Shifting Perspectives: Enhancing Healthcare Professionals’ Awareness Through a Disability Studies Undergraduate Curriculum

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Abstract
Disability Studies has experienced steady growth in the humanities, the social sciences, and education departments of a growing number of United States colleges and universities. One area of study that has remained static is undergraduate health science, where the number of schools offering a degree in disability studies has grown slightly from two in 2009 (Cushing & Smith, 2009b; Taylor & Zubal-Ruggieri, 2013) to four in 2015 (Zubal-Ruggieri, 2015). Some disability scholars believe that health science students are missing out on an opportunity to incorporate this perspective into their outlook and approach to disability. Longmore (1991) believes that "students interested in healthcare . . . need to have the opportunity to study this [disability] in the same way that they have the opportunity to study women's history or African American history or Asian history" (Stanford University News Service, Silent Screen Villains section, para.12). This opportunity can shape a group of healthcare professionals who view disability from a unique individual perspective. The purpose of this survey research study was to examine alumni self-perception of the impact of completing a one-semester (16 credit) disability studies concentration in an undergraduate health science major. Fifty-one alumni from a New York area public research 1 level university who graduated between 2006 and 2012 with a Bachelor of Science in Health Science and a concentration in Disability Studies were surveyed to examine their perception of the helpfulness of the curriculum in four areas: practice and/or post-graduate study, comfort level interacting with people with disability, confidence level in ability to work with people with disability, and sensitivity and awareness of disability issues. This survey research study used descriptive statistics to analyze the responses to 10 Likert questions. The paper also includes comments from one open-ended question that allowed respondents to add additional thoughts and comments. The results strongly indicated that the health science alumni perceived a positive increase in the four focus areas as a result of completing the disability studies concentration.

Key Words
Disability Studies, Health Science, Undergraduate Programs, Disability Studies Curriculum
Introduction

Disability Studies as a field of study is growing in many disciplines across college campuses worldwide. Courses on the ideology of disability have been integrated into the humanities, the social sciences, and education (Vidali, Price, & Lewiecki-Wilson, 2008); additionally, students are afforded a range of options regarding the level of study: from a minor to a concentration or certification to some universities offering a major in disability studies both in undergraduate schools and in graduate programs. The integration of disability studies programs available in the United States has grown from 29 schools offering some type of disability studies program in 2004 to 36 schools in 2013 where it has remained until 2015 (Taylor & Zubal-Ruggieri, 2013, Zubal-Ruggieri, 2015). In addition, there are “31 . . . ‘partial degrees’ (modules, minor, diploma, concentration, certificate)” (Cushing & Smith, 2009a, p. 8). This growth has predominantly occurred in liberal arts programs. In a 2009 study, only two universities were identified as offering any level of degree in disability studies from a health science program (Cushing & Smith, 2009b). This number remained through 2013 (Taylor & Zubal-Ruggieri, 2013) until a new 2015 compilation found the number to have increased to four (Zubal-Ruggieri, 2015).

Including disability studies into the curricula of health science programs remains an area of controversy to many disability studies scholars due to the association between the medical model of disability and the professionals who work in healthcare related fields (Evans, 2004). Some disability studies scholars have held steadfast to the belief that disability studies curricula best belongs in the field of social sciences and the humanities. These disciplines are often thought to be the best places to study disability on parallel with gender, race, and culture, which in turn allows students to fully grasp the historic negative treatment and prejudice experienced by
people with disabilities and the effects they have had on the development of the self. While this may be true to some extent, the understanding of the history of the lived experience of disabled people, both socially and within the healthcare system, can work to foster change and help to decrease disparity in treatment. Hoang, LaHouse, Nakaji, and Sadler (2011) found that cultural competency training for physicians and medical students working with the Deaf community helped them to more effectively respond to human diversity among their clients and worked to reduce barriers to healthcare for members of this specific underserved group (p. 181).

In its mission statement, the Society for Disability Studies (SDS) defines disability not as Stedman’s Medical Dictionary did in 1976 as “a deficit that hinders, incapacitates, or restricts a person’s normal achievement” (as cited in Linton, 2006, p. 162) but rather as “a key aspect of human experience” (Society for Disability Studies [SDS], 2016b, para. 1). The experience of disability is individual yet universal, with effects that influence not just the physical being but myriad aspects of a person’s life. To define disability solely in terms of its physical manifestation is to ignore the complex whole of the disabled person and the role of disability in society. The Society for Disability Studies believes that “The study of disability has important political, social, and economic implications for society as a whole, including both disabled and nondisabled people” (2016b, para. 1). Adherence to the social model of disability emphasizes the oppression and isolation disabled people have historically felt due to society’s refusal to adapt to their needs (Shakespeare, 2013, p. 215). This differs greatly from the medical model which views disabilities as intrinsic deficits in people requiring them to either be fixed or accept ostracism.

