

Postsecondary Students with Intellectual Disabilities: A Mixed Methods Evaluation of Peer Perceptions in the Inclusion Environment

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Abstract

Applying for federal student financial aid became a postsecondary option through the 2008 reauthorization of the United States Higher Education Opportunity Act (HEOA) for students with intellectual disability (ID) in the US. Certified Transition Programs (CTP) utilizing 5 programming options for students with ID are now possible. This study evaluated university peers' perceptions in conjunction with one such HEOA program at a mid-size regional public university in the Deep South. The research was a mixed method design with pre-post ratings on the *Sentiments, Attitudes, and Concerns about Inclusive Education Revised* (SACIE-R) scale and a focus group of students taking courses with students in the HEOA university program. Results indicated statistically significant differences in peer perceptions. Focus group findings showed student participants growth in awareness and understanding of SWID. Proposed state policies are changing the higher education climate to foster more CTP opportunities.

Keywords: Higher Education, Inclusion, SACIE-R, Transition, Certified Transition Program

Introduction

The United States (U.S.) continues to evolve toward a more inclusive public education setting. Beginning with the passage of the Education for All Handicapped Children Act, secondary students with disabilities (SWDs) in K-12 schools must be educated in the least restrictive environment with nondisabled peers (1975). Postsecondary education in the U.S. has followed with inclusion of students with intellectual disability (ID) in some combination of campus life and academics and has seen an overall gain in enrollment and success with students with ID (SWID) (Kleinert, Jones, Sheppard-Jones, Harp, & Harrison, 2012).

Changes in U.S. law permitting individuals with ID to be included in programming for university coursework and campus life, concerns about such changes, and the understanding about peer attitudes of students specifically with ID, call for focused research in this area. Quantitative and qualitative research on attitudes of nondisabled university peers with SWID enrolled in their courses can best serve all stakeholders. Specifically, this study examines a new *CTP Program* that began in the fall of 2016 and is the first CTP program in the state. This study measured participants' views during the initial implementation of the *CTP Program* on campus.

Literature Review

University Programs for Students with Disabilities

U.S. colleges and universities offer mentoring programs and enrichment courses in order to support SWID (Grigal, Hart, & Weir, 2012) as postsecondary enrollments for persons with ID rose from 11% of higher education institution (HEI) with SWID enrollment in 2003 to 27.9% in 2009 (National Council on Disability, 2014). In 2008, the Higher Education Opportunity Act was reauthorized with new provisions to allow entrance to postsecondary education for SWID and ensure availability of financial aid (HEOA: Higher Education Opportunity Act, 2008). In 2010, The U.S. Department of Education began an initiative to create model demonstration projects of Transition and Postsecondary Programs for Students with Intellectual Disability (Think College, 2017). This initiative provided grants to create or expand inclusive comprehensive transient and postsecondary programs for SWID.

In the first five years of implementation of the new HEOA provisions and Transition and Postsecondary Programs for Students with Intellectual Disability, 2,245 SWID accessed postsecondary education at 57 U.S. college and university campuses (Grigal, Hart, Smith, Domin, & Weir, 2017). Currently, 266 inclusive college programs for SWID exist across the U.S. (Think College, 2019). Since the reauthorization of HEOA, these students can access federal financial aid (Hart, Grigal, & Weir, 2010). From 2004 to 2016 nearly a 10-fold increase in programs became available (National Coordinating Center Accreditation Workgroup, 2016).

Attitudes and Perceptions of Persons with Disabilities

As societies are increasingly inclusive, more study is needed to understand the perceptions of members of society experiencing these settings. Specifically examining individuals' attitudes and perceptions concerning persons with disabilities can lead to improved understanding of people with differences, increased acceptance of accommodations and interventions, and increased participation and independence for those individuals previously limited in some areas of society. While some studies examine college peers in postsecondary settings, most research has evaluated attitudes or perceptions of educators and future educators about individuals with various disabilities

at various education levels (Carroll, Petroff, & Blumberg, 2009; Scheef, Thapa, Lerum, & Poppen, 2020). Carroll and colleagues (2009) found that pre-service teachers related that SWID should have opportunities and the right for a liberal education and teaching practices should accommodate for SWID. Inclusion at the postsecondary level has increased pre-service teachers' self-efficacy and acceptance of SWID (Scheef et al., 2020). These educators and future educators may set an early foundation for attitude and perception formation amongst their students. University student peers' attitude and perceptions are critical to understand and consider as the U.S. is developing many more programs to serve SWID.

