Intellectual and Developmental Disabilities

Student Confidence in Providing Healthcare to Adults with Intellectual Disabilities: Implications for Health Profession Curricula
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Abstract:	Self-perceived confidence of health professions students at one university in caring for adults with Intellectual Disability (ID) was examined via an electronic survey using the Therapy Confidence Scale - Intellectual Disabilities (TCS-ID). A stepwise multiple regression of data collected from 232 completed surveys revealed that prior training and prior experience were predictors of TCS-ID total score. Adults with ID experience healthcare disparities due, in part, to poor provider communication and a lack of confidence. Results from this novel study suggest that opportunities for experiential learning and training with people with ID are important considerations for health professions curricula. Further research is needed for generalizability of results.

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Abstract

Self-perceived confidence of health professions students at one university in caring for adults

with Intellectual Disability (ID) was examined via an electronic survey using the Therapy

Confidence Scale - Intellectual Disabilities (TCS-ID). A stepwise multiple regression of data

collected from 232 completed surveys revealed that prior training and prior experience were

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Implications for Health Professions Curricula

Adults with intellectual disability (ID) face systemic health disparities, including shorter life expectancy and increased comorbidity of chronic conditions such as obesity, cardiovascular disease, and diabetes compared to those without ID (Cooper, et al., 2015, Desroches, 2019, St. John, et al., 2018, O'Leary, et al., 2017). This vulnerable population also faces disparities in healthcare. Healthcare practitioners often fail to recognize health conditions such as vision and hearing impairments, obesity, dental pathology, gastrointestinal disorders, and behavioural/mental health problems in this population (Coppus, 2013, Hanlon, et al., 2018). Hospitalization rates are higher for adults with ID compared to those without ID due to several factors including misdiagnosis and negative attitudes with this population, leading to unnecessary medical intervention and increased related healthcare costs (Balogh, et al., 2010, Hemm, et al., 2015). Diverse cognitive skills, health literacy, and communication abilities in people with ID contribute to varied abilities to express their health concerns to their provider, to understand medical procedures, and to comprehend recommendations for care (Sullivan & Heng, 2018, Ziviani, et al., 2004). Providers are similarly challenged to determine if or when their patient with ID understands medical information related to their care and may affect provider confidence in the patient's ability to give informed consent (Lennox, et al., 2004, Ziviani, et al., 2004).

Residing in the community and longer life expectancies have led to increasing numbers of aging adults with ID in general medical practice settings. General practice providers may not be trained or equipped to properly serve this population (Hanlon, et al., 2018, Phillips, et al.,

2004). Care provision is further impacted by the general attitude of a healthcare professional towards adults with ID. Healthcare providers have described experiencing fear, discomfort, frustration, uncertainty, a lack of confidence, and feeling generally overwhelmed when caring for adults with ID (Desroches, 2019, Wilkinson, et al., 2012). These reported insecurities are rooted in a lack of experience and limited or non-existent formal training in working with this population, likely influencing clinical decision-making and safe practice (Desroches, 2019).

Adults with ID also express dissatisfaction with aspects of their healthcare, notably in the areas of communication with their practitioner, and a general sense that their provider does not understand their needs (Newton & McGillivray, 2019, Wilkinson, et al., 2012). Clear communication has been identified as a core component of care for this vulnerable population (Agaronnik, et al., 2019, Baumbusch, et al., 2014).

Literature reveals that nurse and physician training programs provide minimal didactic, experiential, and clinical ID-specific educational preparation contributing to an inability to provide quality healthcare (Descroches, 2019, Wilkinson, et al., 2012). Most healthcare professionals are educated on basic communication with patients, but not on methods for teaching those with impaired communication skills (Primeau & Talley, 2019). The areas many practitioners have reported as being inadequately trained in are the same areas that adults with ID perceive as being of a poor quality of care: behavioural or psychiatric conditions, human relations and sexuality issues, complex medical problems, and preventative primary care (Phillips, et al., 2004). A majority of practitioners report interest in receiving education in the health areas identified as problematic in order to improve the care they are providing (Primeau & Talley, 2019, Wilkinson, et al., 2012).

