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ABSTRACT

Positive outcomes for students have motivated educators to identify effective strategies for advancing diversity, equity, and inclusion (DEI) in people with intellectual disability (ID), a minoritized population often excluded from DEI efforts. The current study investigated undergraduate student attitudes toward ID and compared changes in attitudes following participation in one of two community-engaged programs alongside adults with ID. Findings indicate both programs were effective in changing all three components of students' attitudes: affect, cognition, and behaviors.

Keywords: service learning, intellectual and developmental disabilities, inclusion, diversity, higher education

Research shows learning in diverse, equitable, and inclusive environments is beneficial for students in higher education (see Barnett, 2020). Building diverse and inclusive communities leads to rich educational experiences that promote a healthy economy and a skillful society that is globally competitive (American Council on Education, 2012; Mahar et al., 2013; Mansell et al., 2002). Positive outcomes for undergraduate students have motivated educators and administrators in higher education to identify effective strategies for advancing diversity, equity, and inclusion (DEI) across university campuses (McNair & Veras, 2017). In 2016, the U.S. Department of Education committed to making higher education more accessible for and inclusive of people from diverse backgrounds (U.S. Department of Education, 2016).

While efforts to advance DEI in higher education are leading the way in the educational services and rhetoric, there is continued concern to whether institutional changes regarding equity and inclusion have been enacted (McInnis, 2020; Stewart, 2017). Promoting full DEI in higher education requires expansion of current efforts to equity and inclusion of underrepresented populations. Community-engaged programs fall under the umbrella of service learning and can be used to promote intentional DEI interactions through the reciprocation of learning and development of all participants.

Despite advances in DEI efforts, people with intellectual disability remain a minoritized population often excluded from DEI efforts on most university campuses (Tucker et al., 2020). Thus, it is both timely and critical to investigate potential barriers that impede the inclusion of individuals with intellectual disability on university campuses. This paper addresses potential barriers to inclusion by investigating student attitudes toward intellectual disability as well as changes in attitudes as a result of students' participation in community-engaged programing.

Disability Is Diversity

Disability is a natural part of human diversity. With 15% of the global population

experiencing a disability, individuals with disabilities make up the world's largest minority group (World Health Organization, 2021). Disabilities can take many different forms including but not limited to hearing, vision, ambulatory, developmental, and intellectual (World Health Organization, 2021). *Intellectual disability* is characterized by significant limitations in both intellectual functioning (i.e., reasoning, learning, problem-solving) and adaptive behavior, which covers a range of everyday social and practical skills (e.g., managing money, schedules, routines, social interactions) (Schalock et al., 2010). Intellectual disability is one of the most common developmental disabilities in the United States, with an estimated prevalence rate of approximately 1% of the population, or approximately 3.3 million people (American Psychiatric Association, 2013).

Historically, the medical model has been the dominant lens through which society, including higher education, defines and understands individuals with intellectual disability (Schalock et al., 2010). While the medical model served a specific function, this model primarily views individuals in terms of deficit and classifies disability as a fixed trait residing permanently within the individual (Schalock et al., 2010). In contrast, the social-ecological model views disability as a multidimensional and fluid state of human functioning in relation to environmental demands (Schalock et al., 2010). The social-ecological perspective assumes that individuals experience barriers not as a direct result of their disability, but rather as a result of the lack of environmental supports (Shogren, 2013).

A social-ecological understanding of *disability as diversity* shifts focus from increasing personal competence to understanding and providing the supports individuals need to be fully included and experience equity in their environments. From this model, supports cannot be "prescribed" solely from a fixed diagnostic label; rather, the nature and extent of supports an individual with intellectual disability needs to fully participate in education and community life are seen as ever evolving (Shogren, 2013).

Attitudes Toward Intellectual Disability

Negative attitudes toward intellectual disability have been identified as a significant barrier to an inclusive society (Goreczny et al., 2011; Harada et al., 2011; Hunt & Hunt, 2004). Negative attitudes held by people who do not have intellectual disability toward people with intellectual disability leads to exclusion and discrimination (Goreczny et al., 2011; Harada et al., 2011; Hunt & Hunt, 2004; Keith et al., 2015). Furthermore, discrimination and stigma may deter individuals with intellectual disability from community participation in developing interpersonal relationships, finding meaningful employment, and using health care services (Grozny et al. 2011; Keith et al., 2015; Tervo et al., 2004; World Health Organization, 2021). Because attitudes are strongly associated with future behavior (Kraus, 1995), changing negative attitudes toward intellectual disability may be key to reducing discrimination and promoting opportunities for inclusion.