Peers' attitudes toward others with disabilities. Studies have examined attitudes of nondisabled, same-age peers toward SWDs in elementary schools (Bak & Siperstein, 1987; Litvack, Ritchie, & Shore, 2011), middle schools (Hendrickson, Shokoohi-Yekta, Hamre-Nietupski, & Gable, 1996; Siperstein, Parker, Bardone, & Widaman, 2007), and high schools (Krajewski & Flaherty, 2000; Krajewski & Hyde, 2000). Some studies have targeted general attitudes toward individuals with ID among university students (Hardman & Clark, 2006; May, 2012; Phillips, Fortney, & Swafford, 2018). May (2012) examined changes in attitudes in peer inclusion courses, but this study was limited in that it did not examine differences in groups at the start of the semester. Phillips and colleagues' participants volunteered for the study and pre-study familiarity levels limited the generalizability across diverse student populations. Much of the research concerning attitudes and beliefs about inclusion of SWDs has been conducted with preservice teacher participants about students with a potentially broad set of disabilities in their future classrooms rather than with university students concerning SWID. Additionally, there is some research concerning general attitudes of university students toward individuals with various disabilities, although rarely concerning SWID.

As limited studies exist concerning the specific attitudes and perceptions of SWID, it is important to consider university students who share classroom and class time with SWID and how the peers' attitudes are impacted by this classroom exposure. Researchers have found that USA undergraduate students at a public university ($n = 1,762$) with disabilities indicated a more favorable attitude toward people with disabilities than peers without disabilities (Bogart, Logan, Hospodar, & Woekel, 2019). University students in a School of Health and Midwifery Department of Child Development ($n = 163$, primarily female) generally held negative attitudes toward individuals with disabilities. Additionally, similar views were held by university students who did not have family or relatives with a disability (Ozyurek, Yavus, & Cetin, 2016).

In another study, researchers found that 62.6% university students ($n = 1,766$) indicated that people with disabilities are discriminated against more than other students. University students who were male, low-income, or from rural areas indicated more favorable attitudes towards disability than others (Girli, Sari, Kirkim, & Narin, 2016). In an experimental research study, Park and Kim (2018) showed that a 16-week disability awareness educational program for university students resulted in favorable changes in overall attitudes toward people with disabilities (Park & Kim, 2018).

Peers' attitudes toward SWID. Including SWID in higher education is a trending development in the U. S., and recent research is emerging to inform practitioners and policy makers (Griffin, Summer, McMillan, Day, & Hodapp, 2012). The vast majority of U.S. undergraduate students have indicated feeling comfortable in class with SWID (Hafner, Moffet, & Kisa, 2011). Researchers have shown acceptance of SWID correlated to if the university student has a relative with a disability (Neville & White, 2011; Izzo & Shuman, 2013).

Griffin, Summer, McMillan, Day, and Hodapp (2012) evaluated 256 college students about their attitudes toward their classmate SWID. Generally, positive attitudes were reported. Females and those reporting higher positive attitudes indicated higher ability perception, more benefits associated with inclusion of SWID, and more willing to interact on campus with SWID.

Dent, Prescott, Wilson, Brinkley, & Tabi, (2015) utilized a mixed methods design to examine how SWDs were treated and attitudes towards them. Dent and colleagues found that 178 university students of various majors had no change in perceptions about persons with disabilities (PWD) after taking a class about disabilities. Students indicating that they were likely to befriend a person with a disability varied by major: nursing (76.5%), education (72.7%), business (36.4%), and other majors (60.5%). From focus group data, three themes were extracted from five SWDs including being treated differently, students with physical disabilities do not want to be pitied or excluded but would appreciate needed assistance, and a sense of judgment occurs when a disability is not visible.

