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Attitudes of Ethiopian college students toward people with visible disabilities

Almaz Tamene Getachew
University of Iowa

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**ATTITUDES OF ETHIOPIAN COLLEGE STUDENTS TOWARD PEOPLE
WITH VISIBLE DISABILITIES**

by

Almaz Tamene Getachew

An Abstract

Of a thesis submitted in partial fulfillment of the requirements
for the Doctor of Philosophy degree in
Rehabilitation and Counselor Education
in the Graduate College of The University of Iowa

July 2011

Thesis Supervisors: Professor Vilia M. Tarvydas
Professor Emeritus Dennis C. Harper

ABSTRACT

Although the attitudes of non-disabled individuals toward people with disabilities (PWDs) have been studied extensively for years, most of those studies were conducted outside of Ethiopia and very little has been written about Ethiopians and their attitudes toward PWDs. The current study examined the attitudes of a self-selected sample of Ethiopian college students toward persons with visible disabilities. Secondly, the study identified and utilized selected variables that may affect individual personal responses to the development of these attitudes.

Past studies identified that negative and seemingly pejorative personal attitudes of some nondisabled adults have often created general societal barriers affecting all aspects of the quality of life of PWDs. The non-participation of PWDs in society has been limited in Ethiopia to date based on the reports of Ethiopian local experts and governmental report documents; however, because negative attitudes are frequent barriers, without identification and adequate measurement of these attitudes, understanding, identifying, and changing them is very difficult. This study provided preliminary information about the attitudes of a group of university students at Addis Ababa University who might be influential in the future inclusion of PWDs in Ethiopia as they likely represent future elite professionals in Ethiopian society who could potentially impact PWDs in that society in relation to these attitudes.

This study collected self-reported data on Ethiopian college students' attitudes toward people with visible disabilities as measured by the Multidimensional Attitudes Scale Toward Persons With Disabilities (MAS). This study examined the students' attitudes and also identified key variables from the literature related to attitude formation toward PWDs. The results of the Confirmatory Factor Analysis, T-test, ANOVA, and correlation analyses provided some preliminary findings. The CFA was conducted because the MAS has only been used once with an Israeli sample, and there were no other groups for comparison. In order to compare the loadings of items of the MAS, a

CFA was necessary. First, the CFA conducted indicated that the model of MAS for the Israeli sample was not similar to the Ethiopian sample, suggesting that the two samples responded to the items on the MAS differently. Second, it was identified that Ethiopian college students have negative attitudes in general based on this measure. According to the MAS, which was the instrument used to measure attitudes, Ethiopian college students had high mean scores on all the three subscales, reflecting a negative attitude. A t-test was conducted with gender and level of education. The variable of gender was significant with both MAS analyses while education was non-significant. An ANOVA was conducted with the variables of year in school, academic major, and contact level. Year in school was only significant on the cognition subscale of the MAS-34 and on the MAS-22 version; it was significant on the cognition and total subscales. Academic major was a significant factor for all the subscales on the MAS. Contact level was non-significant on the MAS-34 and significant on the MAS-22 for the cognition and total subscales. A Pearson correlation was conducted on the variables of self-esteem and cultural orientation. Self-esteem and cultural orientation were positively correlated with the MAS. Limitations of the study and future research recommendations were discussed.

Abstract Approved: _____
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CERTIFICATE OF APPROVAL

PH.D. THESIS

This is to certify that the Ph.D. thesis of

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To those who loved me in good and bad

Mama may have, Papa may have
But God bless the child that's got his own
That's got his own

Billie Holiday

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CHAPTER I

INTRODUCTION

Visible disabilities often communicate lesser social status in society (Wright, 1983). The visual cue, for example, of seeing a person in a wheelchair, may be all that is needed to initiate the automatic process of making assumptions. These assumptions may produce stereotypical images in Western cultures, such as the inability to be employed, athletic, and beautiful (Barnes, 1996). The following two concepts frame how historical fundamental negative bias and spread effect have shaped the images of individuals with visible disabilities. Wright (1991) explained that fundamental negative bias occurs when negative images overshadow any other images. For example, once an individual is labeled as having a disability, that label is remembered over any other characteristics of the person. The only salient characteristic is that the person has a disability. Therefore, other aspects about the person become secondary to the disability and may even go unnoticed (Wright, 1983, 1991).

The second concept that was informed by fundamental negative bias is spread effects. According to this concept, one single negative aspect much like the first gives all the information needed to make assumptions about the rest of the person. For example, if an individual has a visible disability, such as using a wheelchair, it may be assumed that he also has an intellectual disability. The effect of being in a wheelchair spreads to making assumptions about a person's intellectual abilities (Dembo, Levinton, & Wright, 1956; Mussen & Barker, 1944).

In Eastern cultures such as Ethiopia, the same visible disabilities invoke images of poverty and poor health (Tirussew, 2005). The images of people with disabilities (PWDs) in both Eastern and Western cultures provide the bias for negative attitudes. Non-disabled people's misconceptions about PWDs' personality, behavior, and potential achievement have historically led to formation of negative attitudes (Gill, 1996; Howland & Rintala, 2001; Seifert & Bergmann, 1983). Current assumptions combined with

historical social portrayals of PWDs as “sick and suffering” make it difficult for these individuals to meet the standards of social norms and to be viewed independent of these images. This is particularly true in Ethiopia, where the images of PWDs are frequently limited to negative ones; therefore, only one image of PWDs is popularized (Tirussew, 2005). To understand how negative attitudes affect people with disabilities, it is critical to conceptualize how disability is perceived in a society. In Ethiopia, the combination of limited positive images and lack of public information about disabilities has led to negative societal attitudes about PWDs. These negative beliefs have led to the perception that a PWD is limited physically and intellectually, cannot live independently, and cannot form a family in Ethiopia (Tirussew, 2005). Negative portraits of PWDs have increased rejection and marginalization of this population (Ruffner, 1990).

In almost all nations and cultures, PWDs frequently experience some form of social rejection. There has been a consistent global display of negative attitudes toward PWDs in general, but especially for those with visible disabilities such as missing limbs or facial deformity (Wright, 1983). Although many different cultures display negative attitudes toward disabilities, it is the application of these attitudes that are determined by cultural norms. Surveys assessing the public’s attitudes toward people with intellectual disabilities conducted in 10 different countries with 800 participants reported negative attitudes in general. The results of the Special Olympics study indicated that there were high percentages of negative public perceptions and beliefs toward individuals with intellectual disabilities regarding their overall abilities and where they should live, work, and attend school (“Multinational Study of Attitudes,” 2003). These negative attitudes (Antonak & Livneh, 1995; Burge, Ouelette-Kuntz, & Lysaght, 2007) often prevent PWDs from participating in their respective cultures and communities. The lack of participation of PWDs in society is a critical issue to explore, because PWDs are also part of those societies, and lack of participation leads to low quality of life (Antonak & Livneh, 1988). To address the issue of negative societal attitudes towards disabilities,

researchers are advised to first understand the concept of attitudes and their impact on an individual's thinking and behavior (Yuker, 1994).

In general, people develop and adhere to certain attitudes for multifaceted and complex reasons, often socially, culturally, and situationally determined, that serve as reactions specific to certain cultures (Katz, 1960). One of the main reasons individuals adhere to specific attitudes is to comply with existing social norms (Katz, 1960). Rao, Horton, Tsang, Shi, and Corrigan (2010) suggested that “cultural differences in stigmatizing attitudes may also reflect the intensity of cultural investments in social connectedness and the implications of different forms of group membership” (p. 351).

For example, studies in Ethiopia have demonstrated that social norms of attitudes toward disabilities have been less than favorable (Tiressew, 2005). For attitudes in Ethiopia to be better understood, the culture of disability must first be conceptualized, and there must be an understanding of the cause and definition of disability in Ethiopian culture. Disability in Ethiopia is an extremely taboo issue, and the first layer of negativity is avoidance and blame. In 2000, Rhamet, Metasibia, and Selamawit conducted a study that examined Ethiopian children's experiences with cerebral palsy. They interviewed a father and asked him what he believed to be the cause of his son's cerebral palsy. The father replied that his wife was responsible. He elaborated that his wife once encountered a man with a physical disability and was disgusted by the sight of him. Therefore, God gave him and his wife this child as a form of punishment. While not all Ethiopians have this causal belief, some do, and thus investigations of attitudes toward disabilities need to be filtered through a cultural lens. People without disabilities use cultural lenses to process the disabilities of others. In Ethiopia, children who have siblings with disabilities are taught not to mention them in school because the stigma of association may prevent other children in the family from attending school (Weldead, 2007). Children learn that the cultural norm is to hide family members with disabilities. In another study, children

were socialized to avoid people with epilepsy because it was considered contagious especially during seizures (Tekle-Haimanot et al., 1991).

Children are taught by their culture what attitudes and behaviors to have toward disabilities. Therefore, a cultural norm is one means to form opinions and attitudes about disabilities. Yang et al. (2007) demonstrated that socio-cultural beliefs and norms can influence the content of stigmatizing attitudes. In Ethiopia, the belief systems of the parents influence what attitudes the children should assume toward people with disabilities. The next section will discuss attitudes, disabilities in Ethiopia, and disability laws and policies in Ethiopia.

Attitudes

This section will provide brief definitions of attitudes and their historical context. It will also provide a rationale for the definition of attitudes that the current study will employ. It is critical to have both a conceptual and an operational definition for measuring attitudes. The current study will utilize the ABC definition of attitudes, which are known as affective, behavioral, and cognitive (Antonak & Livneh, 1988). The affective component (A) defines the emotions of attitudes, which are the likes and dislikes. The behavioral component (B) explains the direct behavior that is attached to the internal attitude. The cognitive component (C) identifies where the organization and formation of attitudes are stored (Slininger, Sherrill, & Jankowski, 2000). Although this is the operational definition used in this study, there has been no universally accepted definition of attitudes in the literature.

The definition of attitudes has been evolving throughout history. However, the following elements have consistently appeared within the various definitions (Antonak & Livneh, 1988, p. 10): “(a) attitudes are learned; (b) attitudes are complex, multi-component structures; (c) attitudes are stable (even rigid); (d) attitudes have a social object of reference; (e) attitudes vary in their quality; and (f) attitudes are multifaceted behaviorally.”

The various definitions of attitudes have contributed to the difficulty of measuring attitudes. At one point, there were more than 30 definitions for the term (Rao, 2004). English psychologist, Herbert Spencer, first introduced the concept of attitudes in 1862 (Allport, 1935). In 1901, Baldwin defined attitudes as “readiness for attention or action of a definite sort” (Baldwin, 1901, cited in Ajzen & Fishbein, 1980, p.13). In 1918, Thomas and Znaniecki defined attitudes as a “cognitive process,” determining the individual’s potential and actual response (Thomas & Znaniecki, 1918, cited in Antonak & Livneh, 1988). Allport (1935) added that “an attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related” (p. 810).

Allport’s definition contributed several components that influenced later models of attitudes: Attitudes are (a) private, (b) formed and organized through experience, (c) acquired through a socialization process, and (d) are not passive but are relatively directive. Allport’s theory included the belief that attitudes directly influence behavior. Allport’s theory of behavior and attitudes influenced the development of the Expectancy-Value Model of Attitudes created by Fishbein and Ajzen in 1972.

The centrality of the Expectancy-Value Model states that an individual has many beliefs about an object and that the object may be viewed as having many attributes. The individual may associate each attribute with an evaluative response, and through a learning process, may learn to associate an attribute with an attitude about the object. Fishbein and Ajzen (1972) theorized that this learned attitude toward a particular object might later elicit a summed evaluative response. Hence, Fishbein and Ajzen defined attitudes as a function of an individual’s belief about an object and the individual’s evaluative responses. The continual evolvement of how attitudes are defined includes beliefs, cognition, and behavior. This progression led Findler, Vilchinsky, and Werner (2007) to apply this definition and describe attitudes as multidimensional.

Findler et al. (2007) developed the Multidimensional Attitudes Scale Toward Persons with Disabilities (MAS), which conceptualized attitudes as multidimensional with three components: affective, behavioral, and cognitive. The current study used the MAS to measure attitudes and therefore employed the same definition of attitudes. Using an instrument that measured the same definition of attitudes brought continuity to how attitudes were defined and what components of attitudes were measured in this investigation. Thus, this is the operational definition of attitudes.

Studies point to the importance of exploring and defining attitudes and their formation and application when trying to establish opportunities for and inclusion of PWDs into a particular society (Chan, Lee, Yuen, & Chan, 2002). Multiple aspects of society, family, religion, community, and school interactions influence attitudes. The following section will discuss the current status of disabilities in Ethiopia and establish the need to study attitudes.

Disabilities in Ethiopia

According to the International Labor Organization (ILO, 2003), people with disabilities are the largest invisible minority group in Ethiopia. The population of Ethiopia has been estimated at 85 million (WHO, 2006). According to Tirussew (2005), there are 8 million people with disabilities in Ethiopia, although the World Health Organization (WHO) estimates the number to be much greater. Due to the high stigma associated with disabilities in the Ethiopian culture, most people either hide or never declare a disability (Tirussew, 2005). In Ethiopia, people with disabilities often are not participants in society because of the overall belief that disabilities are a result of a curse and/or are punishments from a deity (Mulatu, 1999). Hence, disabilities often are defined in terms of supernatural beliefs. The extent of these beliefs is not clearly specified in the literature, which makes estimating their pervasiveness unclear at present. Ethiopians also view visible (physical) disabilities as limiting, and therefore people with disabilities are believed to have little strength and to be unable to perform physical labor (Shilbre et al.,

2001). Because of their inability to perform physical labor, individuals with disabilities are viewed as burdens to their immediate families for not being able to contribute to the family's income. Ethiopia continues to be an agricultural society, and physical labor remains the common source of employment; therefore, a physical disability may be a limitation for participation in the most common job market (Tirussew, 2005). However, research has shown that increasing the participation of individuals with disabilities is more than just economically advantageous for a country (ILO, 2003). Inclusion brings secondary benefits, such as decreasing isolation and increasing secondary psychological well-being for the PWD (Schur, 2002). Nonetheless, this combination of cultural beliefs, perceptions, and negative attitudes are reported to persist and contribute to PWDs lack of participation in Ethiopian society (Mulatu, 1999; Rhamet et al., 2000). If the current negative perceptions are not addressed, these cultural attitudes may increase (Fitaw & Boersma, 2006). The population of PWDs is estimated to increase globally with the advancement of modern medicine and a concomitant an increase in the aging population (Binstock & George, 2001; Smart, 2001). PWDs are living longer, and aging in general is accompanied by the decline of abilities such as hearing, vision, and physical mobility. Therefore, the number of individuals with a variety of limitations is likely to increase in Ethiopia as well. The attitudes affecting this increasing population need to be addressed because studies indicate that negative attitudes are a barrier to a positive quality of life.