Adults with ID experience healthcare disparities associated with providers' lack of knowledge, communication barriers, and lack of confidence in working with this population. Information about health professions student confidence may prove helpful in gaining insight into academic preparation and curricular needs. The purpose of this study was to explore the self-perceived confidence of students enrolled in multiple healthcare professional training programs at a large, urban private university in caring for adults with ID. More specifically, this study sought to answer the following questions:

1. Are there differences in confidence levels between students in different health professions programs?

2. Do health professions students gain greater confidence in working with adults with ID as they progress in their curriculum?

3. Do health professions students who have prior experience or training with people with ID report greater confidence in providing care to them?

Methods

Participants and Recruitment

After receiving Institutional Review Board approval from Northeastern University, all students enrolled in graduate health professions education programs in the University's Bouvé College of Health Sciences (n=1112) were invited to participate anonymously in this study via email with a link to a Qualtrics survey. Graduate programs in the Department of Applied Psychology are Applied Behavioral Analysis (Graduate Certificate, Certificate of Advanced Graduate Studies (CAGS) and Masters degree), School Psychology (CAGS, Masters and Doctor of Philosophy (PhD)), Student Development and Counseling (CAGS and Masters degree), Counseling Psychology (CAGS, Masters and PhD). Graduate programs in the Department of

Nursing are the Doctor of Nurse Practitioner, Doctor of Nurse Practitioner Anesthetist, PhD in Nursing, and the Masters in Nursing Direct Entry program. Remaining graduate programs from which participants were recruited are the Doctor of Physical Therapy, Masters in Physician Assistant Studies, Masters in Speech Language Pathology, and the Doctor of Pharmacy (PharmD) program.

Measurements

Demographic information was collected on gender, expected year of graduation, professional program, and prior experience with adults with ID. The Therapy Confidence Scale - Intellectual Disabilities (TCS-ID) was used to measure student confidence in treating adults with ID (Dagnan, Masson, Cavagin, Thwaites & Hatton, 2014). The TCS-ID consists of 14 questions that are answered on a 5-point Likert scale of self-reported confidence *(Not Confident* to *Highly Confident)*. Refer to Figure 1 for the questions. The scale's test-retest reliability is high (r=0.83) and Cronbach's alpha for the scale is 0.93. The scale is a valid measure as it was shown to differentiate between groups with or without ID training and specific experience (Dagnan, Masson, Cavagin, Thwaites & Hatton, 2014). The TCS-ID was designed to measure confidence levels of providers who engage in therapeutic-based relationships like psychologists and counselors (Dagnan, Masson,Cavagin, Thwaites & Hatton, 2014). The participants of this study included students enrolled in psychology and counseling programs as well as other professions which benefit from developing therapeutic relationships with this patient population, e.g., nursing, and physical therapy. Due to the terminology difference between the United States and the United Kingdom, "intellectual disability" was used to replace "learning disability" in the survey (Hronis, et al.,2018).

Data Collection and Analysis

Descriptive statistics were used to analyze demographic information. Data collected from the TCS-ID responses were analyzed using stepwise multiple regression to examine the contributions of gender, professional program, graduation year, prior experience, and prior training to the prediction of TCIS-ID total score. All analyses were performed using IBM SPSS Statistics (Version 26) predictive analytics software.

Results

A total of 232 respondents (20.9%) completed the anonymous survey. Demographic information is provided in Table 1. Half of the subjects (n=117, 50.4%) reported prior experience with adults with ID, however the majority had no formal training (n=208, 89.7%). Those who responded "yes" to having prior experience with adults with ID were then asked to identify the source of that experience. Of those with experience, 64.1% (n=75) gained it through work and 54.7% (n=64) through volunteering. Twenty-one (17.9%) had experience as a family member of a person with ID and 17 (14.5%) identified their experience was as a friend. Types of experiences with adults with ID are reported in Table 2. Those who responded "yes" to having prior training in working with adults with ID (n=24) received that training through work (n=19, 79.2%), as a volunteer (n=7, 29.2%), through school (n=12, 50%), or "other" (n=1, 4.2%). Subjects were able to select more than one source of experience and training. Types of training with adults with ID is also reported in Table 2.

The mean total sum score on the TCS-ID was 45.14 with a standard deviation of 10.31. Stepwise multiple regression demonstrated that the two variables with a significant contribution to the total TCS-ID score were prior experience ($p = 0.022$) and prior training ($p = 0.005$). Variables such as graduation year ($p=0.488$), gender ($p=0.404$), and professional program type ($p=0.680$) did not have significant contributions. The amount of multicollinearity of the variables

was calculated using the Variance inflation factor (VIF). A low VIF (e.g., values close to 1.0) indicates that the associated independent variable is not collinear with the other variables in the model. The collinearity was not observed with any variable of this study (VIF ranged between 1.052 and 1.201). The full description of stepwise multiple regression is presented in Table 3.