Postsecondary Transition Programs

In 2012, the U. S. Department of Education funded 27 U. S. Transition and Postsecondary Programs for Students with Intellectual Disability. Folk and colleagues at the University of Hawaii interviewed and observed campus and community members associated with the program after the first year of programming (Folk, Yamamoto, & Stodden, 2012). Four students enrolled in the program indicated enjoying the social aspect of university life and changes in self-perception from high school including increased work effort and better social productive post-school options. Self-advocacy was seen in a university student peer when observing students in the program, as he sought out help for his own needs. One student enrolled in the program indicated that initially his friends were unaccepting of his decision to attend university, but soon after expressed desire to do the same. A faculty member was initially hesitant about the functionality of having a SWID in Study Skills and English courses; however, the instructor quickly became an advocate for the mission of the program and inclusive university education.

Researchers at another comprehensive transition program conducted a case study exploration (Berg, Jirikowic, Haerling, & MacDonald, 2017). Specifically, authors sought to assess knowledge and beliefs about the hidden curriculum in university life. These are skills often not directly taught or acknowledged but aid in adult learner success (About Education, 2016). Via semi-structured interviews researchers found that 40% of students enrolled in the program and 100% of nonstudent stakeholders identified the hidden curriculum of postsecondary education as critical to success. Students in the program were given a measure of adaptive skills and overall their skills fell about -2 standard deviations below the mean with greater skills indicated in Socialization and Communication than Daily Living. This study suggests creative ways to address barriers to success that SWID may encounter in a university setting.

Although specific areas have been researched in various ways concerning the impact of SWID inclusion in university campus life and coursework, systematic research concerning peer perception and attitudes of SWID is minimal in regards to SWID specifically. Much of the research has included perceptions of general persons with disabilities (PWD) rather than specifically about SWID students attending the university and enrolled in courses alongside them. Also, much of the research has included anecdotal interviews, case studies, or other non-systematic methods and is unrelated to specific standards of Transition and Postsecondary Programs for Students with Intellectual Disability.

Research Questions

- 1) Do changes in perceptions of university student peers occur from the start to finish of a course with the inclusion of SWID participating in their classrooms from the *CTP Program*?
- 2) What themes emerge from university student peer responses concerning experiences, new understandings, views, gains, losses, and advice from participating in an inclusive university course with SWID participating from the *CTP Program*?

Methods

University CTP Program

The university certified transition program (*CTP Program*) examined in this study is an inclusive, comprehensive educational and independent living program with a vocational component for young adults, ages 18 to 28 with intellectual disability (ID). The *CTP Program* includes four semesters in which the SWID receives a certificate of completion. Students participate in instruction, out of class academic supports, campus activities and vocational training. Campus residence is optional but recommended.

Participants

Study participants were typical students enrolled alongside the SWID at a mid-size regional public university in the Deep South. Participants (Qualitative: N = 8, Quantitative: N = 87) were enrolled in one of five sections of three, first-year, general education, courses over a 16-week period. Each of the courses where participants were recruited included 2-5 students enrolled in the *CTP Program*. Program eligibility included the ability to navigate and live on campus independently and have basic reading and writing skills with accommodations. Students in this program displayed mild ID which included intelligence and adaptive behaviors 2-3 standard deviations below average.

Participation was voluntary and the university's Institutional Review Board approved the study. All participants signed informed consent forms prior to participating. Participation in the focus group was anonymous and pseudonyms were assigned

Tables 1 and 2 present participant demographic characteristics and course enrollments, respectively. More females than males participated; however, this may be due to the makeup of the courses and that the female university enrollment for that semester at the undergraduate level was 63.75% of total enrollment of 5,647 (NSU, 2016). The majority of students were under the age of 25, a range of degrees were represented from all colleges within the university, and although all levels of students were represented, the majority were freshman or sophomore levels.

Instruments

The quantitative data for this study comes from a slightly modified version of the Sentiments, Attitudes, and Concerns about Inclusion Education Revised (SACIE-R; Forlin, Earle, Loreman, & Sharma, 2011). The SACIE-R is a 15-item rating scale utilizing a four-point Likert scale of strongly disagree, disagree, agree, and strongly agree intended to measure preservice teacher perceptions of inclusion. Three constructs were found via factor analysis including *Sentiments*, or comfort levels, when engaging with PWDs; *Acceptance* of students with different needs; and *Concerns* about inclusion in their educational setting. The SACIE-R is a revision of the 19-item SACIE (Loreman, Earle, Sharma, & Forlin, 2007), which refined and combined the *Attitudes Toward Inclusive Education* scale (ATIES; Wilczenski, 1992), a modified version of the *Interaction with Disabled Persons* (IDP) scale (Gething & Wheeler, Earle, Loreman, and Sharma (2011) validated the SACIE-R using 542 preservice teachers from 9 institutions of higher learning in Hong Kong, Canada, India and the U. S. They caution, that the percentage of variance explained in the SACIE-R is less than 50% and internal reliability of the Attitudes and Concerns factors falls slightly below the ideal.