Negative attitudes do not always stem from malicious intent, but may stem from a lack of knowledge, misinformation, or a lack of experiences (Hunt & Hunt, 2004; Pace et al., 2010). Undergraduate students report their attitudes about disability are often influenced by limited opportunities in secondary education to engage with peers with intellectual disability as well as even more limited opportunities on college campuses (Tucker et al., 2020). Research has long agreed on a framework of three components of attitudes: affect, cognition, and behaviors (McGuire, 1985; Rao, 2004). McGuire's framework suggests that attitudes can be formed from one, a combination of two, or all three of the components (i.e., what we feel, think, and how we act) (Zanna & Rempel, 1988).

Impact of Interactions on Attitudes

Previous research has identified interactions with individuals with intellectual

disability as the strongest predictor of attitudes (McManus et al., 2011; Morin et al., 2013b; Page & Islam, 2015). For example, researchers have found the attitudes and perceptions of Special Olympics volunteers became more positive after interactions with athletes at the games (Freudenthal et al., 2010; Li & Wang, 2013). Support for the positive relationship between attitudes and interactions has led to further exploration and research on the nature and type of interactions. While *frequency* of contact alone (i.e., the number of times that a person without a disability interacts with an individual with a disability) has been found a weak predictor of positive attitudes, the *quality* of contact (i.e., negative or positive interactions) has consistently been found as a strong predictor of attitudes toward intellectual disability by persons without a disability (McManus et al., 2011; Morin et al., 2013b). Studies show both the duration and quality of interaction is important in positively impacting attitudes (Keith et al., 2015; Narukawa et al., 2005; Roper, 1990). Additionally, results of research with undergraduate students show that greater knowledge of intellectual disability along with more frequent and more positive interactions with individuals with intellectual disability resulted in more positive social perceptions toward individuals with intellectual disability (Phillips et al., 2019).

CONCEPTUAL FRAMEWORK

The community-engaged programs explored in this study fall under the umbrella of experiential educational models known as service learning. Jacoby (2015) defines service learning as a "form of experiential education in which students engage in activities that address human and community needs, together with structured opportunities for reflection designed to achieve desired learning outcomes" (p. 2). While researchers found service learning can lead students to a greater understanding of disparities in their communities (Buch & Harden, 2011; Koch et al., 2014; Mitchell, 2014), there have also been critiques that ill-designed service-learning experiences do not allow students to critically examine community roles, power dynamics, and the value of community members in learning (Haddix, 2015).

Marcelle Haddix's (2015) framing of community engagement provides a way to critique and rethink service learning. As such, community-engaged programming integrates service in curricula that increases students' knowledge of the value of communities and community members, as well as the impacts that community members have on learning and the community as a whole (Haddix, 2015). We utilized this approach to service learning, carefully designing interactions of both community members and students and intentionally developing reflections, allowing for collective learning across higher education and communities.

Decades of research show that when individuals with disabilities are embraced in communities, everyone benefits (Mahar et al., 2013; Mansell et al., 2002; Tucker et al., 2020). However, individuals with intellectual disability continue to encounter systemic and attitudinal barriers that perpetuate segregation and discrimination (Ali et al., 2012; Wehmeyer, 2013). The authors believe that fostering thoughtful interactions between undergraduate students and adult community members with intellectual disability (hereafter referred to as community members) has potential to impact the affective and behavioral components of attitudes and influence cognitions by disproving stereotypes through gains in experiential knowledge. The community-engaged programs described below aimed to provide opportunities for meaningful engagement between undergraduate students and community members once or twice a week throughout the program.

