medical school training and our own experience as graduate students and as practicum and internship supervisors, we hypothesized that the majority of graduate students in Psychology would not rate their level of DD training as sufficient. Because the breadth of clinical experiences available to students increases with the number of years that students are enrolled in graduate school (i.e., first year Master's students will likely have less opportunity to take an elective course or conduct psychotherapy compared to upper year doctoral-level students), we hypothesized that the degree of DD training would be related to the level of graduate school. As well, because DD is typically diagnosed in childhood[1], we hypothesized that students who are focused on children as a clinical area would note more training than students who are focused on adults.

Methods

Participants

We recruited graduate students who were enrolled in Clinical Psychology, Clinical Neuropsychology, and Counselling Psychology graduate programs from across Canada. Universities were identified by the Canadian Psychological Association accreditation website or by registration with the Canadian Council of Professional Psychology Programs (as of December 2008). The current analysis is limited to students enrolled in the 24 CPA accredited Clinical Psychology programs, one CPA accredited Clinical Neuropsychology program, and 4 CPA accredited Counselling Psychology programs. We used an online survey that was circulated to students via each graduate program's director of clinical training, and 303 respondents were from CPA accredited programs across 8 provinces, out of an estimated 1600 graduate students[2]. For

[1] The DSM-IV-TR (American Psychiatric Association, 2000) lists Pervasive Developmental Disorders under *Disorders usually first diagnosed in infancy, childhood, or adolescence.*

[2] We estimated the population of graduate students by examining program statistics that were presented on program websites or by emailing directors of training.

the purposes of examining differences based on graduate school experience, students were designated as "beginner" if they were in a Masters program, "intermediate" if they were in PhD/PsyD1 – PhD/PsyD2, and "advanced" if in PhD/PsyD3 or above.

Survey

An online survey was developed by adapting the one used to assess Canadian medical students' training in DD (Burge et al., 2008), and was posted through an online survey tool (www.surveymonkey.com). The survey was anonymous, and asked graduate students to report their level of graduate school training (year of MA, PhD, or PsyD), university, primary theoretical orientations, intended areas of competence and primary client groups[3], previous experiences with people with DD, coverage of DD educational and clinical experiences, opinions on ways to improve DD training, and future professional plans. The survey was available in English and French.

Procedure

After obtaining ethics approval from the Centre for Addiction and Mental Health's Research Ethics Board, we contacted the director of clinical training from each program, and asked that they forward the invitation to their students to participate in the online survey. The directors circulated the survey via internal email lists. Interested students could click on a link to the information letter and online consent form. Once they gave informed consent, they were directed to the 15-min survey. Students were only able to complete the survey once. The survey was conducted between December, 2008, and February, 2009.

Results

Respondent characteristics

[3] Taken from the College of Psychologists of Ontario's areas of competence and client groups (The College of Psychologists of Ontario, 2005 revised 2009).

Respondents' degree of education, training focus, and geographic location varied widely. As shown in Table 1, 69% of the sample consisted of PhD-level students, while 26.3% consisted of Masters-level students. Approximately 27% of students were designated as "beginner", 35% as "intermediate", and 39% as "advanced". The majority of respondents were located in Ontario (42%) and Quebec (26%); levels commensurate with the percentage of CPA accredited programs located in Ontario (40%), and Quebec (24%). As expected, the majority of respondents (87.8%) came from clinical programs.

Insert Table 1 here

In terms of intended client groups, respondents whose clinical focus was "child only" (4.3%), "adolescent only" (0.7%), and "child and adolescent but not adult" (30.4%) were combined into the "youth focussed" group (35.4%). Individuals whose focus was "adult only" (32%) and "adolescent and adult but not child" (10.9%) were combined into the "adult focussed" group (42.9%). Individuals whose focus was "child, adolescent, and adult" (13.9%) and "child and adult" (4%) were combined into the "lifespan focussed" group (17.9%). There was no relationship between clinical focus and level in graduate school, $\chi^2(4, N = 301) = .77, p = .95$.

Table 2 ranks the percentage of the sample to come from each university. Université de Montréal, with its Clinical Psychology and Clinical Neuropsychology programs, and York University, with its Clinical Psychology and Clinical-Developmental Psychology programs, contained the most respondents (14.2% and 9.6%, respectively).