Quantitative Methods

Using a mixed methods design, differences over one semester between participants' scores on each factor and the total scores of the SACIE-R were examined quantitatively. Participants included students from five courses, including Public Speaking (two sections), Personal Fitness (one section), and University Studies (two sections). University Studies is an overview of skills needed to be successful in the university setting for incoming students. A series of paired samples *t*-tests were conducted to examine differences from the Start (first 2 weeks) and End (last 2 weeks) of the semester between student's scores on each factor and the total scores of the SACIE-R. Statistical significance was defined as $p < .05$.

Qualitative Methods

In addition to the pre- and post-semester surveys, eight students participated in a focus group at the end of the 16-week study. Information gained for the survey informed the qualitative inquiry. A focus group interview is a valuable tool for gauging the attitudes, beliefs and opinions of a small group of people with similar backgrounds on a given topic. Focus group analysis allowed the researchers to ascertain shared or divergent viewpoints quickly and efficiently (Krueger & Casey, 2015, Patton, 2015). The eight students were randomly selected from a list of volunteers and were enrolled in three of the classes.

Of the four female and four male focus group participants, one indicated an age between 26 and 35 years old. The remaining participants were 25 or younger. Five participants had experienced at least one 'significant/considerable' interaction with a PWD, and three stated they had a close friend or family member with a disability. Five participants said they had received no training related to PWDs; the remaining three listed 'some.' On level of experience interacting with a PWD, two said they had none, three listed 'some,' and three put 'high (at least 30 full days).' Half of the group rated their confidence level for interacting with PWDs as 'average,' two rated it as 'high' and one each at 'low' and 'very high.'

All participants gave informed consent for participation and video recording. An hour was dedicated for the session, and after preliminary discussions and icebreakers, the formal interview lasted 25 minutes.

The focus group questions included: (1) How would you compare and/or contrast your classroom experience with the [Program] students to your experience in your other classes without [Program] students? (2) Did you gain any new understandings about PWDs from being in class with the [Program] students? (3) Do you think you will view PWDs differently after being in class with the [Program] students? (4) Do you think there were any advantages to

being in an inclusive classroom with the [Program] students? (5) Do you think there were any disadvantages to being in an inclusive classroom with the [Program] students? (6) What advice would you give to future students who will be in classes with [Program] students? (7) Does anyone have anything else they would like to add? Questions were crafted to focus discussion on participants' experiences with *Program* students in class and how these experiences may have affected their perceptions of the inclusive classroom and of people with disabilities and to broaden findings of the quantitative inquiry. Responses were transcribed, then coded, from the video recording by one researcher and proofed to confirm accuracy. Themes were developed from the extracted codes to provide context and understanding.

Results

Research Question #1

Quantitative findings address the first research question: 1) Do changes in perceptions of university student peers occur from the start to finish of a course with the inclusion of SWID participating in their classrooms from the CTP *Program*? Three areas of the SACIE-R violated the assumption of normal distribution at the $p > .05$ level as assessed by Shapiro-Wilk's test. These included Sentiments during Semester Start ($p = 0.003$) and Semester End ($p = 0.036$), and Concerns during Semester End ($p = 0.007$). All other areas met the assumption for normality. Student's scores in Sentiments statistically significantly increased ($p = 0.038$) from Semester Start ($M = 15.32$, $SD = 2.60$) to Semester End ($M = 15.82$, $SD = 2.41$). Descriptive statistics of t -tests are reported in Table 3. No other statistically significant results were found between Semester Start to End. Effect size for change over the semester was measured via Cohen's d and results indicated a small effect size (Cohen, 1988), for Sentiments ($d = 0.23$) and no or little effect for all other factors of the SACIE-R.