The Current Study: Comparison of Two Community-Engaged Programs

The first community-engaged program, Let's Take a Walk, was designed to facilitate engagement of undergraduate students and community members in an inclusive walking program in and around the

university campus during spring 2018. After noting the benefits of Let's Take a Walk (Tucker et al., 2020), we began implementation and exploration of a second community-engaged program. The second community-engaged program was embedded as the service-learning component of an undergraduate Developmental Disabilities course in the fall of 2018. Students enrolled in the class received course content (i.e., readings, discussions, assignments) and were required to choose between one of three service-learning options for course credit (Let's Take a Walk or Next Chapter Book Club (n.d.), both on the university campus, or Turning Point Ranch in the community).

Specifically, the current paper explored the impact of the two community-engaged programs on undergraduate student attitudes toward intellectual disability. We aimed to answer the following research questions: 1) What are undergraduate students' attitudes toward individuals with intellectual disability prior to participation in a community-engaged program? 2) Do undergraduate students who voluntarily participate in a community-engaged program report significant changes in their attitudes toward individuals with intellectual disability after completion of the program? 3) Do undergraduate students who were required to participate in a community-engaged program as part of course-related service-learning requirements report signifycant changes in attitudes toward individuals with intellectual disability after completion of the program? 4) Was the voluntary community-engaged program more or less effective than the required community-engaged program in changing undergraduate students' attitudes toward individuals with intellectual disability?

METHOD

This study analyzed quantitative data collected from undergraduate students who participated in one of the two community-engaged programs. Participant data from the first community-engaged program was collected as part of a larger multi-informant and mixed-method study of Let's Take A Walk (see Tucker et al., 2020). The first program was conducted by three principal investigators, all faculty in Human Science-related fields, including the first two authors. The university's Institutional Review Board approved all protocol and procedures within the first program. Participant data from the second community-engaged program was collected as part of a small exploratory study on the impact of community-engaged programs embedded within service-learning requirements of an undergraduate course. The university's Institutional Review Board also approved study procedures for the second program.

PROCEDURES

First Community-Engaged Program

The first community-engaged program, Let's Take a Walk, conducted in spring 2018, included undergraduate students recruited by program team members through announcements made in undergraduate Human Sciences classes and clubs at the beginning of the semester. Students were invited to participate in the program and complete questionnaires at two time points (pre- and post-program). Students in the first program were paired with community members and pairs spent 45 minutes walking together as a group around campus twice a week for 10 weeks (Tucker et al., 2020). While pairing of walking partners was not random, pairs were initially assigned by the first two authors using limited knowledge of student and community members' experiences and personalities based on data and interaction with participants at pre-program data collection. Walking partners were reassigned throughout the semester based on student or community member absences, as well as observations of partner dynamics by program team members. For example, if conversation and communication did not appear to come with ease between walking partners, team members attempted to facilitate identification of topics of common interest and/or made

changes to the partner pairings. Nineteen of the 20 walking sessions planned were conducted (one session was cancelled due to inclement weather). Students and community members who participated in the first program were paid up to $130 for completing the program and questionnaires.

Second Community-Engaged Program

The second community-engaged program was conducted in fall 2018 and paired undergraduate students with community members as part of the service-learning component of an undergraduate Human Sciences course on Developmental Disabilities taught by the first author. This course is designed to provide students with an understanding of the social construction, history, identification, and classification of intellectual disability as well as the complexities and diversity of persons with intellectual disability across the lifespan. The Conceptual Framework of Human Functioning (Schalock et al., 2010) and Social-Ecological Model of Disability (Shogren et al., 2018) are used as primary theoretical lenses, and students are required to apply these frameworks across several course assignments, including reflections on their community-engaged programs. Throughout the semester, students are guided through in-class discussions and assignments to reflect on how their service learning through the community-engaged program impacted their professional skills, their understanding of self, and their personal or academic development.

As part of the service-learning course requirements, all undergraduate students enrolled in the course were required to participate in community-engaged programs through Let's Take a Walk, Next Chapter Book Club, or Turning Point Ranch. Let's Take a Walk followed the same general procedure as outlined in the first program with student-community member pairs walking together around the university campus. Students participating in the university affiliated Next Chapter Book Club, a community-based program for individuals with intellectual and developmental disabilities (https://www.nextchapterbookclub.org), were partnered with community members for weekly on-campus activities, including reading and discussion. At Turning Point Ranch, a therapeutic riding center located a few miles from the university campus, undergraduate students were paired to walk alongside community members on horseback and offered support as community members practiced horsemanship and navigated obstacle courses. Students at all three sites were required to attend one-hour sessions once a week for 12 weeks. Participants who completed the pre- and post-program questionnaires did not receive monetary compensation or additional course credit for participating in the research study.

