Evaluating Social Work Students’ Attitudes Toward Physical Disability

by

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
School of Social Work
College of Behavioral and Community Sciences
University of South Florida

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Date of Approval:
June 21, 2010

Keywords: disability, attitudes, social workers, interactions, contact

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DEDICATION

To my inspirational parents and brother for your unyielding faith in me growing up, and beyond. You’ve shown me how to balance realistic expectations with infinite dreams, and to enjoy life. To my grandparents for raising my parents to be so kind and strong, and for sharing your love and wisdom with me. To my great-aunt Irene, cousin Jo-Ann, aunt Debby, and Elaine for treating me like a star. To “uncle” Wayne, “uncle” John, and all my uncles and aunts for spoiling me. To Juliann, the first Ph.D. in our family for encouraging me. And to Toni for keeping me laughing for the past eighteen years. I am fortunate to have a rare, large tapestry of close cousins, family and friends who like nothing more than to laugh together and stand by each other, no matter what the distance.

To my husband, Rhode, for your patience and generosity. You defy gravity. I am lucky I found you to roll down the aisle beside, and so happy to be a part of your wonderful family. To our babies/puppies, Little Bear and Butterfly, for making us smile everyday and reminding us to be thankful for all we have.
ACKNOWLEDGEMENTS

I’d like to thank Dr. Michael Rank, Dr. Iraida Carrion, Dr. Charlotte Dixon, Dr. Jane Roberts, and Dr. Tennyson Wright for your support throughout my dissertation. You are amazing instructors and I’m so grateful I had the opportunity to learn from you all. I’m also grateful to have had the guidance and friendship of my colleagues Dr. Robert Lucio, Dr. Joan Reid, and all my peers in the doctoral program at the University of South Florida.

To Nancy Gewirtz, MSW, Ph.D. who was and will always be my mentor. You made social change seem not only possible, but within grasp, and your passion inspired me to pursue my doctorate degree. You are missed, but your work lives on.
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Evaluating Social Work Students’ Attitudes Toward Physical Disability

Rachael A. Haskell

ABSTRACT

Given the social work profession’s commitment to serving individuals with disabilities and cultural competence, the promotion of favorable attitudes toward persons with disabilities within social work education is critical. This study examined the question: “what are the attitudes of undergraduate social work students at three universities toward individuals with physical disabilities as measured by responses on the Attitudes Toward Disabled Persons Scale Form B (ATDP-Form B; Yuker et al., 1960, 1966) and Interactions with Disabled Persons Scale (Gething, 1991)?” It explored the following hypotheses, that participants who: 1) have had prior positive contact with persons with physical disabilities; 2) have higher perceived levels of knowledge about issues affecting persons with physical disabilities; and 3) have had more social work classes will respond with more positive attitudes than other participants. Sociodemographic data about gender, ethnicity, country of origin, religion, and university affiliation was also collected to measure the possible impact of these characteristics on student attitudes. The primary aim is to learn more about the way undergraduate social work students generally view individuals with physical disabilities and feel about interactions with this population.
Advocating for historically oppressed populations, reducing poverty, and promoting social justice serve as one of the foundations of the social work profession (Reamer, 1999; National Association of Social Work, 2003). Given this foundation, the Council on Social Work Education (CSWE) accreditation standards (2004) instruct social work schools to prepare students to alleviate oppression and social injustice as social work professionals, and to provide students with the knowledge and skills to practice with a variety of client populations, including: clients with disabilities and clients of different ages, sex, gender, class, marital status, national origin, race, culture, ethnicity, religion, family structure, and sexual orientation with respect. One focus of social work is the provision of advocacy, support, and counseling services to individuals with disabilities. Individuals with disabilities have experienced the kind of oppression and social injustice the CSWE identified, and continue to experience difficulty gaining equal access to society (Oliver, 1996; Rocco, 2005; Ross-Gordon, 1991).

According to the United States Congress Committee of Small Business (1989), employment rates, research in patterns of social interaction and segregation, and attitude surveys of human service providers suggest that this society possesses significant prejudice toward individuals with disabilities. In 1990, Congress found that the number of individuals with disabilities was increasing as the population was growing older and
enacted the Americans with Disabilities Act (ADA) in an effort to remove discrimination and obstacles people with disabilities may face in many areas of life (United States Equal Employment Opportunity Commission [EEOC], 1997). Miller (1999) argued that the ADA strives to remove barriers of all kinds, including attitudinal barriers, that impede individuals with disabilities from full access to community life. In passing the ADA, Congress recognized that society has demonstrated negative attitudes, paired with discrimination against individuals with disabilities and identified it as a “serious and pervasive social problem” (EEOC, 1997, p.1).

However, several years after the enactment of the ADA, there continues to be barriers to access that keep individuals with disabilities at a disadvantage. One example of such barriers was reported by the General Accounting Office (GAO; 2001) in a study of voting access for individuals with disabilities. The GAO (2001) reported that eleven years after the enactment of the ADA, 87% of polling places had physical impediments that limited individuals with disabilities’ ability to vote. Accessibility was not even identified as a criteria for selecting polling sites in many counties, and none of the polling places examined by the GAO (2001) had equipment adapted for blind voters. In 2008, the GAO reported improvements, but continued gaps in access remain an issue for voters with disabilities. For example, four states, Delaware, Massachusetts, Missouri, and Tennessee still have not made plans to provide each polling location with at least one voting system equipped for individuals with disabilities. Furthermore, the ADA does not require state and local governments or private entities to take actions that would “threaten” the “significance of a historic property…or impose undue financial and
administrative burdens.” Therefore, an individual with a disability may not be allowed to vote if to provide access would be an “undue hardship” for the polling site (GAO, 2008).

Oliver (1996) argued that when society creates and maintains spaces that persons with disabilities cannot physically or “metaphorically” enter, it reflects the discrimination that individuals with disabilities continue to experience, while failing to recognize that it is perpetuating it. He also argued that society defines disability as a personal problem, and therefore often does not liken this discrimination to discrimination other minority groups experience (Oliver, 1996). Rocco (2005) concurred, arguing that,

We do not imagine having delayed access to materials, entering buildings from poorly marked entrances, often at the rear, or denying entrance into public buildings for some disabled adults, restricting participation in the social, civic, and political life of the community segregation and discrimination, and we should (p. 2).

The low employment rate of individuals with disabilities is another current example of how many individuals with disabilities experience difficulty participating fully in society, especially when compared to the employment rates of individuals without disabilities. Research done at Cornell University in collaboration with the American Association of People with Disabilities (AAPD) in 2007 found that out of 22,382,000 persons with disabilities of working age, only 37.7% were employed, compared to 79.7% of persons without disabilities.

The director of Cornell’s Rehabilitation Research and Training Center on Disability Demographics and Statistics reported that the employment gap between persons with and without disabilities is getting wider, and emphasized that this employment gap makes persons with disabilities much more likely to live in poverty (Houtenville, Erickson & Lee, 2007). Cornell University researchers found that the poverty gap is 15.9%, with 25.4% of working-age United States citizens with disabilities
living in poverty compared to 9.5% of those without disabilities. Their report also noted that persons with disabilities constitute 28.4% of working-age United States citizens living in poverty and that 23% of individuals with disabilities of any age are living in poverty (Houtenville, Erickson & Lee, 2007). Even cash benefits from programs like Supplemental Security Income (SSI), Supplemental Security Disability Income (SSDI), and Temporary Assistance for Needy Families (TANF) are often not enough to lift incomes above the federal poverty line. In 2002, 41.6% of adults with a disability who lived in a household with an income below the poverty line received income support from SSDI and/or SSI and 6.8% lived in a household whose income was from the Temporary Assistance for Needy Families (TANF) program (Weathers 2004, as cited in Stapleton, Day, Livermore, & Imparato, 2006).

The median earnings of working age individuals with disabilities in 2004 was $26,700. These median earnings are $1,900 lower than in 2000, and $1,800 less than 1981. Thus, overall, annual earnings of these individuals are not increasing. In addition, 2003 United States Bureau of the Census Survey of Income and Program Participation Report data indicates that their annual median earnings are 33% lower than individuals without disabilities even when education and job category is factored out. These employment and poverty rates suggest that individuals with disabilities experience disenfranchisement and possible discrimination.

The disenfranchisement of individuals with disabilities is also evident when looking at the history of institutionalization and sterilization of this group from the latter half of the 18th century to the 1960’s (Morales & Sheafor, 2002). Between 1907 and 1963, more than 60,000 Americans, mostly women with disabilities and institutionalized
women were sterilized without their consent (Reilly, 1991, as cited in Pham & Lerner, 2001). Even in 1995, the National Institute of Health found that 10% of women with disabilities reported coerced sterilization by health care providers (Nosek, 1995, as cited in Hutchison, 2003). They also reported that their health care provider lacked knowledge about reproductive options and/or concerns for individuals with disabilities.

**Significance of the Study**

Implications for Social Work

Given the marginalization and poverty experienced by so many individuals with disabilities, and social work’s professional mission to serve those who are "vulnerable, oppressed, and living in poverty," (National Association of Social Workers (NASW; 1996, p. 1) it is imperative that social workers are prepared for working with this population. In 1999, 11% of social workers with a Bachelor’s Degree in Social Work identified that they were working with individuals with disabilities as a client population, and an additional 14% were working in geriatrics, where they had clients with “age-related” disabilities (Rogers, 1999). This is consistent with 2005 data indicating that 10% of social workers work specifically with individuals who have developmental disabilities, 11% work in health services, and 16% work in aging services (Weismiller, Whittaker & Smith, 2005).

Research addressing the question of how many social workers in other fields have had clients with disabilities was not available. However, it would be helpful to know, for example, what percentage of social workers providing outpatient family services have clients with disabilities, in order to get a more accurate assessment of the percentage of social workers who are working with this population. However, given that the U.S.
Bureau of the Census estimates that approximately 19 percent of the population had some level of disability in 2003, it is likely that regardless of the social work field they are in, social workers will be providing assessments, interventions, case management, crisis resolution, family support, and a variety of other services to individuals with disabilities. This is especially true given that social workers often work with the poor, and that the number of individuals with disabilities between the ages of 50 to 65 is estimated to double by 2010 (U.S. Bureau of the Census, 2004, as cited in Bruyere, 2006; Weathers, 2006). Individuals with disabilities are already one of the largest minority groups in the United States, estimated at approximately 51 million people, with the largest percentage having physical disabilities (30%) (U.S. Bureau of the Census, 2003).

According to the Child Trends Data Bank (2000), children limited in mobility, self-care, communication, or learning are more likely than other children to be exposed to financial difficulties, home health hazards, problems with medical care, and low parental health and education status (as cited in Hogan, Rogers, Michelle, & Msall, 2000). The U.S. Department of Health and Human Services (2000) suggested that this trend may reflect the impact of environmental barriers that limit these children’s ability to fully engage in society, as well as the disability itself. In addition, a 1997 study found that 31% of children with these disabilities were reported to be “unhappy,” compared with only 17% of children without these disabilities. Given that the social work profession is focused on advocating for underprivileged populations and on promoting mental health, social workers serving children and families may be faced with the challenge of assessing and treating children with these conditions. More than 60% of social workers are employed in the fields of child welfare/ family support, and mental health services
(Rogers et al., 1999; Weismiller, Whittaker & Smith, 2005). Social workers with negative attitudes may have inaccurate perceptions about children with these disabilities and may not effectively assess the needs of these children, and may underestimate their capability to overcome these challenges. This may then inhibit these social workers from fully advocating for children who have disabilities.

Thus, professional social work, at its best, ensures that the plight of the people most devalued and in need, for whom providing services is neither profitable nor popular, will not be forgotten (Witkin, 1998, p. 1).

In addition, Phillips (1985, 1990) found that mental health professionals, such as social workers, may not be aware of the negative societal messages often sent to individuals with disabilities (as cited in Strike, Skovholt, & Hummel, 2004). These messages include: their life is tragic; they are inferior to individuals without a disability, and they are not as capable of successfully fulfilling their roles in life, i.e. as an employee, a spouse or a parent (Vash & Crewe, 2004; Swain, French & Cameron, 2003; Makas, 1998; all as cited in Jaeger & Bowman, 2005). These messages may not be stated directly, but may be evidenced by lack of access and practices like the decision of the federal government to depict former President Franklin Delano Roosevelt standing up in a national monument honoring him, even though he was in a wheelchair most of his life (Garland-Thompson, 2001). As Garland-Thompson (2001) described, many advocates and scholars in the disability field “had wanted to avoid repeating the persistent stereotypes of disability - the ones that tell us that disability is a shameful personal problem relegated to the private realm of charity and medicine, but inappropriate in the public sphere” (p. 1). Disability advocates eventually prompted President Bill Clinton to have the monument reconstructed to more accurately represent his physical appearance,
but the inscription fell short of delivering the message many disability advocates wanted. It focused on President Roosevelt as a man with an “illness” who persevered because of his patience and persistence. Disability advocates sought:

…a quotation, first of all, that would advance the idea that disability is integral to a person's character and life experience, rather than a defect to be eliminated. Second, we wanted a quotation suggesting that the experience of disability can enrich a life, foster leadership, and create a sense of community. Third, in keeping with the human scale of the statue, we searched for words hinting that F.D.R.’s disability made him an accessible -- rather than a lofty -- hero. In other words, we recommended that any new inscription present disability as a common, yet influential, human experience, one that can be integrated into a meaningful and full life (Garland-Thompson, 2001, p. 2).

The Disability Rights Movement focused on the need for individuals with disabilities to be identified as equally capable of being providers as they are of being receivers, and as capable of contributing positive, valuable resources to society (Fine and Asch, 1988; Asch, 2001). However, Papadimitriou (2001) has suggested that regardless of how successful individual with a disability is or could be, he/she may still be faced with the “ableist” notion that an individual with a disability who is content, competent, and independent is paradoxical or impossible (as cited in Toombs, 2001). She argues that this is because someone seen as visibly “outside of the norm” may arouse uncomfortable feelings, and as Hahn (1988b) noted, may prompt what he termed “existential anxiety” (Papadimitriou, 2001, as cited in Toombs, 2001). “Existential anxiety” refers to the “ableist” belief that having a disability interferes with the functional capacities “necessary” to pursue a fulfilling life. These researchers and others argue that this belief can cause discomfort, anxiety about how to interact, and unfavorable attitudes (Hahn, 1988b; Livneh, 1982; Gething, 1992; Papadimitriou, 2001, as cited in Toombs, 2001).
Strike, Skovholt, and Hummel (2004) specifically examined the perceived competence of social workers and other mental health counselors related to knowledge about disability and related issues using the Counseling Clients with Disabilities Survey, and found that even though 99% of the respondents reported some prior work with clients with disabilities, with an average of 12 years of client experience, participants still reported significant limitations in their perceived ability to work with individuals with disabilities effectively because of a lack of knowledge about how to appropriately and comfortably interact with these clients. In addition, they continued to see clients with disabilities despite self-report of a lack of competence working with this population (Strike, Skovholt, & Hummel, 2004).

Thompson (2001) and Lipsky (1980) warn that the influence of helping professionals, like social workers, provides ample opportunities for discrimination (as cited in Hayashi & Kimura, 2004). Research done on the attitudes of undergraduate and graduate social work students in the United States (U.S.) and Japan found that U.S. social work students indicated “very negative attitudes” on different items measured by Makas’ Modified Issues in Disabilities Scale (MIDS; 1993, as cited in Hayashi & Kimura, 2004), including the following: 75% strongly disagreed or disagreed that “Most people who have physical disabilities expect no more love and reassurance than anyone else;” 48% agreed or strongly agreed that “Zoning laws should not prohibit group homes for people with disabilities from being established in residential districts;” 22% strongly agreed or agreed that “For a person with a severe disability, the kindness of others is more important than any educational program;” and only 30% of undergraduate students strongly agreed or agreed that “It is logical for a woman who uses a wheelchair to
consider having a baby.” In addition, 25% of undergraduate and 22% of U.S. graduate social work students strongly agreed, agreed, or had no opinion about whether “People with physical disabilities should get special certification from their physicians in order to apply for a marriage license.” This research seems to support Fichten and Amsel’s (1986) argument that the field of social work should do more research about the content of stereotypes and attitudes toward individuals with physical disabilities. Unfortunately, not much other social work research has been done since.

If social workers perceive negative differences between individuals with disabilities and individuals without disabilities, including that they are more deserving of charity than social action, and that they are less capable of fulfilling valued roles in society, it’s very possible that they will treat them with less hope for positive outcomes. If negative attitudes are made up of unfavorable thoughts, feelings, and/or intended behavior, then negative attitudes may lead to unfavorable behavior lacking the advocacy, empathy, and/or commitment expected by the social work profession. Furthermore, if a helping profession does not assess the attitudes of its members toward diverse populations, how will that profession gain knowledge about the thoughts, feelings and intended behavior of those it represents? How will it advance respect, acceptance and comfort with diversity? These studies also suggest the need for disability information and education to enhance social workers’ ability to practice in a manner that benefits individuals with disabilities (Morrison, 2005).

Cultural Competence

It has been increasingly recognized that cultural factors such as race, ethnicity, gender, sexual orientation, religion, national origin, and ability/disability play an
important role in helping professionals’ relationships with clients, and the effectiveness of counseling (Atkinson, Morten, & Sue, 1998; Pope-Davis et al., 2002; Pope-Davis & Coleman, 1997; Ridley, 1995; all as cited in Goh, 2005). Ridley, Baker, and Hill (2001) reflected that cultural competence is critical for all mental health professionals. Other researchers have argued that training culturally competent counselors is essential for bridging gaps in access to societal resources by making their work more relevant to diverse populations (Pedersen, Draguns, Lonner, & Trimble, 2002; Pope-Davis, Liu, Toporek, & Brittan-Powell, 2001; all as cited in Goh, 2005).

Roysircar, Gard, Hubbell, Ortega, and Webster (2002) research with counseling trainees in a clinical psychology program demonstrated how increased cultural competence can benefit clients in terms of help-seeking behavior and satisfaction. In this study, counselor trainees were asked to report their perceived level of multicultural competence, then provided with a ten week educational and experiential multicultural competency training. When they were measured at post-test, respondents who showed significant and reliable change from pre- to post- test were associated with higher client reports of help-seeking behavior, well-being, and satisfaction.

Social work and mental health counseling have standards of cultural competence which guide professional practice in an effort to promote the provision of effective, quality services. Each helping profession has its own definition of cultural competence, but many concepts in common about what it means to be culturally competent.

The National Association of Social Workers (NASW) specifically addresses individuals with disabilities as a cultural group deserving of social workers’ respect, sensitivity, dignity, and application of culturally competent practice in its Standards for
Cultural Competence in Social Work Practice (2001). It’s conceptualization of culture is a pattern of behavior including: thoughts, communications, traditions, beliefs, values; racial, ethnic, social and religious group institutions; and ways in which people experience the world around them. In addition, the NASW stresses the importance of social workers learning about oppression, social diversity, culture, and strengths of those with disabilities as well as those from a variety of other diverse groups in the profession’s Code of Ethics (1996).

The NASW (1996, 2001) has stated that cultural competence is a core value of the social work profession and that in order for social workers to deliver effective clinical interventions social workers should be knowledgeable about theories of personality, behavior, environmental influences, physical health, and impairment and disability, as well as the interplay of these factors on psychosocial functioning. Cultural competence is defined by the NASW (2001) as a set of attitudes, behaviors and policies that come together in a system or among professionals and enable them to work effectively in cross-cultural situations. It operationally defines the term as transforming knowledge into appropriate attitudes and practices aimed at producing effective services and better outcomes for clients (Davis & Donald, 1997).

Given this charge for the social work profession, it is imperative that social workers are given information not only about impairments and limitations individuals with disabilities may face, but also about the unique needs and strengths many individuals with disabilities possess, including problem-solving skills, persistence, and patience. Blatt (1987) argued that social workers have started to hear and listen to the voices of marginalized groups, but will need to make additional efforts to include people
"who are unable to influence the kinds of stories that are told about them" (p. 306, as cited in Witkin, 1998).