Further analysis utilizing a series of ANOVAs examined if statistically significant differences existed between the specific demographic areas of gender, major, course enrollment, and university status within Semester Start and End of each area of the SACIE-R. Table 4 provides details. Age group was not included in analysis due to limited participants in older groups. Statistically significant differences were noted in the Semester End answers for gender in the areas of Sentiments ($p = 0.012$), Concerns ($p = 0.039$), and Total SACIE-R ($p = 0.023$). All indicated that female participants had higher scores. Course enrollment for Semester End Concerns also indicated statistically significant differences among the course types. Introductory Speech $M = 15.97$ = borderline Agree/Strongly agree range, University Studies $M = 15.52$ = borderline Agree/Strongly Agree range, Personal Fitness $M = 17.11$ = Strongly Agree range, $p = 0.023$). For factors, means of 1-5 fall in the Strongly Disagree range, 6-10 fall in the Disagree range, 11-15 fall in the Agree range, 16-20 fall in the Strongly Agree Range.

The mean ranges for Sentiments Semester Start and End scores across all demographic groups fell in the Agree to Strongly Agree range. All mean ranges from all demographic groups Semester Start and End Attitudes decreased in the Agree range except for other university status at the post semester. The mean ranges for Semester Start and End Concerns in the Strongly Agree range for all demographic areas except for end of semester male, Arts & Sciences, and other university status. For total scores, means of 1-15 fall in the Strongly Disagree Range, 16- 30 fall in the Disagree range, and 31-45 fall in the Agree range. The Semester Start and End Total SACIE-R scores fell in the Agree range for all demographic areas.

Participants responded to a series of questions about their personal experiences with PWDs. Table 5 provides details. Responses included a general increase of reports of having significant/considerable interactions with a person with a disability, some increased training on PWDs, and negligible change in knowledge of legislation or policy pertaining to PWDs. Participants indicated negligible change in level of confidence in interaction with PWDs. A slight increase in level of experience interacting with a PWD was noted.

Research Question #2

Qualitative results address the second research question: 2) What themes emerge from university student peer responses concerning experiences, new understandings, views, gains, losses, and advice from participating in an inclusive university course with SWID participating from the *CTP Program*? A thematic analysis was applied to the transcripts resulting in five recurring themes: (a) initial awkwardness, (b) open-mindedness, (c) normalcy/sameness, (d) heightened awareness/understanding, and (e) motivation/encouragement. We report on the language students used in application to theme development. In cases, students' language may be viewed as problematic from a critical disabilities perspective, e.g., discussions of 'normal' and 'inspiration.'

Theme #1: Initial Awkwardness. Some students expressed initial feeling of weirdness. No student received advanced notice that a cohort of SWID would be in the class. Furthermore, this study was conducted during the first semester of the program's existence on campus, so students had no foreknowledge about it. For example, on the first day of class, four SWID entered class together with an aide and sat down together in the front of the room. Many traditional students were doubtlessly questioning what was happening.

Simon spoke about 'the initial awkwardness of it,' and that 'students don't really, like, initially know how to react to the environment.' Samantha spoke up next: 'For me it was like, "Okay, don't be weird about it." But then I just felt like I made it a thing—not to be weird about it—and now I'm being weird about it. But I wasn't actually weird about it; it was just, like, in my head....'

Realizing that some students experienced initial awkwardness likely explains why several said, 'Just always be understanding—like, open-minded.' Justin exhorted, 'Be patient,' and Janice stressed, 'Don't judge.' Frank's advice was 'to be open-minded, you know, because it will give you a chance to later—sometimes you can become good friends with them....'

Theme #2: Open Mindedness. Being open-minded and working through the initial awkwardness gives way to a realization of normalcy or sameness. By semester's end, focus group participants realized that they and the SWID are, to use Kristina's words, 'really not all that different.' Students applied the idea of normalcy both to the course and to the people in it. Students were asked to compare or contrast their classroom experiences in their courses with SWID to their other courses. Janice spoke first: 'I feel like it's the same.' Justin said, 'It's not much different like at all.' Samantha suggested that people tend to think that others with disabilities either cannot make it to college or be successful in college, then she expressed, 'So, to be in a class with somebody with a disability—a college class!—and have it just be normal was, like, really eye opening for me personally.' Brian focused on the presence of the SWID in the classroom and concluded, 'I don't feel like it has any effect on our education at all. I don't feel like there's any real impact on what's going on in the classroom.' Students tended to discount any effect or impact whatsoever but to communicate that they experienced no negative effects or impacts.