Initially, student/community member partners in the second community-engaged program were assigned based on limited knowledge of students' and community members' experiences and personalities based on program team members' interactions with students in the first few weeks of class and with community members through recruitment to the program. Similar to the first program, partners were reassigned throughout the semester as needed. While all students enrolled in the course were required to engage in the service-learning project, students were invited, but not required to participate in the research study by completing pre- and post-program questionnaires. Names of students who consented to participate in the research study were blinded from the course instructor (first author) and graduate teaching assistant.

Prior to beginning each of the community-engaged programs, undergraduate students were provided a brief handout of basic etiquette regarding respectfully engaging with community members. Specific training on working with individuals with disabilities was intentionally omitted from the protocol. Instead, program team members—including the first two authors, as well as graduate and undergraduate assistants and interns who had completed prior coursework and/or research experience in the field of intellectual and developmental disabilities—served as on-site

program mentors, modeling skills of engaged interactions for participants during each session of the two programs. Our community-engaged interaction approach included program team members taking an active role in facilitating interactions between undergraduate students and community members (e.g., helping to facilitate conversation by providing icebreaker questions and leading scavenger hunts and other walking session activities), keeping in mind the reciprocal and equitable role of learning for all participants. For example, during Let's Take a Walk, program team members embedded instructional coaching into walking sessions by modeling desirable supports (e.g., modeling how to physically support a community member with an unsteady gait). Our approach also included intentional availability of program team members for questions, debriefing, and reflections. Program team members arrived early for all program sessions and stayed late after sessions ended and provided undergraduate student and community members with their email and phone contact information as well as scheduled office hours. The development of our community-engaged programs is deeply rooted in our understanding of disability from a strengths-based approach. Thus, our community-engaged programs included individualization based on the support needs of undergraduate students and community members.

PARTICIPANTS

First Community-Engaged Program

Twenty-four undergraduate students (22 identified as female, 2 identified as male), ranging in age from 18 to 21 years (M = 19.83, SD = 1.34) participated in the first program. A majority of students, 70.8%, identified as European American (n = 17), 16.7% as African American (n = 4), 8.3% as Hispanic/Latino (n = 2), and 4.2% as Native American (n = 1). Student participants in the first program attended an average of 17 of the 19 sessions.

Second Community-Engaged Program

Fifty-three (67.1%) of the 79 undergraduate students enrolled in the course completed the pre-program questionnaire and 36 (45.6%) completed the post-program questionnaire. Of the 36 participants with completed data, 33 identified as female and 3 identified as male. Undergraduate students ranged in age from 19 to 32 years (M = 20.83, SD = 2.73). A majority (n = 24, 66.7%) identified as European American, 8.3% as African American (n = 3), 5.6% as Hispanic/Latino (n = 2), and 16.7% as Native American (n = 6). Across all three community settings, students in the second program attended an average of 11 of the 12 sessions.

INSTRUMENT

In addition to demographic data reported above, undergraduate student participants in both programs completed the Attitudes Toward Intellectual Disability (ATTID) (Morin et al., 2013a). The ATTID is a 70-item self-report questionnaire used to assess affective, behavioral, and cognitive attitudes toward intellectual disability and has been used to note differences in attitudes across populations as well as track changes in attitudes across time within the same population. The ATTID includes five factors along the three dimensions of attitudes: *Discomfort* and *Sensibility/Tenderness* (Affective); *Interaction* (Behavioral); and *Knowledge of Capacity and Rights* and *Knowledge of Causes of Intellectual Disabilities* (Cognitive). All item responses are recorded on a 5-point Likert scale ranging from Totally Agree (1) to Totally Disagree (5). A mean score ranging from 1 to 5 is derived for each of the five factors (positive = 1 and 2, neutral = 3, negative = 4 and 5). All items included in the *Sensibility/Tenderness* factor along with 12 items in the *Discomfort* factor are reverse scored so that lower mean scores across all five factors consistently reflect more positive attitudes toward intellectual disability. The ATTID reports adequate reliability and internal consistency (Cronbach's

alpha) ranging from 0.59 to 0.89 for each of the five factors (Morin et al., 2013a). In the current study, the ATTID maintained satisfactory reliability with internal consistency (Cronbach's alpha reported at pre-program participation) ranging from 0.71 to 0.94 across the five factors.