Traditional health science curriculum has often adhered to a model of disability, which fosters a perception of people with disability being in need of fixing in order to assimilate into
society rather than the need for society to accommodate to people with disability. As a result, many disability studies scholars have historically rejected the idea of integration into any health science related programs as a way to stay distanced from the dominant medical perspective that is often apparent in programs designed to educate people in fields that aim to work with disabled clients or patients receiving services. This long-held view has isolated students in health science majors and future healthcare professions from an opportunity within their studies to understand the disability perspective and incorporate it into their work. Is it possible to draw a distinction between the medical model and health care? Since healthcare providers are necessary in many aspects of both disabled and non-disabled people’s lives, is it possible to incorporate a social aspect of disability within the traditional healthcare curriculum in order to affect their attitudes and perception?

In an April 17, 2004, e-mail posted on the Society for Disability Studies list-serv in a discussion regarding the establishment of guidelines for the growing discipline, Carol Gill distinguishes between medical practice and the medical model:

The medical model is not synonymous with the medical system or medical practice. I still maintain (cordially!) that the medical system can be very helpful and, indeed, valuable—despite its hazards. But the medical model is not useful or valuable to disabled people, if “medical model” refers to a set of beliefs that conclude that disability is simply a defect located in individuals and that the best response to disability is the restoration of normality. The medical model refers to those beliefs, not to medical practice….Disability Studies should challenge the connection between the medical model and medical practice (as cited in Chen, Kudlick, & Kirchner, 2004, The Social Construction of Theory section, para. 6.)

In an effort to challenge the connection between the medical model and medical practice, disability studies theorists have discussed the integration of disability studies into curriculum within health science programs (Block, 2004), and several programs have been successfully
integrated in a number of universities. This inclusion has occurred predominately through the integration of individual courses in graduate programs that reflect a disability studies philosophy. The incorporation of disability studies into undergraduate programs in the health sciences has been much slower. In 2013, 36 colleges and universities across the US were identified as offering disability studies as a major, minor, concentration, or certificate program both in undergraduate and graduate schools. Of those 36 programs, nine were offered in undergraduate programs and only two of the nine were identified as being a part of a health science school (Taylor & Zubal-Ruggieri, 2013), a number which increased to four in 2015 (Zubal-Ruggieri, 2015).

Disabled people rely on health care in much the same way as non-disabled people. Many individuals have markedly different healthcare experiences based on their providers’ sometimes lack of understanding regarding the lived experience of disability. As a wheelchair user with a spinal cord injury, one of the authors has often been left answering questions related to functional ability or level of injury that rarely pertained to the strep throat or sinus infection that precluded the visit to a healthcare provider. Studies have explored the attitudes of healthcare students who have not received any education in disability studies toward disability and their clients who have disability. Many students in the helping professions possess negative attitudes toward people with disability as influenced by a number of internally held beliefs (Pfeiffer et al., 2003). These negative attitudes contribute to the general belief that disabled people have a decreased quality of life as compared to the non-disabled population (Connally, 1994 as cited in Albrecht & Devlieger, 1999, p. 979). Iezzoni, Ramanan, and Drews (2005) found that medical students reported feeling unprepared for interactions with clients with disability and that their limited interaction with disabled clients, lack of knowledge regarding clients’ life experience,
and biased views of disability as a burden influenced their attitudes and level of interactive care offered.

The incorporation of a disability studies curriculum that challenges the commonly held view of disability as a burden through exposing healthcare students to disability as a human experience can work to alter the predominant negative view of disability among healthcare students. Research has shown that the relationships between students in healthcare related fields and those with whom they will eventually work benefit from students acquiring knowledge of the real life experiences with disability. A cross-sectional study of undergraduate students in six healthcare related fields found that their views toward clients with intellectual disability, substance abuse, and acute mental illness impacted their attitude toward the clients and affected the therapeutic relationships (Boyle et al., 2010). These views were not experiential but rather influenced by cultural perception of disability. Much of health care focuses on comparison to a norm in order to identify a difference and attempt to minimize the gap. This focus contributes to a negative view of disability that can be changed through increasing familiarity with disability in its everyday state as opposed to the societal stereotypes and misconceptions often viewed in its medicalized state.