Not only did the students have a consensus on the class being normal, but they also viewed everyone in the class, at least by the end of the class, as the same. Frank specified that 'everybody has different learning tendencies, and everybody can be the same in certain things. And they are just normal people just like us.' Brian echoed Frank's sentiments, adding, 'I mean in different aspects of life everybody has their disadvantages [compared] to other people...just treat them like anybody else. They are no different from you, in all honesty.'

Theme #3: Normalcy/Sameness. The lens of normalcy or sameness allowed students to gain new levels of comfort and understanding toward PWDs, especially for those students with previously limited exposure. Janice said her experience was 'eye opening because you don't really get to interact with people like that outside of class.' Samantha said she had 'been around PWDs before' but that being in a college class together resulted in her feeling more comfortable toward PWDs. Simon said enthusiastically, 'I can say that throughout this single semester in my life that I have become more sensitive and more, I guess, willing and receptive.' Simon added, 'I feel less awkward waving at someone who's got a disability. I feel less awkward talking to them.' Kristina, who has a family member with a disability, indicated that she learned better how to connect and communicate with the SWID. She said her interactions allowed her 'to, you know, be one on one with them.' She learned about the kinds of 'questions I can ask them' because 'you know, I know what they are interested in now like when it comes to the communication aspect of it.'

Theme #4: Heightened Awareness/Understanding. Becoming more comfortable and communicating with the program students created a sense of an enhanced perspective on PWDs. Jerilyn said, 'I have never been in a class with any person like the [Program Name] students before, and...I just have a greater understanding of just, I don't know, how we're not really that different.' Simon spoke about becoming 'more sensitive and aware' and how he now notices the SWID and other SWDs around campus 'and that's also new to me...' Jerilyn approved of Simon's use of the word 'aware' and added, 'I think it heightens awareness for all the non- [Program] students that are in the class, and I think that's a great thing.' Janice reflected on the semester: 'We got to understand more—like a lot more! Cause like, when I used to just see people walking around with disabilities, I didn't like really know like what they were..., and now I can see that they are just like us.' Justin followed up on Janice's comment with, 'Kind of what she said. Get in their head a little bit and understand what they are going through and what they are thinking.'

Brian concluded, 'It helps a lot of people who have never been around [PWDs] to understand them and to have experience with them.' Frank concluded that the inclusive classroom allowed him to 'get a better understanding on how [PWDs] feel about certain situations and what they go through in life.'

Theme #5: Motivation/Encouragement. Another theme from the focus group was motivation/encouragement. Samantha first referenced this theme: 'I feel like I have always heard stories of PWDs, like, succeeding and doing great things, but to meet people who have actually, like, done that, like [student], who has written his book—like he's a published author!—that's awesome.' Frank spoke about gaining 'a greater respect' for Program students 'because not—even people without disabilities, some don't attend...' whereas Program students 'are trying to attend college and have a better life for themselves and try to be more independent [rather] than having more respect for Program students as opposed to 'people without disabilities' who 'don't even try to attend college and just stay home and do nothing....' Jerilyn referenced comments about respecting Program students for at least trying to go to college, and added that 'it makes everybody else try harder because [Program students] are breaking a lot of barriers, and it's really cool to see that, and I think it makes everybody else work a little bit harder in the class.' Brian continued Jerilyn's narrative: 'It inspires people when they see them succeed. It makes them want to succeed also. So, it's kind of like an inspirational thing to have them around you.'

Discussion

This present study adds to the literature through mixed methods analysis of the impact of students from the Program through which mainstream university students had regular direct exposure to SWID in their classrooms. Much of the literature base concerning inclusive education has been about secondary schools and conducted on preservice teachers and/or used case study or anecdotal data collection methods. This study about university student attitudes and perceptions of peer SWID provides immediate findings of a new CTP program in at its inception. This study measures potential campus and community benefit of an inclusive Transition and Postsecondary Program for SWID. As 266 programs have been developed with the HEOA and Transition and Postsecondary Program for SWID grants since 2010 (Think College, 2019), it is imperative to conduct quality research into the campus impact of these programs.

In this study most students appeared to already have favorable perceptions as measured on the SACIE-R. However, with no cut-score or definition of what is optimal for peers in inclusive university courses, it is difficult to analyze if the levels indicated are at desired levels. Negative attitudes (Ozyurek, Yavus, & Cetin, 2016) and lack of education about discrimination (Girli, Sari, Kirkim, & Narin, 2016) of individuals with disabilities appear to be distinctly different than attitudes found in this study.