Discussion

This study explored interdisciplinary health professions students' confidence toward the delivery of care to adults with ID. Based on the results, students with prior experience and prior training in working with this population had greater levels of self-perceived confidence. No significant differences existed in self-reported confidence levels across disciplines, years of graduation, or gender identity. This was a novel investigation into confidence of health professions students in caring for adults with ID using the TCS-ID. The TCS-ID appears to be the only published scale to measure confidence levels of healthcare professionals specifically working in the context of persons with ID and is further validated for "therapeutic-based" practitioners (Dagnan, Masson, Thwaites, James & Hatton, 2017, Hinde & Mason, 2020, Hronis, et al., 2018, Marwood, et al., 2017). This study is the first to utilize the TCS-ID to measure confidence in a broad range of health professions which benefit from developing a therapeutic relationship with patients. Published studies measuring confidence with this population are in the fields of mental health, nursing, and primary care.

A question remains as to whether confidence directly impacts competency in providing care to patients, and to patients with ID in particular. Though confidence influences performance it is not synonymous with competence. Owens and Keller (2018) explored the connection between workforce confidence and patient experience. The authors analyzed responses of 41 hospital organizations to HealthStream's Patient-Centered Excellence Survey as a measure of

confidence in patient experience; and patient responses to the Hospital Consumer Assessment of Healthcare Providers and Systems as a measure of patient perceptions of their experience (Owens & Keller, 2018). Results indicate that hospital organizations with greater confidence levels in the patient experience had better outcomes for the patient experience (Owens & Keller, 2018). If providers have greater confidence in their abilities to be successful with a particularly challenging task, they may feel less fearful and stressed, and their patients may be more likely to have a positive provider encounter.

The patient-provider relationship, interaction, and communication are factors identified as contributing to dissatisfaction between the desired and current state of healthcare for adults with ID (Baumbusch, et al., 2014). Dissatisfaction with care often leads individuals with ID to seek medical care less frequently, further distancing their relationship with their healthcare team and catalyzing the development of co-morbidities and preventable health conditions (Hanlon, et al., 2018, Wilkinson, et al., 2012). The health and wellbeing of people with disabilities is a national priority (Healthy People 2030, nd). Globally, reducing healthcare disparities for this population is an "ethical imperative" by the World Health Organization (Primeau & Talley, 2019). Healthcare providers are challenged to recognize special problems experienced by people with ID due, in part, to limited training in effective interaction with people with ID. Indeed, opportunities for directly engaging with people with ID has been shown to predict more positive attitudes of the provider toward patients with ID, a factor in meeting the health needs of this population (Hemm, et al., 2014). The results of this current study support the inclusion of expanded education and training that include experiential opportunities for direct interaction.

This study provided an opportunity to explore several independent variables across health professions programs at one university by leveraging the ability to recruit from a college that

encompasses multiple healthcare professions. The results provoke further questions about how well the curriculum prepares students for adequately caring for adults with ID. All professions appear to be equally unprepared. Students graduating from programs that do not provide specific knowledge, skills, and experience in caring for adults with ID will enter the workforce unprepared for the unique and complex challenges faced by this population. Such complexity requires an informed, competent, and confident interprofessional healthcare team to effectively manage chronic conditions, as well as health and wellness promotion (Hanlon, et al., 2018). Support for ID-specific education for interprofessional healthcare providers exists (Ervin, et al., 2014, Hemm, et al., 2014, McCoy & Holt, 2020, Primeau & Talley, 2019). Resources, such as the "Core Competencies on Disability Healthcare Education" (Alliance for Disability in Health Care Education, 2019) may be utilized to design such curricula. Further research is needed to better understand most effective methods for such training, delivery methods, and timing of learning experiences.