A self-selected group of medical students from three schools in the Boston area acknowledged that they knew little about the effects of sensory and motor impairments on the everyday lives of people they worked with and they held largely negative views about the experience of living with disability. Since the group’s views on living with disability were largely derived from watching older family members lose independence as a result of aging, their perception of sensory and physical disability rarely included younger, more active adults living with disability (Iezzoni et al., 2005). Such biased misconceptions can be dangerous or life-
threatening; for example, the commonly held assumption that a disabled person is not sexually active could lead to a healthcare provider to omit providing information or screenings for sexually transmitted diseases in a routine examination (Shakespeare, Iezzoni, & Groce, 2009) or not accounting for decreased sensation when determining signs and symptoms of infection. In addition, there is the possibility that a lack of healthcare providers’ knowledge regarding ways to effectively communicate with Deaf women might lead to feelings of mistrust, incomplete, or incorrect knowledge of health issues, resulting in a general avoidance of healthcare services (Steinberg, Wiggins, Barmada, & Sullivan, 2002, p. 729). Research shows that disabled people experience higher rates of early death and are more likely to experience unmet healthcare needs (Campbell, Sheets, & Strong, 1999; Iezzoni, 2009; Lennox & Kerr, 2007; Meade, Mahmoudi, & Lee, 2015; Kessler Foundation and National Organization on Disability, 2010; Turk, Scandale, Rosenbaum, & Weber, 2001). It is possible that greater knowledge and sensitivity on the part of providers might impact this disparity. Incorporating a disability studies perspective into a medical or healthcare science curriculum enables health science students to gain a broader perspective of disabled people’s experiences, and this exposure creates an opportunity to build better rapport and establish a basis for collaboration with clients (Evans, 2004).

“In the same way that Women’s Studies has influenced the training and delivery of service in gynecology, Disability Studies can and should influence the curriculum and practice in rehabilitation” (Linton, 1998, p. 536). In disability studies literature, there has been discussion regarding incorporating disability related curriculum more fully into graduate and undergraduate health science programs (Barnes, 1999; Block et al., 2005; Evans, 2004; Farel, 2004; Hayward, 2004; Lubet, 2004; Price, 2004; Seelman, 2004). Much of this discussion has centered on graduate studies within the health science and rehabilitative science fields, but the
implementation of disability studies curriculum into undergraduate health science majors has been slower. Relatively few schools have addressed the need to educate future healthcare providers with regard to the paradigm of disability by incorporating a disability studies curriculum into undergraduate health science programs. This integration would purposefully create a group of service providers educated in the social and historical treatment of people with disability. Attitudes and behavior as future healthcare providers would be influenced as a result of examining how the societal perception of living with disability often differs from real life experience.

In this study, the researchers surveyed alumni of a health science major in a greater New York area public research 1 level university who completed a one semester disability studies concentration in their last semester of an undergraduate health science major. Upon successful completion of the concentration, graduates earned a Bachelor of Science in Health Science with a Concentration in Disability Studies. Of the five courses in the concentration, two adhere strictly to the disability studies philosophy and cover disability from a social, philosophical, historical, and political perspective exclusively: Disability Health and Community and Disability and Employment. Two courses approach disability from a human development standpoint incorporating the disability studies perspective into the curriculum with an emphasis on the life stages as relevant to their course: Children and Disability and Disability and Aging. The final component is a four credit course that coordinates the students’ 45-hour practicum with the writing of a capstone paper. The four content courses incorporate disability into a lifespan continuum addressing social, employment, historical, developmental, and aging issues to guide students toward the understanding that disability is not a static experience but a human one that evolves throughout one’s lifetime. The curriculum was developed before SDS created their
guidelines for disability studies and was called a Concentration in Disability Studies from its inception in 2004 until 2012. In order to adhere to the guidelines adopted by SDS and to more accurately reflect the blended focus of the curriculum, the concentration was renamed Disability Studies and Human Development in 2012.

The purpose of this study was to examine alumni self-perception of the impact of completing a disability studies concentration in an undergraduate health science major. Alumni who completed this concentration were surveyed to determine their perception of the helpfulness of the curriculum in four areas: practice and/or post-graduate study, comfort level interacting with people with disability, confidence level in ability to work with people with disability, and sensitivity and awareness of disability issues.