Insert Table 2 here

Perceptions of training

Most graduate students rated training in DD as "somewhat important" (55.6%) or "very important" (38.1%), and 85% of students agreed that training in DD would improve their ability to provide psychological services to other populations. At the same time, the majority of students indicated that they had not taken a mandatory or elective course in DD as part of their graduate training (70% indicated "No" to both). Four percent of the sample (n = 11) took both an elective and mandatory course. Of the 15.5% (n = 46) who took a mandatory course, 61% (n = 27) rated the course training as "adequate" or "extensive" (rather than inadequate). Of the 14.5% (n = 41) of individuals who took an elective course, 78% (n = 32) rated the course training as "adequate" or "extensive". Significantly fewer students in the "adult focussed" group had taken a course in DD (16.7%) compared to students in the "lifespan focussed" or "youth focussed" groups (30.2% and 36.3%, respectively), $\chi^2(2, N = 299) = 11.67, p = .003$.

When students were asked to rate how well they felt they were educated to work with people with DD, 40% rated their overall education as "sufficient but need more" and 54.5% rated their education as "poor". Table 3 lists the percentage of the sample that reported having received some education in various specific DD topics, and the percentage of this group that rated the coverage as "adequate" or "extensive" (rather than inadequate). Chi-square analysis confirmed that a greater percentage of students who rated their overall education as "poor" also noted having received no education in each specific DD topic compared to students who rated their overall education in DD as "sufficient" (all p's < .001). The top three topics covered included the diagnosis of DD (79%), diagnosis of mental illness or behaviour disorders in people with DD (50.8%), and how to respond to disability in general (47.2%). Depending on the

specific topic, between 31%-64% of students who received some education in each topic rated it as "inadequate".

Insert Table 3 here

Contrary to expectations, there was no relationship between level of graduate school ("beginner", "intermediate", "advanced") and overall education rating ("poor" vs. "sufficient but need more"), $\chi^2(2, N = 297) = 2.50, p = .29$. Chi-square analysis did indicate a positive relationship between the level of graduate school and training in the diagnosis of DD, $\chi^2(6, N = 297) = 26.56, p < .001$. However, 51% of students at the "advanced" level continued to rate their overall training as "poor". Approximately half of students at the "advanced" level had not received any education in the diagnosis of mental illness in people with DD (43%) and two thirds had not received any education regarding psychotherapy for people with DD (66%). As expected, a greater percentage of students in the "youth focused" group reported "sufficient" overall training (72%) compared to those in the "adult focused" group (25%) and in the "lifespan focused" group (47%), $\chi^2(2, N = 297) = 30.42, p < .001$. As shown in Table 4, compared to students in the "adult focused" and "lifespan focused" groups, a greater percentage of students in the "youth focused" group reported receiving education in specific DD topics.

Insert Table 4 here

In terms of clinical experience, 90% of our sample had observed or conducted psychological assessments, and of this group, 38% had never observed or conducted an

assessment with a person with DD. A significantly greater percentage of students in the "adult-focused" group had never been involved in an assessment of a person with DD (51%) compared to the "youth focused" group (20%) or "lifespan focused" group (39%), $\chi^2(2, N = 298) = 21.90$ $p < .001$. Of the 91% of students who had observed or conducted psychological interventions, 79% had never done so with a person with DD. Eighty-three percent of the "adult focused" and "lifespan focused" group had never been involved in an intervention for people with DD, compared to 71% of the "youth focused" group, $\chi^2(2, N = 298) = 5.13$, $p = .08$. As expected, there was a positive relationship among graduate school level and involvement in an assessment, $\chi^2(2, N = 298) = 16.52$, $p < .001$, and intervention, $\chi^2(2, N = 298) = 11.13$, $p = .004$, with a person with DD.

Additional training

Students were asked to indicate what types of training improvements they would like to see incorporated into their graduate training, listed in Table 5. Over 80% of students would like to have more clinical contact with people with DD, more current content on DD in classes, have guest lectures by specialists in DD, and have more curriculum dedicated to DD content.

Insert Table 5 here

Discussion

This study is an important first step towards developing guidelines for Clinical and Counselling Psychology training in DD in Canada. Clearly, graduate students in Clinical and Counselling Psychology programs value training in DD, and most believe that this will contribute to their skills in providing psychological services to other client groups. This insight is

shared by psychiatrists in training (Reinblatt, Rifkin, Castellanos, & Coffey, 2004) and medical students (Burge et al., 2008) and is based on the idea that being able to establish rapport, communicate, assess, and treat individuals with DD, who by definition have impairments in communication, problem solving or adaptive behaviour, requires a skill set that can assist any psychologist who provides clinical services. There is a need for greater training in DD for Canadian Psychology graduate students, especially given that the majority of individuals with DD in Canada live in the community across the lifespan, and many will use non-specialized psychological services rather than professionals with specialized advanced training in DD.