Two concepts frequently noted in the field of mental health counseling are cultural competence and multicultural counseling competence (Goh, 2005). According to Sue (1998), cultural competence is "the belief that people should not only appreciate and recognize other cultural groups but also be able to work effectively with them" (p. 440). Sue, Arrendondo, and McDavis (1992) defined multicultural counseling competence as a counselor's beliefs/attitudes, knowledge, and skills that relate to working with culturally diverse clients (as cited in Goh, 2005). Goh (2005) noted that both concepts try to capture describe competencies required to perform well in mental health counseling. He suggested that the following definition of cultural competence for mental health counseling is the most comprehensive, developed by the Substance Abuse and Mental Health Services Administration (1997, as cited in Goh, 2005):

A set of congruent practice skills, behaviors, attitudes, and policies that come together in a system, agency, or among professionals to work effectively in cross-cultural situations. It is the ability to demonstrate skills and knowledge which enable a person to work effectively across cultures: the ability to provide mental health treatment within the cultural framework of the consumer: the ability to provide effective services to people of a specific cultural background, including one different from the provider (p. 27).

The American Counseling Association (ACA) (2008) represents nineteen organizations of rehabilitation and mental health counselors who provide specialized services to individuals with disabilities, including the American Mental Health Counselors Association (AMHCA), and the American Rehabilitation Counseling Association (ARCA). The focus of both the AMHCA and ARCA is to enhance service delivery to individuals with disabilities, and to promote excellence in the rehabilitation
counseling profession. These associations recognize the importance of cultural competence in providing quality services. In addition, ARCA (2008) has stated its recognition of the need to eliminate environmental and attitudinal barriers so that more employment and community opportunities are available to individuals with disabilities.

The National Rehabilitation Counseling Association (NRCA) is another organization with a similar goal. One of the purposes of NRCA (1993) is to:

…initiate support programs to enhance the ability of persons with disabilities to become as self-sufficient as possible, in order to maximize opportunities for fulfilling their role by right to become fully contributing members of society (as cited in Kirk & La Forge, 1995, p. 1).

These associations helped prompt the development of their accrediting organization, the Council on Rehabilitation Education (CORE; 1994) which is committed to multiculturalism, advocating for the inclusion of all races, ethnic groups, and communities, and the provision of training to enable counselors to improve services to ethnic minorities with disabilities (as cited in Kirk & La Forge, 1995). In 1992, the Association for Multicultural Counseling and Development (AMCD) urged ACA to adopt their suggested standards for multicultural competencies (Sue, Arredondo, & McDavis, 1992, as cited in Kirk & La Forge, 1995). These standards were later expanded (Arredondo, Toporek, Brown, Jones, Locke, Sanchez, & Stadler, 1996) and have since become “a central aspect of all counselors' work” (ACA, 2008, p. 1). These standards identify that a culturally skilled counselor understands how culture may affect clients’ vocational choices and help-seeking behavior, as well as the appropriateness of counseling approaches. In addition, one standard addresses attitudes, stating that culturally skilled counselors: are aware of their stereotypes and preconceived notions toward minority groups; possess specific knowledge about the particular minority groups
they are working with; and recognize that clients’ experience with poverty, stereotyping, and powerlessness can influence the counseling process” (Arredondo et al., 1996).

While not all of the standards specifically address the role of attitudes in cultural competence, researchers have argued that the attitudes of helping professionals can negatively or positively impact their clients. Hunt and Hunt (2000) noted that “negative attitudes are believed to result in and reinforce discriminatory, biased, and stereotypical responses toward people with disabilities” (p. 269). More specifically, researchers have theorized that negative societal attitudes and negative attitudes of helping professionals can have a limiting effect on the occupational and social success of individuals with disabilities, (Correa, Silberman, & Trusty, 1986; Geskie & Salasek, 1988; Grossman, 1972; Jones & Guskin, 1984; Chubon, 1982; Cook, Kunce, & Getsinger, 1976; Holmes & Karst, 1990) and a negative influence on self-concept (Antonak & Livneh, 1982). Rogers (1951) described self-concept as “an organized configuration of perceptions of the self… composed of such elements as the perceptions of one’s characteristics and abilities…” (pp. 136–137) that is influenced by the positive or negative valuations of others. Antonak and Livneh (1988) theorized that professionals can strongly influence the attitudes of clients’ family and peers, as well as the attitudes of society at large toward individuals with disabilities.

Some individuals with disabilities may internalize negative attitudes, making it possible for the negative attitudes and actions of others to negatively affect their behavior, relationships, education, health, and employment opportunities (Brillhart, Jay, & Wyers, 1990; Oermann & Lindgren, 1995; Yuker, 1994; all as cited in Milsom, 2006). Beail (1983) argued that “the stereotype has a powerful influence in that it provides a
defined frame within which the stigmatized can move” (p. 57). Other researchers have emphasized that it is important to study attitudes toward individuals with disabilities because societal attitudes influence their help-seeking behaviors, and their ability to mainstream into society (Arokiasamy, Rubin, & Roessler, 2001; Brodwin & Orange, 2002; Chan, Hedl, Parker, Lam, & Yu, 1988; Wang, Thomas, Wong, Chan, Lee, & Lui, 2002; Leung, 1990, 1993; Cook, 1998; DeLoach, 1994; Moore & Feist-Price, 1999; Yuker, 1994, 1995; all as cited in Chen, Brodwin, Cardoso, Chan, 2002).

In their study of students studying to be special education students, Beattle, Anderson, and Antonak (1997) noted that positive attitudes are essential for working with this population, because they are likely to encourage the establishment of resources to increase the integration of individuals with disabilities, while negative attitudes support expectations of poor achievement and inappropriate behavior. Researchers like Yuker (1988), and Antonak and Livneh (1988), who forged the way for disability attitude research, as well as others, have enumerated the need for positive information and environments to change attitudes and help this population integrate successfully into society (Au and Man, 2006; Holmes & Karst, 1990; Jones & Guskin, 1984; Papadimitriou, 2001, as cited in Toombs, 2001).

DeLoach and Greer’s (1981) research found that helping professionals who have negative attitudes toward individuals with disabilities often exhibit behavior that can be harmful to clients with disabilities, including:

…interpreting as abnormal behaviors considered normal in nondisabled persons; over-emphasizing the effects of disability on adjustment; treating the disabled in terms of their disabilities instead of their other characteristics; consistently underestimating the potentials of those with whom they work (p. 46-47).
Funk (1986) argued that this may be because self-advocacy is not what society often expects from a person with a disability (as cited in Holmes & Karst, 1990). Holmes and Karst (1990) note that counselors may also adversely affect their clients if they have negative attitudes or limited expectations of individuals with disabilities because they may be reinforcing any internalized self-doubt the client may have. DeLoach and Greer (1981) argued that, "if lack of knowledge or aversive reactions cause a professional to view severe disability as a catastrophic event which destroys one's chance for a happy, fulfilling life, it will be difficult for her clients/patients/students to ever grow beyond her definition of their situation" (p. 44).

**Purpose of the Study**

The purpose of this study is to explore the attitudes of undergraduate social work students at three different universities toward individuals with physical disabilities. It will endeavor to describe the affective, behavioral, and cognitive aspects of attitudes toward this population from a personal and societal perspective.
CHAPTER TWO:
LITERATURE REVIEW

This review will highlight concepts, perspectives, theories, and empirical studies in social work and other helping professions such as psychology, rehabilitation psychology, education, and health literature related to the attitudes of helping professionals/students toward disability. It will also highlight instruments that have been used to measure attitudes toward this population. First, the concept of “disability” must be examined.

Models for Viewing Disability

There are many ways to conceptualize the term “disability.” The U.S. Bureau of the Census (2000) defines disability as a long-lasting sensory, physical, mental, or emotional condition that makes it difficult for him/her to perform daily living activities or impedes him/her from being able to go outside the home alone or to work at a job or business. Activities of daily living were described as getting around inside the home or work, bathing, dressing, using the toilet, and getting in or out of a bed or chair (U.S. Bureau of the Census, 2003). The Americans with Disabilities Act (1990) defines disability as a physical or mental impairment that substantially limits one or more major life activities, but goes further to also protect individuals who have a known history of disability and those perceived to have a disability. The Disabled Peoples International, a
network of 110 national organizations/assemblies of “disabled people, established to promote human rights of disabled people through full participation, equalization of opportunity and development” (Disabled Peoples International, 2008, p. 1) made a distinction between disability and impairment. It defined impairment as “the functional limitation within the individual caused by physical, mental or sensory impairment” and disability as “the loss or limitation of opportunities to take part in the normal life of the community on an equal level with others due to physical and social barriers” (p. 41). This definition is very different from the definition utilized by the U.S. Bureau of the Census (2003) because it describes disability as the loss of opportunity, not a limiting condition within the individual. Using this definition, disability could be viewed as the result of limitations imposed by society in terms of access barriers, lack of inclusion, and discrimination, not simply the direct result of a functional limitation.

Emerging literature highlights other perspectives that view disability as a form of cultural diversity and difference rather than an individual defect (Davis, 2001; Gill, 1987; Oliver, 1990, 1996; Rocco, 2005; Strike, Skovholt, & Hummel, 2004). These perspectives are part of the Minority Group, Civil Rights, Independence, Social/Environmental, and Disablism paradigms (Davis, 2001; Nagi, 1965; Rocco, 2005; Shapiro, 2000; World Health Organization, 2001), which recognize the role of social and physical environments in the life experiences of individuals with disabilities. These paradigms view disability as natural part of life with its challenge to make the environment accessible, and attempts to “fix” individuals with disabilities as discriminatory because they present individuals with disabilities as “less than” individuals without disabilities (Shapiro, 2000). They emphasize that individuals with
disabilities can maintain positive abilities even in the context of a physical impairment (Hahn, 1988a, 2001; Shapiro, 2000; Papadimitriou, 2001, as cited in Toombs, 2001).

Many using these paradigms view the individuals with disabilities as a non-ethnic, oppressed minority (Bogdan & Knoll, 1988, as cited in Shapiro 2000; Charlton, 1998; Davis, 2001; Hahn, 1987; Hohensil & Humes, 1988, as cited in Strike, Skovholt, & Hummel, 2004; Linton, 1998; Oliver, 1990, 1996). Strike, Skovholt, and Hummel (2004), describe how the minority model draws parallels between the experiences of individuals with disabilities with the experiences of other cultural minority groups in terms of their history of stigma, discrimination, and marginalization. These authors argue that the Dimensions of Personal Identity model (Arredondo, Toporek, Brown, Jones, Locke, Sanchez, & Stadler, 1996) helped reframe the concept of cultural difference to include not only those who are different ethnically, but also those who have experienced a need for civil rights protection because of other characteristics that make them vulnerable to discrimination. This model describes the impact of different characteristics on personal identity, including visible demographic characteristics that can prompt societal stereotyping and contextual characteristics that are less visible but also have an impact on an individual, family or group’s experience. This contextual dimension of identity specifies that there are historical and socio-cultural forces that affect personal and group identity.

From this identity perspective, and the perspective of many authors in the field of disability research, individuals with disabilities constitute a cultural group bound by their common history of oppression and stereotyping (Hahn, 1987, 1988b; Linton, 1998; Oliver, 1990, 1996; Charlton, 1998; Davis, 2001; Gill, 1994; Mackelpranh & Salsgiver,
1996; Papadimitriou, 2001, as cited in Toombs, 2001). “The focus then is not on charity but on an individual’s right to be a participating citizen of one’s country” (Rioux, 1996, as cited in Shapiro, 2000, p. 82). Davis (2001) wrote that “people with disabilities have a unique voice emerging from unique individual and group experiences” and that disability scholars have “fought hard to get disability included in the race/class/gender triad” (p. 535). In fact, Rocco (2005) argued that for disability and disability attitudes to be viewed as a public issue, they must become as visible as the race-class-gender triad. He also identified that disability should be more often explored as a social construct, a political concern, and an experience deserving of attention and a theoretical framework in the education of adults/professionals.

Hahn (1987) argued that individuals with disabilities have not historically been clearly identified as an oppressed minority group because of a prevailing assumption that the disability/functional limitation itself is what creates the unequal access and difficulties they have. His belief was that our social environment is shaped by policies that reflect societal attitudes, so the level of access society grants a group of individuals to social organizations, education, employment, architecture, transportation, and communication is reflective of society’s attitudes as well. According to this argument, the lack of access experienced by individuals with disabilities is linked to poor attitudes toward this population and that public attitudes as well as physical space make up the environment (Hahn, 1988b). Others have added that if having a disability is seen as a tragedy, society will focus on that tragedy as the cause of the limitations experienced by persons with disabilities in society, instead of looking at the large role societal obstacles
play in creating these difficulties (Oliver, 1990; Hahn 1988b; Mackelprang & Salsgiver, 1996; Papadimitriou, 2001, as cited in Toombs, 2001).

These minority group/social models suggest that “social action” is needed to encourage environmental changes capable of supporting the functioning of individuals with disabilities, and that social change and personal attitude change are inexorably linked. It argues that positive social change, such as increased access and integration of individuals with disabilities in society, will promote more favorable personal attitudes toward individuals with disabilities, and reciprocally prompt more positive social change. Many utilizing this model have argued that if individuals with disabilities have a positive attitude towards themselves, and take pride in not changing themselves to be more like individuals without disabilities, more positive social change will occur (National Association of the Deaf, 2000; Hahn, 2001). This perspective is by many in the deaf community who have argued against cochlear implants, and argued for self and societal acceptance of deafness as a positive form of diversity (Shapiro, 2000). The National Association of the Deaf (NAD; 2000) position statement about cochlear implants is on preserving and promoting the integrity of individuals with hearing impairments, and point out the adverse effects of “inflammatory” statements about these individuals. NAD (2000) pointed out that medical professionals who view deafness as a “disability and an abnormality” to be "fixed" by cochlear implants have a pathological view that:

…must be challenged and corrected by greater exposure to and interaction with well-adjusted and successful deaf and hard of hearing individuals. The media often describe deafness in a negative light, portraying deaf and hard of hearing children and adults as handicapped and second-class citizens… There is little or no portrayal of successful, well adjusted deaf and hard of hearing children and adults without implants. A major reason implantation and oral language training have been pursued so aggressively by the media, the medical profession, and
parents is not simply because of the hoped-for benefits that come with being able to hear in a predominantly hearing society but more because of the perceived burdens associated with being deaf (p. 1)

Hahn (2001) conducted a study of individuals with disabilities about their perceptions of and feelings about their disability and found that these individuals seemed to have to a minority-group perspective. Remarkably, they indicated that they would not choose to be “cured” of their disability even if this were possible (Hahn, 2001).

Traditionally, disability has been seen from a diagnostic perspective, viewing disability as a problem within the individual’s body to be fixed. Under this model, the problems that are associated with disability are thought to reside within the individual alone, not in relation to societal factors (Olkin, 2002). This “medical model” focuses on “curing” this “difference” instead of valuing the strengths individuals with disabilities may possess. Viewing individuals with disabilities from this model may make it easier to engage in what Wright (1983) called a “disability spread.” This refers to the perception that a physical “defect” or disability “spreads” to the mental, social, or emotional characteristics of the person (Wright, 1983).

With all of these varying perspectives, it is difficult to define the term ‘disability’. Bajekal, Harries, Breman and Woodfield (2004) noted that theories about what defines disability and “lay perceptions” of disability differ, and research into attitudes towards and experiences of disability has shown that even individuals with disabilities vary in their response when asked to indicate whether they perceive themselves as ‘disabled’ (as cited in Deal, 2006).

There are many different “types” of disabilities, defined and categorized in a variety of ways. The U.S. Bureau of the Census (2003) divided disabilities into the
following categories: sensory disabilities, physical disabilities, mental disabilities, “self-care” disabilities, “go-outside home” disabilities and employment disabilities. One of the difficulties with conducting research on the impact of education on attitudes of individuals toward disability is that there is such diversity within this population in terms of both visible and "invisible" characteristics, types of impairment, and many individuals have multiple disabilities. According to the U.S. Bureau of the Census (2000), the majority (58%) of individuals with disabilities are between the ages of 16-64 years old, and 37% are 65 years or older (U.S. Bureau of the Census, 2003).

In addition, the U.S. Bureau of the Census (2003) estimates that the individuals with physical disabilities constitute the largest subgroup of the disabled population (30%). Physical disabilities tend to be visible, typically presenting as mobility or manual dexterity impairments. Physical disability has been defined as a condition that substantially limits physical activities such as climbing stairs, reaching, lifting, carrying or walking (Census Bureau, 2003).

**Attitudes as Described in this Study**

Many definitions of “attitude” have been published in research literature. Antonak and Livneh (1988) estimated that there have been at least 500 different definitions published. However, certain themes emerge in research literature conceptualizing this term. Meyers (1987) proposed that an attitude is a positive or negative evaluative reaction or unfavorable evaluative reaction toward an object, experience, person or persons, as evident in someone’s feelings, beliefs or intended behavior. This definition is consistent with Castaneto and Willemsen’s (2006) perspective that attitudes have an affective and cognitive dimension, and that these feelings and perceptions may also be related to
behavioral tendencies. They noted that this concept has been referred to as the “ABC’s” of attitudes wherein the affective component refers to emotions that shape the attitude, the behavioral component refers to the intended or actual behavior of the person, and the cognitive component consists of a person’s thoughts and perceptions (Sable, 1995, as cited in Castaneto & Willemsen, 2006). Castaneto and Willemsen (2006) and Meyers (1987) view attitudes as the tendency to react favorably or unfavorably to the world based on his/her values, thoughts, and perceptions.

According to Antonak and Livneh (1988), researchers also consistently propose that: attitudes are learned through experience and interaction with individuals, social objects, and events; attitudes are relatively stable; attitudes are often aimed at specific people, situations, events, and ideas, termed the “attitude referent”; attitudes have differing degrees of intensity and direction toward, against, or away from the “attitude referent”; and that attitudes are often manifested behaviorally when the individual encounters the “attitude referent” (Antonak and Livneh, 1988).

Taifel and Turner’s (1979) social identity theory argued that negative attitudes can result because human beings seek group belonging, and perceive negative differences between their “in-group” and the others’ “out-group” even when there’s no evidence that these differences exist between groups to any larger extent than they do within group. Findings from Taifel’s (1970) minimal groups experiments revealed that even when participants were assigned arbitrarily to a group with unremarkable differences and did not know one another, members of both groups began to identify themselves with their group, and showed preference to members of their group, offering them rewards that maximized their group's outcomes.
The work of many researchers has been based on the belief that a person may not be aware that he/she has a negative attitude. They argue that attitudes can be implicit and explicit (Fazio, Sanbonmatsu, Powell, & Kardes, 1986, as cited in White, Jackson, & Jordan, 2006; Robey, Beckley & Kirschner, 2006; Bellezza, Greenwald, & Banaji, 1986; Greenwald, & Banaji, 1995; Greenwald, McGhee, & Schwartz, 1998). Implicit attitudes are those that someone may not consciously be aware of, but can be reflected in stereotypes and the continuing influence of learned associations (Greenwald & Banaji, 1995). Explicit attitudes have been thought to be accessed when someone is asked to share their thoughts about how one should view and treat a particular attitude referent. The concept of implicit attitudes and measuring implicit attitudes has also emerged in social psychology research (Greenwald & Banaji, 1995).

Each of these perspectives highlight that attitudes are primarily made up of thoughts and feelings assigned to an attitude referent that may then influence behavior. Thus, from these perspectives, someone’s attitude toward an individual with a disability may be more favorable if they associate positive thoughts and feelings with the attitude referent.