RESULTS

Research Question 1

Pre-program mean scores for the five ATTID factors indicated that attitudes of student participants in both program groups were primarily positive before engaging in either of the community-engaged programs. In addition to the pre-program mean scores and standard deviation, the percentage of scores that were positive (1 or 2), neutral (3), or negative (4 or 5) is provided in Table 1. In the first community-engaged program, a majority (69.46% to 92.16%) of participants reported positive attitudes toward individuals with intellectual disability for four of the five factors (*Discomfort, Interaction, Knowledge of Capacity and Rights, Knowledge of*

Table 1. *Pre-Program ATTID Factor Scores and Percentage of Positive, Neutral, and Negative Attitudes*

ATTID Factors	*M*	*SD*	% Positive	% Neutral	% Negative
First Program					
Discomfort	1.45	0.43	92.16	5.39	2.45
Sensibility/Tenderness	2.84	0.76	37.76	23.78	38.46
Interactions	1.53	0.42	86.76	11.52	1.72
Knowledge of Capacity and Rights	1.79	0.41	81.67	15.00	3.33
Knowledge of Causes	2.29	0.49	69.46	20.36	10.18
Second Program					
Discomfort	1.58	0.52	91.18	5.07	3.76
Sensibility/Tenderness	2.57	0.81	52.31	16.67	31.02
Interactions	1.75	0.49	81.86	13.24	4.90
Knowledge of Capacity and Rights	1.85	0.33	81.62	14.48	3.90
Knowledge of Causes	2.30	0.61	67.46	18.25	14.29

Causes). For the remaining factor, *Sensibility/ Tenderness*, only 37.76% of students in the first program reported positive attitudes and slightly more students reported negative attitudes (38.46%).

Prior to the second community-engaged program, a majority (52.31% to 91.18%) of participants reported positive attitudes toward individuals with intellectual disability for all five factors (*Discomfort, Sensibility/Tenderness, Interaction, Knowledge of Capacity and Rights, Knowledge of Causes*). While attitudes of students in the second program were primarily positive (52.31%) for *Sensibility/Tenderness*, it is important to note that nearly one-third of students still reported negative attitudes (31.02%) on the same factor. Additionally, independent sample t-tests of pre-program scores found no significant differences between the two program groups on any of the five ATTID factors (*Discomfort* [p = .22], *Sensibility/Tenderness* [p = .91], *Interaction* [p = .16], *Knowledge of Capacity and Rights* [p = .24], *Knowledge of Causes* [p = .44]).

Research Question 2

To determine changes in participants' attitudes toward people with intellectual disability following the first community-engaged program, a series of paired-sample t-tests were conducted on pre- and post-program scores for the five ATTID factors (see Table 2). Results indicated that attitudes of students in the first

Table 2. *Changes in ATTID Factor Scores Across Community-Engaged Programs*

	Pre-Program		Post-Program			
ATTID Factors	*M*	*SD*	*M*	*SD*	95% CI for Mean Difference	*t*
First Program						
Discomfort	1.45	0.43	1.22	0.31	[.10, .37]	3.52**
Sensibility/Tenderness	2.84	0.76	2.18	0.76	[.31, .30]	3.91***
Interactions	1.53	0.42	1.36	0.43	[0.4, 0.30]	2.67*
Knowledge of Capacity and Rights	1.79	0.41	1.42	0.41	[.24, .48]	6.21***
Knowledge of Causes	2.29	0.49	2.25	0.51	[-.13, .21]	0.49
Second Program						
Discomfort	1.58	0.52	1.38	0.43	[.06, .34]	2.89**
Sensibility/Tenderness	2.57	0.81	2.05	0.91	[.22, .82]	3.49***
Interactions	1.75	0.49	1.52	0.44	[.13, .31]	3.76***
Knowledge of Capacity and Rights	1.85	0.33	1.56	0.35	[.19, .39]	5.99***
Knowledge of Causes	2.30	0.61	2.46	0.95	[-.28, .15]	-1.06

Note. CI = confidence interval.
* $p < .05$. ** $p < .01$. *** $p < .001$

program significantly improved in four of the five factors, including *Discomfort, Sensibility/ Tenderness, Interactions, and Know-ledge of Capacity and Rights*. However, no significant differences were found between pre- to post-program scores on *Knowledge of Causes*.