**Methods**

**Research Design**

This study utilized a survey research design. Respondents were asked predominately Likert-style questions and one open-ended question that allowed respondents to add additional thoughts and comments.

**Participants**

A convenience sampling method was used for this survey research project. Alumni who successfully completed the one semester disability studies concentration in the Health Science major of a Northeast area public research 1 level university between 2006 and 2012 were recruited via a mailed survey (n = 317) with 51 responding for a response rate of 16%.
Measures

A survey was created by the researchers consisting of 10 Likert scale questions and one opened-ended question developed to capture perception of changes in attitude and behaviors in the following four areas: practice and/or post-graduate study, comfort level interacting with people with disability, confidence level in ability to work with people with disability, and sensitivity and awareness of disability issues. Five questions focused on the perception of the curriculum’s effect on practice and/or post-graduate study: one question assessed comfort level interacting with people with disability; one question addressed confidence level with regard to working with people with disability; and three questions measured sensitivity and awareness of disability related issues. The 10 survey questions were formulated to include a Likert response from 1-5 with 1 being “strongly agree” and 5 being “strongly disagree.” (See Table 2).

Procedures

The researchers received IRB approval. Alumni were then mailed an explanatory statement outlining the purpose of the study, a consent form, and a survey. Directions on the survey instructed alumni to disregard the survey if they were not currently working in a healthcare related field and/or attending a graduate or certificate program. Each participant completed a self-report survey and mailed it back in a self-addressed stamped envelope. Return of the completed survey indicated informed consent. A second round of surveys was mailed out to alumni who did not respond to the first mailing. A total of 51 surveys were returned, the majority from alumni that identified as either working in a healthcare related field and/or attending a graduate or certificate program. Although alumni were instructed to not return the survey if they were not currently working or studying in a healthcare related field, 4 surveys
were returned with alumni indicating just that. Rather than disregard these 4 responses, the researchers chose to include them in the statistical analysis and record their comments since there was no noticeable difference between their responses and the responses of those working and/or studying in a healthcare related field.

The results of the Likert survey questions were analyzed utilizing descriptive statistics, and the qualitative responses were analyzed using provisional coding. The mean response for each Likert question was recorded as well as frequency of response in each of the four focus areas: attitudes and perception of helpfulness of curriculum on practice and in post-graduate coursework, confidence level, comfort level, and sensitivity to disability related issues. The percent agreement (strongly agree/agree) for statements for the four focus areas were calculated for all 51 respondents overall and also by field of work or study. In addition, participants were given an opportunity to include open-ended comments. While there are some inherent similarities in the analysis of qualitative data, Saldana (2009) states there are 29 discrete methods for data analysis. No one method for coding data is the best, rather the researcher must select the appropriate combinations of methods based on the goals of the study. Upon initial immersion into the data, the qualitative data appeared to be directly related to one of the four focus areas. Therefore, it was determined by mutual agreement that a provisional data analysis procedure was optimal. Provisional coding utilizes a predetermined list of codes shaped from either a literature review, field testing results, or, in this case, the four focus areas of the quantitative survey questions.

**Results**
The means and standard deviation of the Likert response questions were calculated using the 2010 version of Excel along with the percent of agreement with each statement (Table 1). The frequencies of response for each question were reported (Table 2). The percent of responses were organized by the respondents’ reported field of work or study with 19 in rehabilitation services (physical therapy [PT] and occupational therapy [OT]), 10 in mental/behavioral health residential/day programs, nine in nursing, nine in other healthcare related fields (obstetrics/gynecology [OB/GYN], emergency medical services [EMS], HIV counselor, orthopedics, speech language pathology, substance abuse counselor, and cardiology), and four in non-healthcare related fields. The percent of agreement by field of work or study was calculated for each question (Table 3).

Thirteen respondents provided 21 sentences of qualitative comments. With the exception of four data segments (i.e., low pay for entry-level disability studies related employment, wanted increased discussion of medical model in course work, shared that a family member has a chronic illness, thanking the major for offering the concentration), the qualitative data was coded into one or more of the four focus areas. The findings of the qualitative analysis are woven into the presentation of the quantitative results and discussion using representative low-inference data.