There are limitations to this study. The TCIS-ID was originally designed to assess the confidence of a therapeutic-based practitioner (i.e. a psychologist, counselor, mental health practitioner, social worker, occupational therapist) at key stages of the therapeutic relationship (Dagnan, Masson, Cavagin, Thwaites & Hatton, 2014). The scale's validity with the professions in question for this study, apart from those within the Department of Applied Psychology, has not been established. The TCS-ID should be validated for healthcare professionals who serve people with ID, including but not limited to primary care providers, physical therapists, and speech-language pathologists. Building therapeutic relationships with patients is similarly important to provision of care and thus, the use of the TCS-ID was appropriate for this study. Subject recruitment was based on convenience sampling making these results difficult to

generalize. While the response rate was high for the DPT program, of note there was a relative lack of participation from the Nursing and Department of Applied Psychology programs. This study would have benefitted from a higher and more equal response rate from students in each program. Future surveys would benefit from interprofessional authorship to foster participation from different disciplines. Moreover, subjects were primarily female which limits generalizability to those of other gender identities. Further research is needed to explore the validity of the TCS-ID in reference to a greater scope of healthcare professionals, and to widen the breadth of this study to health professions programs nationally and internationally to allow for greater generalizability.

Evidence for effective ID-specific education is necessary to encourage implementation in entry-level health professions curricula. Lack of provider confidence should drive the need for curricular development, with particular focus on enhanced communication and a collaborative, patient-centered approach to improve healthcare for this vulnerable and underserved population.

Conclusion

This was a novel study of health professions students' confidence in providing care for adults with ID. Prior experience and specific training with this population were the most significant factors in predicting confidence levels. Results suggest experiential learning opportunities may be important to include in entry-level health profession curricula to better prepare graduates to effectively care for and reduce healthcare disparities in this vulnerable population. Educators have a duty to prepare future healthcare providers who are excellent in clinical practice, are socially responsible and can advocate for this underserved population.

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Figure 1

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Figure 1. Therapy Confidence Scale - Intellectual Disabilities (TCS-ID)

How confident are you that you can:

1. Listen carefully to concerns presented by a client with a learning disability?

2. Be empathetic towards a client with a learning disability?

3. Understand special issues related to having a learning disability and their impact on a person's life?

4. Communicate with a client who has a learning disability?

5. Develop a therapeutic relationship with a client who has a learning disability?

6. Gather information from a client with a learning disability so that their difficulties can be better understood?

7. Use assessments in a way that a client with a learning disability will understand?

8. Explain results of an assessment process to a client with a learning disability?

9. Use knowledge about mental health issues in formulating the problems of a client with a learning disability?

10. Help a client with a learning disability to identify issues that need to be considered in sessions?

11. Use knowledge of mental health interventions to work effectively with a client who has a learning disability?

12. Identify therapeutic approaches that will be effective for a client with learning disability?

13. Work with care-givers and other important people in the lives of people with a learning disability?

14. End intervention with a client who has a learning disability in an effective manner?

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Table 1

Table 1

Table 1. Characteristics of the participants.	
Variable	All participants n=232 n (%)
Gender	
Male	37 (15.9)
Female	193 (83.2)
Non-binary	1 (0.4)
Prefer not to say	1 (0.4)
Program of Studies	
Doctor of Physical Therapy	114 (49.1)
Speech-Language Pathology	40 (17.2)
Physician Assistant Studies	36 (15.5)
PharmD	24 (10.3)
Department of Applied Psychology	14 (6.1)
Nursing	3 (1.3)
Year of Graduation	
2021	74 (31.9)
2022	75 (32.3)
2023	47 (20.3)
2024	35 (15.1)
2025	1 (0.4)
Had experience with adults with ID	
Yes	117 (50.4)
No	115 (49.6)
Had training with adults with ID	
Yes	24 (10.3)
No	208 (89.7)

Table 2

Table 2

Types of experience with adults with ID reported	
	All participants n=117 n (%)
Work	75 (64.1)
Volunteer	64 (54.7)
Family member	21 (17.9)
Friend	17 (14.5)
Other	8 (6.8)
Types of training with adults with ID reported	
	All participants n=24 n (%)
Work	19 (79.2)
Volunteer	7 (29.1)
School	12 (70.8)
Other	1 (4.2)

Table 3

Table 3

Stepwise multiple linear regression.				
Dependent variable	**Independent variable**	**B**	***p***	**95% CI for B**
TCIS-ID total score	(Constant)	978.256		-1674.031, 3630.544
	Gender	-1.309	0.404	-4.398, 1.779
	Program	0.172	0.680	-0.646, 0.989
	Graduation	-0.462	0.488	-1.773, 0.849
	Previous work	3.206	0.022	0.477, 5.935
	Previous training	6.543	0.005	1.958, 11.128