Measuring Attitudes Toward Disability

Attitudes toward disability have been measured in many different ways. Antonak and Livneh (2000) reviewed over forty measurements of attitudes toward individuals with disabilities of the literature on measuring attitudes toward individuals with disabilities, listing a variety of direct and indirect measurement methods. However, there has been no substantial change in the methods of measurement toward this group (Antonak and Livneh, 1995b, as cited in Longoria, 2006), and the most widely used
instruments are more than twenty-four years old. According to Vargas, von Hippel and Petty (2004) this trend appears to be true with regard to attitude measurement in general (as cited in Longoria, 2006).

The studies found by this author primarily used either rating scales or trait attribution scales. Rating scales measure the degree to which a respondent agrees or disagrees with a statement related to individuals with a disability. Trait attribution scales measure the characteristics respondents associated with a target population, a case scenario, or a photograph of an individual with a specific disability.

Trait attribution instruments have been used in attitude studies because they purport to reflect the affective and cognitive component of attitudes. These studies are based in the belief that the traits someone attributes to a group of people offer information about whether he/she feels positive about that group and thinks favorably about that group, thus revealing whether his/her attitudes are favorable or unfavorable. Adjective checklists are one type of trait attribution instrument used in the literature to explore attitudes toward individuals with specific disabilities (Siperstein, Bak, & Gottlieb, 1977; Parish, Bryant, & Sherazi, 1976; Goldstein & Blackman, 1975, Williams, 1986, all as cited in Yuker, 1988; Campbell, Ferguson, Herzinger, Jackson & Marino, 2004; Slininger, Sherrill, & Jankowski, 2000; Gray & Rodrigue, 2001, Robey, Beckley & Kirschner, 2006). The adjective checklists often used ask respondents to assign attributes toward a group of people presented and use these responses to describe traits and perceptions of respondents toward individuals with disabilities.

The Adjective Checklist (ACL) is one of the most frequently used trait attribution instruments (Gough, 1960; Gough & Heilbrun, 1983). The Adjective Checklist (ACL)
consists of 300 adjectives commonly used to describe a person’s attributes. Since its development, it has been utilized in more than 30 studies of children's attitudes toward individuals with disabilities, and has been used for studying attitudes of adults toward disabilities as well (Dy-Liacco, 2002). Other trait attribution instruments similar to the ACL are the Personal Attribute Inventory (PAI) (Parish, Bryant, & Sherazi, 1976), and the Berkeley Personality Profile (BPP) (Harary & Donahue, 1994). Both have been used to study the attitudes of adults and children toward individuals with disabilities (Parish, Bryant & Sherazi, 1976; Castaneto & Willemsen, 2006).

The Attitudes Toward Disabled Persons Scale (ATDP) (Yuker, Block & Campbell, 1960) has been reported to be the most widely used and studied of all scales measuring generalized attitudes toward individuals with a disability (Antonak & Livnech, 1988; Yuker & Hurley, 1987). It specifically asks respondents to answer on a Likert scale the degree to which they agree with various statements about individuals with physical disabilities. The ATDP measures respondents’ level of agreement with statements about the characteristics of individuals with disabilities, the extent to which respondents perceive individuals with disabilities as similar to rather than different from individuals without disabilities, the extent to which the respondent believes individuals with disabilities should be treated similarly to person without disabilities, and the extent to which the respondent believes individuals with disabilities accept or reject their disability (Yuker and Hurley, 1987). The assumption underlying this survey is that the less similar a respondent thinks individuals with physical disabilities are to individuals without disabilities, the less likely they are to believe these individuals should be treated similarly, the more likely they are to believe that these individuals reject their own
disability, and the more negative their attitude toward this population. This assumption is consistent with social identity theory (Taifel and Turner, 1979) and Taifel’s (1970) minimal groups experiments.

Most attitude scales based on Likert’s summated rating scales, like the ATDP, are thought to measure the affective and cognitive aspects of attitudes (Antonak & Livneh, 1988). One of the many strengths of this instrument is that the ATDP also appears to be capable of measuring respondents’ behavioral tendencies, because it asks them how people should behave toward this population.

Another popular rating scale is the Scale of Attitudes Toward Disabled Persons (SADP) (Antonak & Livneh, 1982). According to Antonak and Livneh (1982), responses from administration of both the SADP and ATDP produce a measurement of factors that include derogatory personality stereotypes, benevolent stereotypes, behavioral misconceptions, and optimism/pessimism. These instruments assess attitudes from a societal perspective as opposed to a personal one. Items typically focus on how individuals with disabilities are, or should be, treated at the societal level (Gething, Lacour, & Wheeler, 1994).

ATDP scores have shown moderate to high correlations with measures of attitudes towards persons with disabilities, including the Interaction with Disabled Persons Scale (IDP) (Gething, 1994, as cited in Junco & Salter, 2004). The IDP was developed in response to criticism that because the ATDP is written at the societal level instead of at the individual level of analysis, and was designed specifically as a unidimensional measure of the overall attitude toward individuals with disabilities, it cannot be as descriptive as it should be about how a given rater feels about a particular
individual in a certain situation (Thomas, Palmer, Coker-Juneau, & Williams, 2003). The IDP is unique in that it focuses on measuring attitudes from a personal perspective (Gething & Wheeler, 1992). In addition, study results have found that the IDP may provide a multidimensional measurement of attitudes toward individuals with disabilities (Thomas et al., 2003).

IDP items ask about respondents’ general feelings related to social interactions with individuals with disabilities, emphasizing the affective aspect of the “abc’s” of attitudes. The scale was developed based on the idea that attitudes are closely related to comfort in social interaction and level of prior close contact with individuals with disabilities. The authors of the scale posit that negative attitudes are more likely to be held by people who have had little prior contact with individuals with disabilities, because they may feel uncertain of how to behave or what to expect from the person. The authors also proposed that a person may develop a negative attitude if they experience an uncomfortable feeling associated with not having a disability, and awareness of their own vulnerability (Gething & Wheeler, 1992, as cited in Daruwalla & Darcy, 2005). It was developed in Australia, but has been translated into four languages and received international validation from nine countries (Daruwalla & Darcy, 2005). Results have indicated that there was item homogeneity regardless of the country and language it was interpreted into (Gething et al., 1997, as cited in Au & Man, 2006).

A couple of criticisms have been consistently been made about all of the instruments noted here. These criticisms are that they may be susceptible to socially desirable responding and should be more specific in measuring attitudes toward specific types of disability and in specific contexts. Attitude instruments that directly ask about
how respondents think or feel about individuals with disabilities have been especially questioned about their ability to measure attitudes accurately because respondents may be tempted to hide and distort their answers to respond in a socially desirable way (Cunningham, Preacher, & Banaji, 2001, as cited in White, Jackson, & Gordon, 2006; Wright, 1983; Gething, 1994; Hagler et al., 1987; Siller et al., 1967, as cited in Thomas et al., 2003). However, the findings have been mixed with regard to specifically how vulnerable these instruments are to socially desirable responding (Cannon & Szuhay, 1986; Yuker, 1986, as cited in Morrison, 2005).

For example, within the multitude of studies Yuker and Block (1986) conducted using the ATDP, there were seventeen positive correlations when compared with Edwards Social Desirability Scale (EDS) (Edwards, 1957, as cited in Morrison, 2005) and Marlowe-Crowne Social Desirability Scale (MCSD) (Crowne & Marlowe, 1960, as cited in Morrison, 2005) scores. However, the median correlation score was .20, only a small indication that social desirability influences ATDP scores and not enough to threaten the validity of the scores (as cited in Morrison, 2005). In a study by Morrison (2005) of 280 undergraduate students, social desirability did not appear to impact the ATDP ratings in the study. Similar findings were noted by Hunt and Hunt (2000) and Thomas et al. (2003) when they compared ATDP and MCSD scores.

With regard to the IDP and socially desirable responding, Loo (2001) found that there was a significant relationship between IDP and MCSD scores for two scales of Gething’s (1994) six factor model, but the correlations were very small, ranging from r= -.22 to -.29. For the remaining four scales, there was no significant relationship, with correlations ranging from r = -.05 to .08. Another study yielded similar findings about
two scales underlying the IDP (Thomas et al., 2003). In contrast, a study by Gething & Wheeler (1992) reporting the psychometric properties of the IDP showed a non-significant relationship between IDP and MCSD scores, indicating that social desirability did not have a significant effect on scores.

The other criticism of attitude scale instruments is many focus on the term "disability," but do not ask about attitudes toward those with physical disabilities, or sensory impairments, or mental health disabilities, etc. in particular. Researchers have found that attitudes toward individuals with disabilities is influenced by the type of disability (Wong, Chan, Cardoso, Lam, & Miller, 2004, as cited in White, Jackson, & Gordon, 2006) and many have developed scales such as the Attitudes to Blindness Scale [AB] (Cowen, Underberg, & Virillo, 1958, as cited in Antonak & Livneh, 1988) and Scale of Knowledge and Attitudes toward Epilepsy and People with Epilepsy [ATPE] (Antonak & Rankin, 1981, as cited in Antonak & Livneh, 1988) to measure these attitudes. Deal (2006) found that even the attitudes of people with disabilities towards other people with disabilities is influenced by the type of impairment, producing the following rank ordering of the most accepted to the least accepted impairments: Deaf, Arthritis, Epilepsy, Cerebral Palsy, HIV/AIDS, Down's Syndrome and Schizophrenia.

It has also been found that attitudes toward individuals with disabilities may be impacted when asked about disability in a general versus specific societal context. One study of 513 introductory psychology course students in the United States, Taiwan, and Singapore found that in the context of individuals with disabilities dating and getting married, Singaporean students had more positive attitudes than Taiwanese students,
however, in the general context, there was no significant difference in attitudes between Singaporean and Taiwanese students (Chen et al., 2002).

Unfortunately, there are very few reliable and valid instruments that ask about specific disabilities, and examining attitudes within just one context or disability could limit the scope of attitude data. Given this, and the paucity of recent research about the attitudes of social work students toward individuals with disabilities, this study will start with a wider lens, exploring attitudes of social work students toward individuals with physically disabilities in general. It will utilize both the ATDP and IDP scales, because the instruments have been widely tested in studies about attitudes toward individuals with physical disabilities, have demonstrated psychometric soundness, are more likely to yield data that can be used in comparisons with other helping professionals, (Gething 1994a; Gething, Wheeler, Cote, Furnham, Hudek-Knezevic, Kumpf, McKee, Rola & Sellick 1997; all as cited in Daruwalla & Darcy, 2005; Antonak & Livneh, 1988), and have been thought to be a useful in combination together (Thomas et al., 2003; Hickson & Smith, 1996; Kowalsky, 2005). In particular, the ATDP has been used more extensively than any other attitude scale and correlates well with measures relating to specific disabilities, representing strengths of this instrument in particular.

Thomas et al. (2003) conducted a study using both the ATDP and IDP, and clearly identified that that the reason for examining attitudes with both instruments was the idea that the IDP may provide valuable supplementary information to the ATDP (Thomas et al., 2003). This reason was also cited by the authors of a study on the attitudes of 180 nursing and teaching students (Hickson & Smith, 1996). They found that these two measures worked well together in predicting respondents’ responses about how
likely they would be to work in the special education/disability field in the future, and whether they had an interest in undertaking post-graduate study in special education. Those who demonstrated more positive attitudes toward people with disabilities as measured by the ATDP and IDP were significantly more likely to identify higher levels of self-efficacy toward future interactions with individuals with disabilities, and more interest in gaining increased experience and education related to individuals with disabilities, than those with more negative general attitudes (Hickson & Smith, 1996).

The ATDP and IDP were also used together in a study examining whether the attitudes of physical therapy clinicians, physical therapy faculty, and physical therapy students are related to their perceptions of the ability of individuals with disabilities to function effectively as physical therapists. Results supported the argument that perceptions of the abilities of individuals with disabilities are related to attitudes toward individuals with disability, with more positive attitudes being positively correlated with more accurate perceptions about the abilities of individuals with disabilities. Findings also supported that the ATDP and IDP can be used to measure perceptions of respondents about individuals with disabilities.

**Attitudes Toward Disability among Helping Professionals/Students**

Most of the research found on attitudes of social workers and students toward individuals with disabilities in this review was more than ten to twenty years old, suggesting the need for more current research in this area. As Deal (2006) cited, Antonak and Livneh (2000) give examples of research using each of many attitude measurement methods, but out of 116 references cited in the article, only twenty were published from 1990 or later, suggesting that either limited research has been performed since 1990 on
attitudes towards individuals with disabilities, or there is a need for a more thorough review of the literature pertaining to this topic. In this review of literature on the attitudes of helping professionals and/or students toward this population, a concerted effort was made to focus on studies conducted in more recent years, understanding that it would limit the scope of this part of the review.

One study conducted in Hong Kong utilized the ATDP scale to explore the attitudes of health care professionals and their students towards people with disabilities (Au & Man, 2000). The attitudes of professionals and students in a variety of helping professions, including physiotherapists, occupational therapists, social workers and nurses were assessed. Of over 500 students and 489 professionals selected randomly for this study, the social work students had less favorable attitudes than the professional social workers, as well as other types of health care students. The average ATDP scale scores for both the occupational therapists and students were well above the overall average, and significantly higher than all social work scores (Au & Man, 2006).

Another study asked staff at a specialized school and hospital program providing education and support to patients with disabilities to identify personality characteristics they associate with students without a disability and students with a disability (Robey, Beckley & Kirschner, 2006). Participants were 30 staff from a variety of positions at the facility, including: nursing staff, therapists and therapy related staff, administrative assistants/clerical staff, non-clinical administrators, and a personal care attendant. All participants had extensive contact with patients who have disabilities: 20% indicated having had friends or family members with developmental disabilities and 16.7% indicated having had friends with disabilities. The assumption of this study was that
respondents’ attitudes may be “invoked” by a briefly presented case scenario or presentation of an attitude referent (Fazio, Sanbonmatsu, Powell, & Kardes, 1986, as cited in White, Jackson, & Gordon, 2006). Despite their extensive exposure to persons with disabilities, participants demonstrated “infantilizing” attitudes toward individuals with disabilities. They were more likely to associate disability-related words with words indicating child-like features than they were to associate non-disability-related words with similar child-like words. This result seemed to be consistent with the stereotype that all persons with disabilities have cognitive impairments, and cannot independently take care of themselves.

One study by Schwartz and Armony-Sivan (2001) compared the attitudes of 149 Israeli college students studying social work, law, science, and natural science toward the inclusion of individuals with mental retardation and mental illness in the community. Overall, social work students showed more positive inclusion attitudes to people with disabilities than other students.

Another study by Wurst and Wolford (1994) looked at the response of college psychology students in an abnormal psychology and perception course to activities simulating auditory and visual disabilities and a social interaction with individuals with disabilities. Participants reflected a negative emotional reaction during the simulation, with the strongest negative reactions being associated with the words "awkward," "isolated," "frustrated" and "anxious" (Wurst & Wolford, 1994). They used the words "distant," "judgmental," and "ignoring" to describe the attitudes of individuals without disabilities toward individuals with disabilities. Even though they reported that after the exercise they were more knowledgeable about the challenge of routine tasks for
individuals with disabilities after the simulation exercises, felt more emotional empathy for people with disabilities, had a greater understanding of the mental and physical strength of people with disabilities, and had more awareness of the stigma associated with disability and more appreciation for their sensory abilities, their perceived attitude improvement “fell short” of empowering them to feel confident and respected within their simulated disability experience. When asked how they would change their interactions with individuals with disabilities, participants said that they would be more patient, offer assistance more often, and be more respectful.

Fichten and Amsel (1986) also did a study on the attitudes of undergraduate psychology students toward individuals with disabilities. They found that socially desirable traits were attributed to the students without disabilities, including: ambition, dominance, companionability, and extroversion, while socially undesirable traits were primarily attributed to students with physical disabilities including laziness, submissiveness and introversion. Millington, Strohmer, Reid, & Spengler (1996) argued that individuals with the negative attitudes tend to perceive people with disabilities as different, incompetent, and inferior to themselves (as cited in Castaneto & Willemsen, 2006).

Findings in a study of the attitudes of 194 social work students in Japan indicate that students have a lack of knowledge and experience related to disability issues (Hayashi & Kimura, 2004). Gilson and DePoy (2002) reflected that one reason for a lack of knowledge is that disability content in the field of social work is still often being taught from the diagnostic perspective of the medical model (as cited in Hayashi & Kimura, 2004). Oliver (1996) argued that the introduction of information focused on
changing individuals’ perceptions from a medical model to a social model would contribute significantly to a more beneficial, contemporary understanding of disability.

A 2005 study of undergraduate social work student attitudes toward community integration of individuals with mental retardation and mental illness indicated that social work students had the most favorable attitudes out of social science, natural science, and law students. Social work students viewed individuals with disabilities as similar to those without disabilities, and did not advocate community segregation (Schwartz & Armony-Sivan, 2001).

**Possible Impact of Information & Contact on Attitudes**

There are not only many studies about attitudes toward individuals with disabilities, and theories about what “attitudes” are and how to measure them, there are also many different theories about what influences attitudes and prompts more negative or positive attitudes.

Chubon (1992) categorized attitude theories into the following models: consistency, social judgment, functional, and stimulus-response learning based. Consistency theories posit that incongruity prompts attitude change” (Mulkey, 1980, as cited in Morrison, 2005). They argue that a person has a need for attitudes to remain internally consistent and if this consistency is not maintained, he/she experiences psychological tension and adjusts his/her attitudes in order to achieve cognitive balance (Chubon, 1992). Festinger’s (1957) theory of cognitive dissonance is a popular consistency theory. This theory suggests that dissonance among attitudes, opinions, and values leads to dis-equilibrium and a person feels the need to reduce tension by making them consistent. Gething and Wheeler (1992) associated their Interactions with Disabled
Persons Scale with the dissonance theory, suggesting that negative attitudes are reflections of the respondent’s feelings of discomfort, based in uncertainty and anxiety about interactions with an unfamiliar population (as cited in Forlin, Fogarty, & Caroll, 1999).

Chubon (1992) presented social judgment theories as those that suggest a process wherein a person receives information about an attitude object, and forms a perception about that attitude object. Similar to this theory, information integration theory argues that an individual’s attitudes are a reflection of their knowledge and beliefs about an object and that introduction to new information can promote positive attitudes (Daruwalla & Darcy, 2005).

Functional theory suggests that attitudes serve a purpose and a person will change his/her attitudes if he/she finds it useful to meet his/her psychological needs. Thus, psychological needs must be identified and addressed in order to initiate attitude change. Psychological needs can then be addressed with reinforcement and adequate information as people develop and change attitudes in a way that benefits them (Chubon, 1992).

Stimulus-response learning theory is based on the idea that attitudes can be learned and unlearned in the same way that information and behavior is (Hovland, Janis, & Kelly, 1953). It suggests that each person has a learning pre-disposition, and some learn by persuasion while others learn primarily with factual information.

Another theory on changing attitudes toward persons with disabilities identified two “forces” that influence attitude change. In this theory, Lewin (1948) described restraining forces as factors that restrict change, and driving forces as factors that can promote changes to existing opinion or behavior. Evans (1976) suggested that to create
attitude change, one must either minimize restraining forces, such as discomfort or anxiety, and/or enhance driving forces, like positive disability contact or information, to encourage comfort and investment in change.

Thus, all these theories suggest the possibility that having information or contact with individuals who have disabilities could enhance attitudes among individuals without disabilities (Mulkey, 1980, as cited in Morrison, 2005). From the perspective of each of these theories, coursework or contact would seem to be capable of creating positive attitudes if it: 1) challenges a person’s preconceived cognitions about individuals with a disability thereby causing cognitive dissonance and a need to adjust his/her cognitive schemas; 2) prompts the person to develop a positive perception of the information he/she receives about individuals with a disability; 3) offers psychological benefit or useful information, such as receiving social praise or benefiting from learning a new skill; 4) utilizes a variety of educational approaches to meet the diverse learning predispositions of participants, including direct contact and indirect informational contact with someone who has a disability; and 5) provides education in a comfortable, positive way, reducing anxiety associated with disability and fears about interacting with this population.