When change was measured quantitatively, it was mixed and often minimal, as was in this study. This also aligns with Hafner, Moffet, and Kisa's (2011) study indicating that undergraduate students indicated feeling comfortable in class with SWID, and Griffin, Summer, McMillan, Day and Hodapp's (2012) findings of 256 college students indicating positive attitudes toward a SWID. Their results also aligned this study's findings about female students reporting higher positive attitudes in several areas: End for Total SACIE-R, Sentiments, & Concerns. Although this study did not specifically intervene about disability awareness, the favorable changes in Park & Kim's (2018) results from a 16-week disability awareness educational program generally align to this study.

The SACIE-R also indicated increased peer comfort levels from pre-to post-test. This may indicate peers found it easier over a semester with inclusion of SWID in their courses to overcome their initial shock when interacting with people with severe physical disabilities and perceive themselves if they had a disability less negatively. Although growth in Sentiments had a small effect size, growth in this area is highly desired for any community and university campus. concerning the Sentiments variable, the focus group themes of initial awkwardness and normalcy/sameness appear to align in agreement with the quantitative data indicating that peers' first day of class was unexpected to be inclusive and that these initial thoughts and feelings changed over the semester to include the remaining three themes of open-mindedness, heightened awareness/understanding, and motivation.

As SWID and peers were enrolled in several courses, more research as to why some courses had higher ratings than others (i.e., University Studies and Personal Fitness courses had higher ratings than Speech), Dent, Prescott, Wilson, Brinkley, & Tabi (2015) noted significant differences in university majors regarding friendship with a PWD.

Additionally, student comments regarding the qualitative study themes reveal that academic inclusion of SWID positively impacted students. Responses like 'it makes everybody else try harder because [Program students] are

breaking a lot of barriers, and it's really cool to see that, and I think it makes everybody else work a little bit harder in the class' have obvious potential benefit to the entire university community and beyond if these perceptions are maintained and continue to grow.

This study provides a look into the university impact of a new program; however, it is limited in several ways. Students at this university tend to be from a region that is primarily rural and suburban. The timing of the program launch is both advantageous and potentially limiting in that the program began the semester the study began. All participants were new to the experience, and experiences may change over time as campus culture toward the students enrolled in the *CTP Program* potentially changes. The SACIE-R was validated on pre-service teachers, not general college students.

Although more favorable perceptions about inclusion and PWDs has been noted (Griffin, Summer, McMillan, Day, & Hodapp, 2012), further study of this phenomenon on college campuses is warranted. Long-term impact of inclusion in these courses has yet to be examined at this university, and no peer-reviewed articles examining such impact elsewhere was found. The long-term impact on both SWID enrolled in programs like these and students studying alongside them should be examined further to explore change in indicators like service, friendship, academic growth, mental and physical health, and careers. Additionally, other campus members' perceptions may be valuable to evaluate systematically and quantitatively, such as non-program faculty, administration, and staff (Morin, Rivard, Crocker, Coursier, & Caron, 2013) as several other studies looked at in case study or anecdotally (Casale-Giannola & Kamens, 2006; Wilson, Bialk, Freeze, Freeze & Lutifiyya, 2012; Folk, Yamamoto, & Stodden, 2012; Berg, Jirikowic, Haerling, & MacDonald, 2017).

In the U.S., the Higher Education Opportunity Act, 2008 provides some leeway into the components of programs, such as the number of years students who are pursuing a certificate rather than a diploma can be enrolled and the structure and amount of academics versus campus life included. As programs at other universities develop and modify their structures, a data-based look into not only the impact on the students enrolled in the programs but also the impact on the broader campus should be assessed in order to better understand the impact, benefits and limitations of such programs. In turn, policy and legal decisions should consider the broader short and long-term impact on communities with inclusion of SWID in campus

Currently, there is proposed establishment of a fund to be used for post-secondary CTP in this university's state. Funds will be used by existing programs to expand the number of individuals served or provide services needed for success of independent living and employment after completion of the program. Funds will also be utilized to start additional programs as current programs do not have enough openings to fill the applicants. Proposed funds will also be used to support all programs in the state through higher education and disability initiatives.

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