Attitudinal studies in Ethiopia have confirmed that individuals with disabilities continue to face negative attitudes, stigma, and discrimination (Mulatu, 1999; Rhamet et al., 2000). However, the attitudes of specific groups have not been assessed. Identifying variables that predict attitudes for specific groups is essential to developing interventions (Yuker, 1994). Researchers have conducted studies of other nations that highlight specific factors and their association with predicting attitudes (Rao et al., 2010).

Studies of attitudes in the United States have indicated a strong correlation between negative attitudes and the impact on self-perception of PWDs. Studies have

shown that experiencing negative attitudes in turn negatively affects the perception that PWDs have of themselves and their skills, which in turn may affect PWDs' use of rehabilitation services to optimize their skills (Beck, Carlton, Alien, Rosenkoetter, & Hardy, 1993; Bowman, 1987; Mullins, Roessler, Schriener, Brown, & Bellini, 1997; Watson-Armstrong, O'Rourke, & Schatzien, 1994). Antonak and Livneh (2000) stated that negative attitudes such as prejudice, misconceptions of abilities, and stereotyping "create real obstacles to fulfillment of their roles and fulfillment of their life goals" (p. 211). Furthermore, they asserted that knowledge about attitudes toward people with disabilities might be used to better inform assessments, design improved rehabilitation training and counseling programs, and inform and create public policy that would contribute positively to modification of attitudes toward this population. Antonak and Livneh (2000) also maintained that scholars and researchers must first critically assess the attitudes of professionals before attempting to modify the general population's perceptions of the disability community. Although general negative attitudes likely affect PWDs' access to various institutions, such as school, employment; and the larger community, social policy has the potential to change such outcomes (Gilmore, Campbell, & Cuskelly, 2003). This is one of the rationales for accessing Ethiopian college students' attitudes in the current study; they are a defined group of future professionals who could influence policy and access for people with disabilities in their country. Thus, it becomes critical to review laws and policies in Ethiopia that directly and indirectly affect PWDs.

Laws and Policies in Ethiopia

The current Ethiopian government has made many strides since the completion of its constitution in 1995 to protect the rights of its citizens, particularly oppressed populations such as women, children, and PWDs. According to an International Labor Organization report (ILO, 2003), Ethiopia added the protection of peoples' rights to its 1995 constitution, and it was one of the first countries to sign the African Charter on Human and Peoples' Rights in 1998. Ethiopia also signed the following United Nations

Conventions guidelines: (a) Convention on Elimination of All Forms of Discrimination against Women (CEDAW), (b) Convention of Civil and Political Rights (CCPR), (c) Convention on Economic and Social and Cultural Rights (CESC), and (d) the Convention on the Rights of the Child (CRC). More recently, Ethiopia signed the Convention on the Rights of People with Disabilities (United Nations, 2002). This most recent action by the Ethiopian government illustrates its intent to recognize the rights of people with disabilities. However, negative attitudes continue to be a barrier in Ethiopia despite efforts by policymakers to decrease discrimination against the disability community (Mulatu, 1999; Rhamet et al., 2000).

Research has indicated that globally attitudinal barriers, such as access to employment (Burge et al., 2007; Hunt & Hunt, 2004; Mullins et al., 1997) and access to services (Wong, Chan, Cardoso, Lam, & Miller, 2004), are the most cited causes of hindrance to full participation in society for individuals with disabilities in many countries (Chubon, 1992; Singh, 2003). Critical examinations of attitudes toward people with disabilities are necessary because of the association of attitudes with behavior and formation of beliefs about that population, which also affect relationships with peers and other professionals (Paris, 1993).

Policymakers also need to be aware of societal attitudes so that more informed policies may be integrated into the legal system (Antonak & Livneh, 1988). This is especially critical in Ethiopia because of the general increase in the prevalence of disabilities with the progress of medical care and the increase in the aging population (Binstock & George 2001; Smart, 2001). As the disability population increases, the need for access to the larger community will increase as well, thus creating a real and immediate need for attitudinal change. As stated earlier, studies have indicated that attitudes can be changed through interventions, but understanding how attitudes are formed may also better inform intervention for attitudinal change. Scholars have concluded that negative attitudes toward people with disabilities may be formed through

socio-cultural socialization, meaning that this is how people learn norms, customs, and beliefs (Livneh, 1998); culture is a variable that affects attitudes and impacts how attitudes are displayed. Since culture is a factor in predicting attitudes, some researchers have suggested that collective and individualistic cultures display attitudes toward disabilities differently. For instance, research examining the differences between American and Chinese employers' attitudes toward PWDs suggests that Western cultures such as the United States, which has more individualistic and competitive values, may increase stigma and negative attitudes towards people with disabilities compared to Eastern cultures such as China (Rao et al., 2010). Although cultural factors are predictive variables, so is the experience of education. Yunker (1994) stated that those with higher levels of education tend to have more favorable attitudes toward PWDs. These favorable attitudes may be related to exposure to disability literature and/or PWDs in educational institutions in general; also people who choose to gain more education may already have the tendency to accept change in general and not just changes in perceptions about disabilities.

Studies in the United States have noted that certain groups of non-disabled persons have more favorable attitudes toward PWDs (Yunker, 1994). One group, in particular, is the college-educated population (Satcher & Dooley-Dickey, 1992). Hunt and Hunt's (2004) study indicated that college students with social science majors are more likely to display positive attitudes compared to those students with business majors. This finding was related to the fact that students in the social sciences are more likely to be exposed to disability literature and thus have increased knowledge and contact with disabilities in general, whereas business students may have fewer opportunities to be exposed to disability literature and people with disabilities (Hunt & Hunt, 2004).

The attitudes of college students in Ethiopia toward disabilities have not been assessed. College students were chosen for this study because they are the future professionals and policymakers in their society. Many studies choose to examine the

attitudes of college students with the assumption that they will influence institutional access for people with disabilities (Satcher & Dooley-Dickey, 1992). The present study focused specifically on college students because this population is likely to have positions that either enable or hinder access for people with disabilities. For people with disabilities in Ethiopia, the opportunity to access social-cultural activities such as weddings, funerals, festivals, and general gatherings is very restricted (Tirussew, 2005); thus, accessing larger institutions such as education and employment has been even more difficult. A study to examine Ethiopian college students' attitudes toward disabilities is needed, because attitudes must first be identified before they can be changed. When the factors that change attitudes are identified, interventions based on those factors can be developed to begin the process toward changing attitudes from negative to positive. More specifically, the attitudes of professionals toward PWDs need to be identified because research has indicated that negative attitudes of professionals can prevent PWDs from fully integrating into a society (Chubon, 1992; Matziou et al., 2009; Seccombe, 2007; Tervo, Azuma, Palmer, & Redinius, 2002; Wright, 1980). Although gatekeepers can grant access, they also have the power to prohibit access through negative attitudes and policies, which may perpetuate discrimination against those with disabilities. The International Association for the Scientific Study of Intellectual Disabilities (2001) stated that the intention of creating social policy is to "promote acceptance and inclusion of people with disabilities into mainstream society" (p. 97). Therefore, if policymakers are college-educated and social policy is designed to promote integration of PWDs, it is reasonable to measure the attitudes of those who may influence social policy development and implementation. Also, determining what factors contribute to negative attitudes may inform the type of interventions that should be considered when addressing those particular factors. To begin this process, research must begin with accurate and valid assessment of attitudes. The variables of the current study were derived from several researchers who identified these factors in the development of attitudes toward

disabilities (Antonak & Livneh, 1988; Yuker, 1994). Identification and measurement of attitudes are critical; however, the categorization of the source of attitudes is even more crucial. Livneh (1988) conducted a study in which he was able to identify six systems from which negative attitudes were derived. The first system is the socio-cultural-psychological; these attitudes originate and are influenced by social and cultural norms and belief systems and include what an individual experiences to be the norm in that society. Cultural orientations of collectivism or individualism may clarify cultural norms based on their identification. Based on this identification, Rao et al. (2010) stated that “cultural differences in stigmatizing attitudes may also reflect the intensity of cultural investments in social connectedness and the implications of different forms of group membership” (p. 351). The following section will identify the study variables examined in the current investigation.

Study Variables

Previous studies that have assessed college students’ attitudes toward PWDs have identified the predictive variables that not only predict attitudes but also may be used to change attitudes (Antonak & Liveh, 1988). The identified variables are gender, level of education, year in school, academic major, previous contact with people with disabilities, self-esteem, and cultural orientation (Antonak, 1988; Fichten, 1988; Yuker, 1994). The identification of participants with collectivistic or individualistic cultural orientations has been significant in determining attitudes toward disabilities (Rao, 2004). The social-cultural component is part of defining attitude development, and the influence of societal and personal culture affects attitude disposition. Therefore, the cultural orientation an individual endorse may affect their attitudes. An in-depth review of these variables is found in Chapter II.

Purpose of the Study

The purpose of this study was to describe a sample of self-selected Ethiopian college students’ attitudes toward individuals with visible disabilities. Research has

indicated that despite efforts to integrate individuals with disabilities into society, negative attitudes continue to be an obstacle (Chan et al., 2002; French, 1994). More importantly, changing attitudes may be one of the major aspects in improving life conditions for PWDs (Dalal, 2006). Current research also indicates that developing countries' attitudes toward disability are slowly changing, although one of the major barriers is feelings of pity by the non-disabled community (Mallory, 1993). To reduce negative views toward PWDs, studies have identified some variables related to predicting attitudes toward disability (Yuker, 1994). Factors such as contact with people with disabilities, educational level, and professional practice have all influenced self-reported attitudes toward disabilities (Anthony, 1969; Asmus & Galloway, 1985; Barrett & Pullo, 1993; Chan et al., 2002; Eberhardt & Mayberry, 1994; Gething, 1992; Lee, Paterson, & Chan, 1994). Although these variables have defined particular attitudes, the shift from the current images of people with disabilities from pitied individuals to capable individuals remains difficult. This type of image change can be addressed through assessment and measurement of attitudes and education about disabilities.

Visible disabilities were chosen for this study because these types of disabilities often impact how people respond to PWDs. A visual cue, such as seeing a spinal brace or an assistive animal, is frequently all that is needed to categorize visible disabilities not only as different but possibly as lower status. Therefore, visible disabilities are easier to define and identify compared to less visible disabilities, such as cognitive and psychological disabilities (Adrian, 1997). Research has also shown that positive attitudes toward PWDs are achievable through educational interventions and some types of contact with PWDs (Junco & Salter, 2004). Furthermore, policymakers need to be aware of societal attitudes to better inform themselves and pass policies that could legally open doors for inclusion of PWDs (Antonak & Livneh, 1988, 2000; Chan et al., 2002; Dalal, 2006; Rao, Angell, Lam, & Corrigan, 2008). One of the major goals of changing societal

attitudes is also to educate the society's "gatekeepers" regarding disability in hopes of generating opportunities and increasing positive attitudes toward PWDs.

Studies conducted in China, Ethiopia, and the United States have reported that negative attitudes result in societal barriers (Antonak & Livneh, 1988; Tirussew, 2005); thus, it becomes important to measure attitudes in order to understand their impact and to develop policies that address those barriers.

In general, people who seek education have the tendency to be more receptive to new knowledge and understanding, which often may lead to changes in thoughts and/or behavior. In past studies, those with higher education reported more positive attitudes (Yuker, 1994). However, it is unknown if the intervention of education would also result in positive attitudes in the Ethiopian college student population. The education factor plays two roles in this study: It is a predictive variable as well as a rationale for the study. Because college students are involved with an educational institution, this study will specifically examine the effects of the education factor on their attitudes toward disabilities.

Rationale

This study focused on college students and their reported attitudes toward people with visible disabilities for very specific reasons. Visible disabilities often provide a more direct identification and saliency, or cue, of a disability. The visibility of difference is said to invoke an automatic reaction in an individual (Wright, 1983). College students were targeted because (a) they are future key stakeholders in permitting access to various institutions; (b) educational interventions combined with contact have proven to be effective in changing their attitudes (Amsel & Fichten, 1988; Antonak, 1981; Donaldson & Martinson, 1977; Yuker, 1988); (c) college students are in a key location for both of these interventions to take place; and (d) information about attitudes of college students are somewhat easier to obtain because they are a definable group.

In summary, the purpose of this study was to examine Ethiopian college students' attitudes toward people with visible disabilities and the relationship of these attitudes to the variables of gender, education level, year in school, academic major, level of contact, self-esteem, and cultural orientation.

Yuker (1994) identified level of contact, education, and gender as variables that influence attitudes. He stated that “the beliefs that a nondisabled person has about people with disabilities are probably the major variables that influences attitudes” (p. 5). Yuker (1994) also believed that prior contact, attitudes of significant others, and effects of educational level influenced non-disabled people's value of PWDs. He concluded that increases in contact and context are major influential factors. He also noted, overall, that education and female gender were positively correlated with favorable attitudes (Jamieson, 1984; Upton & Harper, 2002). However, the variable of number of special education courses had no relationship with positive attitudes (Yuker, 1994). Other findings have shown that choice of academic major influences attitudes; for instance, social science majors have reported more favorable attitudes compared to those who majored in business (Hunt & Hunt, 2004). Although researchers agree that opportunities for contact and information that non-disabled people receive about PWDs influence their attitudes, other studies have indicated that the self-esteem of non-disabled people also influences their attitudes toward PWDs. Keller and Siegrist (2010) found a correlation between high self-esteem and a positive attitude toward disabilities. These findings imply that level of contact, gender, education level, and self-esteem influence attitudes. Other studies reported similar results for the relationship of self-esteem with academic major.

Statement of the Problem

Negative attitudes are associated with avoidance and rejection, while positive attitudes usually are associated with broader acceptance and comparatively more favorable reactions (Yuker, Block, & Young, 1970). Non-acceptance of PWDs by non-disabled people is globally consistent, and studies have indicated the importance of

studying attitudes and their basis when trying to establish opportunities and inclusion for PWDs (Chan et al., 2002). The understanding and study of attitudes may benefit PWDs by providing methods with which to develop procedures to address these attitudes as well as providing appropriate assessment to measure the effects of interventions (Antonak & Livneh, 2000). Antonak and Livneh (1995) argued that successful inclusion of PWDs in the community is determined, in part, by the attitudes of the public. In the United States alone, studies have uniformly indicated that non-acceptance and lack of full inclusion and integration of PWDs continue to create societal barriers that hinder individuals with disabilities from full participation in society (Bordiere & Drehmer, 1986; Campbell, Hensel, Hudson, Schwartz, & Sealander, 1987; Elston & Snow, 1986; Greenwood & Johnson, 1987; Holmes & McWilliams, 1981; Martin, Scalia, Gay, & Wolfe, 1982; Minskoff, Sautter, Hoffman, & Hawks, 1987; Schriener, Greenwood, & Johnson, 1989; Singh, 2003). Global attitudinal studies conducted by the Special Olympics (“Multinational Study of Attitudes,” 2003) have also confirmed that people in many nations display negative attitudes toward PWDs.

Research Questions

The following two research questions guided this study:

Question #1: What are the general attitudes of the Ethiopian college student population in Addis Ababa University as measured by the MAS subscales of Affect, Behavior, and Cognition?