Researchers have found that when measuring attitudes, it is important to explore both the influence of information about this population and prior and current contact with an individual with a disability (Amsel & Fichten, 1988; Beattle et al., 1997; Evans, 1976; Gething, 1986; Gilbride, 1993; Yuker & Block, 1986; Yuker, 1994). Information provision through academic curricula has been found to impact attitudes in many studies. More specifically, researchers have found that teachers, health care paraprofessionals,
and nurses who have had coursework such as behavioral science, rehabilitation, and special education had more favorable attitudes toward individuals with disabilities than those who had not had this coursework (Mandell & Strain, 1978; Geskie, 1985; all as cited in Morrison, 2005; Felton, 1975), and that scores improved from pre to post attitude measurements over the duration of coursework (Sadlick & Penta, 1975).

The results of Beattle et al. (1997) were consistent with Morrison’s (2005) review of research and other findings that information provision can promote positive attitude change, but primarily in combination with positive contact (Barrett & Pullo, 1993; Jones, Sowell, Jones, & Butler, 1981; Pernice & Lys, 1996; Pfeiffer, 1989; Schwartzwald, 1981; all as cited in Herbert, 2000; Anthony, 1972). They asserted that the quality of the contact and characteristics of the professor with a “visible disability” in their study may have contributed to the positive attitude change in that he/she seemed to present to participants as competent, socially skillful, good with communication, and accepting of his/her disability (Beattle et al., 1997).

Another study looked at the effectiveness of a variety of interventions with 433 prospective special education teachers and found that the combination of curriculum content/information and positive contact with individuals with disabilities can be effective in promoting favorable attitudes toward disabilities (Beattle et al., 1997). The prospective educators at this university were already in volunteer placements at agencies that serve students with disabilities, however, many of these placements were in special segregated settings with children with severe disabilities. As the researchers pointed out, these settings may have led the prospective educators to believe that all students with disabilities are severely disabled and can only be educated in segregated classrooms.
Thus, they were concerned that the kind of contact they were having with individuals with disabilities could potentially prompt a limiting view about individuals with disabilities and their ability to integrate into society. In an effort to investigate factors that would promote positive attitudes, the researchers provided one group of students with exposure to a teacher with a visible disability instructing the class, and another group with both exposure to a teacher with a visible disability and disability related information (Beattle et al., 1997). Results revealed significantly more favorable attitudes in the group that was both taught by professor with a visible disability and received disability information (Beattle et al., 1997).

Estes, Deyer, Hansen, and Russell (1991, as cited in Morrison, 2005) examined the impact of information provision via academic curricula and contact experience in a study of occupational therapy students in their first and last semester of coursework found that fourth semester students held significantly more favorable attitudes toward individuals with disabilities than those in their first semester, as measured by the ATDP. They argued that the curriculum provided students with information and contact with individuals with disabilities, which had a positive impact on their attitudes toward disability (Estes et al., 1991, as cited in Morrison, 2005). This is also consistent with Begab’s (1968) study of related to mental retardation with a group of newly admitted and graduating students in graduate social work programs. The study found that the social work students who had a family member with mental retardation had more favorable attitudes than those who did not, but the most favorable attitudes toward mental retardation were graduating students who had gained clinical experience with mental
retardation. Therefore, the combination of classroom education and contact through field placement had the largest impact on attitudes.

In addition, previous contact, especially positive contact, has been associated with more favorable disability attitudes even prior to any research-implemented intervention (Evans, 1976; Amsel & Fichten, 1988; Gilbride, 1993). One study found that college students who had previous contact with individuals with a physical disability “at baseline” were more at ease with their peers who have disabilities than those who had no contact (Amsel & Fichten, 1988).

However, researchers have also pointed out that an uncomfortable or limited experience may promote less favorable attitudes (Evans, 1976; Shapiro, 2000; Yuker 1988; Wright, 1980). Robey, Beckley and Kirschner (2006) found that exposure alone is not enough to promote positive attitudes. Thus, the quality, closeness, and length of contact may influence its impact on attitudes. Au and Man (2006) compared the attitudes of 511 students and found that a significant factor in affecting the scores on attitude was the quality of the contact with individuals with disabilities with positive contact producing more favorable scores.

Yuker’s (1988) review of 274 studies exploring the impact of contact with disabled on attitudes toward disability found that interaction with persons with disabilities is associated with positive attitudes when the person with a disability is perceived positively and the person without a disability does not believe that:

…(a) disability is the most important characteristic of [people with disabilities]…; (b) ...people [with disabilities] are different, incompetent, inferior, and... have negative characteristics; and (c) ...nondisabled persons are unable to cope with... [people with disabilities] and their problems (Yuker, 1988, p. 274).
Yuker (1988) found that “people with disabilities indicated that strangers regarded them as being much more unfortunate than friends did (p. 11).” He posited that if a difference is visible, is regarded as negative, and the observer lacks a context for understanding the difference, a negative perception will be assigned (Yuker, 1988). Thus Yuker (1988)’s work suggests that positive exposure leads to a more favorable perspective of disability, and exposure that is perceived to indicate difference and inequality leads to a less favorable perspective of disability. In one of Yuker’s (1994) studies, he found that when an individual with a disability disclosed information about his or her condition, reduction of tension resulted among subjects without a disability (Yuker, 1994).

Gilbride (1993) suggested that interactions between individuals with disabilities and individuals without disabilities promote favorable attitudes when they are positive, take place over time, and involve cooperation and mutual benefit. This is consistent with Allport’s (1954) contact theory that prejudice between groups will decrease with contact if they have equal status, common goals, cooperation and support from societal authority, but may increase if contact occurs in the context of inequality.

Donaldson (1980; as cited in Herbert, 2000) found that contact was only associated with favorable attitudes when the individual with a disability was similar to the individual without a disability in terms of educational and work achievement, and other status factors. In addition, it has been argued that contact with an individual with a disability is associated with less favorable attitudes if it evokes fear or guilt (Wright, 1980). These negative reactions could reinforce stereotypes about the experience of those
with disabilities, highlighting that helping professionals should not assume that their attitudes are positive just because they have had exposure to people with disabilities.

These many studies demonstrate that information received via academic curricula and contact are factors that should be examined when assessing attitudes toward this population. In this study, both these factors were taken into consideration, but with limitations to be discussed in the methods chapter.

The two other instruments that were used in this study offer the benefit of having been used to measure both the possible impact of education received and contact on attitudes. Gething (1994) found that professionals who received training about individuals with disabilities showed significant attitude change over time in one study utilizing the IDP for attitude measurement (as cited in Fogarty, Forlin, & Carroll, 1999). Another study found that education students demonstrated decreasing levels of discomfort over a three year period of pre-service study as measured by the IDP (Gething 1991), with similar findings by Beckwith and Matthews (1994) between first and later year undergraduate students (as cited in Fogarty, Forlin, & Carroll, 1999). Gething (1991) found that those with lower levels of education experienced greater discomfort in their interactions than those with higher levels of education. Another study indicated that the attitudes of students who completed a rehabilitation internship had significantly more positive attitudes on the ATDP-A than those who had not (Morrison, 2005). In addition, IDP scores have been thought to be associated with perceived knowledge about disabilities and a variety of other sociodemographic variables (MacLean & Gannon, 1995, as cited in Loo, 2001).
Prior level of contact with people with disabilities has also been associated with scores on the IDP and ATDP. Higher levels of contact have been significantly associated with more favorable attitude scores on the IDP in many studies (Gething, 1991; Gething, 1991a, as cited in Fogarty, Forlin, & Carroll, 1999; Beckwith & Matthews, 1994; Gething, 1991, 1994; MacLean & Gannon, 1995, as cited in Forlin, Tait, Carroll, & Jobling, 1999). The results of one study indicated that pre-service teachers who had more frequent contact with individuals with disabilities expressed less discomfort on the IDP than those who experienced less frequent contact (Forlin, Tait, Carroll, & Jobling, 1999).

Morrison (2005) found a significant difference between the pre-test ATDP-A scores of those who had close, personal contact and those who had more distant or no contact, indicating that intimate contact has a positive effect on attitudes toward disability. Another study using the ATDP found that American and Taiwanese students with prior contact with people with disabilities were more optimistic, had greater concern about human rights, and showed fewer behavioral misconceptions about individuals with disabilities than students with no prior contact (Chen et al., 2002). These studies and others suggest that ATDP and IDP scores have been related to information presented in educational curricula and the amount and type of contact respondents have had with individuals with disabilities, and demonstrate that contact should be examined in further research (Algaryouti, Alghazo, & Dodeen, 2003; Morrison, 2005).
CHAPTER THREE:

METHODS

This study’s aim was to build on prior disability research by exploring the attitudes of undergraduate social work students toward individuals with physical disabilities. It considered the possible impact of contact with individuals with physical disabilities, perceived level of knowledge about individuals with physical disabilities, amount of social work coursework, and other demographics on those attitudes.

Research Design

This was an exploratory, one-shot case study. The research question was “what are the attitudes of undergraduate social work students at three different universities toward individuals with physical disabilities as measured by responses on the Attitudes Toward Disabled Persons Scale Form B (ATDP-Form B; Yuker et al., 1960, 1966) and Interactions with Disabled Persons Scale (Gething, 1991)?” This study explored the following hypotheses, that participants who: 1) have had prior positive contact with persons with physical disabilities; 2) have higher perceived levels of knowledge about issues affecting persons with physical disabilities; 3) have had more social work classes will respond with more positive attitudes than other participants. This question was investigated using a sociodemographic data form, and two quantitative surveys.
administered to undergraduate social work students at three different universities in Central Florida.

Sampling

The study selected participants from a purposive sample of undergraduate social work students at three universities located on 3 different campuses in Central Florida. Students were chosen from: the University of Central Florida in Orlando; Saint Leo University in the city of St. Leo, in west central Florida, and Southeastern University in Lakeland. The University of Central Florida is a large public, metropolitan, research university with over 48,000 students on eleven different campuses. Saint Leo University is a Catholic institution with 14,000 traditional campus and continuing education students. Southeastern University is a Christian, liberal arts university with over 2,900 students. These universities were chosen because the author had access to them, and they are different in size and location. In addition, the universities are diverse in terms of being secular or faith based institutions.

The sample was selected from current, available classes approved by the directors of each undergraduate school of social work at each campus. Potential participants were given time to complete the surveys during class time or bring them home to review and return them the following week. The number of participants was anticipated to be 145 students initially, given an 80% response rate. This response rate was based on studies with in-class surveys from researchers including Claudio and Stingone (2008), Dommeyer, Baum, Hanna, and Chapman (2004). The University of Central Florida (UCF) anticipated having 80 students, St. Leo University (St. Leo) anticipated having 40 students, and Southeastern University (SEU) anticipated having 60 students. However,
the response rate was much lower at 31%. It could be that giving potential participants the option to complete the surveys at home decreased the response rate.

**Participants**

Data was collected from 55 female and 1 male undergraduate social work participants from UCF (24), St. Leo (12), and SEU (20). Participants were between the ages of 18 to 54 years (M = 26.11, SD = 9.53). The mean age of St. Leo participants was the highest, (M = 27.67, SD = 8.93), followed by UCF (M = 27.52, SD = 10.30), and SEU (M = 20.40, SD = 1.59). Sixty-six percent of the sample were Caucasian, 20% Hispanic, and 14% Black. Eight-five percent of the sample identified their religious affiliation as “Christian,” 5% “other,” and 9% “none.” Ninety-three percent reported their country of origin was the United States, and 7% other. None of the participants identified as having personal “self” knowledge about issues affecting individuals with physical disabilities. See Table 1 for more detailed information by university.

**Measures and Variables**

The study’s dependent variable is undergraduate social work student attitudes towards individuals with physical disabilities, which was measured with the Attitudes Toward Disabled Persons Scale (ATDP) (Yuker, Block, & Campbell, 1960) and Interactions with Disabled Persons Scale (IDP). The ATDP is a scale designed to measure the extent to which respondents perceive individuals with physical disabilities as similar to rather than different from individuals without disabilities, and the extent to which the respondent believes individuals with disabilities should be treated similarly to person without disabilities (Yuker and Hurley, 1960, 1987). Social identity theory suggested that when a group of people are seen as different from ourselves, they are often
then viewed as inferior, not deserving of equal treatment, thus negative attitudes result (Tajfel & Turner, 1979, 1986) . This theory has been supported by the work of many others examining attitudes and prejudice (Brewer, 2001; Seta, Seta, & McElroy, 2003; Wenzel, Mummendey, Weber, & Waldzus, 2003).

Antonak and Livneh (1988) noted that the scale purports to measure the attitudes of individuals without disabilities toward individuals with disabilities on continuum of acceptance-rejection and attitudes of individuals with disabilities toward themselves on a continuum of self-acceptance-rejection of having a disability. However, no research was found in this study’s literature review indicating that the survey should only be used with only individuals without disabilities or only with individuals with physical disabilities. It has also been argued that this instrument measures how respondents think individuals with disabilities should be treated at the societal level (Gething & Wheeler, 1992) and thought to measure a generalized positive or negative attitude toward individuals with physical disabilities (Morrison, 2005).

The authors of the ATDP conducted an extensive review of the disability-related literature to identify descriptions of individuals with disabilities that could be applied when forming the construct statements used in the ATDP (Yuker, Block, & Younng, 1966, 1970). The content validity of the ATDP scale was established by having multiple psychologists review the descriptions of disability found in the literature by the authors to identify the extent to which they were relevant and could be used in the scale. Construct validity was demonstrated through convergent and discriminant validity. Convergent validity was assessed by correlating ATDP scores with other attitude toward disability measures with correlation scores ranging from .09-.98.
This study will utilize the ATDP Form-B developed later as a 30 item equivalent form of the original (Yuker, Block & Campbell, 1962, 1966). It usually takes ten minutes to administer. The scale asks respondents to answer “I agree very much +3,” “I agree pretty much +2,” “I agree a little +1,” “I disagree a little -1,” or “I disagree pretty much -2,” “I disagree very much -3” to items depicting two types of statements. One type of statements ask about perceived characteristics of individuals with physical disabilities and the other type of statements address perceptions about how individuals with disabilities should be treated. Items include: “very few disabled persons are ashamed of their disabilities,” and “disabled people are not as self-confident as physically normal persons.”

Yuker and Block (1986) noted that the ATDP Form B test-retest reliability for over three weeks or less is .74-.91 with a median score of .79, and .68 over a five month period. The split-half reliability score for the ATDP Form B ranges from .72 to .83. Rao (2004) noted that recent studies found a median reliability score of .80 when tested with the same reliability measures.

Where ATDP (Forms A and B) items reflect a difference between individuals with disabilities and individuals without disabilities, the difference has negative connotations, implying that low scores reflect the perception of persons with disabilities as both different and inferior or disadvantaged to some degree (Yuker, Block, & Campbell, 1962, 1966). Thus it is thought that lower scores reveal a more negative attitude and higher scores on the ATDP reveal a positive attitude because they reflect perceptions of individuals with disabilities as similar to individuals without disabilities (Yuker & Block, 1986).
Half of the items are worded positively and half are worded negatively, so to score the scale, the signs of the positively worded items need to be altered first. Then the responses need to be summed, with the sign of the sum reversed to eliminate any negative value. Scores range from 0-180. Yuker and Block (1986) reported that the mean ATDP score for Americans based on the average scores from 29 studies was 117.1.

The other quantitative measurement that was administered is the Interaction with Disabled Persons (IDP) Scale (Gething, 1991). It was first created in Australia, and between 1988 and 1990, was based on a sample of over 6,000 cases. As discussed earlier, the IDP scale was designed to measure feelings of discomfort in social interactions as a primary factor underlying negative attitudes, and was argued to be closely related to contact with individuals with disabilities (Gething & Wheeler, 1992). The scale contains 20 items corresponding to a 6-point response scale ranging from “agree very much” to “disagree very much” with no neutral point on the response scale. The IDP scale consists of twenty items asking about their general feelings related to interactions with individuals who have a disability. Items in the scale include: “I admire their ability to cope”; "I feel overwhelmed with discomfort about my lack of disability"; and "I wonder how I would feel if I had this disability." The IDP is thought to be composed of underlying factors in its measurement of attitudes (MacLean & Gannon, 1995; Gething, 1994; all as cited in Fogarty, Forlin, & Carroll, 1999; Thomas et al., 2003). The factors include the following: discomfort in social interactions, containing items relating to a respondent’s potential behavior and reaction to meeting someone with a disability; coping/succumbing framework, containing items relating to the view that a respondent was likely to take towards a person with a disability; perceived level of information, was measured by items
relating to information about disability; vulnerability, containing items related to concern about becoming disabled and its impact (Fogarty, Forlin, & Carroll, 1999).

IDP test-retest reliability coefficients have ranged between +.51 for a one year period to +.82 over a two week period. Item homogeneity measured with Cronbach's Coefficient Alpha revealed values ranging from +.74 to +.86 (Gething & Wheeler, 1992, as cited in Gething, Lacour, & Wheeler, 1994). These results seem to compare favorably with those of other attitude measures (Antonak & Livneh, 1988). Gething (1991) reported internal consistency reliabilities from .74 to .86. The estimates of the total-scale reliability for the IDP were found to exceed .75 in the studies noted by Fogarty, Forlin, and Carroll (1999). In addition, Gething (1991) found significant correlations between the IDP scale scores and scores on other measures of attitudes toward individuals with disabilities, demonstrating concurrent validity. Correlation scores between IDP and other scale scores were significant with total and subscale scores ranging from r = -.22 to -.44 (Gething, 1991).

As discussed in the background literature, the quality and frequency of contact with a person who has a disability, as well as information/knowledge about disability related issues have been found to influence attitudes, and researchers have suggested examining the impact of these factors on attitudes in additional studies (Algargouti, Alghazo, Dodeen, 2003; Gilbride, 1993; Morrison, 2005; Yuker 1988). Thus, the ATDP and IDP will be accompanied by a data form that gathers sociodemographic information, including prior direct contact experience, possible placement experience with individuals with disabilities, amount of social work coursework completed, perceived knowledge about disabilities, gender, age, and race/ethnicity, as these variables may also influence...
attitudes. On the data form, participants will be given a written definition of physical
disability and direct contact as defined below, and asked to answer five questions,
including the following: “How would you characterize your relationship with the
individual(s)”; “How often did you have direct contact with this individual(s)?”; and
“Overall, what was the experience with this individual(s) like?” Data form items were
designed to explore variables of interest in this study. Items were based on
sociodemographic data forms from similar studies by Morrison (2005), Upton and
Harper (2002), and placement types/populations information listed in the universities’
field program materials.

With regard to curriculum information, the data form asked how many social
work courses respondents have had, assuming that the more social work coursework
respondents have had, the more information they may have that could influence attitudes.
The second assumption was that gaining information about human diversity, human
behavior, and/or race and culture may influence attitudes. This assumption was based on
the fact that each of the universities in the study have been accredited by the Council on
Social Work Education (CSWE), and the educational objectives set forth by the CSWE
are aimed at promoting perceptions conducive to effective work with various populations
(2004). It is also based on research discussed earlier that level of education in the helping
professions has a differential impact on attitudes toward this population. In addition, the
content and the way content is presented in each class at each university will not be
identical, so it cannot provide an equal comparison with regard to the amount of
information or kind of information respondents have based on data collected in this study.
One of the limitations of the data form was that it is not a standardized instrument, and it did not collect data about the kind of information being provided in the respondents’ academic coursework or what class they were selected from to be potential participants in this study. It also did not examine the possible influence of different courses on attitudes as this would seem to be more feasible and appropriate as an area for future research.

Responses to items about contact (yes/no), gender, race/ethnicity, and placement type/population provided nominal data about the possible influence of these variables on attitudes. The participants’ responses about their self-perceived level of knowledge regarding the conditions and life circumstances of individuals with a physical disability, as well as the quality and amount of contact questions, produced interval level data. Ratio level data was collected from responses about the number of individuals with disabilities the respondent has had contact with, the respondent’s age, and the number of social work courses he/she has had.