With the exception of being educated about the diagnosis of DD, at least half of respondents noted not receiving any education in specific DD topics. The level of coverage for respondents who did receive training was also often rated as inadequate. The level of training in DD is most limited for students who aim to provide services to primarily adult-age clients, which is highly problematic given that individuals with DD are expected to have their disability across the lifespan. The concern over the lack of adequate psychological services for adults with DD is echoed in recent papers put forth by advocacy organizations for individuals with DD (i.e., Autism Ontario, 2008). At the same time, many graduate students whose training is focused on youth also continue to lack a level of training in DD that they would like to have. The majority of pediatric psychologists surveyed have reported that training in DD was "very important or essential" for their practices (LaGreca et al., 1988).

Further discussions are required to determine the best mechanisms to provide more training to graduate students. In the open-ended part of our survey, many students wrote about the challenge of obtaining the specialized skills to work with people with DD and at the same time meeting their programs' research and clinical training requirements. There are, however,

many different ways that students can gain exposure to individuals with DD across the lifespan, other than through dedicated courses. Authors have recommended that diversity training be "infused" throughout a program's curriculum (Fouad, 2006), and it is certainly conceivable that youth, adult, and lifespan-focused programs can incorporate DD content in their psychotherapy, assessment, and ethics courses.

There are also opportunities outside of the graduate program to obtain training in DD. When LaGreca and colleagues (1988) asked pediatric psychologists when they felt training in DD should occur, only 41% felt that training should occur at the graduate level, while the remaining felt that it should be pursued at the internship or even postgraduate level. An overview of CPA accredited internship programs has highlighted a number of clinical opportunities at practica and internship levels (e.g., Bloorview Kids Rehab, CAMH Dual Diagnosis Program, Kingston Internship Consortium), although most are only in child focussed settings.[4] It is certainly important that graduate students obtain supervision by clinicians who are interested and competent to work with individuals with DD. There is also a growing number of opportunities for psychologists to participate in interprofessional education opportunities within healthcare settings (Priest, et al., 2008; Winefield & Chur-Hansen, 2004), and Canadian interdisciplinary working groups are developing case based learning modules on DD that can be accessed via the internet (Morris et al., 2009).

There are two problems with the internship/post-graduate approach. First, without well-supervised exposure (not just exposure but exposure that is good, exciting, and interesting) within graduate training, students are unlikely to pursue postgraduate experiences. The other problem is that general clinical and counselling psychologists still require some generalist

[4] See http://www.cpa.ca/accreditation/cpaaccreditedprograms/

knowledge so that they can appropriately recognize DD, and refer onward for more specialised consultation and treatment. Waiting for internship experiences to obtain training in DD will result in training for relatively few clinical and counselling psychologists, and less than what is required to provide services to a population that has such high service needs across the lifespan. In smaller communities, where specialist services are not available, generalists must also have some basic comfort, knowledge, and skill with this population. This would include knowing how to conduct cognitive and adaptive behaviour assessments, and how to modify questions and include informants as required to assess for mental health concerns.

This study is limited by the potential response bias inherent in survey research. We have no information on nonrespondents and cannot rule out the possibility that those who responded are more concerned about the topic of DD than the typical graduate student in Psychology. As well, the current analysis cannot be generalized to the experience of graduate training in unaccredited programs.

Conclusion

All psychologists need to have some training in the assessment and diagnosis of DD, management of behaviour in DD, and understanding mental health problems in this population and how it can be treated. Training should also cover how to help and support the families of individuals with DD, especially if we are taking a lifespan approach or integrative approach to care. These objectives can be accomplished by infusing aspects of DD into already existing coursework and by making sure that in-house clinical opportunities as well as external practicum opportunities include people with DD and their families in their services. We believe that psychologists who are comfortable and invested in this population should be training Psychology graduate students, and authors have highlighted how leaders in the field of DD often develop an

interest in the population based on early training opportunities, positive experiences, and mentorship from other professionals in the field (Schalock, 1998). Future research could evaluate: 1) how students value improvements in curriculum, 2) how teaching in DD helps students more broadly, and 3) could also study how students who are interested become interested in the topic. Providing training in DD is an important part of enhancing the diversity content in CPA accredited programs and can help future psychologists to provide their services to a broader range of clients and presenting problems across the lifespan.