Question #2: What is the relationship of selected characteristics (gender, education level, year in school, academic major, contact level, self-esteem, and cultural orientation) of Ethiopian college students at Addis Abba University to their attitudes toward visible disabilities?

Definition of Key Variables

The following definitions of key variables guided this study:

Disability: an individual who (a) has a physical or mental impairment that limits the individual's life activity, (b) has a record of such impairment, or (c) is regarded as having such impairment. The impairment may be visible or invisible, permanent or temporary in nature (ADA, 2001).

Visible disability: a condition or disorder that results in visible disfigurement, amputation, or other orthopedic impairments.

Positive attitudes: favorable attitudes displayed toward people with disabilities as measured by high scores on the Multidimensional Attitudes Scale Toward Persons With Disabilities (MAS).

Negative attitudes: unfavorable attitudes displayed toward people with disabilities as measured by low scores on the Multidimensional Attitudes Scale Toward Persons With Disabilities (MAS).

Gender: self-reported identification by participant as male or female at the time of the study.

Education level: self-reported highest level of education attained by participants at the time of the study.

Year in school: self-reported year within participant classification of either undergraduate or graduate student.

Contact level: indirect contact, which is knowledge about disabilities such as through coursework, or direct contact, which is both prior and present interaction with an individual or a community of people with disabilities. Contact level was self-reported and was also measured by the Marlowe-Crowne Social Desirability Scale (MCSDS).

Self-esteem: defined as individuals' self-perception and judgment of self-worthiness that is expressed through attitudes toward themselves as measured by The Coopersmith Self-Esteem Inventory Adult Form (CSEI).

Collectivistic cultural orientation: behavior that is dictated by the norms of the in-group and likely to occur in a communal manner (Mills & Clark, 1982) as measured by the Individualism/Collectivism Scale (INDCOL).

Individualistic cultural orientation: behavior that is autonomous and independent from the in-group and may seem to be more concerned about individual achievements than the in-group's success (Triandis, 2001) as measured by the Individualism/Collectivism Scale (INDCOL).

Summary

This study examined Ethiopian college students' attitudes toward people with visible disabilities and the relationship between attitudes of the participating college students and their gender, education level, year in school, academic major, contact level, self-esteem, and cultural orientation. These variables have been identified as key factors in understanding the components of attitudes toward PWDs in the literature. Examining societal attitudes are critical for potential inclusion of PWDs into mainstream society.

Negative attitudes have affected PWDs' ability to integrate into society. Due to the major life effects of attitudes, it becomes crucial to examine the attitudes of future decision makers and gatekeepers, such as college students. It is just as important to identify dimensions that contribute to changing attitudes, such as educational intervention and contact. Studies have indicated that attitudes are acquired through social-cultural learning and conditioning. The MAS was used to measure attitudes in this study because it defined attitudes in terms of affect, behavior, and cognition, and it appeared to be a newer and more promising measure.

CHAPTER II

LITERATURE REVIEW

Introduction

This literature review will be organized into four sections. The first section will summarize historical disability studies. The second section will address attitudes: (a) general assessments, (b) attitude measurement, (c) mechanisms, concepts, and development of attitudes, (d) study of attitudes and disabilities, (e) conceptual issues and key aspects of evaluating disabilities, (f) attitudes toward people with disabilities, (g) visible disabilities and attitudes, (h) professional attitudes, (i) rehabilitation professionals' attitudes, and (j) college students' attitudes toward disabilities. The third section will describe major variables that affected attitudes toward disabilities: (a) education level and disability type, (b) gender, (c) year in school, (d) academic major, (e) contact level, (f) self-esteem, and (g) cultural orientation. The fourth section will discuss the theoretical framework for understanding attitudes.

The literature review will be limited to information pertaining to this study. Very little research in Ethiopia has addressed attitudes toward the disenabled community. However, a conservative estimation indicates that approximately 10% of the population or 8 million individuals in Ethiopia have disabilities. This is a conservative estimation because of the high stigma associated with having a disability that may keep people from disclosing any type of disability (Tirussew, 2005).

Historical Overview of Disability Studies

People with physical disabilities have been written about since medieval times, a period in which PWDs were seen as evil and their disabilities as a punishment from a deity. When they were not being feared for their contagiousness or evil spirit, the disabled population was pitied for their conditions. "From early Egyptian, Greek, and Chinese civilization to the present, negative attitudes towards people with disabilities have been prevalent. These negative attitudes exist within most cultures and nations"

(Arokiasamy, Rubin, & Roessler, 1995, p. 123). The continued stereotyping of PWDs and their perceived lack of ability and limitations has only added to the history of global devaluation and stigmatization of PWDs. The visible appearance of a disability aids in identifying and marking those individuals (Wright, 1983), thus making them a noticeable target for negative perceptions. Responses towards PWDs have been influenced by other factors, such as economic conditions and socio-cultural norms and values of a particular society (Arokiasamy et al., 1995). These factors contribute heavily to societal attitudes toward disabilities in Ethiopia.

In Ethiopia, individuals with disabilities are viewed as outsiders and are not included in daily cultural activities such as eating with family members, attending events, and socializing with guests. These exclusions occur because there is still a great level of shame and stigma associated with disabilities in Ethiopia; thus, family members who have disabilities are segregated from others (Fitaw & Boersma, 2006). Fitaw and Boersma (2006) conducted their study in Ethiopia with 932 participants with disabilities: 528 males and 404 females. Only 23% of the participants received a primary education (elementary level educations), and 56.9 % did not receive any formal education. The participants reported that of those over the age of 7 years, about 70.7%, did not attend school. The reasons given for those individuals not being involved in school were disabilities (38.5%), lack of finances (30.9%), lack of physical access (15.2%), and family and community influence (4.5%). Although Arokiasamy et al. (1995) noted that economic and socio-cultural norms and values influence attitudes toward disabilities, the Fitaw and Boersma study revealed how economic factors contributed to the small percentage of PWDs receiving an education in addition to strong cultural beliefs and stigmas that segregated them from others.

A study conducted by Tekle-Haimanot et al. (1991) examined the attitudes of rural Ethiopians toward physical disability, specifically epilepsy. The participants were interviewed regarding their attitudes and perceptions on each of the disorders. The

epilepsy attitudinal survey was administered to a total of 1,546 households in a village and about 94% of that total were interviewed. The researchers reported that epilepsy was known by several different names in that village, depending on the languages spoken. Although Amharic is the national and official Ethiopian language, over 96 tribal languages are spoken throughout the country. Those individuals who live near Somalia and Sudan in bordering tribes are likely to speak several languages and dialects: Amharic, a mixture of Arabic and Amharic, Somali, and Tigrinya. In the official language, epilepsy is referred to as the “falling sickness” based on the physical symptoms of seizures, which cause some epileptics to lose balance and fall. In the Tigre language, it is known as the “slave’s illness.” This is because this minority group historically has worked as indigenous servants or “slaves” in other parts of the country, and when an individual within this group had epilepsy, it was stigmatized as a disease that only slaves could and would contract. In Tekle-Haimanot et al.’s 1991 study, the majority of the participants ranged from 15 to 45 years, 58.4% were female, 86.7% identified farming as their occupation, and 53% identified Islam as their religion. About 89% of the participants stated that they had either read about or were aware of epilepsy, with 86% responding that they had witnessed an attack and 14% admitting to having family members with epilepsy. Five percent considered epilepsy to be hereditary, about 2% thought it was a form of insanity, and 45% thought it was contagious. Of those who believed it was contagious, about 98% perceived that during a convulsion was the most likely time to transmit the disease to others. The following questions examined not only attitudes toward people with epilepsy, but also the levels of distance or degrees of closeness people in the village were willing to interact with epileptics. When asked if they were willing to employ a person with epilepsy, 75% said they would not, although 52% said they would work with a person who had epilepsy; 67% admitted that they would not rent to a person suffering from epilepsy, unless they were forced to; and 90% were willing to shake hands with an epileptic but only 41% were willing to be friends

with a person with epilepsy. Although 65% of the participants said they would allow their children to befriend a person with epilepsy, about 50% admitted to instructing their children to run away if those individuals had convulsions or seizures. This study demonstrates norms and attitudes of rural Ethiopians toward individuals with epilepsy. More importantly it also shows how they socialize their children to behave around people with a disability such as epilepsy.

The attitudes of college students have yet to be examined. Tekle-Haimanot et al.'s 1991 study is an example of some of the research that has been conducted in Ethiopia. The study did not employ attitudinal instruments to accurately measure attitudes and can only attribute the findings to rural populations. One of the main issues with studies about disabilities in Ethiopia is that they exclude future professionals who are currently college students who could begin to address societal barriers such as policies and access to institutions. The following section will discuss definitions, assessments, and measurements of attitudes.

Attitudes

As stated in Chapter I, attitudes have been defined as being composed of three main components of affect, behavior, and cognition, known as the ABCs of attitudes (Antonak & Livneh, 1988; Erwin, 2001; Triandis, 1971). These components combined make up the disposition of attitudes: (A) Affect defines the emotions of attitudes, which are the like and dislike; (B) behavior explains the direct action that is connected with the internal attitude; and (C) cognition describes how the organization and formation of attitudes about an object are stored (Slininger et al., 2000). Although this is the operational definition used in the current study, there is not a universally accepted definition of attitude, and in fact, 30 definitions of attitude have been described over the years (Rao, 2004). The term "attitudes" was first introduced by British psychologist Herbert Spencer in 1862 as cited by Allport (1953, p. 799).

Although many definitions of attitudes have arisen throughout the years, scholars agree that some components have stayed the same: (a) Attitudes are learned; (b) attitudes are complex, multi-component structures; (c) attitudes are stable (even rigid); (d) attitudes have a social object of reference; (e) attitudes vary in their quality and quantity; and (f) attitudes are multifaceted behaviorally (Antonak & Livneh, 1988, p. 10).

Definitions of attitudes have varied over time. Some definitions have been abstract and operationally inconsistent, and some definitions have been based on a single component of affect, behavior, or cognition. An example of an abstract definition of attitude was provided by Katz (1960): “Attitude is the predisposition of the individual to evaluate some symbol or object or aspect of his world in a favorable or unfavorable manner” (p. 168). Allport’s definition of attitude was based on a continuum: “Attitude is the degree of affect for or against an object or a value” (p. 10). English and English (1958) provided a definition of attitude that was concrete: “Attitude is an enduring learned predisposition to behave in a consistent way towards a given class of objects” (p. 50). Higgard and Atkinson (1967) defined attitude as “an orientation towards or away from some object, concept, or situation, and a readiness to respond in a predetermined manner to these, or related objects, concepts, or situations” (p. 583). Although most researchers included the three components of affect, behavior, and cognition in their definition of attitude, others focused on a single component. Fishbein’s (1967) definition of attitude emphasized the single component of affect, and he wrote that attitude is “a learned disposition to respond to an object or class of objects in a consistently favorable or unfavorable way” (p. 275). Bogardus (1931) provided a behaviorally driven definition of attitude: “An attitude is a tendency to act towards or against some environmental factor which becomes thereby a positive or negative value” (p. 52). Allport’s definition emphasized the cognition component, and his conclusion was that “attitudes are individual mental process which determine the actual and potential response of each person in a social world” (p. 6). Newcomb, Turner, and Converse (1965) stated that

“attitude is a state of readiness for motive arousal” (p. 40). Other scholars have defined attitudes with two or more components, such as Krech, Crutchfield, and Ballachey (1962). They defined attitudes with an emphasis on affect and behavior and stated that attitudes are “an enduring system of positive and negative evaluations, emotional feelings, and pro or con action tendency with respect to a social object (p. 177). Although abstract in some definitions, attitudes have been identified as a concrete threat for individuals with disabilities.

General Assessments

Scientists’ efforts to measure attitudes can be traced back to the 1850s in Germany (Antonak & Livneh, 1988). Since that time, the measurement of attitudes has gained global popularity, evidenced by the thousands of thesis and articles that have been produced. L.L. Thurstone became known as a pioneer in the measurement of attitudes in the United States in the 1930s. He argued that attitudes could be measured on a continuum ranging from most favorable, which were positive attitudes, to least favorable, which were negative attitudes (as cited in Antonak & Livneh, 1988). Thurstone’s theory was that attitudes could be measured by a single score, which was derived from a participant’s verbal response to an object. Although his measurement of attitude was on a single subscale of affect, it led to the development of the equal-appearing interval also known as the consensual location scale. At the same time as those researchers were preoccupied with how to measure attitudes in general, other researchers were trying to understand whether visual stimuli influenced attitudes.

Jones et al. (1984) suggested that the reaction to visible difference is unavoidable and involuntary. They explained that the process of viewing and labeling a difference is a social cognition process. During social cognition, human beings begin to generally categorize and associate attributes to people with visible physical difference. When individuals begin to categorize people with visible differences, people with visible differences are socially placed in certain categories, which are associated with certain

beliefs about that person exhibiting visible difference, and hence, those beliefs generally lead to stereotyping (Jones et al., (1984). The concept of stereotyping was defined by Jones et al. (1984) as “over generalized, largely false beliefs about members of social categories that are frequently, but not always, negative" (p. 155). The outcome of social cognition and categorization that leads to stereotyping and labeling people who are different is often driven by misinformation and limited knowledge about the individual with the visible difference (Wright, 1983).

The labels and outcomes of stereotyping play an important role in developing affect, behavior, and cognition in attitudes toward the individual with a visible difference (Miller, 1982). It is essential to measure the attitudes about the visible difference in order to identify how that notification of visible difference affects the individuals with the physical difference. However, the concept of attitudes can be difficult to measure because it is complicated and not always directly observable. To better illustrate this point, Rokeach (1968) stated:

A preferential response toward an attitude object cannot occur in a vacuum. It must necessarily be elicited within the context of some social situation about which we also have attitudes. How a person will behave with respect to an object-within-a-situation will therefore depend, on the one hand, on the particular beliefs or predispositions activated by the attitude object and, on the other hand, by the beliefs or predispositions activated by the situation. (p. 126)

Therefore, while attitudinal instruments measure one’s disposition toward an object, they also take into consideration situation and characteristics of the individual doing the observing. Also, because the disposition of the individual about the person with the visible difference is not isolated, the belief about that person and/or the attitudes toward the person may spread to other beliefs about that individual. This concept is known as “spread affect” (Wright, 1983).

Numerous instruments have been developed to measure non-disabled persons’ attitudes toward PWDs (Livneh, 1988). Table 1 provides a list of attitudinal instruments that have been constructed to measure attitudes toward disabilities.