**Definitions**

This study’s focus was on measuring attitudes toward individuals with a physical disability. The Census (2000) definition of “physical disability” was used in this study, thus describing physical disability as “a condition that substantially limits physical activities such as climbing stairs, reaching, lifting, carrying or walking (Census Bureau, 2003). Such disabilities can be “acquired” genetically, prenatally, at birth, and as a result of other conditions, like cardiac problems, injury or aging. It was difficult to quantitatively account for any possibly confounding attitude differences (especially possible age-related attitudes) that may have resulted from including various forms of
disability “acquisition” together. However, most instruments for measuring attitudes toward individuals with disabilities do not differentiate between types of disability. Thus, this study defined disability according to the U.S. Bureau of the Census (2003) without specifying the “type” to minimize threats to the reliability and validity of the instruments selected. This definition was used to ask respondents if they have had prior direct contact with an individual with a physical disability on the sociodemographic data form. The term “direct contact” as utilized in this study was defined as having interacted in-person with a person(s) who has a physical disability. It was assessed with five data form items.

This study utilized Meyers (1987) definition of “attitude” as “a favorable or unfavorable evaluative reaction toward something or someone, exhibited in one’s beliefs, feelings or intended behavior” (as cited in Shapiro, 2000, p. 10). For the purposes of this study, attitude was operationally defined as the scores acquired on the ATDP Form B and IDP.

Process and Procedures

The first step in conducting the study was to select potential students for inclusion in the study. Undergraduate social work program directors from each of these universities were asked to select each social work class section available at their university for participation. Once class sections were identified, the author contacted each instructor to discuss the study, and arranged the specific date that they were able to present the study to their students for participation. The author then distributed envelopes with instructions regarding informed consent, completion of the surveys, and specifics regarding debriefing and follow-up options to each instructor to read to students/potential participants at the start of the study and during the research procedures.
Data Collection

The attitude measures were administered in the third month of the semester because instructors needed time to get students familiar with them and the course before introducing a research study. Instructors from each selected class met with their students to discuss the study and informed consent. They then provided instructions about research procedures. Students were instructed by their instructors not to complete the surveys twice, in the event that they are in more than one class section involved in the study, and not to complete the survey if they are not a social work major.

Instructors asked students to complete the informed consent form, sociodemographic data form, ATDP-Form B, and IDP if they agreed to be part of the study. The measures and informed consent procedure took approximately 30 minutes total with informed consent procedures taking 5 minutes, the sociodemographic data form taking approximately 5 minutes, the ATDP-Form B taking 10 minutes, and IDP taking 10 minutes to administer. Instructors gave the students 45 minutes to provide ample time to review and/or complete the research material before collecting the students’ sealed envelopes. Participants were reminded of the contact information they can use for follow-up, questions, or concerns, on the informed consent form and students were thanked for their time.

Human Subjects

The subjects in this study were undergraduate social work students in one of seven social work groups. To reduce the risk that students would feel pressure to participate, their instructor explained that their participation is completely voluntary, confidential, anonymous, and will not in any way affect their grade or education. In
addition, they were reminded that they should seal their envelopes, so even their participation or non-participation would not be known by their instructor. When the instructor provided verbal instructions, he/she provided every student with an envelope containing informed consent material, a sociodemographic data sheet and two surveys, and offered to answer any questions. The envelope was given to all students in the class for review, and the instructor advised students who wish to participate to review the consent form and do their best to honestly complete the measures, if they chose to participate.

Participants and their data remained anonymous, i.e. never associated with the participant name. The instructor introduced the research, instructing the class to: review the research material, keep a copy of the informed consent form; and seal the envelopes with the remaining research material, regardless of whether they’ve decided to participate or not. The instructor left the room while they were reviewing the material to ensure privacy, and then collected all of the student envelopes, without knowing or indicating which potential participants chose to participate and those who did not. Potential participants were reminded by their instructor that they could withdraw consent to participate at any point by stopping responding to research items.

One area of possible human subjects concern was the fact that the researcher did not administer the instruments, so participants may not have felt as comfortable contacting a “stranger” if they were in need of follow up support. However, students who agreed to participate were encouraged to call the researcher, faculty supervisor, and/or Internal Review Board(s) to ask any questions that may arise, at any time.
In addition, as discussed earlier, respondents may have felt pressure to respond in a socially desirable way, especially when some of the research material was being distributed and collected by their instructors, and participants may have felt uncomfortable responding or may experience cognitive “dissonance.” Instructions were read aloud by the instructor to remind potential participants that responses would remain anonymous, and that honest answers are most helpful. Participants were not asked for their names at any point in this study.
CHAPTER FOUR:
RESULTS

First, raw data was checked for accuracy of data entry. A frequency analysis was run on each variable in the dataset and descriptive data to verify that all data fell within the range of the possible responses, and no outlying data was found.

Analytic Approach

Quantitative data was entered into the Statistical Package for Social Services (PASW Statistics 18) for analyses and data graphing. Descriptive statistics were run on the socio-demographic data collected on the data form, including nominal (gender, race, contact yes/no, contact relationship, contact quality, field placement type), and ratio (age, number of courses taken within the social work major) level data to examine their possible relationship with attitudes toward individuals with disabilities, as measured by the ATDP Form-B and IDP. These variables were also examined with analysis of variance (ANOVA), post hoc analyses, regression analysis, and correlations.

The research question asked what the attitudes of undergraduate social work students at three universities were toward individuals with physical disabilities as measured by responses on the ATDP- B (Yuker et al., 1960, 1966) and IDP (Gething, 1991). The hypotheses were that participants who: 1) have had prior positive contact with persons with physical disabilities; 2) have higher perceived levels of knowledge about
issues affecting persons with physical disabilities; and 3) have had more social work classes will respond with more positive attitudes than other participants.

For each factor examined in the study, a descriptive analysis was run. The analyses included measures of central tendency, including the mean, range, and standard deviation of each variable. Correlations were then run on all the independent variables to examine possible relationships between them, as well as their possible relationship with the dependent variables. ANOVA’s and t-tests were used to determine whether there is a statistically significant relationship between demographic, knowledge and contact variables and total attitude scores. A one way ANOVA was run for university, ethnicity, religion, and country of origin. Many variables were re-coded for certain analyses, including country of origin and university, and t-tests were run to look more closely at possible statistically significant relationships between groups. Those variables found to have a statistically significant relationship with total attitude scores were identified and entered into regression analyses, resulting in four regression models.

Contact

The mean score of the number of contacts participants reported they had with a person who has a physical disability was 9.96 (SD = 20.8). This score ranged from 1 to 39. Frequency of contact was measured with an item asking participants to indicate how often they had contact with each individual they know with a physical disability. The values ranged from (1) rarely, (2) occasionally, (3) often, to (4) very often. The mean frequency of all contacts for all participants was 2.60 (SD = .90). In addition, the mean frequency of all contacts for each participant was calculated and used in regression analyses described in the next chapter.
Each respondent was also asked to rate the quality of their experience (negative, neutral, positive) with each person with a disability they identified having contact with, then the mean of all these values (-1 to 1) was computed. The mean quality of contact score of all contacts for all participants was .59 (SD = .50), indicating a “neutral” to “positive” experience. The mean quality of all contacts for each participant was calculated and used in regression analyses described in the next chapter.

Proximity of contact was measured by asking respondents to indicate the type of relationship they had with the individual(s) with a physical disability they identified having contact with. There was overlap among these responses, with participants reporting they had multiple kinds of contacts with individuals who have a physical disability. Responses were grouped into family (relative, spouse, child, sibling), friend (family friend, personal friend), professional (client, fellow student, supervisor/teacher, co-worker), and distant relationships (strangers and acquaintances) then weighted as follows: (3) close, (2) mid, and (1) distant. Thirty-six percent of participants reported at least one distant relationship with an individual who has a physical disability, 32% reported at least one family relationship, 29% reported at least one professional relationship, 27% reported at least one friend relationship, and 7% reported having had no contact.

Self-Perceived Knowledge

Self-perceived level of knowledge responses ranged from (1) no knowledge to (6) extensive knowledge. Participants had a mean score of 3.86 (SD = 1.15), indicating that, on average, they reported having “a bit” of knowledge about the life conditions of individuals with physical disabilities. Participants were also asked where they gained
knowledge in this area, with multiple answers possible. Sixty-six participants said they received their knowledge from social work education, 60% from other experience, 39% from media, 31% from volunteer experience, 20% from research/literature, and 18% from personal experience.

Social Work Classes

The number of social work classes ranged from 1 to 17, with a mean score of 8.0 (SD = 4.90). Fourteen percent of participants reported having taken 8 classes, 11% reported 4 classes, UCF students reported having had 22 classes in their social work education thus far, SEU reported 19 classes, and St. Leo reported 10 classes. This indicates that participants were freshman, sophomore, junior, and senior level undergraduate social work students. Twenty-four of these students indicated that they had started a field placement, in addition to classes. The data form asked participants to circle the item that best describes the placement population, placement issue, and placement setting. Responses indicated that approximately 43% had started in field placement, with 43% working with children and families, 13% working in schools, 12% in inpatient or outpatient mental health, 11% working with adults, 5% with the homeless, 4% with seniors, 2% with individuals who have developmental disabilities, 2% with individuals who identify as gay, lesbian, bisexual, or transgendered, 2% with sex offenders, 2% with caregivers. None of the respondents identified working with individuals who have physical disabilities or in group homes in their placement.
CHAPTER FIVE:

DISCUSSION

Research Question

What are the attitudes of undergraduate social work students at three universities toward individuals with physical disabilities as measured by responses on the ATDP- Form B and IDP?

The responses on the ATDP and IDP were analyzed to examine the overall attitudes of these students toward individuals with physical disabilities. As discussed in previous chapters, it is purported that the ATDP measures the degree to which respondents perceive individuals with disabilities as similar, and IDP scores measure the degree of discomfort associated with interactions with individuals with disabilities. The assumption underlying the ATDP- Form B is that the more similar the respondent perceives individuals with physical disabilities are to individuals without a disability, the more positive their attitude is, so higher scores indicate a more positive attitude. The IDP is based on the idea that the less discomfort a respondent has when perceiving interactions with individuals with physical disabilities, the more positive his/her attitude is. The scores on the ATDP– Form B ranged from 79 to 170, with a mean score of 122.13 (SD = 20.54). The scores on the IDP ranged from 30-89 with a mean score of 58.86 (SD = 13.41).
These mean scores are consistent with findings reported by Yuker and Block (1986) for Americans based on the average scores from 29 studies (M = 117.1) and studies from Gething and Wheeler (1992) indicating a mean score of 67. UCF had the highest ATDP-Form B mean score (M = 129.92, SD = 18.60), followed by St. Leo (M = 120.58, SD = 18.52), and SEU (M = 113.70, SD = 21.24). St. Leo had the lowest IDP mean score (M = 53.67, SD = 10.03), followed by UCF (M = 56.75, SD = 12.59), and SEU (M = 64.50, SD = 14.63). Thus, SEU (20) had the highest levels of discomfort, followed by UCF (24), and St. Leo (12). This information is summarized in Table 2.

However, differences found between participants based on university affiliation were analyzed with caution since the number of participants from each university was different, and it appears that the difference may have been the result of a small sample size. To control for the possible impact of differences in university size, data from each university was also recoded into large (UCF) and small university (St. Leo and SEU combined) categories. Independent sample t-tests were run by large and small university and the size of the university was found to be significant for the ATDP t(54) = 2.58, \( p = .013 \), but not for the IDP t(54) = -1.02, \( p = .313 \).

When these attitude surveys were also analyzed for their relationship to one another, Pearson correlations reveal a statistically significant moderate negative relationship between the total scores for the ATDP-Form B and IDP (\( r(56) = -.433, p < .01 \)). This indicates that as one of the attitude survey’s total score increased, the other attitude survey total score decreased. According to research literature describing what these attitude instruments are purported to measure, this correlation suggests the possibility that 1) participants tended to feel more comfortable with individuals with
physical disabilities when they perceived them to be more similar to individuals without physical disabilities, and/or 2) the more comfortable participants felt in their interactions with this population, the more similar to individuals without physical disabilities they perceived them to be.

Frequencies were run on ATDP- Form B and IDP items individually and where the majority answered in one direction or another, i.e. agree vs. disagree, the results are reported here. Items where the majority of participants answered that they agree at least “a little,” included: “Disabled persons do not become upset any more easily than non-disabled people” (ATDP, N=56, 64.3%); “Most people feel uncomfortable when they associate with disabled people” (ATDP, N=56, 75.0%); “It hurts me when they want to do something and can’t” (IDP, N=56, 94.7%); “It is rewarding when I am able to help” (IDP, N=56, 98.2%); “I feel frustrated because I don’t know how to help” (IDP, N=56, 82.1%); “I feel ignorant about disabled people” (IDP, N=56, 58.9%); “I am grateful that I do not have such a burden” (IDP, N=56, 85.7%); “I admire their ability to cope” (IDP, N=56, 96.5%); “I feel better with disabled people after I have discussed their disability with them” (IDP, N=56, 71.4%). These items seem to indicate that participants want to be able to help individuals with physical disabilities, but feel frustrated when they don’t know how to help or feel like they need more information to interact in a positive manner.

Items where the majority of participants disagreed at least “a little” included: “Disabled persons should not expect to lead normal lives” (ATDP, N=56, 92.8%); “Disabled people are not as happy as non-disabled ones” (ATDP, N=56, 92.8%); “Most physically disabled persons have different personalities than normal persons” (ATDP,
N=56, 82.0%); “I dread the thought that I could eventually end up like them” (IDP, N=56, 57.1%). These items seem to reflect empathy and a belief that individuals with disabilities should be able to expect an opportunity to lead a “normal” life, as well as some awareness of their own vulnerability as posited by Gething and Wheeler (1992, as cited in Daruwalla & Darcy, 2005).

Hypotheses 1- Contact

Participants who have had prior positive contact with persons with physical disabilities will respond with more positive attitudes than other participants.

This hypothesis was analyzed by examining scores from data form items asking about the quality of contact, as well as the frequency and proximity of relationship the participant reported he/she had with the individual(s) who has a physical disability. Pearson product-moment correlations were run between these contact variables and the ATDP- Form B and IDP. These revealed a statistically significant moderate relationship between the ATDP- Form B and quality of contact ($r(52) = .393, p < .01$). The IDP was shown to be moderately correlated with frequency of contact ($r(50) = -.500, p < .01$), and moderately correlated with quality of contact ($r(52) = -.321, p < .05$). Both of these correlations were statistically significant. Analysis of this data indicated that, in general, the more positive the contact reported was, the higher the ATDP-Form B total score was. This fits with prior research (Yuker, 1988; Au & Man, 2006) which proposed that positive exposure leads to a more positive view of individuals with physical disabilities, and the way they should be treated at the societal level.

Frequency of contact and proximity of relationship were variables analyzed in this study, given the findings of many researchers (Begab, 1968; Evans, 1976; Robey,
Beckley & Kirschner, 2006; Shapiro, 2000; Yuker 1988; Wright, 1980) which suggested that not only the quality, but also closeness of relationship and frequency of contact with an individual who has a disability, may influence attitudes. With regard to proximity of relationship to individuals with a physical disability, there was no significant relationship with the ATDP-Form B total score ($r(56) = -.062, p = .650$) or the IDP total score ($r(56) = -.129, p = .343$). Frequency of contact was not found to have a statistically significant impact on ATDP-Form B total score ($r(50) = .143, p = .32$), but did have a moderately strong negative relationship with IDP total score ($r(50) = -.50, p < .01$). This is consistent with Gething’s (1992) work which suggested that those who have had more prior contact with individuals with disabilities feel less uncomfortable in interactions with this population.

Frequency of contact and relationship proximity could be considered an influence, not only on this quality of contact variable, but also on participants’ level of self-perceived knowledge. Therefore, contact frequency and relationship proximity were examined related to level of self-perceived knowledge as well. See Table 3 for correlation scores between attitude survey totals and contact scores.

**Hypotheses 2- Self-Perceived Knowledge**

*Participants who have higher levels of self-perceived knowledge about issues affecting persons with physical disabilities will respond with more positive attitudes than other participants.*

There was no significant relationship between the ATDP-Form B and self-perceived knowledge about issues related to life with a physical disability. However, a Pearson correlation indicated a moderate statistically significant negative relationship.
between self-perceived knowledge and the IDP \( (r(56) = -0.437, p < .01) \). Participants with higher self-reported levels of knowledge tended to report less discomfort interacting with individuals who have a physical disability. This is consistent with prior research which indicates that individuals with higher levels of self-perceived knowledge, whether gained through contact, experience, academic curriculum, both, or other sources can contribute to lower levels of discomfort when interacting with this population (Estes et al., 1991, as cited in Morrison, 2005).

The closer proximity participants indicated having, the higher self-perceived knowledge of disability issues was \( (r(56) = 0.474, p < .01) \), with a moderate positive statistically significant relationship. In addition, the more frequent contact participants reported having, the higher self-perceived knowledge reported \( (r(50) = 0.458, p < .01) \), also with a moderate positive statistically significant relationship.

One interesting finding was that there was no statistically significant relationship between the number of social work classes and self-perceived knowledge \( (r(51) = -0.007, p = .959) \), even though social work coursework was reported most often by participants as their primary source of knowledge. This study did not examine the kind of information being taught in the participants’ social work classes, but Gilson and DePoy (2002) suggested that if classes are only being taught from the diagnostic perspective of the medical model, they may not be effective in making people feel knowledgeable about this population (as cited in Hayashi & Kimura, 2004). See Table 4 for correlations between the ATDP- Form B total score, IDP total score, number of social work courses and level of self-perceived knowledge.
Hypotheses 3- Social Work Classes

Participants who have had more social work classes will respond with more positive attitudes toward individuals with physical disabilities than other participants.

This hypothesis was examined by running a Pearson Correlation of the number of social work classes reported by participants with ATDP-Form B and IDP scores. Results indicated no statistically significant relationship between these variables. The correlation between the ATDP-Form B and number of social work classes was $r(51) = .049, p = .731$. The correlation with the IDP was $r(51) = .080, p = .575$. Although social work education was identified the most often (67%) by participants as the source of their knowledge about disability issues, it was not significantly related to ATDP-Form B attitude scores ($r(54) = .210, p = .127$) or IDP scores ($r(54) = -.087, p = .534$). This was in contrast to other research which showed that attitude scores improved from pre to post attitude measurements over the duration of coursework and/or field placement experience (Felton, 1975; Mandell & Strain, 1978; Geskie, 1985, all as cited in Morrison, 2005; Sadlick & Penta, 1975). This could suggest the need for social work classes to target disability related issues as an area for more attention, and possibly with a focus on provision of a combination of positive contact opportunities and academic information.

Demographic Variables and Attitudes

Age, ethnicity, religion, and country of origin were demographic variables examined in this study. Gender was removed from analyses as there was only one male participant. A one way ANOVA was run for ethnicity and religion, and a t-test run on country of origin to examine their possible relationship to ATDP-Form B and IDP
scores. Although these variables may have influenced attitude scores, any notable differences were not detected, perhaps because of the small sample size.

Ethnicity (coded into three categories; Caucasian, Black, and Hispanic) did not have a statistically significant relationship with ATDP- Form B total score ($F(2, 53) = 1.93, p = .155$) or IDP total score ($F(2, 53) = 1.65, p = .202$). Participants who identified as Hispanic had the highest levels of discomfort ($M = 63.91$), followed by Caucasian ($M = 58.68$), and Black ($M = 52.75$). Among three categories of religion (Christian, Other, and None) no statistically significant difference was found between ATDP- Form B total score ($F(2, 52) = 1.23, p = .884$) or their IDP total score, $F(2, 52) = 1.33, p = .273$. Participants who identified as Christian (47) had highest levels of discomfort ($M = 59.89, SD = 13.78$) when compared to those who answered other (3) with a mean score of 49.00 (SD = 11.71), and those who reported that they had no religion (5) with a mean score of 53.60 (SD = 12.00). U.S. born participants (51) had higher levels of discomfort ($M = 59.18, SD = 13.01$) when compared to other (4) with a mean score of 50.25 (SD = 16.38). However, a t-test run on country of origin with ATDP- Form B total score ($t(53) = 1.17, p < .248$) and IDP total score ($t(53) = -1.30, p < .199$) revealed no statistically significant relationship with participants’ attitude scores.