Of the 51 respondents, most agreed that the undergraduate disability studies curriculum helped them in their practice and post-graduate studies (64.7%; 52.9% respectively), helped to make them better overall service providers (82.4%), and increased confidence in their ability to advocate for clients with disability (82.4%). This positive impact was evident in the percent agreement with the survey questions and was consistent with open-ended comments offered by the alumni in this study as shown by this example: “The Disability Studies coursework really
taught me a lot and was the foundation to the start of my graduate career.” Although only 47.1% indicated that they referred back to their undergraduate disability studies coursework while at work or school, the overall responses indicated that the curriculum had a positive impact on them as healthcare providers. One student comment reflected this perspective: “I am so thankful for all I learned in the Disabilities Studies program, and it has completely changed my outlook on things. It has greatly benefited me in several jobs I've encountered.” The respondents reported feeling an increase in comfort level when interacting with people with disability (84.3%) and an increase in confidence when working with people with disability (84.3%). Awareness of disability related issues also increased with the respondents reporting that their language and disability related terminology use as well as their attitude about disability changed as a result of the disability studies curriculum (Table 1). “I wish that all my classmates were exposed to this! I think that everyone going into health care should have knowledge of what we learned in Disability Studies!”

The responses were organized by reported field of work or study. Of the 10 respondents working and/or attending a post-graduate program in various mental or behavioral health programs, 100% indicated an increase in comfort level, confidence level, and awareness and sensitivity as a result of the disability studies curriculum. Of the four respondents who are not working or attending a post-graduate program in a healthcare related field, 100% felt an increase in confidence level, awareness of disability related issues, and positive attitude toward disability. All respondents from both groups indicated a positive change in their disability related language and terminology use (Table 3). As one alumni stated: “The impact of the disabilities concentration [reaches] farther than academics.”
The area most significantly affected by the undergraduate disability studies curriculum was increased awareness of disability related issues, 94.1% (Table 2). All respondents working and/or studying in mental or behavioral health programs, other healthcare related programs, and non-healthcare related programs indicated an increase in awareness of disability related issues. Of the 19 respondents working and/or studying in rehabilitative services 89.47% indicated an increase in this area as well as 88.89% of the nine respondents in the nursing field (See Table 3).

**Discussion**

Seelman (2004) believed, “… a Disability Studies perspective is both compatible with and necessary to education in the health related and rehabilitative professions” (para. 1). Yet Iezzoni et al. (2005) showed that students in healthcare related fields often feel unprepared to work with people with disability as a result of a limited amount of experience with disability. This study demonstrated that a disability studies curriculum in an undergraduate health science program positively impacted the perception of alumni in four focus areas: attitudes and perception of helpfulness of curriculum on practice and in post-graduate coursework, confidence level working with people with disability, comfort level interacting with people with disability, and awareness of/sensitivity to disability related issues.

The perception of disability that healthcare providers possess can affect their views related to the abilities and needs of the people they serve. Coursework that introduces healthcare students to the social history of the treatment of people with disability provides them with more awareness of barriers to access. Awareness of these barriers and their effects on a person’s outlook, education, and work history can influence health care that addresses the whole person rather than a sole focus on the physical manifestation of disability. A significant percentage of
alumni indicated feeling an increased awareness of disability related issues as a result of completing the disability studies concentration (94.1%). Healthcare providers who are knowledgeable about the historical impact of structural, systemic, and attitudinal barriers to access and ways they continue to affect disabled people’s lives will be more inclined to challenge these obstacles they may face in their roles as healthcare providers.

Although only 47.1% of respondents reported referring to the coursework while at work or graduate school, there was a measurable positive influence on the four focus areas. The significance of this finding shows that alumni do not necessarily need to refer back to their coursework to remind themselves of the historic implication of the treatment of disability and its effects in order to incorporate this social point of view into their work and/or study. While more than 80% of the 51 respondents expressed an increase in confidence, comfort, and awareness of/sensitivity to disability related issues, 82.4% indicated that the coursework had made them a better overall service provider, and they felt an increase in confidence in their ability to advocate for clients.