Table 1. Instruments Measuring Attitudes Toward Disabilities

Instrument Name	Date	Developers	Date
Attitude Toward Disabled People Scale		Yuker, Block, & Chapman	1966
Attitudes Toward the Retarded Scale		Efron & Efron	1967
Disability Scale of Adjustment		Bell	1967
Attitudes to Deafness Scale		Cowen et al.	1967
Disability Awareness Adjective Scale		Downes	1968
Attitudes of Disability Scale		Linkowski	1969
Disability Social Distance Scale		Tringo	1970
Multidimensional Attitude Scale on Mental Retardation (also known as the Mental Retardation Attitude Inventory)		Harth	1971
Attitudes Toward Handicapped Individuals		Lazar	1973
College Facilities for Handicapped Opinionnaire		Manus & Manus	1973
Mental Retardation Questionnaire		Gan, Tymchuck, & Nishihara	1977
Attitude Toward Treatment of Disabled Students		Fonosch	1979
The Acceptance Scale		Voeltz	1980
Attitudes Toward Mainstreaming Scale		Berryman, Neal, & Berryman	1980
A Scale of Knowledge and Attitudes Toward Epilepsy and People with Epilepsy		Antonak & Rankin	1981
Scale of Attitudes Toward Disabled Persons		Antonak	1982
Disability Social Relationship Scale		Grand, Bernier & Strohmer	1982
Attitudes Toward Handicapped Vocational Students		Clauser	1983
Attitudes Toward Disablement Scale		Antonak	1985
Attitudes Toward Inclusive Education Scale		Wilczenski	1992
The Integration with Disabled Persons Scale		Gethig	1994
Multidimensional Attitudes Scale Toward Persons with Disabilities		Findler, Vilchinsky, & Werner	2007

Attitude Measurement

Findler, Vilchinsky, and Werner (2007) measured attitudes using the Multidimensional Attitudes Scale Toward Persons with Disabilities (MAS). The MAS defines attitudes as encompassing three components: affect, behavior, and cognition. Although attitudes toward disabilities in general have been negative, this is especially the case for visible disabilities because the “mark” or difference that is easily identifiable (Wright, 1983). Thus the individual with a disability is often socially marked and stigmatized, affecting the individual’s equity and social participatory status in society. Goffman (1963) described stigma as “an attribute that is deeply discrediting within a particular social interaction” (p. 7). The mark becomes the identifier and the salient cue in social interactions where stigma begins and creates what Wright refers to as “a spread effect” (Wright, 1980). This perceived difference pervades all aspects of the person. The person’s visible disability supplies the cue necessary to influence other people’s impressions of the person based on the existing perceived difference. The Ethiopian college students who will be surveyed in this study may not necessarily understand different sub-groupings of disabilities, but they will see a visible disability and react to it. Thus the survey asks questions only about their attitudes based on what they see rather than any knowledge they may have about a particular disability. Attitudes are inferred from their responses. Attitudinal measurements and instruments only measure attitudes at the time, but they do not provide insight on how particular attitudes are formed nor do they explain attitude development. The following section, will describe how attitudes form and the purposes attitudes serve. Understanding the formation of attitudes may contribute to developing tools that can be used to change attitudes (Yuker, 1994). Therefore, it is necessary to look at the mechanisms and theories behind attitudes toward PWDs before studying the impact of negative attitudes.

Mechanisms, Development, and Theory of Attitudes

One mechanism of how attitudes are formed is exposure to those attitudes and values that are attributed to a particular object, which, in this case, is a PWD (Fazio, Shook, & Eiser, 2004). For example, Zajonc (2001) concluded that one could form a preference for an object merely by repeated exposure to the object; in general, if the individual's continually observes negative attitudes displayed toward PWDs, the simple repeated exposure to those attitudes may also contribute to attitude formation and stability. Fazio and Zanna (1981) referred to this type of attitude formation as direct experience. The mechanisms that contribute to the formation of attitudes have significantly impacted the study of attitudes, especially negative attitudes toward PWDs. Thus, attitudes are formed through various means including the simple exposure of an attitude toward an object (Winkielman, Schwarz, Fazendeiro, & Reber, 2003), conditioning (De Houwer, Thomas, & Baeyens, 2001), the observations of the attitude and the context in which the attitude was observed (Bem, 1972; Fazio, 1987), direct and indirect experiences that are determined by the information that individuals receive about the given object, and finally attitudes formed through general socialization (Newcomb, 1943). Although these mechanisms describe how general attitudes are formed, negative attitudes toward PWDs are formed through the same methods. Antonak and Livneh (1998) identified several methods that describe how negative attitudes are formed toward PWDs; one of those methods is cultural socialization. They stated that the negative attitudes some cultures display might be learned and passed on through social and cultural teachings.

One of the theories of the origins of negative attitudes is from the study of social/cultural learning (Antonak & Livneh, 1988). A review of the literature was conducted by Livneh (1988) and resulted in four groupings of how negative attitudes toward PWDs are formed. The first category is socio-cultural psychological. This mechanism of attitude formation states that attitudes are formed through learned cultural-

social and value norms. Furthermore, learning socially and culturally appropriate attitudes is a method to adhere to socially acceptable values (Katz, 1960). In Ethiopia, for example, individuals who have epilepsy are highly stigmatized and feared (Tekle-Haimanot et al., 1991), and thus children are expected to stay away from those individuals, especially during seizures, when it is believed that epilepsy may be transferred to another person. The acceptable norm and attitude to have in this particular case is to stay away from the individual with epilepsy. Moreover, if an individual were to be closely associated with someone who is known to have seizures, the non-disabled person may be stigmatized for that association, and thus suffer the consequences for his or her lack of adherence to the norm.

Since attitudes enable people to interpret and respond to the environment, they are also used to protect and communicate social norms (Antonak & Livneh, 1988; Katz, 1960). Although it is critical to measure and study attitudes in regard to PWDs, it is just as important to understand the mechanism of how attitudes are changed, especially those toward individuals with visible disabilities. The techniques that have been identified as contributing to positive attitudinal change are: (a) direct or indirect contact with people with disabilities, (b) information or education related to disabilities, (c) positive camping or persuasive messages, (d) analyzing discrimination and prejudice, (e) disability simulations, and (f) group discussions (Beckett, 2009; Dalal, 2006; Donaldson, 1980; Krahe & Alwasser, 2006). Several previous studies have been conducted to measure how effective these methods are in changing attitudes towards disabilities.

Misinformation has been identified as a means of formation of negative attitudes. Thus, it would seem only logical that introducing information to challenge current knowledge would increase positive attitudes (Fishbein & Ajzen, 1975). A study conducted in 2004 by Hunt and Hunt measured whether an educational intervention would increase knowledge and positive attitudes of business students. The results of that study indicated that there was a significant increase in knowledge and positive attitudes

one week after the educational intervention occurred (Hunt & Hunt, 2004). Krahe and Altwasser (2006) administered an intervention to school-age children to measure attitudinal change toward PWDs. The study compared a purely cognitive intervention with a cognitive and behavioral intervention. The results indicated that there were significantly more positive changes with the latter intervention. The results also suggested that persons who had previous contact with people with disabilities displayed more positive attitudes.

Collectively, these past studies demonstrated the critical need to conduct theory-based attitudinal research. The changes these studies created were increasing access to people with disabilities and demonstrated that educational interventions combined with contact have improved attitudes in some areas. Consequently, there are still more studies that need to be conducted globally for these same outcomes to be achieved. Previously, studies in attitudes were not as popular prior to the enactment of significant legislation, such as the Civil Rights Act (CRA), the American with Disabilities Act (ADA), and the Individuals with Disabilities Education Act (IDEA). All of these acts collectively increased the visibility of PWDs in society, thus creating the need to study attitudes toward disabilities.

Study of Attitudes and Disabilities

The topic of attitudes and individuals with disabilities has been intensively studied for several reasons. In the United States, after the passing of the Civil Rights Act of 1964, scholars urged the nation to examine their attitudes toward the disabled population. Dubrow (1965) urged professionals in the rehabilitation field to examine their own anxieties and hostile attitudes toward PWDs. There was an explosion of global interest in individuals with disabilities between 1979 and 1981, which was stimulated by the 1979 International Year of the Child, followed by the 1981 International Year of the Disabled Persons. Many nations during the 1970s, including Ethiopia, were looking for ways to better incorporate PWDs into society. To accomplish that integration, it was

necessary to better educate and inform the public to increase more favorable attitudes toward PWDs (Miles, 1983).

It has been reported that general attitudes toward PWDs are overwhelmingly negative (Baggett, 1993; Benham, 1995; Chubon, 1992; McCarthy & Campbell, 1993; McGee, 1989; Rao, 2002; Williamson, 2000). Other studies were conducted in specific areas such as employment (Fowler & Wadsworth, 1991; Watson, 1994; Wehman, 1993) and attitudes among professionals (Callahan, 1994; Fichten, 1988; Matziou et al., 2010), which also concluded that there is a lack of sensitivity and appropriate attitudes. One of the main reasons that visible disability evokes a similar type of reaction globally is because the cue is visible and quickly noticeable. Previous studies have measured attitudes; however, the conclusions of these studies made an inference regarding attitudes but no real predictions of behaviors. Even if attitudes were positive, this did not indicate the inclusion of PWDs, which is behavior.

Attitudes do not necessarily predict behavior. In general, attitudinal studies conducted over the years have found a low correlation between attitudes and prediction of behavior. Attitudes have been assumed to predict behavior because a behavior is a component of attitudes. Therefore, researchers assumed that attitudes would predict actual behaviors. To prove this theory, many studies were conducted to assess attitude's ability to predict actual behavior.

In 1934, LaPiere conducted a study that assessed the attitudes of hotel and restaurant employees toward Chinese Americans. He took a Chinese couple across the country with him to test this theory. Although the restaurants and hotels served the couple, when he sent the hotels and restaurants attitude survey, the results indicated that 92% of the restaurants and hotels said they would not serve the Chinese couple. Their behavior when providing accommodations for the couple and their attitudes when they were surveyed were not the same.

A second study examined students' attitudes toward cheating to predict cheating. Students' attitudes toward cheating were measured at the beginning of the semester. Students were also allowed to score their own tests in class providing them an opportunity to cheat. When students' scores on the attitudes toward cheating and their scores on their own tests were analyzed, there was virtually no correlation. How students' scored on the attitudes survey and how they scored their own tests were not related.

Even recent studies of attitudes toward disability and hiring practices have proven that correlation between attitudes and behaviors continues to be poor. A study by Wilgosh and Skaret (1987) that examined employers' attitudes toward hiring people with disabilities concluded that while employers displayed positive attitudes, when it came to actually hiring people with disabilities they did not. The authors concluded that employers displayed positive attitudes because they wanted to behave in socially desirable ways and say the right things; however, when it came to actually hiring people with disabilities, they were less concerned about what others might think and relied on their knowledge about disabilities, which in most cases was limited or was based on stereotypes.

Researchers have attempted to predict job satisfaction attitude and attendance (Vroom, 1964) and whether attitudes toward labor unions predicted labor union meeting attendance (Dean, 1958). Another study was conducted to examine attitudes toward participating in a psychological study to predict the actual behavior of participating in the study (Wicker & Pomazal, 1971). All of these studies concluded that there was a poor correlation between attitudes and actual behavior.

In general, attitudes have been found to be poor predictors of actual behavior. Wicker (1969) conducted a meta-analysis of attitude studies that attempted to predict attitudes; he stated that "taken as a whole, these studies suggest that it is considerably more likely that attitudes will be unrelated or only slightly related to overt behaviors than that attitudes will be closely related to actions. Product-moment correlation coefficients

relating the two kinds of responses are rarely above .30, and often are near zero” (p. 65).

In general attitudes studies have proven that there is a difference between what people say (attitude) and what they do (behavior). The better predictor of behaviors is not necessarily attitude; personal disposition, social context, and norms have been reported to have more reliability in determining people’s behaviors and actions (De Fleur & Westie, 1958; Deutscher, 1969; LaPiere, 1934).

Conceptual Issues and Key Aspects of Evaluating Disabilities

The saliency of disability is global because the cue for the disability is visible, and a visually noticeable disability globally communicates that a person is different. One of the significant points of this study is how the visibility of a disability provides the cue in part needed to establish the perception of difference (Jones et al., 1984). When perception of difference is established, the non-disabled person socially categorizes the PWD and attaches attributes to that individual. Some examples of attributes are the ability to perform life roles such as worker, student, and community member. In Ethiopia, specifically, individuals with disabilities are misjudged on their ability to perform work tasks and contribute to their community (Tiressew, 2005). These attributes are formed through cognitive categorizations, which include overgeneralization of people’s characteristics based on initial yet salient characteristics (Harper, 1995; Harper, 1999). The salient characteristic may be a missing limb or other visible disfigurement, and the response of the non-disabled individual has been socially taught or conditioned regarding a PWD (Harper, 1995; Wright, 1980). The visible “difference” of a disability is often the stimulus needed to elicit acquired and conditioned actions (Bain, 1930; Richardson 1970), which in Ethiopia has taken the form of negative attitudes, displayed in terms of exclusion from social activities and stigma for disclosing disabilities. However, because attitudes are also acquired and learned, change is also possible through teaching, such as educational interventions (Bain, 1930; Hunt & Hunt, 2004). Research has indicated that

positive attitudes are achievable through educational interventions and contact with PWDs (Junco & Salter, 2004). Consequently, the majority of intervention studies focusing on improving attitudes have been very limited in their impact (Donaldson, 1980; Harper, 1995).

Attitudes Toward People with Disabilities

The study of attitudes began in Germany in 1850 and since then, the study of attitudes toward PWDs has become increasingly common. Studying attitudes toward PWDs was made necessary because to change negative attitudes, they must first be studied in order to make changes that result in integration of PWDs (Jones & Gaskin, 1984). The process of studying attitudes affecting the disabled community has been described as working on three different social levels (Antonak & Livneh, 1988). Altman (1981) described the first and innermost level as peers, family, and friends of PWDs as well as the attitudes of inner circles that directly affect the self-conceptualization of PWDs and their socialization into the community. The second level is the relationship between rehabilitation professionals and PWDs. Professionals are of the utmost importance for two reasons: Their attitudes are the first contact a PWD has with a service provider, and second, professionals' attitudes influence society at large. This group influences medical and rehabilitation services, as well as the exchange of information between professionals and PWDs and their families. The second level is composed of rehabilitation counselors, social workers, teachers, and health care professionals (Antonak & Livneh, 1988).

The third level, also known as the outermost circle, is described as societal attitudes. These attitudes can create real barriers for PWDs in gaining access and integrating into the larger society. Societal negative attitudes are obstacles for PWDs in meeting their life goals. Examination of public attitudes becomes essential because of the large role of societal attitudes in the acceptance of PWDs. Yuker (1965) stated that to understand the nature of the interaction between PWDs and individuals who are non-

disabled, examination of attitudes becomes necessary. Examination of attitudes towards people with disabilities can be measured in a variety of ways. Measuring attitudes toward disabilities is both “complex and multifaceted” because it becomes difficult to measure and then change attitudes toward disabilities (Yuker, 1988). However, PWDs are part of society. Knowledge of people’s attitudes must be increased in order to change attitudes and accomplish integration of PWDs into the community (Yuker, 1988). With the understanding that stereotypical beliefs and negative attitudes have long impacted the lives of PWDs, Altman’s (1981) review of attitudes toward disabilities concluded that attitudes of friends, family, and the general public are vital, but also added that societal attitudes as a group shape the experiences of PWDs; thus, “proposed change on the organization, community or even the national level” is necessary (as cited in Gething, 1994, p. 322). Furthermore, PWDs acknowledge that negative attitudes play a critical role in hindering them from integration into society (Donaldson & Martinson, 1977).