There was also no statistically significant correlation between age and ATDP-Form B scores ($r(55) = .181, p = .185$), but IDP attitude scores revealed a moderate statistically significant relationship ($r(55) = -.454, p < .01$). This indicates that as age of participants’ went up, discomfort with individuals who have physical disabilities went down. Age also had a statistically significant moderate positive relationship with mean
frequency of contact score \( r(50) = .426, p < .01 \) and self-perceived knowledge \( r(55) = .458, p < .01 \).

**Linear Regression Models**

Based on all of these analyses, the variables that had a statistically significant relationship with ATDP- Form B and/or IDP scores were selected for entry into four different Linear Regression models. In addition, the ATDP and IDP were entered into the models not only as dependent variables in order to further examine their relationship with one another. Attitude scores included in these models were based on IDP and ATDP-Form B total scores. Quality of contact is the mean score of ratings assigned by participants for each contact reported with an individual who has a disability combined. Frequency of contact is the mean score of the number of times participants reported for each contact with an individual who has a disability combined. The first model examines the impact of mean frequency of contact and mean quality of contact on ATDP- Form B total score. The second model used IDP total score as the dependent variable, with self-perceived level of knowledge, frequency of contact, and quality of contact entered into the regression analysis. The third model used ATDP- Form B, self-perceived level of knowledge, frequency of contact, and quality of contact entered with IDP total score as the dependent variable. This model explained more of the variance in total attitude scores than the other models. The fourth model was run with the same variables as the latter model, except with ATDP-Form B total score as the dependent variable.
Model 1: 

*Frequency of Contact and Quality of Contact, Dependent Variable- ATDP- Form B Total Score*

Regression analysis of this model resulted in an adjusted multiple regression coefficient of determination ($R^2$) of .13. This indicates that 13% of the variability in the total ATDP- Form B attitude scores can be explained by the variables included in this model ($F = 4.65, p < .01$). Collinearity diagnostics were utilized and it was determined that collinearity is not a problem in this model as the tolerance values was .99 for both quality and frequency of contact. The Durbin-Watson index score was 1.91, indicating that the residuals are not correlated, and within an acceptable range. See Figure 1 for the normal P-P Plot regression standardized residuals with expected and observed values predicted values with ATDP- Form B Total Score as the dependent variable, and Figure 2 for a histogram of standardized residuals for this regression model. The plot illustrates that most of the residuals follow the line very closely, indicating a moderate to strong degree of normality. See Table 5 for findings from this regression model.

Frequency of contact was not found to have a statistically significant impact on ATDP- Form B total score. The unstandardized regression coefficient was 1.06, indicating that on average, as the mean frequency of contact increased by 1 point, participants scored 1.06 points higher on the ATDP- Form B. The standardized coefficient resulting from this regression analysis was .05 ($t = .348, p = .729$) revealing a statistically non-significant relationship between this variable and ATDP- Form B total score.
The unstandardized coefficient resulting from regressing ATDP- Form B total attitude score was 13.30. On average, those who reported 1 point higher average quality contact with individuals who have physical disabilities scored 13.30 points higher on the ATDP- Form B scale assessing the level of perceived similarity between individuals with and without a physical disability. This revealed a statistically significant, moderate positive relationship of .33 \((t = 2.47, p < .05)\). The 95% confidence interval of the coefficient is [2.47, 24.14], identifying the range of values within which we are 95% sure the population coefficient is contained.

Model 2:

*Age, Self-Perceived Knowledge, Frequency of Contact and Quality of Contact, Dependent Variable- IDP Total Attitude Score*

The adjusted multiple regression coefficient (R2) of .35 indicates that 35% of the variability in the total IDP attitude scores could be explained by age, self-perceived knowledge, frequency of contact and quality of contact scores. The data fit the model very well \((F = 7.51, p < .01)\). Collinearity diagnostics showed that the tolerance values were .64, .67, .93, and .75 for age, self-perceived knowledge, quality of contact, and frequency of contact respectively. A value close to one indicates that the independent variable has little variability explained by the other covariates, so collinearity is not a concern in this model. The Durbin-Watson index score was 2.21, indicating that the residuals were not correlated, and within an acceptable range. See Figure 3 for the normal P-P Plot regression standardized residuals with expected and observed values predicted values with the IDP as the dependent variable and Figure 5 for a histogram of the standardized residuals for this model. The plot indicates that most of the residuals follow
the line closely, indicating a moderate degree of normality. See Table 6 for findings from this regression model.

Age did not seem to impact IDP total scores when controlling for other variables. The unstandardized coefficient was -.31. The standardized coefficient resulting from this regression analysis was -.22 (t = -1.51, p = .729) revealing a statistically weak, non-significant relationship between this variable and IDP total scores. The 95% confidence interval of the coefficient is [-.72, .10]. This suggests that age may be more related to frequency of contact and self-perceived levels of knowledge than with discomfort, given the statistically significant relationship with frequency and knowledge discussed in the previous section.

The unstandardized coefficient resulting from regressing IDP total attitude score and self-perceived level of knowledge about the experience of individuals with physical disabilities was -2.00. This indicates that as self-perceived level of knowledge increased by 1 point, IDP total score decreased by 2.00 points, on average. However, the standardized coefficient resulting from this regression analysis showed that the relationship between this variable and IDP scores was not statistically significant within this model β = -.16 (t = -1.12, p = .27). The 95% confidence interval of the coefficient was [-9.4, -.86].

Frequency of contact was the only variable that showed a statistically significant relationship with IDP total scores in this linear regression. The unstandardized regression coefficient of mean frequency of contact and IDP total score was -5.13, indicating that as frequency increased by 1 point, the level of discomfort as measured by the IDP decreased by 5.13 points. The standardized coefficient resulting from this regression
analysis was -.33 \( (t = -.24, p < .05) \), suggesting a moderately strong relationship between these variables when controlling for others in the model. The 95% confidence interval of the coefficient is [-9.40, -.86], indicating the range of values within which it is 95% certain the population coefficient is contained.

The unstandardized regression coefficient of quality of contact and IDP scores was -5.84, indicating that, on average, as the mean score of quality of contact increased by 1 point (becoming more positive), participants scored 5.84 points lower on the IDP scale. However, the standardized coefficient value showed that the relationship between these variables within this model was not significant \( (\beta = -.21, t = -1.76, p = .09) \). The 95% confidence interval of the coefficient is [12.55, .86].

Model 3:

*Age, Self-Perceived Knowledge, Frequency of Contact, Quality of Contact, and ATDP-Form B, Dependent Variable- IDP Total Score*

In this regression model, ATDP- Form B total score was entered because of its statistically significant relationship with IDP total score. Although the literature reviewed in this study did not identify any other studies that used ATDP attitude scores in this way, it seemed to make sense to include it to see what it’s impact would be, along with the other variables in this model. The adjusted multiple regression coefficient (R2) of .43 indicates that 43% of the variability in the total IDP attitude scores could be explained by age, self-perceived knowledge, frequency of contact and quality of contact scores with the addition of ATDP- Form B total scores, compared to 35% without this addition. The data fit the model very well \( (F = 8.38, p < .01) \). Collinearity diagnostics showed that the tolerance values were .64, .66, .72,.78, and .79 for age, self-perceived knowledge,
frequency of contact, quality of contact, and ATDP-Form B total scores respectively, so collinearity was not a concern in this model. The Durbin-Watson index score was 2.42, indicating that the residuals were not correlated, and within an acceptable range. See Figure 5 for the normal P-P Plot regression standardized residuals with expected and observed values predicted values with the IDP as the dependent variable, and Figure 6 for a histogram of the standardized residuals for this model. The plot indicates that most of the residuals follow the line closely, indicating a moderate to strong degree of normality.

The unstandardized coefficient resulting from regressing IDP total attitude score and ATDP-Form B Total Score was -.23. This means that for every 1 point increase in the total ATDP-Form B total score, there was a .23 decrease in IDP total score. The standardized coefficient indicated that ATDP-Form B total score had a statistically significant impact on IDP total score in this model ($\beta = -.33$, $t = -2.73$, $p < .01$). This suggests a moderate negative relationship between ATDP total score and IDP total score. The 95% confidence interval of the coefficient was [-.39, -.06].

Regressing IDP total attitude score and age resulted in $b = -.28$. The standardized coefficient revealed that age did not have an impact on IDP total score when controlling for relevant covariates $\beta = -.20$ ($t = -1.49$, $p = .14$). The 95% confidence interval of the coefficient was [-.67, .10].

Self-perceived level of knowledge about the experience of individuals with physical disabilities also did not have a significant impact on the level of discomfort reported by participants when other variables in the model were entered in. On average, for every 1 point higher the self-perceived knowledge score was, the level of discomfort
total score was 2.55 points lower. The standardized coefficient was $\beta = -.20 \ (t = -1.52, p = .137)$. The 95% confidence interval of the coefficient was [-5.94, .84].

The unstandardized coefficient resulting from this regression analysis of frequency of contact was -4.13, indicating that on average, participants who had more mean frequent contact with individuals who have a physical disability scored 4.13 points lower on the IDP. This seems to reflect that the more frequent the contact was, the less discomfort participants reported, even when controlling for the possible influence of the other variables. The standardized coefficient resulting from this analysis shows that the relationship between this variable and IDP total score is statistically significant $\beta = -.26 \ (t = -2.05, p < .05)$. The 95% confidence interval of the coefficient was [-8.18, -.07].

The unstandardized coefficient resulting from this regression analysis of quality of contact was -5.84, indicating that on average, for every 1 point increase in mean quality of contact, the IDP total score was 4.13 points lower. The standardized coefficient resulting from this analysis showed that the relationship between this variable and IDP total score was not statistically significant $\beta = -.21 \ (t = -1.76, p = .09)$. This is in contrast to the previous statistically significant correlation found between these variables, so the impact of the quality of contact became non significant when the other variables were factored in. It is also in contrast to results from the next model which used the ATDP-Form B as the dependent variable.

Model 4:

Age, Self-Perceived Knowledge, Frequency of Contact, Quality of Contact, and IDP Total Score, Dependent Variable- ATDP- Form B
Running the regression this way explained 25% of the variance in attitude scores ($F = 4.14, p < .01$) with the mean quality of contact ($\beta = .31, t = 2.34, p < .05$) and IDP Total Score ($\beta = .44, t = .269, p < .01$) having a statistically significant relationship with the ATDP-Form B total score. This model does not explain as much of the variance as the second and third models.

Collinearity did not appear to be a problem, with a Durbin Watson score of 2.05, tolerance values ranging from .59 to .87, VIF values from 1.15 to 1.68. See Figure 7 for the normal P-P Plot regression standardized residuals with expected and observed values predicted values with the IDP as the dependent variable, and Figure 8 for a histogram of the standardized residuals from this linear regression. This plot indicates that most of the residuals follow the line closely, indicating a moderate to strong degree of normality.

The unstandardized coefficient resulting from this regression analysis of mean quality of contact was 12.76, indicating that on average, participants who had more 1 point higher mean quality of contact with individuals who have a physical disability scored 12.76 points higher on the ATDP-Form B. The standardized coefficient of .31 suggests a moderate positive relationship with ATDP-Form B total score. This seems to reflect that the more positive the contact was, the more similar participants perceived individuals with physical disabilities to be with individuals without physical disabilities.

The unstandardized coefficient resulting from this regression with IDP total score entered in was -.65, indicating that on average, participants who scored 1 point higher on the IDP, scored 4.13 points lower on the ATDP-Form B. The standardized coefficient resulting from this analysis shows that the relationship between this variable and IDP total score is moderately strong and statistically significant $\beta = -.44$ ($t = -2.73, p < .01$). If
these instruments accurately measured what they have purported to measure, these results seems to reflect that the more discomfort participants reported about interactions with individuals who have physical disabilities, the less accepting of their own disabilities they viewed individuals with physical disabilities to be, and/or the less similar to individuals without disabilities they believe them to be.

However, when the linear regression was run in the third model with IDP total score as the dependent variable, the model explained 18% more variance than when the ATDP- Form B was the dependent variable, even when the rest of the model was entered the same. Thus, a better explanation of how these attitude scores relate to one another may be that perhaps the extent to which participants perceived individuals with physical disabilities as comfortable with their own disability and similar to individuals without physical disabilities influenced participants’ level of discomfort in interactions with individuals who have disabilities, as measured in this study.

This is consistent with social identity theory developed by Tajfel and Turner (1979) who proposed that negative attitudes can develop when we categorize people as similar enough to be a member of our own “in-group,” or as different from ourselves and assign negative stereotypes to that group. Their theory attempted to explain ethnic/religious and other kinds of prejudice, but may contribute to an understanding of the results from this regression model which seems to suggest that the level of similarity perceived by participants between individuals with physical disabilities and individuals without disabilities had more of an influence on comfort in interactions than vice versa.

Comparison of these models also suggests that the level of discomfort as measured by the IDP was more impacted by frequency of contact and self-perceived
knowledge than participants’ view of similarity and beliefs about how individuals with physical disabilities should be treated as purportedly measured by the ATDP- Form B. See Tables 7 and 8 for additional findings from these regression models.

In summary, quality of contact and frequency of contact influenced attitude scores more than any other variables. This is perhaps because the more often and positive contact is experienced with an individual with a physical disability, the more similarly these participants viewed individuals with physical disabilities, and the more comfortable they felt in their interactions with these individuals. It is also possible that the more comfortable they thought individuals with physical disabilities were with themselves, the more comfortable they felt interacting with them.

Strengths/Limitations

There were many strengths of this study. One is that it highlights that individuals with physical disabilities are a population deserving of attention in discussions of cultural competence. The oldest and still prevalent medical model describes disability as an individual defect that makes a person different from others, and as a flaw to be eliminated. It is contrary to the concept of disability as a potential source of cultural identity and pride. By utilizing the ATDP- Form B, an instrument measuring the extent to which undergraduate social work students perceive individuals with physical disabilities to be comfortable with their disability and similar to individuals without physical disabilities, this study enabled exploration of disability as a component of identity and a factor impacting how potential social workers believe society should respond to these individuals as a group.
It was also exploratory in nature, so it enabled consideration of a wide variety of factors possibly influencing attitudes toward individuals with physical disabilities. The socio-demographic, knowledge and contact factors that were analyzed were those thought to be associated with attitudes in prior research. Here they were all explored in one study and in more depth with different facets of knowledge and contact included, like: self-perceived knowledge, sources of knowledge, number of classes, field placement status, as well as quality, frequency, and proximity of contact.

Much of the research found in the literature was more than 10 years old, so one of the benefits of this study is that it yielded up-to-date quantitative information about attitudes of undergraduate social work student attitudes toward individuals with disabilities. The primary aim was to contribute knowledge about the attitudes of these “soon to be” social work professionals to the field of social work education and other helping professions. Because attitudes toward individuals with disabilities are different across disability type, and consciously held attitudes may be different from unconscious, instinctual reactions to groups of individuals, a study factoring in these variables, as well as ones addressed here would most likely be best. However, this kind of study may not be as feasible. Thus explicit attitudes toward individuals with physical disabilities were the focus of this study, but perhaps it will prompt studies about attitudes toward individuals with other kinds of disabilities, analysis of explicit and implicit attitudes in combination, or other related studies in the future, as discussed in the next section.

A limitation of disability attitude research is that there are many instruments that propose to measure attitudes, but they are based on different definitions of “attitude” and “disability” and beliefs about how to best measure these concepts. The attitude
instruments utilized in this study have been widely respected, tested, and used in similar studies, both together and independently. They seem to complement one another in terms of the kind of attitude information they offer and look at attitudes from different perspectives. The results from this study seemed to support perhaps even analyzing the data from these surveys together in a way not previously found by this author in the literature. In addition, using these instruments seems to offer some information about possible future behavior, as they measure participants’ reported beliefs about what behavior toward individuals with physical disabilities should be, and how comfortable they are in interactions with these individuals. However, these surveys do not have a total score value representing a differentiation between positive attitudes and negative attitudes. So the total ATDP- Form B and IDP scores can only be described in comparison to other groups or be used to detect within group or with pre-post measurement differences.

A strength of these surveys is that they have been reported to have only minimal social desirability response bias. In any attitude study, this bias can significantly confound results. So in an additional effort to minimize the possibility of participants answering in a way they think would be socially desirable, potential participants were not provided with any incentives to participate, and their anonymity was ensured. However, this project did not measure the level of social desirability response bias, so it is not possible to speculate about the extent to which these efforts were successful.

The results could have been impacted by the latter, and by the relatively small sample size. The sample was expected to be much larger, but participation rates were poor, possibly because the surveys were administered at a busy time mid semester and
potential participants were given the option to take the surveys home to complete. Perhaps those with more favorable attitudes were the students more likely to take the time to volunteer to complete the surveys and return them to their instructor. And although there was ethnic and age diversity within the sample, the participants were from three different universities, and it was a purposive sample, external validity was limited by the fact that the sample was predominantly white, included only one male student, and no one identified as having a disability. The sample was not stratified to ensure accurate representation of social work students across the country. In addition, the type of social work course and content of the courses these student participants were taking was not examined, so the consistency of educational course work may have been limited, even though all the universities were accredited by the Council on Social Work Education.

Another limitation was the use of a data form that has never been empirically tested before and was never pilot tested because of time constraints. Items on the form were based on socio-demographic items used in prior attitude research looking at similar factors, but the instrument as a whole has not been standardized. In particular, items asking about sources of disability knowledge and type of field placement were difficult to use in analyses because they were not items that could be scaled or ranked. This author did not find any standardized instrument that would effectively capture all of the essential data for this study. In order to account for the possibility that participants may have a physical disability that could differentially influence the results in this study, one item on the data form was included that asked respondents to rate their level of knowledge about individuals with physical disabilities, then to identify where they gained this knowledge from, if any. One of the possible responses was: "Personal Knowledge: Self or Other."
The data indicated that none of the respondents identified having personal, “self” knowledge of issues affecting individuals with a physical disability, but the item may have been confusing and may still have influenced the results.

Even given these limitations, it is the hope of this author that it will prompt more research into the attitudes of social work students toward individuals with disabilities. It is an area of study essential for social work education and the social work profession.

Future Research Directions

The findings from this study did highlight a number of areas for future research. One is that an analysis of the coursework/curriculum participants were receiving could have contributed to a better understanding of why the number of classes taken by participants did not influence their self-perceived level of knowledge or significantly impact attitudes toward individuals with physical disabilities, as measured by the regression models in this study. Perhaps a study describing the kind of social work curricula being used in schools of social work to address issues pertaining to individuals with physical disabilities with a quantitative component comparing subsequent attitude scores would be helpful. In particular, it could address what kind of information about disabilities is being provided in schools of social work, including: theoretical perspectives about how to define “disability,” disability as viewed from a medical model, cultural, and/or strengths based perspective, and whether differences between individuals with physical disabilities vs. differences between disabled and non-disabled groupings are highlighted.

In addition, the format in which disability information is presented, i.e. classroom presentation, exposure to an individual with a disability as a guest presenter, experience
in field placement with this population, and/or simulated disability exercises could be analyzed in relationship to subsequent attitude scores. In terms of changing attitudes, this study seems to suggest also that having contact with individuals who have disabilities has the most impact on attitudes, so a study looking at attitudes before and after contact would yield helpful information about how this could be incorporated into curriculum effectively promoting more positive attitudes. A pre-post study examining the impact of various forms of information delivery and their differential impact on attitude scores would also be especially helpful in distinguishing what kind of curricula would be most effective in changing attitudes.