Table 1

Respondent Characteristics (N= 303)

Characteristic		%
Education level	MA1	12.5
	MA2	11.2
	>MA2	2.6
	PhD1	13.5
	PhD2	18.8
	PhD3	8.9
	PhD4	12.8
	PhD5	10.6
	>PhD5	3.4
	Any level of PsyD	3.7
	Unspecified	1.0
Province	ON	41.8
	QC	26.4
	AB	8.7
	BC	7.7
	SK	5.0
	MB	4.0
	NS	4.3
	NB	2.0
Type of program	Clinical Psychology	87.8
	Clinical Neuropsychology[5]	6.6
	Counselling Psychology	3.6
	Unspecified	2.0
Intended client groups	Adult	61
	Adolescent	56
	Child	53
	Family	37
	Couples	11
	Geriatric	10
Intended areas of competence	Clinical	92.1
	Counselling	34.0
	Health	24.4
	School	22.1
	Rehabilitation	14.2
	Clinical Neuropsychology	13.2
	Forensic	13.5
	Industrial / Organizational	1.3

[5] From the University of Windsor or Université de Montréal.

Theoretical orientation	Cognitive Behavioural	45.9
	Eclectic	11.6
	Integrative	10.9
	Psychodynamic	8.9
	Other	5.9
	Unknown	5.0
	Interpersonal	4.6
	Humanistic	3.9
	Behavioural	2.0
	Experiential	1.0
	Psychoanalytic	0.3

Note: Intended client groups and intended areas of competence are not mutually exclusive.

Table 2

University Distribution

University	Province	% of total sample
Université de Montréal	QC	14.2
York University	ON	9.6
Université Laval	QC	7.6
University of Windsor	ON	5.3
Lakehead University	ON	5.3
University of Calgary	AB	5.3
Queen's University	ON	5.0
University of Regina	SK	4.6
Dalhousie University	NS	4.3
Simon Fraser University	BC	4.3
Ontario Institute for Studies in Education/University of Toronto	ON	4.3
University of Guelph	ON	4.3
University of Ottawa	ON	4.3
Dalhousie University	NS	4.3
University of Manitoba	MB	4.0
University of Alberta	AB	3.3
University of Western Ontario	ON	3.0
University of British Columbia	BC	2.6
Concordia University	QC	2.3
McGill University	QC	2.0
University of New Brunswick	NB	1.3
Université du Moncton	NB	0.7
University of Victoria	BC	0.7
University of Waterloo	ON	0.3
University of Saskatchewan	SK	0.3

Table 3

Percentage of Reported Coverage and Adequacy of Coverage

Topic	Received coverage (%)	Of those who received coverage, % who thought it was "adequate or extensive"
Diagnosis of DD	79.0	56.6
Diagnosis of mental illness or behaviour disorders in people with DD	50.8	43.4
How you respond to disability or your attitudes toward disability in general	47.2	68.9
Psychiatric and behavioural phenotypes associated with specific DD	44.4	47.2
Psychotherapy as an intervention for people with DD and mental health problems	36.6	36.2
Specific strategies for communicating with people with communication problems due to DD	29.2	46.9

Table 4

Clinical Population of Interest and Percentage Reporting Adequacy of Training in Specific DD Topics

Specific DD topic	Focus	No	Yes, inadequate	Yes, adequate or extensive	χ^2 (4)
Diagnosis of DD	Youth	11.7	30.1	58.3	18.43, $p = .001$
	Adult	23.2	42.4	34.4	
	Lifespan	30.8	25.0	44.2	
Diagnosis of mental illness or behavior disorders in people with DD	Youth	37.9	30.1	32.0	17.78, $p = .001$
	Adult	52.8	33.6	13.6	
	Lifespan	62.7	15.7	21.6	
Psychiatric and behavioral phenotypes associated with specific DD	Youth	45.1	24.5	30.4	15.66, $p = .004$
	Adult	60.3	27.8	11.9	
	Lifespan	61.5	13.5	25.0	
Psychotherapy as an intervention for people with DD and mental health problems	Youth	56.3	24.3	19.4	8.92, $p = .06$
	Adult	65.1	27.0	7.9	
	Lifespan	69.2	15.4	15.4	
Specific strategies for communicating with people with communication problems due to DD	Youth	57.8	18.6	23.5	17.01, $p = .002$
	Adult	78.6	15.1	6.3	
	Lifespan	76.0	12.0	12.0	
How you respond to disability or your attitudes toward disability in general	Youth	45.6	13.6	40.8	7.27, $p = .10$
	Adult	52.0	17.6	30.4	
	Lifespan	65.4	13.5	21.2	

Table 5

Ways Training in DD Could be Improved

Ways training could be improved	%
Additional clinical contact with people with DD	86.4
Cover more current content on DD in classes	86.2
Have DD specialists provide guest lecture	86.1
Assign more curriculum time to learning about people with DD	82.7
Have better prepared instructors on DD	74.7
Additional orientation to available services and agencies	71.6
Have parent or self-advocate guest lecturers	50.0
Additional visits to community group homes	43.7
Additional visits to people with DD at their workplaces	32.6

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