Visible Disabilities and Attitudes

Wright stated that negative attitudes toward physical disability arise from the inferior status that society and individuals assign to the PWD (1980). Wright also suggested that an individual with a physical disability often does not fit in with common societal expectations and, therefore, is frequently devalued and perceived as inferior (Wright, 1980). Non-acceptance of PWDs in Ethiopia is communicated through the non-presence of PWDs in public places, low employment status, isolation, and other secondary mental health issues (Shilbre et al., 2001). Therefore, negative attitudes toward people with disabilities in Ethiopia are socially learned (Fishbein & Ajzen, 1972, 1975) and are a function of historical beliefs (Antonak & Livneh, 1988).

Ethiopians’ attitudes toward disabilities, as is true in all cultures, are inherently embedded in their cultural and social beliefs, and hence, negative attitudes are often passed on through social-cultural interactions. Attitudes about disabilities in Ethiopia are often based on supernatural beliefs, which have proven to be negative (Alem, Desta, &

Araya, 1995). These beliefs include (a) possession by evil spirits or the devil or other demons that may be specific to a tribe; and (b) curses, spells, or bewitchments by people who are believed to have supernatural powers of “buda” (evil eye) (Kahana, 1985; Messing, 1958; Reminick, 1974). These beliefs have affected Ethiopians in numerous ways, such as condoning social stigma, marginalizing individuals who are believed to be physically or mentally ill, as well as limiting access to rehabilitation services (Weldead, 2007). As a consequence, negative attitudes toward PWDs have become socially acceptable attitudes to possess, and to have any differing opinions would be going against the norm (Katz, 1960). The method by which attitudes have been taught and learned in Ethiopia is through conditioning of what is acceptable for the cultural norm (De Houwer et al., 2001; Winkielman et al., 2003) and general socialization (Newcomb, 1943), both of which have contributed to the formation of negative attitudes toward PWDs. Although beliefs about attitudes of the general population in Ethiopia are connected to supernatural beliefs, it is uncertain if Ethiopian college students’ beliefs are informed by cultural socialization. What is certain is that the beliefs of college students and professionals in general do affect PWDs. In fact, professionals who are employed in the rehabilitation profession have a direct affect on an individual with a disability.

Professional Attitudes

In a study by Wong, Chan, Cardoso, Lam, and Miller (2004), a total of 98 participants, of which 49% were white, 15% African American, and 14.3% Asian American, indicated that disability type, age, gender, and ethnicity significantly contributed to rehabilitation students’ attitude formation regarding PWDs. Participants indicated higher preferences for young, educated, Euro-American women. In 2006, researchers Rosenthal, Chan, and Livneh assessed rehabilitation counseling (RC) students’ attitudes toward disabilities. Their findings concluded that there were two factors that were most salient for RC students in their preferences. The first was age, and second was disability type. RC students’ preference for younger consumers was related

to the physical ability of younger consumers. Parashar, Chan, and Leierer, assessing Indian graduate students' mentoring preference and attitudes toward disabilities, conducted a similar study in 2008. They also concluded that disability type, age, college education level, and employment status played a significant role in which students with disabilities were chosen by the graduate students to mentor. Asian Indian graduate students preferred to work with people with disabilities who were women, white, educated, and employed.

A 2002 study conducted by Chan et al. examined the effects of curriculum in changing the attitudes of Chinese rehabilitation and business students. The study concluded that rehabilitation students had more positive attitudes toward PWDs compared to the business students. One rationale of this research was that certain areas of academic studies expose students to various types of disabilities through occupational training experience, thus creating a type of contact. Studies have indicated that people in the field of humanities have shown less negative attitudes compared to those with other majors. Major in the humanities were found to have more contact and exposure to disabilities compared to majors such as business and management (Hunt & Hunt, 2004). Hence, the academic majors of college students also play a significant role in the formation and/or change of attitudes toward PWDs.

Rehabilitation Professionals' Attitudes

The attitudes of rehabilitation professionals have been of critical interest because of the key role that rehabilitation professionals play in promoting access of PWDs to society (Antonak & Livneh, 2000; Brodwin & Orange, 2002). However, in Ethiopia, there is a lack of research on the attitudes of college students and professionals toward disabilities. Ongoing research is critical in this area because past research has shown that negative attitudes of professionals influence the barriers faced by PWDs in fully integrating into society (Chubon, 1992; Wright, 1980). It then becomes a necessity to

examine the attitudes of those students who will become future professionals and authority figures in a society.

In a multinational study of attitudes toward PWDs conducted by the Special Olympics in 2003, the results from Egypt are critical to the proposed study because Egypt is similar in culture to Ethiopia, and both countries are located in Northeast Africa. Hence, it is logical to assume that the attitudes displayed in Egypt toward PWDs are similar to attitudes that have been displayed in Ethiopia, particularly if the disability is visible. Egypt and Ethiopia as nations that are part of the sub-Saharan region of Africa are culturally very similar in core beliefs and worldviews, which include attitudes (Nwadiora, 1996; Mbiti, 1969). In sum, many factors affect an individual's attitude toward PWDs. The variables that have directly influenced negative and positive attitudes have been gender, level of education, academic, year in college, self-esteem, and level of contact. The following section will address these variables and their level of influence on attitudes toward disabilities.

College Students' Attitudes Toward Disabilities

Many scholars have pointed out the importance of examining college students' attitudes toward disabilities for establishing attitudes in the larger society. Hunt and Hunt (2004) said that because college students are placed in a unique position of becoming future leaders in the business world, and thus having potential to affect employment outcomes for people with disabilities, it was essential to examine the attitudes of college students who were business majors. Although many studies use college students for attitudinal studies, few studies have actually examined attitudes toward visible disabilities.

Olkin and Howson (1994) specifically examined college students' attitudes toward visible disabilities and the mages they invoked. The study was conducted at a California state university with a 90% Caucasian student population and a total of 184 participants. The participants were 98% Caucasian with 57% females and 43% males.

None of the students reported having a disability and no data could be located from the university about the number of students with disabilities attending the university. The students were given two assessments to complete along with a demographic sheet. The two assessments measured two different aspects of attitudes. The Social Distance Scale (SDS) measured social acceptance of individuals with disabilities. The SDS asked questions such as “would have as a next door neighbor” or “would accept as a close kin by marriage.” The Attitudes Towards Disabled People (ATDP) is constructed so that higher scores indicate a positive attitude and lower scores indicate a negative attitude. Although there were no hierarchies in gender preferences, there were preferences in disabilities. The disabilities toward which the respondents displayed more negative attitudes were cerebral palsy, facial disfigurement, little people (dwarfism), MS, and quadriplegia. The disabilities that elicited favorable social distance and more positive attitudes were amputees with missing arms or legs, and individuals with blindness, crutches, and leg braces. Fifty-eight percent of the students identified the image of a wheelchair user when asked about a disabled person. This study summarized a few aspects of visible disabilities and their acceptance and non-acceptance. Disabilities that affected speech and communication were placed in the negative attitude category. Thus cerebral palsy, facial disfigurement, and MS were met with unfavorable attitudes because of the possibility of affecting an individual’s speech. Although Olkin and Howson’s (1994) study may have alluded to speech impairment possibly playing a role in the ranking of disabilities, it is critical to examine other aspects that may play a role in college students’ attitudes toward disabilities.

To examine college students’ attitudes towards disabilities, researchers need to ask the question to what degree does the majority of society—experts, professionals, and personal opinion—contribute to the attitudes of college students toward disabilities (Brillhart, Jay, & Wyers, 1990). Many researchers attempted to answer this question, most notably Yuker’s (1994) review of the literature that identified variables influencing

attitudes toward PWDs. Yuker (1994) wrote that not only is the concept of attitudes difficult to measure, but researchers need to invest in researching more relevant characteristics that have a greater influence on attitudes toward PWDs. He identified contact as having the most influence, and gender, professional field, education level, and self-esteem having some influence. Although Yuker (1994) mentioned other variables such as race/ethnicity and religion, they were of little significance. Thus the following review will focus on the variables of educational level, gender, year in school, academic major, contact level, self-esteem, and cultural orientation.

Characteristics that Influence College Students'

Attitudes Toward Disabilities

This section highlights the demographic categories that attitudinal studies have found to be influential in predicting attitudes towards disabilities. The following themes were found within various research studies examining college students' attitudes toward general disabilities: gender, education level, year in school, academic major, level of contact with people with disabilities, self-esteem, and cultural orientation. Although the majority of the following studies examined the attitudes of college students without disabilities toward students with disabilities in an educational environment, the following variables were identified as factors that influence college students' attitudes toward disabilities.

Education Level and Disability Type

It is critical to acknowledge the influence of education and the environment it provides as a category. It is only logical to address education and educational environment when assessing college student's attitudes toward disabilities. Stovall and Sedlacek (1983) were one of the first researchers to make the connection between disability type and situation when they assessed college students' attitudes toward people with physical disabilities. They concluded that disability types influence attitudes. Their study found that college students had more favorable attitudes toward students who used

wheelchairs than those who were visually impaired. A study by Rosenthal et al. (2006) indicated that the two factors that made a difference in attitudes were disability type and age; however in other studies age was as significant as disability type. In 2008, Parashar et al. concluded that the disability type of the individual contributed to their attitude toward disabilities. These findings suggest that education and disability type influence attitudes toward disabilities. Higher education has been found to have a positive correlation with more favorable attitudes (Yuker, 1994). Students with higher levels of college education expressed more favorable attitudes compared to freshmen and sophomores, who displayed less favorable attitudes toward fairness and accommodations (Upton & Harper (2002).

Gender

Studies comparing gender differences in attitudes toward disabilities have reported varying results. Yuker (1994) stated that although past studies have reported positive attitudes for females, the differences between the genders are diminishing. Consequently, some current researchers are still finding no differences in attitudes between genders whereas other studies are consistently reporting differences between genders mainly with females expressing more favorable attitudes compared to males in the United States (Hunt & Hunt, 2000; Pitman & Slate, 1994; Upton & Harper, 2000). To date, no study in the United States has found males expressing more favorable attitudes compared to females. Studies conducted in France and Japan found no differences between males and females whereas in India, Denmark, and Israel, males displayed more favorable attitudes toward disabilities (Yuker & Block, 1986). A study in Australia by Gething (1991) also concluded that females had significantly more favorable attitudes toward disabilities compared to males. Even when various age groups' attitudes toward disabilities were compared, female students displayed more favorable attitudes across age groups.

Another study conducted by Upton and Harper (2002) examined the attitudes of undergraduate students toward students with disabilities receiving accommodations. Their research addressed several significant variables that influenced attitudes, with two of them being gender and education level. They assessed college students' attitudes toward students with disabilities and the accommodations they received. After examining a total of 852 students without disabilities and 71 students with disabilities, they concluded that females reported more positive attitudes than males. Also, students who were considered at a higher level in college indicated more favorable attitudes toward students with disabilities. The authors also indicated that freshmen and sophomores expressed more concern for fairness toward students with disabilities receiving accommodations. Upton and Harper concluded that although females demonstrated more favorable attitudes, students who were identified as either juniors or seniors also had more favorable attitudes. These studies demonstrate that while gender is a factor in the influence of attitudes, education level seems to make a difference as well.

Royal and Roberts (1987) compared the attitudes of students in elementary school, middle school, high school, and college. They concluded that female subjects had more favorable attitudes across all age groups. A literature review conducted by Rao (2004) identified gender as an important variable, which could influence attitudes among college faculty. Rao concluded that some female college faculty had more positive attitudes toward PWDs than did male college faculty. Although gender continued to be a predictive factor of attitudes, level of education did not affect females' attitudes.

Year in School

Several studies that measured attitudes of college students toward disabilities have also measured the influence of years in college on these attitudes (Antonak; 1981; Asmus & Galloway, 1985; Semmel & Dickson, 1966). All of these studies concluded that the variable of year in school influenced attitudes toward disabilities. While the majority of the research is over 20 years old, with the exception of the studies conducted by Upton

and Harper (2002) and Pitman and Slate (1994), the latter two studies concluded that students with more years of education displayed more positive attitudes toward students with disabilities. These findings indicated that attitudes may vary between undergraduates and graduate students because the years in school seem to influence attitudes. Yunker (1994) concluded that among demographic variables, the amount of education might indicate the most variability in attitudes. He also found that more education was correlated with positive attitudes in the United States. There are two parts to the rationale for adding year in school as a variable in this study. The first is that it will provide additional variability in data collection, and the other is that correlation was obtained only in the United States and not in other parts of the world. Au and Man (2006) found that health care professionals held more positive attitudes compared to students in the health care field. They attributed the positive attitudes of students in the health care profession to having more years in school, meaning more exposure to disability literature and work experience in the field combined. A student's year in school was a significant factor, but also the academic major may be an important factor that predicts attitudes. Numerous studies have been conducted to investigate not only the influence of a college education but also the contribution of the academic major to attitudes toward disabilities (Antonak, 1981; Asmus & Galloway, 1985; Chism & Satcher, 1997; Loo, 2001; Satcher & Dooley-Dickey, 1992). Other researchers have examined the influence of specific majors on attitudes (Hunt & Hunt, 2000, Loo, 2004; Lyons & Hayes, 1993).

Academic Major

Several studies have indicated that the academic major, or area of study, also influences how college students view students with disabilities. The Hunt and Hunt (2000) study found that college students who majored in business held more negative attitudes toward disabilities in comparison to other majors. They recommended that business majors needed more education about disabilities so as to foster more positive attitudes toward disabilities in the business sector of employment.

Hunt and Hunt (2000) attributed their findings regarding business majors' more negative attitudes to having less exposure to both the disability literature and PWDs. Also congruent with the nature of the competition of the business world, business majors are likely to view PWDs as liabilities rather than assets and thus are less likely to hire PWDs. Because business majors are less likely to encounter disability literature, the exposure in academics would be limited. This lack of information also contributed to negative attitudes.

A study by Satcher (1997) confirmed that students who are aware of the American with Disabilities Act (ADA) tend to express more positive attitudes toward PWDs. Based on these findings, it is logical to assume that the variability in attitudes is based on a student's chosen area of study. Also, just by mere choice of major, some students are afforded more contact with disability content and/or PWDs. The amount of contact, which accordingly contributes to their knowledge about disabilities, may also be a factor in their attitudes toward disabilities (Elmaleh, 2000; Gelber, 1993; Yuker, 1994). Patrick's (1987) study adapted a physical education course in which information about disabilities was presented along with an opportunity to have contact with students with disabilities. The combination of both of these interventions proved to be effective in changing attitudes. Bekle's (2004) study found a correlation between students who had knowledge and information about attention deficit disorder and the students' positive attitudes. Those students who knew about disabilities also had positive attitudes.