As discussed earlier, a study of the attitudes including both graduate and undergraduate social work students across the country would enhance the external validity of findings and enable closer examination of the impact of demographic variables on attitudes. A comparison of graduate level students vs. undergraduate students would also provide more in depth information about the possible impact of age, field experience and amount coursework on attitudes. It could also be used to compare these attitude scores to students from other helping professions.

In addition, research analyzing possible subscales within these and other attitude instruments would possibly highlight factors related to attitudes toward individuals with physical disabilities that were not addressed in this study. It could also offer data about the extent to which survey items thought to measure different aspects of attitudes are significantly correlated and offer an accurate reflection of the assumptions underlying these instruments. For example, Gething and Wheeler (1992) suggested that their attitude survey consists of 4 groups of factors, including discomfort in social interactions, coping,
perceived level of information, vulnerability. No subscales were found in the literature related to the ATDP- Form B, but analyses of ATDP instrument items in further detail may reveal items that load well together in exploration of attitudes toward this population.

Another area for future research would be to explore what influences participation or non participation in attitude surveys, and how can this impact study results. This could help researchers design study protocol that would encourage higher response rates and contribute to the diversity of the sample and data gathered.

Research to develop a new disability attitude instrument that establishes a total score value indicating an generally positive vs. generally negative attitude would be helpful for measuring a sample’s overall attitude toward individuals with disabilities. This would offer useful data where attitudes could be described without having to be compared to other groups or the general population, or confined to pre-post designs. Also, the development of a standardized survey that could examine the education, knowledge, contact, and demographic variables included in the data form here would lend itself better to rigorous analysis.

Finally, a very important area of research that could be done related to this would be to administer these attitude surveys to a group of individuals with physical disabilities to examine their own perceptions of disability, how they should be treated, and comfort level in their own interactions with other individuals who have physical disabilities. This would capture data about possible internalized stereotypes, the extent to which the participants associate their disability with group identity, and the extent to which they feel “different” from others.
Implications for Social Work Practice

Although cultural diversity in social work has primarily been discussed in the context of race and ethnicity, the NASW (2007) asserted that diversity is taking on a broader meaning and is now more inclusive of the sociocultural experiences of people of different social classes, religious and spiritual beliefs, sexual orientations, ages, and physical and mental abilities. Given this, efforts toward establishing cultural competence in social work practice with individuals with disabilities are valuable and needed to develop professional expectations and quality care for this population.

Overall, the purpose of this kind of attitude research among the helping professions is to obtain data about the potential behavior of individuals entering the field or in the field so we have the information needed to promote quality care to clients, reduce disenfranchisement of vulnerable populations, and contribute to the well-being of all individuals and families at the societal level.

The attitudes of participants in this study toward individuals with physical disabilities were consistent with those of the general population. These participants are potential future social workers who will be dedicating their careers to helping those in need, and those marginalized by society, including individuals with physical disabilities. It is essential for these future helping professionals to have specialized knowledge of populations such as this in order to provide exceptional, culturally competent services that enable them to overcome the many obstacles facing them in general society.

Based on the results from this study, if social work students are not given opportunities to have positive interactions with individuals who have disabilities, their ability to learn more about this population may be limited, and they may experience more
discomfort interacting with this population. The NASW (1996) has identified individuals with disabilities as a group that should be addressed in discussions of cultural competence. Participants in this study demonstrated a motivation to help individuals with physical disabilities, but on average reported that they only had “a bit” of knowledge about the life conditions of individuals with physical disabilities. Cultural awareness and competence requires more than motivation and good intentions. ACA standards addressing cultural competence assert that culturally skilled counselors are aware of their preconceived notions toward minority groups, knowledgeable about the experience of minority groups they are serving, and understand the impact clients’ experience with stereotyping can have on the counseling process (Arredondo et al., 1996). Without measuring social workers’ level of knowledge and attitudes, we may assume social workers’ motivation to be in a helping profession means they have favorable perceptions of minorities and the information needed to serve minority populations, but this may not be accurate.

This study also raised a question about whether social work education should focus on what makes individuals with physical disabilities different from other groups, or what makes them similar to other groups. From an emic perspective, what makes groups and individuals within groups different is emphasized. From an etic perspective, what makes groups and individuals similar to one another is emphasized. The results here suggested that higher levels of perceived similarities with individuals who have physical disabilities are significantly related to increased comfort in interactions with this population. DeLoach and Greer’s (1981) research found that if helping professionals focus on the person’s disability, they may over-emphasize the impact of disability on
his/her functioning versus other characteristics or life circumstances, and pathologize behaviors considered normal in nondisabled persons.

It is also important to study attitudes toward this population, because societal attitudes influence the help-seeking behaviors of people with disabilities, and their ability to mainstream into society (Arokiasamy, Rubin, & Roessler, 2001; Brodwin & Orange, 2002; Chan, Hedl, Parker, Lam, & Yu, 1988; Wang, Thomas, Wong, Chan, Lee, & Lui, 2002; Leung, 1990, 1993; Cook, 1998; DeLoach, 1994; Moore & Feist-Price, 1999; Yuker, 1994, 1995; all as cited in Chen, Brodwin, Cardoso, Chan, 2002). Beail (1983) found that even when participants with disabilities rejected stereotypes perceived to be held by society, they were inhibited by these stereotypes.

According to social identity theory (Tajfel & Turner, 1979), one way to encourage positive treatment toward a group is to highlight what makes the individuals in those groups similar to one another, i.e. a shared set of values, customs, language, and experience. This is particularly difficult when someone is visibly “outside of the norm” and may arouse uncomfortable feelings. However, we do not want to lose sight of the importance of cultural history, unique set of strengths and challenges, and other characteristics that make groups distinct in valuable ways. This is true for individuals with disabilities, as well as individuals from different racial, ethnic, religious, age, gender. It seems that one challenge facing schools of social work then is to ensure that coursework balances these two perspectives in an effort to promote positive attitudes and prepare social workers to help clients achieve their goals.
Conclusion

The NASW (2007) identified that a few key indicators of cultural competence are valuing and celebrating differences, demonstrating comfort with differences between oneself and others, and awareness of one’s own cultural values and biases. These characteristics were noted as factors that help guard against stereotyping and help enable social workers to advocate for equitable treatment and justice for clients. Another indicator of achievement of cultural competence in social work practice according to the NASW (2007) is a “heightened consciousness of how clients experience their uniqueness and deal with their differences and similarities within a larger social context” (p. 9). This study attempted to contribute data related to these cultural competence indicators by exploring the perceptions of a small group of undergraduate level social work students in Central Florida toward individuals with physical disabilities, their level of comfort interacting with this population, and their self-perceived level of knowledge about issues affecting individuals with a physical disability.

The hypotheses of this study were that participants who had more prior positive contact with persons with physical disabilities; higher self-perceived levels of knowledge about issues affecting persons with physical disabilities; and more social work classes would report more positive attitudes than other participants as measured by two different attitude instruments. Each of the instruments have been thought to measure the abc’s of attitudes, i.e. the affect, potential behavior, and cognitions respondents have related to individuals with physical disabilities. Together they were used to attempt to measure the extent to which respondents view individuals with physical disabilities as similar to nondisabled individuals, the extent to which they believe individuals with disabilities feel
comfortable with their own disability, how these individuals should be treated, how they behave in interactions with this population, and how they comfortable they feel in these interactions.

The results indicated that the more differently respondents perceived individuals with physical disabilities to be, the less comfortable they were interacting with this population. This seems to support the need for social work education to promote the value of cultural and individual differences and discussion about how to address discomfort in interactions with individuals perceived as “different.” However, even promoting a “sweeping” positive view of a group can possibly do harm. Researchers have suggested that even positive stereotypes may set a group apart in a way that prompts the perception of the group as different, and a target for negative attitudes (Fichten and Amsel, 1986; Tajfel and Turner, 1979). Garland-Thompson (2001) argued that when individuals with physical disabilities are portrayed as inspirational, lofty examples of the human spirit, it promotes stereotyping and suggests that their life has been tragic. She suggested that a more healthy, realistic view of disability is as a common, yet influential human experience, one that can be challenging, strengthening, and integrated into a full life.

Perhaps gaining in-person experience with individuals who at first appear to be different can provide individuals without disabilities the opportunity to learn more about characteristics and values they share, and to be possibly be pleasantly surprised finding that many of these individuals possess self-acceptance and pride. Results here supported the idea that when individuals with disabilities are perceived as similar and self-accepting, comfort with this population is enhanced. In addition, the more frequent and
positive the contact, the more positive the attitudes were as measured in this study. Thus having frequent, positive contact with individuals with physical disabilities may be key factors to be integrated into social work curriculum aimed at sending forth culturally competent social work practitioners.

This is consistent with prior research by Yuker (1988), arguably one of the most influential leaders in the field of disability attitude research. He found that individuals with disabilities felt that “strangers regarded them as being much more unfortunate than friends did (p. 11).” In fact, Hahn (2001) found that individuals with disabilities indicated that they would not choose to be “cured” of their disability even if this were possible.

As noted earlier in this chapter, it has been suggested that this kind of knowledge about how clients experience their “uniqueness” and deal with their differences and similarities in society is a key to cultural competence (NASW, 2007). Results from this study showed that most respondents reported having only “a bit of knowledge” about issues affecting individuals with physical disabilities and did not feel knowledgeable even given that 43% were in their last semester of their coursework. The attitudes of this sample were consistent with the general population, with a motivation to help this population and a belief that they should be treated similarly to individuals without disabilities. However, they were not higher than the general population. This demonstrates the needs identified in the NASW (2007) cultural competency guidelines for social workers to promote professional education that advances cultural competency within the profession, conduct research that can inform and guide practice, and evaluate the effectiveness of our work with culturally diverse client groups.
Social workers should also advocate for programs and institutions that demonstrate cultural competence, promote policies and practices that demonstrate respect for difference, and safeguard the rights of and confirm equity and social justice for all people. If negative attitudes are related to perceived differences, lack of self acceptance, and discomfort resulting from the latter factors or perceived lack of knowledge, as seems to have been found in this study, this knowledge could be used toward the betterment of other minority groups. It could be utilized to ensure the cultural competence of future social work professionals, promote positive attitudes toward individuals with disabilities and to eliminate other social ills such as racial, ethnic, gender, age, sexual identity, and religious intolerance.
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APPENDICES
## Appendix A: Tables and Figures

Table 1. Demographics by University

<table>
<thead>
<tr>
<th>Univ</th>
<th>Mean Age</th>
<th>Race N = 56</th>
<th>Religious N = 55</th>
<th>Country of Origin N = 55</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Caucasian</td>
<td>Black</td>
<td>Hispanic</td>
<td>Christian</td>
</tr>
<tr>
<td>SEU</td>
<td>20.40</td>
<td>12</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>ST LEO</td>
<td>27.67</td>
<td>10</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>UCF</td>
<td>27.25</td>
<td>15</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>66%</td>
<td>14%</td>
<td>20%</td>
<td>85%</td>
</tr>
</tbody>
</table>
### Table 2. ATDP and IDP Scores

<table>
<thead>
<tr>
<th>University</th>
<th>ATDP Total</th>
<th>IDP Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UCF</strong></td>
<td>129.92</td>
<td>56.75</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>18.603</td>
<td>12.598</td>
</tr>
<tr>
<td><strong>ST LEO</strong></td>
<td>120.58</td>
<td>53.67</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>18.525</td>
<td>10.039</td>
</tr>
<tr>
<td><strong>SEU</strong></td>
<td>113.70</td>
<td>64.50</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>21.241</td>
<td>14.638</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>122.13</td>
<td>58.86</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>56</td>
<td>56</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>20.544</td>
<td>13.414</td>
</tr>
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</table>
### Table 3. Correlation between Attitude Scores and Contact Variables

<table>
<thead>
<tr>
<th></th>
<th>ATDP Total</th>
<th>IDP Total</th>
<th>Frequency of Contact</th>
<th>Quality of Contact</th>
<th>Proximity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ATDP Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-0.433**</td>
<td>1</td>
<td>-0.500**</td>
<td>-0.321*</td>
<td>-0.093</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.020</td>
<td>0.494</td>
</tr>
<tr>
<td>N</td>
<td>56</td>
<td>56</td>
<td>50</td>
<td>52</td>
<td>56</td>
</tr>
<tr>
<td><strong>IDP Total</strong></td>
<td>-0.433**</td>
<td>1</td>
<td>-0.500**</td>
<td>-0.321*</td>
<td>-0.093</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.020</td>
<td>0.494</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>56</td>
<td>56</td>
<td>50</td>
<td>52</td>
<td>56</td>
</tr>
<tr>
<td><strong>Frequency of Contact</strong></td>
<td>0.143</td>
<td>-0.500**</td>
<td>1</td>
<td>0.088</td>
<td>0.288*</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>0.321</td>
<td>0.00</td>
<td>0.545</td>
<td>0.043</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td><strong>Quality of Contact</strong></td>
<td>0.393**</td>
<td>-0.321*</td>
<td>0.088</td>
<td>1</td>
<td>-0.038</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>0.004</td>
<td>0.020</td>
<td>0.545</td>
<td>0.789</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>52</td>
<td>52</td>
<td>50</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td><strong>Proximity of Relationship</strong></td>
<td>-0.083</td>
<td>-0.093</td>
<td>0.288*</td>
<td>-0.038</td>
<td>1</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>0.542</td>
<td>0.494</td>
<td>0.043</td>
<td>0.789</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>56</td>
<td>56</td>
<td>50</td>
<td>52</td>
<td>56</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).**

*Correlation is significant at the 0.05 level (2-tailed).
Appendix A (Continued)

Table 4. Correlation between Attitude Scores, Courses, and Knowledge

<table>
<thead>
<tr>
<th></th>
<th>ATDP Total</th>
<th>IDP Total</th>
<th># Courses</th>
<th>Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ATDP Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>-.433**</td>
<td>-.049</td>
<td>.103</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.001</td>
<td>.731</td>
<td>.450</td>
</tr>
<tr>
<td>N</td>
<td>56</td>
<td>56</td>
<td>51</td>
<td>56</td>
</tr>
<tr>
<td><strong>IDP Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-.433**</td>
<td>1</td>
<td>.080</td>
<td>-.437**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.001</td>
<td>.575</td>
<td>.001</td>
</tr>
<tr>
<td>N</td>
<td>56</td>
<td>56</td>
<td>51</td>
<td>56</td>
</tr>
<tr>
<td><strong># Courses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-.049</td>
<td>.080</td>
<td>1</td>
<td>-.007</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.731</td>
<td>.575</td>
<td>.959</td>
</tr>
<tr>
<td>N</td>
<td>51</td>
<td>51</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.103</td>
<td>-.437**</td>
<td>-.007</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.450</td>
<td>.001</td>
<td>.959</td>
</tr>
<tr>
<td>N</td>
<td>56</td>
<td>56</td>
<td>51</td>
<td>56</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).
Appendix A (Continued)

Table 5. Summary of Regression Model 1
Frequency of contact and quality of contact with an individual who has a physical disability with ATDP- Form B total attitude score as the dependent variable.

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Std. Coefficient</th>
<th>t-statistic</th>
<th>Lower 95% CL</th>
<th>Upper 95% CL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>76.48</td>
<td>15.56</td>
<td>4.92</td>
<td>45.12</td>
<td>107.77</td>
</tr>
<tr>
<td>Frequency of Contact</td>
<td>2.46</td>
<td>3.01</td>
<td>.110</td>
<td>-.82</td>
<td>-.358</td>
</tr>
<tr>
<td>Quality of Contact</td>
<td>15.35</td>
<td>5.38</td>
<td>.382</td>
<td>2.85**</td>
<td>4.52</td>
</tr>
</tbody>
</table>

Adjusted $R^2$ .130

$F$-statistic (df) 4.65** (2)

Notes: N = 50.
*p < .05, **p < 0.01, one-tailed test.
Figure 1. Regression Model 1 P-P Plot of Regression Standardized Residual Frequency of Contact and Quality of Contact Dependent Variable ATDP- Form B Total
Appendix A (Continued)

Histogram

Dependent Variable: ATDP TOTAL

Mean = 1.04E-16
Std. Dev = 0.979
N = 50

Figure 2. Regression Model 1 Distribution of Standardized Residuals
Appendix A (Continued)

Table 6. Summary of Regression Model 2
Age, self-perceived knowledge, frequency of contact and quality of contact with an individual who has a physical disability with IDP total score as the dependent variable.

<table>
<thead>
<tr>
<th></th>
<th>Coefficient $B$</th>
<th>Std. Error</th>
<th>Std. Coefficient $\beta$</th>
<th>$t$-statistic</th>
<th>Lower 95% CL</th>
<th>Upper 95% CL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
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<td>10.10</td>
<td>10.30</td>
<td>83.72</td>
<td>124.44</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.31</td>
<td>.20</td>
<td>-.22</td>
<td>-1.51</td>
<td>-.72</td>
<td>.10</td>
</tr>
<tr>
<td>Self-Perceived</td>
<td>-2.00</td>
<td>1.79</td>
<td>-.16</td>
<td>-1.12</td>
<td>-5.94</td>
<td>.84</td>
</tr>
<tr>
<td>Frequency of Contact</td>
<td>-5.13</td>
<td>2.12</td>
<td>-.32</td>
<td>-2.42*</td>
<td>-9.40</td>
<td>-.86</td>
</tr>
<tr>
<td>Quality of Contact</td>
<td>-5.84</td>
<td>3.33</td>
<td>-.21</td>
<td>-1.76</td>
<td>-12.55</td>
<td>.86</td>
</tr>
</tbody>
</table>

Adjusted $R^2$ .352

$F$-statistic ($df$) 7.51** (4)

Notes: $N = 49$.

*p < .05, **p < 0.01, one-tailed test.
Figure 3. Regression Model 2 P-P Plot of Regression Standardized Residual Age, Self-Perceived Knowledge, Frequency of Contact, Quality of Contact Dependent Variable- IDP Total
Appendix A (Continued)

Histogram

Dependent Variable: IDP TOTAL

Figure 4. Regression Model 2 Distribution of Standardized Residuals

Mean = 1.46E-15
Std. Dev. = 0.957
N = 49
Appendix A (Continued)

Table 7. Summary of Regression Model 3
Age, self-perceived knowledge, frequency of contact and quality of contact with an individual who has a physical disability, and ATDP- Form B total attitude score, with IDP total score as the dependent variable.

<table>
<thead>
<tr>
<th></th>
<th>Coefficient ( B )</th>
<th>Std. Error</th>
<th>Std. Coefficient ( \beta )</th>
<th>( t )-statistic</th>
<th>Lower 95% CL</th>
<th>Upper 95% CL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>120.92</td>
<td>11.27</td>
<td>10.73</td>
<td>98.19</td>
<td>143.65</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.28</td>
<td>.19</td>
<td>-.20</td>
<td>-1.49</td>
<td>-.67</td>
<td>.10</td>
</tr>
<tr>
<td>Self-Perceived Knowledge</td>
<td>-2.55</td>
<td>1.68</td>
<td>-.20</td>
<td>-1.52</td>
<td>-5.94</td>
<td>.84</td>
</tr>
<tr>
<td>Frequency of Contact</td>
<td>-4.13</td>
<td>2.01</td>
<td>-.26</td>
<td>-2.05*</td>
<td>-8.18</td>
<td>-.07</td>
</tr>
<tr>
<td>Quality of Contact</td>
<td>-2.08</td>
<td>3.40</td>
<td>-.075</td>
<td>-.61</td>
<td>-8.93</td>
<td>4.77</td>
</tr>
<tr>
<td>ATDP-Form B Total</td>
<td>-.23</td>
<td>.08</td>
<td>-.33</td>
<td>2.73**</td>
<td>-.39</td>
<td>-.06</td>
</tr>
</tbody>
</table>

Score

Adjusted \( R^2 \) \hspace{1cm} .435
\( F \)-statistic \((df)\) \hspace{1cm} 8.37** (5)

Notes: \( N = 49 \).
\(* p < .05, ** p < .01\), one-tailed test.
Figure 5. Regression Model 3 P-P Plot of Regression Standardized Residual Age, Self-Perceived Knowledge, Frequency of Contact, Quality of Contact, and ATDP Dependent Variable- IDP Total
Figure 6. Regression Model 3 Distribution of Standardized Residuals
## Appendix A (Continued)

Table 8. Summary of Regression Model 4
Age, self-perceived knowledge, frequency of contact, quality of contact with an individual who has a physical disability, and IDP, with ATDP- Form B total score as the dependent variable.