When analyzing the responses according to field of work and/or study, the most significant finding was in alumni working/studying in an area of mental/behavioral health, with most identifying their place of employment as a day or residential facility (n=10). This group has the largest percent agreement with each statement among those working or studying in a healthcare related field. All the respondents expressed an increase in confidence, comfort, and awareness of/sensitivity to disability related issues. Based on the employment indicated by these alumni, they work closely with a population of disabled people who require assistance in their daily lives. Typically, this population is one who is most likely to be in a situation where autonomy and rights could be restricted by healthcare workers who do not possess prior
knowledge of the social model of disability and the implications of the historic treatment of people in day and residential programs. SDS, in its guidelines for disability studies curriculum, stated that, “DS should work to de-stigmatize disease, illness, and impairment, including those that cannot be measured or explained by biological science” (2016a, para. 2). A Curriculum that introduces the birth of the People First Movement or discusses how disabled people have historically been integrated into community work environments before the industrialization age could have a significant effect on the perspective of providers. One student’s open-ended comment supported this idea: “I strongly urge others in the health science track to consider the Disability Studies concentration as it enlightened me & continues to make me a better healthcare provider.”

A small number of respondents indicated that they were not working in a healthcare related field (n=4), yet they still felt that the coursework had a positive impact on many areas of their lives. All agreed that as a result of their disability studies concentration coursework, their confidence levels when working with disabled people increased, as did their awareness and sensitivity through positive changes in terminology use and attitude toward disability. All felt that they were more aware of disability related issues. While the researchers originally thought to not include responses from this group into the data analysis, the significance of these findings suggest that in addition to having a positive change on healthcare providers in their work and post-graduate study, the disability studies curriculum also greatly impacted alumni’s general outlook and positively influenced their attitudes, views, and overall interactions with disability. However, since there were only four respondents not working/studying in a healthcare related field, this conclusion should be interpreted with caution.
Incorporating the disability studies perspective into undergraduate health science curriculum gives students an opportunity to view people as more than their disability; thus, it alters their approach from one that strives to fix the person to one that addresses external factors when determining how to best approach disability and advocate for the needs of those with whom they work. The findings from this study also provided important information for curriculum building within the health science framework. When a curriculum model that brings together a strong emphasis on the disability studies perspective is coupled with courses that show disability in the context of the lifespan continuum, they can be used as an ideal translational intersection between health care and disability studies. The curriculum model serves as a basis for curricula change and the shaping of consumer and professional attitudes. In bringing together academia and healthcare professionals, the focus is now directed towards the evolving maturity of both communities (Seelman, 2004).

There has been some success in changing students’ perception of disability through the introduction of disability studies curriculum into graduate programs within the health science field (Wright, 2004). SDS, in its guidelines for disability studies curricula feels that “[Disability Studies] should challenge the view of disability as an individual deficit or defect that can be remedied solely through medical intervention or rehabilitation by "experts" and other service providers . . . a program in Disability Studies should explore models and theories that examine social, political, cultural, and economic factors that define disability and help determine personal and collective responses to difference” (2016a, para. 2). Including models and theories that examine influencing factors outside the scope of medical and physical intervention into healthcare curriculum can have a significant effect on a healthcare provider’s approach to disability. This is evidenced by the following alumni comment: “I wish that all my classmates
were exposed to this! I think that everyone going into health care should have knowledge of what we learned in Disability Studies!”

People with disability need medical care and often rely on healthcare professionals for assistance in their daily lives. Healthcare providers often misunderstand the impact of disability on a person’s outlook and quality of life (Iezzoni, Ramanan, & Drews, 2005). Despite these findings, Disability Studies has been slow to integrate into health science curricula. A contributing factor to this slow integration is the perceived correlation between medical practice and the medical model of disability. This correlation was most evident in the survey responses for confidence level and comfort level recorded by those alumni working or studying in the nursing field (Table 3). The low percentage of agreement with the survey statements may be a result of the nursing field being the most likely to work in an acute medical setting. Professionals in this field would be more exposed to illness and would most likely view disability as a life altering experience or debilitating chronic condition as a result of limited contact beyond the acute state.

The largest response group by field of work or study was the rehabilitative services field (PT, OT). This finding is not surprising since a majority of the student population in this concentration consistently seeks to enter these fields. This group saw significant increases in the four focus areas (See Table 3).

**Limitations**

This study measured alumni perception of incorporating a disability studies curriculum into an undergraduate health science program. Although this survey study found positive results, the outcomes might not be generalizable as alumni were graduates of only one program. More
work is needed to determine if the findings portray a universal perception. The self-reporting of perception may be biased given that people may report information about themselves that is not reflective in their work. Another limitation was the small sampling size with 16% response rate due to the use of mailing addresses on file from when the surveyed alumni were students, which were no longer valid. A small number of surveys were returned with no forwarding address. Since the questionnaire instructed alumni not to participate if they were not currently working or studying in a healthcare related field, this might have contributed to a low response rate, and as such, the results might not be a full representation of all alumni. Due to the small sample size and other limitations, the scope of this study is most relevant for generating future research in this area. Additional research is recommended utilizing other means to contact alumni through email or social media.