In general, research has indicated that students in the help-oriented fields (rehabilitation counseling, occupational therapy, education, counseling, and health) tend to display more favorable attitudes compared to students with majors such as business (Antonak, 1981; Hunt & Hunt, 2000). English (1971) concluded that professional association was an important factor that influenced attitudes, mainly because different professional groups have varying degrees of education and training, as do different occupational groups. This thinking is also the logic that Hunt and Hunt (2000) used

when they concluded that it was the nature of the business major's attributes that contributed to valuing competition and devaluing people with disabilities, given that they are viewed as having non-valuable attributes in the business world. A study conducted by Semmel and Dickson (1996) compared the difference in attitudes between special education and general education majors. They found that special education majors displayed more favorable attitudes toward disabilities than general education majors.

The need to examine college student's attitudes toward disabilities goes beyond convenience sampling. College students are tomorrow's leaders of industries, and thus are future employers (Hernandez, Keys, & Balcazar, 2000), educators (Vogel, Leyser, Wyland, & Brulle, 1999), and health care providers (Brodwin & Orange, 2002) of individuals with disabilities. Past research has indicated that individuals with disabilities face discrimination in all these areas.

As research has indicated, employment discrimination was found to be a barrier for people with disabilities and thus, employment discrimination tends to be a focus of attitudinal based studies, because it limits individuals with disabilities from fully participating in society (Livneh & Antonak, 1997). Negative attitudes of employers have contributed not only to discrimination but also to economic disadvantages of PWDs (Satcher & Dooley-Dickey, 1992). Thus, the logic is that since students will be future employers and leaders of many corporations and government institutions, their attitudes will contribute to the type of training and policy modifications that are needed to decrease negative societal attitudes (Satcher & Dooley-Dickey, 1992). More specifically, Loo (2001) identified that there are differences in attitudes between college students' academic majors. Loo's study examined the attitudes of 231 undergraduates with 129 males and 102 females whose ages in the management program ranged from 19-51 years. Only 10 participants self-identified as having a disability. The study concluded that undergraduate Canadian management majors displayed less favorable attitudes overall toward individuals with disabilities. The researcher concluded, "It may be that these

management undergraduates are more competitive (i.e., survival of the fittest), less accepting of perceived weaknesses in people, and more hard-nosed than undergraduates in other disciplines” (p. 294). Chan et al. (2002) also found that when comparing attitudes of first-year rehabilitation students and business students, the rehabilitation undergraduate students’ positive attitudes increased after 1 year while the business students’ negative attitudes increased. They associated their findings with rehabilitation students receiving more exposure and contact as their program progressed, although they found that past experiences and contact were not significant to their findings.

Hunt and Hunt’s (2000) study recommended that business majors needed more education and exposure to PWDs. Thus the context of the contact influences the attitudes that people without disabilities develop toward people with disabilities (Yuker, 1994).

Contact Level

Level of contact with people with disabilities is a critical variable because of its major impact on attitudes. Contact with people with disabilities was first introduced by Amsel and Fichten (1988) as a key variable for reducing negative attitudes toward disabilities. Contact theory (Allport, 1935; Amir, 1969) asserted that “interaction between individuals with differences tends to produce changes in attitudes” (Tripp, French, & Sherrill, 1995, p. 323). Thus, contact may be the most influential variable for prediction of negative attitudes toward disabilities (Yuker, 1994). He defined contact in terms of interaction: “Interaction with disabled people that is personal, rewarding, characterized by cooperation, intimacy, and equal status usually provides positive information and tends to result in positive attitudes” (p. 7). He also stressed that contact can only foster positive attitudes if the information that is exchanged disconfirms stereotypes. For example, “people with close friends who are disabled have positive attitudes” (p. 7). Yuker (1994) stressed the need for researchers to examine the effects of contact along with critical variables, such as status relationships, cooperation, intimacy, group norms, and the attitudes of authority figures. These variables should also include relationships

such as personal and teaching, in addition to settings and norms in which these relationships take place. Yuker (1988) believed that “role relationships and the context in which interaction occurs have important influences on attitudes” (p. 11). Yuker’s studies found that family members, friends, neighbors, educators, employers, and health care workers may also influence attitudes. He stated that studies that examine contact level and attitudes are complex and may yield a variety of results, positive or negative, with no relationship between variables.

Allport (1954) stated that in order for contact to take place and have success, the following must occur: (a) equal status because both members of each group must enter into an equal relationship; (b) common goals that both groups must establish; (c) intergroup cooperation so that members of each group must be able to achieve goals interdependent of each group; and (d) support of authorities, law, or customs so as to establish policy or law that supports the interaction of both groups. All of the above are critical in further establishing that contact hypotheses have some effective outcomes in decreasing conflict and improving relations. A study by Rothbart and John (1985) concluded that contact was an effective method of decreasing discrimination, and the one criterion that needed to be met was contact between the groups occurring often in various contexts. The concept of contact and its critical influence on attitudes toward disabilities has been illustrated in many studies (Antonak, & Livneh, 1988). Contact is not only the most important variable influencing attitudes but also the criteria needed to change attitudes toward disabilities (Yuker, 1994). Amir (1969) wrote that “contact between people—the mere fact of their interacting is likely to change their beliefs and feelings towards each other (pp. 319-320). Most notably, Donaldson (1980) explained that the successful intervention that comes from contact is due to the equal status of the person with disabilities with the person without disabilities.

Yuker (1988) described three factors that are critical to the outcome of successful contact: (a) the personal characteristics of the person with the disability, (b) the personal

characteristics of the person without the disability, and (c) the interaction variables between both people. He also stated that regardless of the variables, it is essential that “positive attitudes of disabled people toward their disability (how they have accepted their disability) often have a positive effect on the attitudes of others towards them” (Yuker, 1994, p. 9). Like Yuker (1988, 1994), many other researchers (Antonak, & Livneh, 1988, 2000) have concluded that contact is an influential variable that affects attitudes toward PWDs. Specifically, Makas (1993) noted that “interpersonal contact between individuals who have disabilities, and those who do not, will have an impact on the attitudes of the group as a whole” (p. 132). Thus, contact in social situations or personal relationships between individuals with and without disabilities are likely to have positive attitude outcomes (Donaldson, 1980). Several studies with college students have proven that contact is a critical variable in measuring attitudes. These studies have concluded that contact is an important variable in examining attitudes and fostering positive attitudes toward PWDs (Hunt & Hunt, 2000; Loo, 2001; Smith, 2003). Fichten (1988) suggested that one of the features that fosters positive attitudes toward PWDs is for PWDs to be viewed as equal in status to people without disabilities.

Yuker (1994) believed that contact is the most important information to obtain from nondisabled participants because the longer contact is maintained with a person with a specific disability, the less important that disability becomes. Yuker also noted that contact is one of the most effective methods of changing negative attitudes. More importantly, researchers concluded that the less interaction an individual has with PWDs, the more likely the individual is to respond to limited stereotypical images and express negative attitudes (Yuker, 1988; Taylor, 1961; Weinberg, 1976).

Amsel and Fichten (1988) introduced level of contact with PWDs as a way of reducing negative thinking toward PWDs. Lyons (1991) suggested that occupational therapy students would benefit from social contact with PWDs in professional settings. The study concluded that students who engaged in contact demonstrated a shift toward

positive attitudes, while those who did not participate in any contact did not demonstrate an increase in positive attitudes even after progression through the occupational therapy program. Pitman and Slate (1994) suggested that, overall, students who have more experience with individuals with disabilities express more positive attitudes toward disabilities.

The current study measured the level of contact in two separate parts. The first part was self-reported by participants on the demographic sheet, in which participants indicated the level of contact, type, and proximity. The Marlowe-Crowne Social Desirability Scale (MSCDS; Crowne & Marlowe, 1960) assessed the second part. This measure was included because participants have a tendency to want to be viewed as socially desirable; therefore, it is important for researchers to differentiate between those wanting to respond to the instrument in a socially desirable manner versus those responding honestly in order to increase the validity of the data (Andrews & Meyer, 2003).

The purpose of the MSCDS is to address social desirability bias. Holden (1994) defined socially desirability bias as “the tendency for individuals to portray themselves in a generally favorable fashion” (p. 429) and, therefore, the MSCDS was used to detect individuals who presented themselves in either an overly desirable or an honest manner.

Both self-report and an assessment were used to indicate contact level with PWDs and the desire for contact. Previous studies showed that in addition to contact, the self-perception of the participants influenced their attitudes toward individuals with disabilities. This study defined level of contact as indirect contact, which is knowledge about disabilities through course work, or as direct contact, which involved both prior and present interaction with an individual or a community of PWDs.

Studies that have examined college students’ attitudes toward disabilities have provided critical information regarding attitude changes. Stovall and Sedlacek (1983) were one of the first researchers to conduct a study on college students’ attitudes toward

physical disabilities. The two variables identified in the Stovall and Sedlacek study were disability type and situation as major influences on attitudes. Their research concluded that students with disabilities displayed more favorable attitudes. Also, with regard to disability type, more favorable attitudes were found toward students who utilized wheelchairs compared to students with visual impairments. A study by Gordon, Chariboga-Tantillo, Feldman, and Perrone (2004) examined the attitudes of undergraduate students toward friendships and marriages with PWDs. They reported that out of the 215 undergraduates, 60% indicated their willingness to befriend an individual with medical, physical, and sensory impairments. Although 13% indicated a willingness to marry an individual with a mental illness, only 4% indicated a willingness to marry an individual with mental retardation. This study further confirmed the hierarchy for disability type and acceptance.

These studies combined have introduced several variables that predict and change attitudes. Although contact level was shown to be a critical variable for predicting attitudes, contact was also a critical component to effectively change attitudes when combined with education. However, persuasive information alone was not as effective (Donaldson, 1980).

The immediacy, type, context, and length of contact between people without disabilities and people with general disabilities have been a point of interest in rehabilitation literature (Donaldson, 1980; Yuker, 1988, 1994). Contact is assessed because the past experiences of people without disabilities with people who have disabilities have proven to affect their current attitudes. As noted in Chapter I, interactions between people with and without disabilities have sometimes resulted in negative attitudes. Allport (1954) believed that contact was critical to improve relations between groups. As in this case, the contact was between people with disabilities and people without disabilities. However, the variable of contact alone cannot predict attitudes, and other studies have found that the attitudes are affected by self-esteem.

Self-esteem

Studies have found that, in general, individuals who hold themselves in positive regard also tend to favor individuals with disabilities (Garske & Thomas, 1990). A study by Findler et al. (2007) using the MAS to measure attitudes and the CSEI to measure self-esteem in a sample of 132 people found positive correlations. Their study concluded that there was a positive correlation (Cronbach's alpha of .86) between high self-esteem and favorable attitudes toward disabilities.

Garske and Thomas (1990) examined the attitudes of rehabilitation students in the beginning of their graduate studies and the relationship to self-esteem and prior contact. The study employed 80 students from 10 different rehabilitation graduate programs. The two instruments used to measure attitudes toward disabilities and level of self-esteem were the Issues in Disabilities Scale and the Rosenberg Self-Esteem Scale. The study concluded that there was positive correlation between participants who displayed high self-esteem as indicated by the Rosenberg scale and positive attitudes. Although the correlation coefficient was low $r=.29$, the relationship between self-esteem and attitudes were statistically significant with a positive correlation. The findings of Garske and Thomas were consistent with other studies reported by Siller (1964) and Yuker et al. (1966). Siller and Yuker et al. also found that individuals with high self-esteem tended to express favorable attitudes toward individuals with disabilities.

The Coopersmith Self-Esteem Inventory Adult Form (CSEI; Coopersmith, 1981) defines self-esteem as individuals' perceptions about themselves. These perceptions could be images or values, both negative and positive, through which the persons view themselves. This is the same definition employed by this study because the study used the CSEI to measure participants' self-esteem. It is critical to measure self-esteem of participants given that Yuker (1994) stated that valid attitude research is only as strong as the profile the researchers build of the participants. He pointed out that many studies about attitudes toward PWDs are not as useful because they provide too much emphasis

on the demographic description of the participants, which is not helpful in understanding why the study participants hold certain attitudes.

Keller and Siegrist (2010), in a study of 950 participants, found a correlation between those who reported having a high self-esteem and those who indicated a positive attitude toward disabilities. They concluded that those participants who had more favorable attitudes also had access to internal psychological resources such as self-esteem and were able to cope with life stressors.

The variables discussed above have played a significant role in various studies in determining attitudes toward disabilities. For those reasons, this study identified gender, level of education, year in school, academic major, and level of contact of interest to measure because studies have indicated variability in attitudes toward disability based on these variables.

Cultural Orientation

Cultural orientation is critical to examine because it influences people's attitudes toward disabilities. Researchers believe that stigmatizing attitudes are driven by socio-cultural norms and influences (Goffman, 1963). The cultural orientation of individuals affects what attitude they have toward an object, because attitudes encompass certain cultural norms. Yang et al. (2007) suggested that cultural norms influence what stigmatizing attitudes will be assumed by a community. For example, researchers in Egypt found that people who held negative attitudes toward intellectual disabilities in Egypt also endorsed cultural norms in that community (Coker, 2005). This form of cultural orientation is collectivist, because the group's values and norms supersede individual opinion. Hui (1988) defined individualism as "(a) the self is the basic unit of survival, (b) have high needs for autonomy. He defined collectivism as (a) hold the view that the unit of survival lies in a group or in several groups and (b) have greater associative and nurturing needs" (p. 667). He also argued that collectivism and individualism are multidimensional constructs that could be further reformed to explain

each construct. He proposed that these constructs could be viewed as horizontal and highlighting equality or vertical, which represents the hierarchy. The combination of these constructs is the basis for the definition of the four subscales of the Individualism/Collectivism Scale (INDCOL) originally developed by Hui (1988): *horizontal collectivism* (HC), *vertical collectivism* (VC), *horizontal individualism* (HI), and *vertical individualism* (VI).

Chiou (2001) conducted a study that examined the cultural orientation of college students, with 254 from the United States, 311 from Argentina, and 264 from Taiwan. He wanted to specifically determine where these college students measured on the four subscales. He found that Argentine college students endorsed a vertically collectivist culture. Taiwanese samples were vertically individualistic and vertically collectivist. The U.S. sample was more horizontally individualistic.

Rao et al. (2010) suggested that cultural characteristics may be able to interpret the difference in stigmatizing attitudes across cultures. They conducted a study that examined the difference in employers' attitudes toward employees with disabilities and the employers' cultural orientation. They used the collectivism and individualism scale to survey 302 employers from Beijing, 284 from Hong Kong, and 293 from Chicago. They found that the Chinese culture highly valued collectivistic cultural orientation, and the American culture endorsed the individualistic orientation. The Beijing sample were young participants, whom the researchers theorized were unique, because they performed like traditional Western business people; they displayed more values of Western society than the rest of the population that endorsed collectivistic orientation. This happens in societies such as in Beijing where there has been a mass Western influence due to the increase in free market participation. Rao et al. (2010) concluded that rather than the cultural orientation, the perception that the person with the disability was responsible for acquiring it influenced attitudes more strongly. However, those who endorsed an

individualistic cultural orientation had more complete values, which may have influenced negative stigmatizing attitudes.