<table>
<thead>
<tr>
<th></th>
<th>Coefficient $B$</th>
<th>Std. Error</th>
<th>Std. Coefficient $\beta$</th>
<th>$t$-statistic</th>
<th>Lower 95% CL</th>
<th>Upper 95% CL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>167.60</td>
<td>24.42</td>
<td>6.86</td>
<td>118.36</td>
<td>216.84</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.09</td>
<td>0.33</td>
<td>-0.04</td>
<td>-0.27</td>
<td>-0.75</td>
<td>0.58</td>
</tr>
<tr>
<td>Self-Perceived</td>
<td>-3.74</td>
<td>2.87</td>
<td>-0.20</td>
<td>-1.30</td>
<td>-9.52</td>
<td>2.05</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency of Contact</td>
<td>1.07</td>
<td>3.57</td>
<td>0.05</td>
<td>0.30</td>
<td>-6.13</td>
<td>8.27</td>
</tr>
<tr>
<td>Quality of Contact</td>
<td>12.76</td>
<td>5.44</td>
<td>0.31</td>
<td>2.34*</td>
<td>1.78</td>
<td>23.75</td>
</tr>
<tr>
<td>ATDP- Form B</td>
<td>-65</td>
<td>0.24</td>
<td>-0.44</td>
<td>-2.73**</td>
<td>-1.13</td>
<td>-0.17</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td></td>
<td></td>
<td></td>
<td>0.246</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$-statistic $(df$)</td>
<td></td>
<td></td>
<td></td>
<td>4.14** (5)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: $N = 49$.

* $p < .05$, ** $p < 0.01$, one-tailed test.
Figure 7. Regression Model 4 P-P Plot of Regression Standardized Residual Age, Self-Perceived Knowledge, Frequency of Contact, Quality of Contact, and IDP Total, Dependent Variable- ATDP
Figure 8. Regression Model 4 Distribution of Standardized Residuals
Appendix B: Survey Instrument

Data Form

If you’re not sure about an item, go ahead and answer it to the best of your ability. If there are items you would rather not answer, just leave those blank, or write a comment about those items at the bottom of the page.

*University: ________________________________

*Age: ___  

*Gender (Check one): Female__  Male__

*Race/Ethnicity (Check one or describe here): ________________________________

Alaskan Native or American Indian (tribal/nation affiliation)__  African American/Black__  
Asian or Pacific Islander__  Hispanic/Latino__  White, not of Hispanic/Latino origin__

* Religious Affiliation (Describe here): ________________________________

*Country of Origin: ________________________________

*How many courses have you taken in your social work major? ______

*If you have already started your social work field placement, what would best describe the primary population and field are you interning with? (Circle as many as apply)

<table>
<thead>
<tr>
<th>Children/Adolescents</th>
<th>Mental Health</th>
<th>Inpatient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Families</td>
<td>Social Skills</td>
<td>Outpatient</td>
</tr>
<tr>
<td>Adults</td>
<td>Parenting Skills</td>
<td>Jail</td>
</tr>
<tr>
<td>Seniors (65 yrs. +)</td>
<td>Domestic Violence</td>
<td>Hospital</td>
</tr>
<tr>
<td>Developmental Disabilities</td>
<td>Sexual Abuse</td>
<td>Community</td>
</tr>
<tr>
<td>Physical/Sensory/Learning Disabilities</td>
<td>Economic Self-Sufficiency</td>
<td>In-home</td>
</tr>
<tr>
<td>Gay/Lesbian/Bisexual/Transgendered</td>
<td>Foster Care</td>
<td>School</td>
</tr>
<tr>
<td>Relative/Non-relative caregivers</td>
<td>Kinship Care</td>
<td>Shelter</td>
</tr>
<tr>
<td>Refugees/Victims of Torture</td>
<td>Alcohol/Substance Abuse</td>
<td>Police Dept.</td>
</tr>
<tr>
<td>Homeless</td>
<td>Victim Advocacy</td>
<td>State Agency</td>
</tr>
<tr>
<td>Sex Offenders</td>
<td>Health- Medical</td>
<td>Group Home</td>
</tr>
</tbody>
</table>

Given the following definitions:

- **Disability**- “a condition that substantially limits physical activities such as climbing stairs, reaching, lifting, carrying or walking (Census Bureau, 2003).”
- **Direct contact**- Interaction in-person with an individual who has a physical disability

1. Please rate your general knowledge of the conditions and life circumstances of individuals with a physical disability (as defined above) by circling the appropriate number.
Appendix B (Continued)

<table>
<thead>
<tr>
<th>No Knowledge</th>
<th>Extensive Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

- If you indicated that you have knowledge in this area, where did you gain this knowledge? *(Circle all that apply)*

  * Social work education
  * Other academic education *(Describe)_____*
  * Media (newspaper, tv, radio) *Research and/or Literature*
  * Personal experience: *(Check all that apply)* Self__ or Other__
  * Volunteer experience *Other ________________________________*

2. Have you ever had direct contact with an individual or individuals with a physical disability?  
   Yes__ No__

If yes to #2, answer Questions #3-6

3. Approximately how many individuals with a physical disability have you had direct contact with? ____

4. How would you characterize your relationship with this individual(s)? *(Circle one for each individual with a disability you have had contact with)*

   a. Spouse  
   b. Child  
   c. Sibling  
   d. Relative *(Describe)__________*  
   e. Stranger  
   f. Client  
   g. Acquaintance  
   h. Supervisor/Teacher  
   i. Fellow Student  
   j. Family Friend  
   k. Personal Friend  
   l. Co-worker  
   m. Other *(describe)__________________________________________*

5. Approximately how often did you have direct contact with this individual(s)? *(For each individual, write the corresponding relationship letter(s) from above in the space next to the correct answer)*

   Rarely _______ Occasionally _______ Often _______ Very Often _______
6. Overall, what was the experience with this individual(s) like? *(For each individual, write the corresponding relationship letter(s) in the space next to the correct answer below)*

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Negative</th>
<th>Neutral</th>
<th>Positive</th>
</tr>
</thead>
</table>
Appendix B (Continued)

Attitudes Toward Disabled Persons Scale (Form B)

Directions: Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one. Write +1, +2, +3; or -1, -2, -3; depending on how you feel in each case. *If you’re not sure about an item, go ahead and answer it to the best of your ability. If there are items you would rather not answer, just leave those blank, or write a comment about those items at the bottom of the page.*

A = -3 I disagree very much  
B = -2 I disagree pretty much  
C = -1 I disagree a little  
D = +1 I agree a little  
E = +2 I agree pretty much  
F = +3 I agree very much

___ 1. Disabled people are usually friendly.  
___ 2. People who are disabled should not have to pay income tax.  
___ 3. Disabled people are no more emotional than other people.  
___ 4. Disabled people can have a normal social life.  
___ 5. Most disabled persons have a chip on their shoulder.  
___ 6. Disabled workers can be as successful as other workers.  
___ 7. Very few disabled persons are ashamed of their disabilities.  
___ 8. Most people feel uncomfortable when they associate with disabled people.  
___ 9. Disabled people show less enthusiasm than non-disabled people.  
___ 10. Disabled persons do not become upset any more easily than non-disabled people.  
___ 11. Disabled people are often less aggressive than normal people.  
___ 12. Most disabled persons get married and have children.  
___ 13. Most disabled persons do not worry anymore than anyone else.
Appendix B (Continued)

___ 14. Disabled employers should not be allowed to fire disabled employees.

___ 15. Disabled people are not as happy as non-disabled ones.

___ 16. Severely disabled people are harder to get along with than those with minor disabilities.

___ 17. Most disabled people expect special treatment.

___ 18. Disabled persons should not expect to lead normal lives.

___ 19. Most disabled persons tend to get discouraged easily.

___ 20. The worst thing that could happen to a person would be for him to be severely injured.

___ 21. Disabled children should not have to compete with non-disabled children.

___ 22. Most disabled people do not feel sorry for themselves.

___ 23. Most disabled people prefer to work with other disabled people.

___ 24. Most severely disabled people are not as ambitious as physically normal persons.

___ 25. Disabled people are not as self-confident as physically normal persons.

___ 26. Most disabled persons don’t want more affection and praise than other people.

___ 27. It would be best if a physically disabled person would marry another disabled person.

___ 28. Most disabled people do not need special attention.

___ 29. Disabled persons want sympathy more than other people.

___ 30. Most physically disabled persons have different personalities than normal persons.

Listed below are a number of statements that are said to describe what people think about different disabled people. Usually, what we think about individuals depends on how well we know them. However, we would like to know what you think in general. Please read each statement carefully and circle what response best describes how you usually feel. If you're not sure about an item, go ahead and answer it to the best of your ability. If there are items you would rather not answer, just leave those blank, or write a comment about those items at the bottom of the page.

Agree very much  Agree pretty much  Agree a little  Disagree a little  Disagree pretty much  Disagree very much

-1  -2  -3  +1  +2  +3

1. It is rewarding when I am able to help  -1  -2  -3  +1  +2  +3
2. It hurts me when they want to do something and can’t  -1  -2  -3  +1  +2  +3
3. I feel frustrated because I don’t know how to help  -1  -2  -3  +1  +2  +3
4. Contact with a disabled person reminds me of my own vulnerability  -1  -2  -3  +1  +2  +3
5. I wonder how I would feel if I had this disability  -1  -2  -3  +1  +2  +3
6. I feel ignorant about disable people  -1  -2  -3  +1  +2  +3
7. I am grateful that I do not have such a burden  -1  -2  -3  +1  +2  +3
8. I try to act normally and ignore the disability.  -1  -2  -3  +1  +2  +3
9. I feel uncomfortable and find it hard to relax  -1  -2  -3  +1  +2  +3
10. I am aware of the problems that disabled People face  -1  -2  -3  +1  +2  +3
11. I can’t help staring at them  -1  -2  -3  +1  +2  +3
12. I feel unsure because I don’t know how to behave  -1  -2  -3  +1  +2  +3
13. I admire their ability to cope  -1  -2  -3  +1  +2  +3
14. I don’t pity them  -1  -2  -3  +1  +2  +3
15. After frequent contact, I find I just notice the person not the disability  -1  -2  -3  +1  +2  +3
16. I feel overwhelmed with discomfort about my lack of disability  -1  -2  -3  +1  +2  +3
17. I am afraid to look at the person straight in the face  -1  -2  -3  +1  +2  +3
18. I tend to make contacts only brief and finish them as quickly as possible  -1  -2  -3  +1  +2  +3
19. I feel better with disabled people after I have discussed their disability with them  -1  -2  -3  +1  +2  +3
20. I dread the thought that I could eventually end up like them  -1  -2  -3  +1  +2  +3

Appendix C: Consent Form

Informed Consent to Participate in Research

Information to Consider Before Taking Part in this Research Study

Researchers at the University of South Florida (USF), University of Central Florida, Southeastern University, and Saint Leo University study many topics. To do this, we need the help of people who agree to take part in a research study. This form tells you about this research study.

We are asking you to consider take part in a research study that is called: “Evaluating Social Work Students’ Attitudes Toward Physical Disability.”

The person who is in charge of this research study is Rachael Haskell, LCSW of the University of South Florida, School of Social Work. This person is called the Principal Investigator. However, other research staff may be involved and can act on behalf of the person in charge. Because the researcher is a graduate student doing this research for dissertation purposes, she is being guided by Dr. Michael Rank, Doctoral Dissertation Committee Chairperson at the University of South Florida, Tampa.

The person explaining the research to you is someone other than the Principal Investigator. In this study, your instructor will be distributing and collecting the research material, but will not have knowledge of your responses or whether you have decided to participate. Your instructor has been asked to describe this research and related instructions to your class, and to collect the anonymous research material in sealed envelopes.

If you decide to participate, the research will be done at the classroom already assigned for this social work course. However, you may also decide to review the consent form at home. If you then choose to participate, you may complete the research material at home and bring to your instructor for inclusion in the study the following week.
Appendix C (Continued)

Purpose of the study

The purpose of this study is to learn more about the way undergraduate social work students view individuals with physical disabilities and perceive interactions with this population. This study is being conducted for a social work doctoral dissertation. It will include about 145 people. You have been asked to take part in this research study because you are an undergraduate social work student in a social work class at one of three social work programs possibly participating in this study. You must be an undergraduate social work major and 18 years of age or older to be included in the research study.

Study Procedures

If you take part in this study, you will be asked to complete two brief surveys and a data form taking approximately 40 minutes total. The data form asks for sociodemographic information and briefly about any experience or knowledge you have related to individuals with physical disabilities. One of the surveys asks you to provide your level of agreement with 30 items on a six point scale. The other survey asks you to provide your level of agreement with 20 items on the same six point scale. Answers on both surveys range from “I agree very much” to “I disagree very much,” with you selecting the answer that best matches your response to the item. If there is any item you do not wish to answer, you can leave it blank or write a comment about that item on the bottom of the page. If you have already participated in the study, don’t complete the research material again.

Time required: If you agree to participate, you will be asked to complete the surveys once, during class time, in your normally assigned classroom. The surveys and data form have been estimated to take 40 minutes total to complete. However, you will have 45 minutes of class time now to consider whether you would like to participate, and to complete the material if you choose. Your instructor will let you know at 40 minutes that you have 5 more minutes to finish with the material.

Location: You will be asked if you would like to participate in this study in the classroom already assigned for this social work course. If you decide to participate, you will be asked to complete the research material from the same classroom. However, you may also complete the research material at home and bring to your instructor in a sealed envelope for inclusion in the study the following week.
Appendix C (Continued)

**Audio or video taping:** This study does not include any audio or video taping.

**Alternatives**

You have the alternative to choose not to participate in this research study. You should take part in this study only because you want to. There is no penalty for not taking part, and you will not lose any benefits. You have the right to stop at any time. If you decide not to participate, you may choose to wait while others review the research material or may choose to use this part of class time to do academic work.

**Benefits**

The only possible direct benefit to you as a research participant is that you may learn more about how research is conducted. In addition, your participation could contribute to society’s and the social work profession’s understanding of social work students’ perceptions about individuals with physical disabilities.

**Risks or Discomfort**

This research is considered to be minimal risk. That means that the risks associated with this study are the same as what you face every day. There are no known additional risks to those who take part in this study. If you choose to participate, your responses will remain anonymous. You will not be asked for your name on any of the research material. You will be asked to seal your research material in an envelope before giving it to your instructor, so your instructor will not be aware of any of your responses, or whether you have even chosen to participate. Regardless of your responses and whether you participate or not, there will be no penalty. In addition, you do not have to answer any questions that make you feel uncomfortable. If you feel uncomfortable answering questions about your feelings and/or thoughts about individuals with physical disabilities, leave those questions blank, or write at the bottom of the page your comments about those questions.

**Compensation**

You will not receive compensation, payment or extra credit for taking part in this study. There will be no penalty and no requirement to ask for an alternative assignment. Your student status and grade will not be affected whether you choose to participate or not.
Appendix C (Continued)

Confidentiality

If you decide to participate, your responses will remain anonymous. You will not be asked to provide your name at any time in this study. We will make every effort to prevent anyone from knowing that you gave us information, or what that information is. If we publish what we learned from this study, your data will be combined with other participants. We will not publish anything that would let people know who you are. Your name will not be known or used in any report, so people will not know how you answered or what you did. No one, not even members of the research team, will know that the survey information you gave came from you.

However, certain people may need to see the study data. The records will be anonymous, so anyone who looks at your records will not know your identity. The only people who will be allowed to see these records are:

- The research team, including the Principal Investigator, and the Principal Investigator’s dissertation committee.

- Certain government and university people who need to know more about the study. For example, individuals who provide oversight on this study may need to look at your records. This is done to make sure that we are doing the study in the right way. They also need to make sure that we are protecting your rights and your safety.) These include:
  - the University of South Florida Institutional Review Board (IRB) and the staff that work for the IRB. Other individuals who work for USF that provide other kinds of oversight may also need to look at your records.
  - the Department of Health and Human Services (DHHS).

Voluntary Participation / Withdrawal

You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study, to please your instructor, the investigator or the research staff. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study. Your decision to participate or not to participate will not affect your student status, course grade, or education in any way. If you decide to withdraw from participation, stop responding to research items.
Appendix C (Continued)

Questions, concerns, or complaints
If you have any questions, concerns or complaints, or experience an unanticipated problem related to the research, call Principal Investigator, Rachael Haskell, Graduate Student, Social Work Doctoral Program, College of Arts and Sciences, (727) 698-2543 or Dr. Michael Rank, Faculty Supervisor, Doctoral Dissertation Chairperson, University of South Florida School of Social Work, at (813) 974-1374, or by email at rhaskell@cas.usf.edu.

If you have questions about your rights as a participant in this study, general questions, or have complaints, concerns or issues you want to discuss with someone outside the research, call the Division of Research Integrity and Compliance of the University of South Florida at (813) 974-9343. You may also contact the University of Central Florida’s Institutional Review Board (IRB) at telephone (407) 823-2901, or email irb@mail.ucf.edu.

Consent to Take Part in this Research Study

It is up to you to decide whether you want to take part in this study. If you do not want to take part in this study, do not complete the survey material. If you want to take part, complete the data form and two surveys.

Completing the surveys implies your consent to participate in this study. Do not complete the research material if you are not 18 years or older, or are not an undergraduate social work major.

How to return this consent form to the researcher: Please return this consent form and the rest of the research material sealed in the envelope provided before turning it in, regardless of whether you have decided to take part or not. Take the second copy of the informed consent form for your records. Your instructor will collect the sealed envelopes and submit them to the researcher immediately after class.
Appendix D: Institutional Approval Letter

October 29, 2008

Rachael Haskell
School of Social Work
6177 Sun Blvd., 404
St. Petersburg, FL 33715

RE: Requested Revisions for Application for Initial Review
IRB#: 107370 I
Title: Evaluating Social Work Students’ Attitudes Toward Physical Disability

Dear Ms. Haskell:

On October 28, 2008, the Institutional Review Board (IRB) reviewed your Application for Initial Review. Approval was withheld pending the submission of the following information, which must be submitted no later than two weeks from the date of this letter:

1. Please submit your letters of support from the University of Central Florida and Saint Leo University.

Please be advised that all of the above information/clarifications must be addressed before final IRB approval can be determined. No research activity including advertising or recruitment can begin until final IRB approval is obtained. If the Division of Research Integrity and Compliance receives no response within 30 days of this letter, the issues will be readdressed by the IRB for further action.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813.974.9343.

Sincerely,

Paul G. Stiles, J.D., Ph.D., Chairperson
USF Institutional Review Board

Cc: Various Menzel/cd, USF IRB Professional Staff
    Michael Rank, PhD
About the Author

Rachael A. Haskell is a Licensed Clinical Social Worker in Florida with a Bachelor’s Degree in Psychology and Master’s Degree in Social Work from Rhode Island College. She has many years of experience as a therapist helping survivors of trauma and their families, clinical program supervisor, adjunct social work instructor, and child advocate. She has presented at several conferences focused on abuse prevention and alternative therapy approaches in the Tampa Bay community, and as an expert related to sexual abuse cases in the media and court.

Ms. Haskell also has experience providing disability awareness workshops to helping professionals, in part based on her perspective as a woman who has been in a wheelchair since childhood. She is a self-published author of a children’s book series about the adventures of her puppy/service dog in training finding strength in overcoming challenges.