Conclusion

As indicated in the compilations of disability studies programs by Taylor and Zubal-Ruggieri (2013) and Cushing and Smith (2009b), the number of disability studies programs has grown throughout the US in the last decade. “Although Disability Studies scholarship grew out of medical and scientific fields, it is now housed in mostly other disciplines” (Brewer & Brueggemann, 2014, Author’s Field section, para. 10). Currently, disability studies curricula have begun a successful integration into some graduate level health science programs as well as a smaller number of undergraduate health science programs. Seelman (2004) and Block (2004) found positive results with the incorporation of a disability studies course in a graduate level health science program. Seelman (2004) felt strongly that disability studies and health science together could “make a difference in bringing their common position to professional and
disability associations, building bridges that will support strategies to broaden curricula to reflect the interests of people with disabilities, fashion more participatory decision-making infrastructure and generate equitable health policy” (para. 12).

The findings from this study demonstrated that alumni perceived the integration of disability studies coursework into undergraduate health science curriculum as having a positive effect on their attitudes and behavior in four areas: practice and/or post-graduate study, comfort level interacting with people with disability, confidence level in ability to work with people with disability, and sensitivity and awareness of disability issues. This positive change in perception of disability has the potential to create healthcare providers who have the ability to impact change within the healthcare system.

**Future Directions**

Future directions of this study could explore the attitudes and perception of alumni from other disability studies programs incorporated into a healthcare curriculum. This study focused on alumni perceptions indicating that the disability studies curriculum increased their ability to provide service to disabled clients. As a result, integration of more disability studies curricula into healthcare courses would be beneficial.
References


communication with patients who have sensory or physical disabilities. *Disability Studies Quarterly, 25*(1). Retrieved from http://www.dsq-sds.org


Table 1

Mean scores and standard deviations from disabilities studies questionnaire:

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Practice</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS coursework was helpful in my current job.</td>
<td>1.71</td>
<td>0.93</td>
</tr>
<tr>
<td>DS coursework was helpful in my graduate studies.</td>
<td>1.73</td>
<td>0.84</td>
</tr>
<tr>
<td>I feel the information learned in the DS concentration has made me a better service provider.</td>
<td>1.52</td>
<td>0.74</td>
</tr>
<tr>
<td>I am more confident as an advocate for clients with disability as a result of what I learned in the DS concentration.</td>
<td>1.72</td>
<td>0.91</td>
</tr>
<tr>
<td>I often refer to the information from my DS coursework while at work or in my graduate studies.</td>
<td>2.48</td>
<td>1.12</td>
</tr>
<tr>
<td><strong>Confidence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After completing the DS coursework, I feel more confident in my ability to work with people with disability.</td>
<td>1.64</td>
<td>0.95</td>
</tr>
<tr>
<td><strong>Comfort</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that I am more comfortable interacting with people with disability now.</td>
<td>1.58</td>
<td>0.87</td>
</tr>
<tr>
<td><strong>Awareness &amp; Sensitivity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disability language and terminology use has changed as a result of what I learned in the DS concentration.</td>
<td>1.58</td>
<td>0.95</td>
</tr>
<tr>
<td>I feel that my attitude toward disability has changed as a result of what I learned in the DS concentration.</td>
<td>1.56</td>
<td>0.87</td>
</tr>
<tr>
<td>I feel that I am more aware of disability related issues now than I was before.</td>
<td>1.42</td>
<td>0.75</td>
</tr>
</tbody>
</table>

Note: Questions grouped by four focus areas. The scores reflect a Likert response from 1-5 with 1 being “strongly agree” and 5 being “strongly disagree.”
Table 2