Much like the Chinese culture, Ethiopian culture has also experienced a mass exposure to Western values. However it is unknown to what extent the exposure to these Western values, which according to research are rooted in individualistic values, have influenced Ethiopian college students. The cultural orientation of Ethiopian college students could be speculated as collectivistic; however, due to the nature of living in an urban city and being exposed to many Western values, until the cultural orientation of those students is assessed, their cultural orientation is unknown.

Theoretical Framework

In an effort to explain how attitudes are acquired, this study was based in part on Bandura's research (1977). Bandura's Social Learning Theory is best known for its explanation of how people learn and, in this case, how they acquire particular attitudes. Bandura believed that people learn through multiple means, both directly and indirectly. People are directly taught through modeling, imitation, and from one another. People are also taught indirectly through observation of behavior. Bandura said that "virtually all learning phenomena resulting from direct experience can occur on a vicarious basis through observation of another person's behavior and its consequences" (p. 213). Since learning can take place through behavioral observation and attitudes are "descriptive concepts which are inferred from observations of behavior" (p. 6), it is reasonable to conclude that positive or negative attitudes can be acquired through the social learning process (Antonak & Livneh, 1988). To further illustrate this point, Middlebrook (1974) concluded that attitudes are influenced by every part of society, family, religion, community, and school interactions. All of these interactions are consistently filled with exchange of direct and indirect learning, which contributes to the development of attitudes about objects (people) and in this case PWDs.

Given that an attitude is “an evaluative disposition towards an object” (Zimbardo & Leippe, 1991, p. 31), a disposition toward that object can also be taught. Many theories have arisen over the years that explain the formation of attitudes and have had a significant impact on the study of attitudes. One of those theories of negative origins of attitudes is through social/cultural learning (Antonak & Livneh, 1988). Bandura’s Social Learning Theory can be used to explain observational learning of socially acceptable or unacceptable attitudes toward an object (people) (Zimbardo & Leippe, 1991). For example, a study in Ethiopia by Fitaw and Boersma (2006) found that 36.2% of parents who had children with disabilities reported that they hid their disabled children due to the social stigma of the disability. The behavior of hiding the children and limiting their interaction with society sends a message to the children with and without disabilities that this is an acceptable behavior; in so doing, it communicates that having a disability may be shameful and should be hidden. The children learn to hide disabilities because the parents modeled this behavior. Thus, it can be successfully argued that this study may illustrate that the negative attitudes children form about disabilities can be socially learned from observation of their parents’ behaviors toward those disabilities.

Negative attitudes toward PWDs are often acquired early in development through cultural conditioning. Even young children know how to categorize people with and without disabilities due to what they have learned about PWDs (Harper, 1999; Maras, 1993; Richardson, Goodman, Hastorf, & Dornbusch, 1961). Further studies have confirmed that children’s beliefs about disabilities are inherited from socio-cultural conditioning (Lee & Rodda, 1994). Bandura’s Social Learning Theory posits that people learn from one another via observation, imitation, and modeling. The theory has often been called a bridge between behaviorist and cognitive learning theories because it encompasses attention, memory, and motivation. This theoretical emphasis forms the basis of how attitudes are acquired in this study. In understanding what informs attitudes,

it is also imperative to understand the definition of attitudes from a conceptual, operational, and historical perspective.

Summary

The literature review found that (a) gender, (b) education level, (c) year in school, (d) academic major, (e) contact level, (f) self-esteem, and (g) cultural orientation are critical variables that contribute to assessment of attitudes. Although attitudes have proved to be difficult to measure and many instruments have been developed to measure attitudes directly and indirectly, it is the variables and personal characteristics of people with and without disabilities that have proven to be essential in changing attitudes. For example, although education is an effective method to improve negative societal attitudes, contact and the quality of relationships that people form will affect the perception people have about individuals with disabilities.

CHAPTER III

METHODOLOGY

Introduction

Chapters I and II reviewed societal attitudes toward disabilities as a reoccurring issue that needs to be examined and addressed in society as a whole. Negative attitudes have been identified as social barriers to access and quality of life for PWDs. Public attitudes influence the treatment and successful integration of PWDs into society (Antonak & Livneh, 1995). In Ethiopia, negative attitudes and misinformation about disabilities have affected the disabled community and may prevent them from fully participating in society. Many Ethiopians with disabilities are subjected to rejection and isolation due to negative attitudes (Tirussew, 2005). Chapter III will describe the methodology and data analysis strategy that was utilized in this study to examine the attitudes of Ethiopian college students. This chapter will discuss (a) an overview of research design, (b) settings and participants, (c) research instruments, (d) procedures for conducting the study, (e) research questions, (f) research variables, (g) data analysis, and (h) power and sample size.

Overview of Research Design

The study is a descriptive analysis of the attitudes of Ethiopian college students who were registered part- or full-time at Addis Ababa University in Ethiopia at the time the research was conducted. The two questions for this study were:

Question #1: What are the general attitudes of the Ethiopian college student population in Addis Ababa University as measured by the MAS subscales of Affect, Behavior, and Cognition?

Question #2: How do the variables of gender, education level, year in school, academic major, level of contact, self-esteem, and cultural orientation affect the students' attitudes toward visible disabilities?

Setting and Participants

This study was conducted in Ethiopia at Addis Ababa University (AAU) during the winter of 2011. AAU is the largest and oldest university in Ethiopia, and therefore the student population is in part reflective of the diversity of Ethiopians. Diversity is identified as one of the key values for AAU; in fact, in the University Wide Strategic Plan for 2008-2013 emphasized diversity (AAU, 2008) . Section 1.3.4 states that “the University promotes diversity of its teaching faculty, support staff and students, and encourages the expression, consideration and evaluation of diverse ideas” (p. 3). Although diversity is a key component, the university does not actually keep records of the student population from each ethnic group; diversity is still defined in terms of gender at AAU. The university provides a variety of academic disciplines. AAU offers undergraduate and graduate degrees from the following schools and colleges: business, law, technology information, education, medicine, engineering, veterinary medicine, and journalism and communications. The most current enrollment information by the Ministry of Education recorded a total of 21,739 undergraduate and 6,984 graduate students enrolled in AAU. The university is located in the heart of the capitol city, thus drawing students from various ethnic groups, religions, and regions of the country.

Participants were recruited from across academic disciplines to ensure that students from various disciplines and education levels would be incorporated in the study. The sample was a convenience sample (voluntary) of undergraduate and graduate students on the AAU campus. The criteria for participants was full- or part-time enrollment as a student at AAU during the period of the study.

The recruitment process involved several steps and methods. The researcher was given permission from various faculty members across the campus to come to classrooms and recruit students. The students who chose to participate in the study also had several options for completing the surveys. Students could choose to go to the graduate school dean’s office, pick up a survey packet, and return it upon completion; they could pick up

packets from the researcher during classroom recruiting visits; or they could pick up packets from the researcher's office during office hours located in the graduate school.

Research Procedures

Prior to conducting the study, approval was received from University of Iowa's Institutional Review Board (IRB) for the ethical protection of all human subjects. Permission was also granted by the President of the University of Addis Ababa and the Dean of the College of Education. There is no IRB office at AAU; therefore the appropriate permission granting office was the Dean of the College of Education. Each packet contained a letter, which introduced the study, a consent form, a demographic sheet, and the four surveys, which were the Multidimensional Attitudes Scale Toward Disabled Persons (MAS), the Coopersmith Self-esteem Inventory (CSEI), the Marlowe-Crowne Social Desirability Scale (MCSDS), and the Individualism/Collectivism Scale (INDCOL). Each packet was in an envelope that was self-adhesive, and students were given the choice to return it to the researcher's office at any time after they completed it. Data collection began on January 30 and ended on February 20, 2011. No self-identifying information was collected; therefore, no identification of the envelopes was necessary. After office hours, students could place the packet under the researcher's office door. The office was accessible only by the researcher and was locked after office hours. Each returned packet was stored in a safe, locked drawer that was housed in the researcher's office for the remainder of the study.

Research Instruments

The data collected consisted of four surveys and a demographic sheet. The research instruments that were utilized for this study were (a) a demographic sheet (see Appendix A) which was used primarily for the purpose of collecting descriptive information about the participants; (b) the Multidimensional Attitudes Scale Toward Persons With Disabilities (MAS; Findler et al. 2007; see Appendix B), which was the main instrument that measured attitudes; (c) the Marlowe-Crowne Social Desirability

Scale (MCSDS; Crowne & Marlowe, 1960; see Appendix C), which was mainly used to establish test-taking bias for social desirability of the participants; (d) the Coopersmith Self-Esteem Inventory Adult Form (CSEI; Coopersmith, 1981; see Appendix D), which was the main instrument used to measure self-esteem of the participants; (e) the Individualism/Collectivism Scale (INDCOL; Triandis, 1995; see Appendix E), which was primarily used in this study to measure participants' level of cultural orientation as collectivistic or individualistic.

Demographic Sheet

The demographic sheet included questions for obtaining the following information: (a) gender, (b) education level, (c) academic major, (d) year in school, and (e) contact level (see Research Variables below).

Multidimensional Attitudes Scale Toward

Persons with Disabilities (MAS)

The Multidimensional Attitudes Scale Toward Persons with Disabilities (MAS) was developed by Findler, Vilchinsky, and Werner in 2007. The authors of MAS defined attitudes as a construct of three components. The ABCs of attitudes are affect, behavior, and cognition. The affect component refers to the individual's positive or negative emotions. The behavioral component describes the behavioral response towards an object. The cognitive component refers to the individual's beliefs, ideals, and thoughts about an object (Antonak & Livneh, 1988). The MAS is constructed of three factors of affect, behavior, and cognition combined to assess an individual's attitudes towards people with disabilities.

The MAS is a 34-item self-report questionnaire. The affect factor consists of 16 items, the behavioral factor of 8 items, and the cognitive factor of 10 items. Each item on the MAS is based on a 5-point Likert scale, ranging from 1 (*not at all*) to 5 (*very much*). High scores represent negative attitudes and low scores represent positive attitudes on the MAS. Although the MAS is a relatively new instrument, it has demonstrated a significant

relationship with the Attitude Toward Disabled Persons Scale (ATDP; Yaker, Block, & Young, 1966), demonstrating adequate convergent validity (Findler et al., 2007)

The MAS was normed on sample of 132 Israeli persons consisting primarily of college students. The reliability of some factors of the MAS was reported to be high. For example, a study of 404 participants with majority college students found that the internal consistency (Cronbach's alpha) of the cognitive factor was .88, behavior was .88, and affect was between .61 and .74; Findler et al.(2007) concluded that MAS has adequate internal consistency for the multiple dimensions that it measures. Women generally displayed more positive attitudes as measured via the MAS; those with higher education also displayed more favorable attitudes. Also, significant correlations have been found between the MAS dimensions of behavior and emotion ($r = .41$) and between behavior and cognition ($r = .35$). The authors of the MAS conducted a factor analysis, and each subscale loaded at the following alpha level; affect at .90, behavioral at .83, and cognition factor at .88 (Findler et al., 2007).

Since the MAS has only been used on the Israeli population, a confirmatory factor analysis (CFA) will be necessary to confirm the loading of the three subscales for this study. Although the CFA does not directly answer the research questions proposed by this study, it does provide evidence to how well the items on the MAS loaded compared to the Israeli population. The analysis will answer the question how well the model of the MAS that was used in Israel relate to the Ethiopian college population studies. The primary goal of the CFA is to show how each group loaded on the factors of affect, behavior, and cognition as well as based on how the factor loaded will determine if the model fit both populations.

The Marlowe-Crowne Social Desirability Scale (MCSDS)

The Marlowe-Crowne Social Desirability Scale (MCSDS) is a self-report questionnaire that was developed by Crowne and Marlowe in 1960. The purpose of the MSCDS is to address social desirability bias. Holden (1994) defined social desirability

bias as “the tendency for individuals to portray themselves in a generally favorable fashion” (p. 429) and, therefore, the MCSDS is used to detect individuals who present themselves in an overly ‘moral and honest manner’. The purpose of the scale was to determine whether participants were presenting themselves in a desirable fashion, which can significantly impact the nature of the findings. To ensure honesty and avoid participants’ need to be viewed in a desirable fashion, such as mean levels on the MAS may be lower (suggesting more positive attitudes) as a result of participants wanting to present themselves in a positive light (i.e., not report negative attitudes toward persons with disabilities). According to the Andrews and Meyer (2003) a score of 24 on the 33 item survey would be considered faking positive, while a 15 is suggested acceptable. No surveys will be deleted if they do meet the cut off score of 15. This score is only a suggestion in how to use and interpret the outcomes of the scale. The MCSDS will be used as a covariate in this study to measure the responsive bias of participants. The primary goal of the MCSDS for this study is to gauge the variability of the participants on their responses on all four surveys. For this purpose, a correlation will be conducted with the MCSDS, the MAS, CSEI and INDCOL. The goal is to use the MCSDS to establish a level of responsive bias of the test outcomes for the other measures in the study.

The MCSDS consists of 33 items. Each item is a forced choice format of true/false statements. The MCSDS includes two factors of denial and attribution. Of the 33 items, 18 comprise the attribution subscale. These items are constructed to capture highly socially acceptable behaviors that also have a low probability of occurrence. An example of an attribution item is “I never go out of my way to help someone in trouble”. The other 15 items comprise the denial subscale. These items on the scale are intended to be socially unacceptable behaviors, also have a high probability of occurrence. An example of denial item is “I like to gossip at times”. The higher the overall score on the MCSDS, the stronger the tendency of the participant to respond in a socially desirable

manner whereas lower scores indicate that the participant is not answering in a socially acceptable manner. The scoring scale of the MCSDS is between 0 and 33.

The MCSDS has been used in a various studies and clinical assessments as well as listed in more than 1000 publications (Beretvas, Meyers, & Leite, 2002). The MCSDS has been established as a highly reliable and valid instrument. It has yielded an internal consistency alpha level of .88 and one month test-rest correlation of .89 (Loo & Thorpe, 2000). The utility of using the MCSDS with college students is common and suggested. Furthermore, the MCSDS has been utilized in numerous dissertations, and the accessibility of this measure for use in research studies makes this instrument a good fit for the present study.