Research Question 3

To determine how college students' attitudes toward people with intellectual disability changed following the second community-engaged program, another series of paired-sample t-tests were conducted comparing pre- and post-program scores for the five ATTID factors (see Table 2). Results indicated that similar to students in the first program, attitudes of participants in the second program significantly improved on the same four factors: *Discomfort, Sensibility/Tenderness, Interactions, and Knowledge of Capacity and Rights*, with no significant differences found between pre- to post-program scores on *Knowledge of Causes*.

Research Question 4

To determine if one community-engaged program was more or less effective than the other in changing undergraduate students' attitudes toward people with intellectual disability, a 2 (Time: pre, post) X 2 (Program: first, second) mixed-model ANOVA was conducted to assess potential differences in impact of the two programs on participating students' pre- and post-program scores for the five ATTID factors (*Discomfort, Sensibility/Tenderness, Interaction, Knowledge of Capacity and Rights, Knowledge of Causes*). Results indicate no significant interaction between Time and Program, (Wilks' Lambda = 0.89, F (6,53) = 1.08, p = .39), indicating no difference in the effectiveness of the two programs.

DISCUSSION

Findings from the current study highlight the positive impact community-engaged programs can have on undergraduate students' attitudes toward individuals with intellectual disability. By fostering meaningful engagement through our hands-on approach and providing individualized supports, significant gains were noted in participants' attitudes across four of the five ATTID factors at completion of both programs (*Discomfort, Sensibility/Tenderness, Interaction, and Knowledge of Capacity and Rights*). Despite differences in recruitment strategies and participants onboarding (volunteer vs. course requirements), our findings suggest both programs had a positive impact on all three components of undergraduate students' attitudes: affective, behavioral, and cognitive.

The affective component of attitudes refers to the feelings or emotions associated with a particular population, while the behavioral component of attitudes refers to past encounters with the population and future behavioral intentions (Maio & Haddock, 2010). After participating in either community-engaged program, participants reported less *Discomfort* (less fear, less anxiety, more comfort in interactions with individuals with intellectual disability) and more positive attitudes regarding *Interaction* (less likely to avoid and more likely to interact with an individual with an intellectual disability). These findings mirror previous research indicating when students have the opportunity to interact meaningfully with community members with intellectual disability, they develop more positive emotions toward experiences with individuals and increased confidence regarding future interactions (Beh-Pajooh, 1991; Tracy & Iacono, 2008).

Perhaps the most noteworthy change in participants' attitudes toward intellectual disability across both programs was participants' significant decrease in feelings of pity toward individuals with intellectual disability (measured by the *Sensibility/ Tenderness* factor). As noted in previous research, "people have a hard time recognizing how tenderness and pity causes harm, but such emotions limit true acceptance, inclusion, and autonomy within society" (Phillips et al., 2019, p. 8). As supported by our previous qualitative findings (Tucker et al., 2020), we

believe programs that result in significantly reduced feelings of pity hold the greatest potential to impact opportunities of empowerment, justice, equality, and inclusion.

The cognitive component of attitudes refers to thoughts and beliefs and can be influenced by personally held values (Maio & Haddock, 2010). Results indicated that participant attitudes in both community-engaged programs became significantly more positive over time regarding *Knowledge of Capacity and Rights*. This finding indicates that following interventions, participants reported viewing individuals with intellectual disability as more capable than they previously reported prior to their interactions with community members in the program. These findings echo previous research highlighting how knowledge gained through interactions can successfully replace misconceptions with a greater understanding of similarities between undergraduate students and individuals with intellectual disability (Hunt & Hunt, 2004; Li et al., 2014). While both community-engaged programs reported significant positive changes regarding *Knowledge of Capacity and Rights*, neither program significantly impacted undergraduate students' *Knowledge of Causes*. In fact, there was little movement on knowledge of causes in either group. One explanation for the lack of significant differences may be a misalignment between the goals of the community-engaged programs and what the ATTID captures. Community-engaged programs, and specifically service learning, aim to promote interactions between students and community members to enhance understanding of community needs and disparities. While the ATTID assessed knowledge of etiology of intellectual disability, this was not a primary learning objective of either community-engaged program explored in the current study.