Frequency and percent of agreement with statements from disability studies questionnaire grouped by four focus areas:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Level of Agreement (1=strongly agree – 5=strongly disagree)</th>
<th>Percent agreement (strongly agree/agree)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Practice</strong></td>
<td>Cell content</td>
<td>Cell content</td>
</tr>
<tr>
<td>DS coursework was helpful in my current job.</td>
<td>19 14 4 1 1</td>
<td>64.7%</td>
</tr>
<tr>
<td>DS coursework was helpful in graduate studies.</td>
<td>16 11 6 1 -</td>
<td>52.9%</td>
</tr>
<tr>
<td>I feel the information learned in the DS concentration has made me a better service provider.</td>
<td>27 15 4 1 -</td>
<td>82.4%</td>
</tr>
<tr>
<td>I am more confident as an advocate for clients with disability as a result of what I learned in the DS concentration.</td>
<td>25 17 7 1 1</td>
<td>82.4%</td>
</tr>
<tr>
<td>I often refer to the information from my DS coursework while at work or in my graduate studies.</td>
<td>12 12 15 9 1</td>
<td>47.1%</td>
</tr>
<tr>
<td><strong>Confidence</strong></td>
<td>Cell content</td>
<td>Cell content</td>
</tr>
<tr>
<td>After completing the DS coursework, I feel more confident in my ability to work with people with disability.</td>
<td>28 15 5 2 1</td>
<td>84.3%</td>
</tr>
<tr>
<td><strong>Comfort</strong></td>
<td>Cell content</td>
<td>Cell content</td>
</tr>
<tr>
<td>I feel that I am more comfortable interacting with people with disability now.</td>
<td>30 13 7 - 1</td>
<td>84.3%</td>
</tr>
<tr>
<td><strong>Awareness &amp; Sensitivity</strong></td>
<td>Cell content</td>
<td>Cell content</td>
</tr>
<tr>
<td>Disability language and terminology use has changed as a result of what I learned in the DS concentration.</td>
<td>32 9 8 4 1</td>
<td>80.4%</td>
</tr>
<tr>
<td>I feel that my attitude toward disability has changed as a result of what I learned in the DS concentration.</td>
<td>32 10 7 2 -</td>
<td>82.4%</td>
</tr>
<tr>
<td>I feel that I am more aware of disability related issues now than I was before.</td>
<td>33 15 2 - 1</td>
<td>94.1%</td>
</tr>
</tbody>
</table>

Note: Percent agreements were based upon responses coded as “agree” or “strongly agree.”
Table 3

Percent of agreement with statements on disability studies questionnaire grouped by field or work and/or study:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Behavioral/ Mental Health (n=10)</th>
<th>Field</th>
<th>Field</th>
<th>Field</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS coursework helpful in current job</td>
<td>80%</td>
<td>63.16%</td>
<td>66.67%</td>
<td>44.44%</td>
<td>75%</td>
</tr>
<tr>
<td>DS coursework helpful in graduate studies</td>
<td>60%</td>
<td>63.16%</td>
<td>44.44%</td>
<td>22.22%</td>
<td>75%</td>
</tr>
<tr>
<td>I feel the information learned in the DS concentration has made me a better service provider.</td>
<td>90%</td>
<td>89.47%</td>
<td>66.67%</td>
<td>66.67%</td>
<td>100%</td>
</tr>
<tr>
<td>I am more confident as an advocate for clients with disability as a result of what I learned in the DS concentration.</td>
<td>100%</td>
<td>89.47%</td>
<td>55.56%</td>
<td>77.78%</td>
<td>75%</td>
</tr>
<tr>
<td>I often refer to the information from my DS coursework while at work or in my graduate studies.</td>
<td>70%</td>
<td>42.11%</td>
<td>11.11%</td>
<td>44.44%</td>
<td>100%</td>
</tr>
<tr>
<td>Confidence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After completing the DS coursework, I feel more confident in my ability to work with people with disability.</td>
<td>100%</td>
<td>84.21%</td>
<td>55.56%</td>
<td>88.89%</td>
<td>100%</td>
</tr>
<tr>
<td>Comfort</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that I am more comfortable interacting with people with disability now.</td>
<td>100%</td>
<td>84.21%</td>
<td>66.67%</td>
<td>88.89%</td>
<td>75%</td>
</tr>
<tr>
<td>Awareness &amp; Sensitivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disability language and terminology use has changed as a result of what I learned in the DS concentration.</td>
<td>100%</td>
<td>78.95%</td>
<td>55.56%</td>
<td>77.78%</td>
<td>100%</td>
</tr>
<tr>
<td>I feel that my attitude toward disability has changed as a result of what I learned in the DS concentration.</td>
<td>100%</td>
<td>68.42%</td>
<td>77.78%</td>
<td>87.5%</td>
<td>100%</td>
</tr>
<tr>
<td>I feel that I am more aware of disability related issues now than I was before.</td>
<td>100%</td>
<td>89.47%</td>
<td>88.89%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note: Responses coded as “agree” or “strongly agree” were used in this calculation.