In spite of holding initially positive attitudes, participation in both programs resulted in shifts to even more positive attitudes toward people with intellectual disability. Previous research has consistently shown that being female, more educated, and having prior experience with individuals with intellectual disability are associated with more positive attitudes (Goreczny et al., 2011; Morin et al., 2013b; Phillips et al., 2019). Goreczny et al. (2011) also found that younger adults reported more positive attitudes toward people with intellectual disability, positing greater tolerance and fewer stereotypes among younger individuals when compared to older adults. Since participants in the current study were primarily female and pursuing degrees in human services-related professions, it is plausible that study participants may be naturally inclined to view intellectual disability more favorably due to their characteristics, dispositions, and interests attracting them to the human services professions.

LIMITATIONS AND FUTURE RESEARCH

The current study was limited by the use of relatively small and fairly homogeneous samples of undergraduate students recruited from Human Sciences courses. As noted previously, undergraduate student characteristics (e.g., female, young adult) may be responsible for generally positive attitudes held toward people with intellectual disability prior to program participation and thus limit the generalizability of the study's results. Future research could explore a more varied sample group and consider programs or interventions with participants who have neutral or more negative attitudes toward people with intellectual disability. Lastly, participation in either of the community-engaged interaction programs required physical presence and face-to-face interaction. Noting accessibility barriers (e.g., structural, transportation) often experienced by individuals with disabilities as well as the ongoing impact of COVID-19 in limiting in-person interaction, future research is needed to explore the impact of virtual contact and online community-engaged programs on undergraduate students' attitudes toward people with intellectual disability. Future studies should also explore the long-term impact of community-engaged programs by

gathering longitudinal, follow-up data in the months and years following conclusion.

IMPLICATIONS FOR RESEARCH AND PRACTICE

Several implications from this study are timely, relevant, and—we argue—critical for practitioners, administrators, and scholars. As we continue to see a push for DEI imperatives across institutions, we must hold administrators accountable to not only provide statements of diversity, but to provide actionable steps to developing, integrating, and delivering equitable and just programs, courses, and content for students. We urge institutions to think beyond deficit approaches to their work and to consider including individuals with intellectual disability in efforts to create more equitable spaces. Moreover, honoring disability as diversity not only offers rich understandings of inclusive higher education environments but also understandings of the communities in which they serve.

Service learning has long been a way to break down barriers with the communities surrounding campuses through student engagement and civic learning (Jones et al., 2016; Manning-Ouellette & Hemer, 2019). Integrating community-engaged programs as part of service learning is a deeper way of pushing students beyond the boundaries of volunteering and surface-level knowledge of community populations. Moving toward community-engaged programming breaks down barriers across community members and students, removing obstacles such as preconceived notions, negative attitudes, apprehension, and stereotyping. We argue this study amplifies the wealth of knowledge and experiences that individuals with intellectual disability have and the transformative action of their place within college campuses. We encourage institutions to consider how they might examine present barriers on their campuses and strategize ways to be more inclusive, not as an additive approach but as an integrative approach to the community at large; for example, hiring students with intellectual disability in positions on campus.

Academic and student affairs divisions should continue to develop greater knowledge and faculty support surrounding the developmental readiness of students. When incurporating DEI frameworks and approaches to coursework, such as community-engaged programs, faculty need to be prepared to design curriculum that is scaffolded and intentional in order for students to gain deeper understandings of the larger societal issues and systems that maintain the status quo or, in this study's case, medical models of working with individuals with developmental disabilities as well as the student attitudes that may hinder work with diverse groups of individuals. We surmise that institutions of higher learning need to place greater emphasis on faculty development with great concentration in developmental readiness around DEI learning.

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