The Coopersmith Self-Esteem Inventory (CSEI)

The Coopersmith Self-Esteem Inventory (CSEI) was developed by Stanley Coopersmith in 1967 to measure general self-esteem. For the purposes of this study, the Adult Form will be used, which was adapted from the School Short Form for children. The CSEI-Adult form has demonstrated strong validity and reliability similar to the School Form and the School Short Form, and high correlations have been found between all three versions demonstrating good convergent validity (Peterson, 1985). The CSEI-A is a self-report questionnaire developed to measure “the evaluation a person makes and customarily maintains with regard to him or herself” (Coopersmith, 1967, 1981). The CSEI presents respondents with items, which are either favorable or unfavorable statements about themselves, and they can respond by choosing either “like me” or “unlike me”. There are 25 items on the CSEI-A. Although originally developed for administration with children, item language is not targeted to children or parents. Form A was developed to be used with participants over the age of 16. All CSEI forms (school form, school short form, adult) are scored dichotomously: all positive attitudes about self are scored as 1 and negative attitudes about self are scored as 0. Raw scores are multiplied by 4, which yield a score between 0 and 100. The CSEI has been used in

numerous studies to measure self-esteem (Bedeian, Geogud, & Zmud, 1977; Johnson, Redfield, Miller, & Simpson, 1983; Taylor & Reitz, 1968). When the CSEI school short form was compared to a highly valid instrument of the Rosenberg Self-Esteem Scale, which measured self-esteem of college student's correlations of 0.59 and 0.60, was obtained (Crandall, 1973).

The Individualism/Collectivism Scale (INDCOL)

The Individualism and Collectivism Scale (INDCOL) used in the present study to measure individualism and collectivism was based on Triandis (1995). When conducting research that takes into account two very different cultures, a comparison of the two cultures is helpful, because societies function differently on a scale of collectivism and individualism (Fiske, 2002). The purpose of measuring constructs of collectivism and individualism began with Hofstede in the 1980s. The INDCOL uses a definition of collectivism that describes people who are independent but within the group (family, tribe, nation), meaning that collectivists as people may change their behavior based on the norms of the in-group and are likely to behave in a communal manner (Mills & Clark, 1982). Individualism characterizes a culture in which people are able to behave autonomously and independently from the in-group and may seem to be more concerned about their personal achievements rather than those of the in-group. Their behaviors are not influenced by the in-group as much as by their own (Triandis, 2001).

The INDCOL was originally created by Hui (1988) using two types of scales, a 6-point Likert format and a scenario format. The current study employed a 5-point Likert scale. Questions on the Likert format were scored in the following manner. For each statement, 5 represents *strongly agree*, 4 represents *agree*, 3 represents *no opinion*, 2 represents *disagree*, and 1 represents *strongly disagree*. The instrument is composed of 32 items with four subscales each consisting of eight items. The subscales are:

1. *Horizontal individualist* (HI) people want to be unique and self-reliant, but they are not especially interested in becoming distinguished or having high status.

2. *Vertical individualist* (VI) people try to compete with others for distinction and status.

3. *Horizontal collectivist* (HC) people perceive themselves as an aspect of in-group and emphasize common goals with others, and

4. *Vertical collectivist* (VC) people sacrifice their personal goals for the sake of in-group goals, but the members of the in-group are different from each other, some having more status than others.

The scoring of the INDCOL is based on the four subscales. Each subscale has eight items with a total of 32 items on the instrument. The scores for each subscale range from 8 to 40. All four instruments—MAS, MCSDS, CSEI, and INDCOL—were utilized for the purposes of answering the research questions.

Research Questions

Question #1: What are the general attitudes of the Ethiopian college student population in Addis Ababa University as measured by the MAS subscales of Affect, Behavior, and Cognition?

Question #2: What is the relationship of select characteristics (gender, education level, year in school, academic major, contact level, self-esteem, and cultural orientation) of Ethiopian college students at Addis Ababa University to their attitudes toward visible disabilities?

Definitions of Variables

The following variables are critical to this study and their definitions are also specific to the instruments utilized.

Disability: an individual who (a) has a physical or mental impairment that limits their life activity, (b) has a record of such impairment, or (c) is regarded as having such impairment (ADA, 1991). The impairment may be visible or invisible permanent or temporary in nature. This variable was self-reported on the demographic sheet in which

participants indicated whether or not they had a disability; they were also informed how this study defined disability.

Gender: the participants' identification with male or female as self-reported on the demographic sheet of male or female.

Education level: defined as the highest level of education, undergraduate or graduate, attained by participants as self-reported on demographic sheet.

Academic major (area of study): the self-reported area of educational concentration of participants. The categories to choose from included business, law, technology information, education, journalism and communications, medicine, engineering, veterinary medicine, and social science.

Year in school: the participants' self-reported year in school within their classification of either undergraduate or graduate student. The choices for undergraduates are (a) first and second year and (b) third and fourth year; and for graduate students are (a) first and second year, (b) third and fourth year, and (c) fifth and sixth year.

Contact level: indirect contact, which is knowledge about disabilities such as through coursework; or direct contact, which is both prior and present interaction with an individual or a community of people with disabilities.

Self-esteem: defined as individuals' self-perception and judgment of self-worthiness that is expressed through attitudes toward themselves. Self-esteem was measured by the Coopersmith Self-Esteem Inventory-Adult Form (CSEI) with low scores indicating low self-esteem and high scores indicating high self-esteem.

Independent Variables

The following is an explanation of the research variables and how they were coded: (a) gender (dichotomous, female or male); (b) education level (dichotomous, undergraduate or graduate); (c) year in school (discrete), undergraduates: 1st and 2nd years, 3rd and 4th years, and graduates: 1st and 2nd years, 3rd and 4th years, and 5th or more; (d) academic major (business, law, technology information, education, journalism and

communications, medicine, engineering, veterinary medicine, and social science); (e) contact level (contact with people with disabilities or knowledge about disabilities); participants indicated their level of contact by circling one answer; (f) self-esteem; and (g) cultural orientation (individualistic and collectivistic).

Dependent Variable

Attitudes toward persons with disabilities were measured by the MAS (Findler et al., 2007). In the present study, a confirmatory factor analysis of the MAS was conducted in order to replicate the factor structure of this measure identified in prior research (i.e., affective, behavioral, and cognitive components loading to a higher-order dimension shared among these components). Based on the results of the factor analysis, composite scores were calculated. Specifically, any items with factor loadings of .40 or higher were aggregated (i.e., sum scores were calculated) such that higher scores represented more negative attitudes toward disabilities.

Data Analysis

The following section presents the study questions and the data analytic approach implemented to address each question.

The first analysis, although it is not a research question, is critical for establishing a model fit for the MAS. As discussed earlier, as a new instrument, very few studies have used the MAS; therefore, it is important to examine if the factors loaded the same way for the Ethiopian sample as they did for the normative sample. Therefore, the first analysis examined whether the factor structure of the MAS fit the Ethiopian population the same way as the Israeli population.

A confirmatory factor analysis (CFA) was conducted to determine if the three-factor solution of the MAS (Findler et al., 2007) provided an adequate fit with the data in this sample of college students. The CFA was conducted using Statistical Analysis Systems version 9.2. Missing data were addressed via maximum likelihood estimation. The conventional chi-square test, comparative fit index (CFI), and root mean square error

approximation (RMSEA) values were used to evaluate global model fit. A non significant ($p > 0.05$) χ^2 is desirable and suggests the model adequately represents the data. The CFI can range from 0 to 1.0 and estimates the proportion of the sample variances and covariance explained by the model. The RMSEA estimates the lack of fit in a model compared to a perfect (saturated) model. CFI values > 0.90 and RMSEA values < 0.08 are considered to represent good correspondence between observed and hypothesized factor solutions. Standardized path coefficients (factor loadings), factor correlations, and second order loadings were examined to evaluate the relationship between each indicator (MAS item) with its associated factor.

Question #1: What are the general attitudes of the Ethiopian college student population in Addis Ababa University as measured by the MAS subscales of Affect, Behavior, and Cognition?

Based on the results of the factor analysis, composite scores were calculated (a sum score of all items with factor loadings of .40 or higher). Means, standard deviations, and range of scores were examined in order to provide descriptive information about Ethiopian college students' attitudes.

Question #2: What is the relationship of select characteristics (gender, education level, year in school, academic major, contact level, self-esteem, and cultural orientation) of Ethiopian college students at Addis Ababa University to their attitudes toward visible disabilities?

The following sets of analyses were conducted to address each hypothesis for each independent variable. For all analyses, the dependent variable was the composite score of attitudes toward visible disabilities that was calculated on the basis of results of the factor analysis.

Independent Variable #1: Gender (dichotomous)

Hypothesis: Compared to males, females will have more favorable attitudes toward disabilities (based on the results of Conine, 1969; Upton & Harper, 2002).

Data Analysis: An independent t-test was conducted to test for mean differences in attitudes for males versus females.

Independent Variable #2: Education Level (dichotomous)

Hypothesis: Participants with a higher level of education (i.e., graduate) will have more positive attitudes toward disabilities relative to those with a lower level of education (based on the results of Antonak & Livneh, 1988; Upton & Harper, 2002; Yunker, 1994).

Data Analysis: An independent t-test was conducted to test for mean differences in attitudes for graduate versus undergraduate levels of education.

Independent Variable #3: Academic Major (categorical with 8 levels)

Hypothesis: Business majors will have more negative attitudes than other majors (based on results of Hunt & Hunt, 2000).

Data Analysis: A one-way independent analysis of variance (ANOVA) was conducted to test for mean and variance differences in attitudes across groups: business, law, technology information, education, journalism and communications, medicine, engineering, and social science.

In the case of a significant F-statistic, Scheffé post-hoc analyses were completed to identify which groups differed significantly from one another. A Scheffé analysis was chosen in order to address unequal group sizes.

Independent Variable #4: Year in School (categorical with 4 levels)

Hypothesis: Participants who are further along in their education will have more positive attitudes toward disabilities (based on the results of Antonak, 1981; Asmus & Galloway, 1985; Semmel & Dicjson, 1966; Upton & Harper, 2002).

Data Analysis: A one-way independent analysis of variance (ANOVA) was conducted to test for mean and variance differences in attitudes across groups (first,

second, third, fourth+ years). In the case of a significant F-statistic, Scheffé post-hoc analyses were completed in order to identify which groups differed significantly from one another. A Scheffé analysis was chosen to address unequal group sizes.

Independent Variable #5: Contact Level (dichotomous)

Hypothesis: Participants with more direct contact with PWDs will demonstrate more positive attitudes toward disabilities relative to participants with no contact (based on the results of Amsel & Fichten 1988; Fichten, 1988; Lyons, 1991; Yucker, 1994).

Data Analysis: An independent t-test was conducted to test for mean differences in attitudes of participants who had previous contact versus no contact with PWDs.

Independent Variable #6: Self-esteem (continuous)

Hypothesis: Higher self-esteem will be associated with more positive attitudes toward PWDs (based on results of Amsel & Fichten, 1988; Keller & Siegrist, 2010).

Data Analysis: A regression analysis was conducted to examine the association between self-esteem and attitudes toward PWDs.

Sequential Order of Data Analyses

The sequential order of the data analyses are as follows:

1. Calculation of internal consistencies of self-report questionnaires and creation of composite scores for the MCSDS and the CSEI-A.
2. Examination of MCSDS scores to account for social desirability effects (e.g., to demonstrate the covariance of the social desirability scale with the other scales of MAS, CSEI, and INDCOL). A table will display the correlation between the MCSDS and the MAS, CSEI and INDCOL.
3. *Analysis for determining adequate fit with this sample of college students:* Confirmatory factor analysis of the MAS for identifying the best fitting measurement model of attitudes toward disabilities.
4. *Analyses for addressing Question #1:* Calculation of composite scores based on the factor analysis of the MAS (i.e., sum score of all items with factor

loadings greater than .40). Calculation of descriptive statistics (means, SDs, range of scores) for composite score of attitudes toward disabilities.

5. *Analyses for addressing Question #2:* Series of analyses including independent t-tests, one-way ANOVAs, and regression procedures for each independent variable under investigation (gender, education level, year in school, academic major, contact level, self-esteem, and cultural orientation).

Sample and Power Analysis

The sample size necessary to achieve sufficient power of at least .80 for the confirmatory factor analysis (CFA) of the MAS was estimated using Monte Carlo simulations based on the procedures outlined by Muthén and Muthén (2002). The necessary sample size for a CFA Model with Normally Distributed Continuous Factor Indicators is $n=150$. Although a sample size of 150 respondents is sufficient, the study employed a conservative estimation to determine sample size using the rule of 10 participants for each question item (Nunnally, 1967). The MAS has 34 questions and yields a required sample size of 340.

The degree of power based on a sample size of $n=150$ for each of the analyses conducted to address Question #2 was computed using G*Power (G*Power, 2000).

Independent Variable #1: Gender (dichotomous): T-test

To test for the mean difference in MAS scores between genders, an independent t-test was used. Assuming that the distribution of gender is approximately 60% female and 40% male, then a two tailed t-test with a sample size of $n=340$ ($\alpha = 0.05$) has at least 85% power to detect an effect size as small as 0.30 (a small to medium effect).

Independent Variable #2: Education Level (dichotomous):

T-test

To test for mean difference in MAS scores between educational level (undergraduate and graduate students), an independent t-test was used. Assuming that the distribution of students is approximately 70% undergraduate students and 30% graduate

students, then a two tailed t-test with a sample size of $n= 340$ ($\alpha = 0.05$) has at least 85% power to detect an effect size as small as 0.30 (a small to medium effect).

Independent Variable #3: Academic Major (categorical):

ANOVA

To test for mean difference in MAS scores among academic majors, a one-way independent analysis of variance (ANOVA) was used. The categories for this variable were business, law, technology information, education, journalism and communications, medicine, engineering, and social science.

A sample size of $n= 340$ ($\alpha = 0.05$) has at least 93% power to detect an effect size as small as 0.25 (a small to medium effect).

Independent Variable #4: Self-esteem (continuous):

Regression

To examine the relationship between MAS and self-esteem, a regression analysis was conducted. A sample size of $n= 340$ ($\alpha = 0.05$) has at least 99% power to detect an effect size as small as .25.

Independent Variable #5: Contact level (dichotomous):

T-test

To test for mean difference in MAS scores between contact levels, an independent t-test was used. Assuming that the distribution of contact is approximately 60% with contact and 40% with no contact, then a two tailed t-test with a sample size of $n= 340$ ($\alpha = 0.05$) has at least 99% power to detect effect sizes as small as 0.25 (a small to medium effect).

Independent Variable #6: Year in School (categorical with 4 levels): ANOVA

To test for mean differences in MAS scores among years in school, a one-way independent analysis of variance (ANOVA) was used. A sample size of $n= 340$ ($\alpha =$

0.05) has at least 98% power to detect effect sizes as small as 0.25 (a small to medium effect).

Summary

The primary purpose of Chapter III was to provide an overview of the research design and procedures to collect data and survey Ethiopian college students' attitudes in general as well as the relationship between the variables of gender, education level, year in school, academic major, contact level, self-esteem, and cultural orientation to attitudes toward visible disabilities. Chapter IV will present and discuss the data collected and the analysis for each research question.

CHAPTER IV

RESULTS

This chapter presents the results of the statistical analyses that were conducted to address the two major research questions for this study. This chapter begins by providing a description of the sample (e.g., frequencies of gender, education level, year in school, academic major, contact with people with disabilities, knowledge of disabilities, and students with disabilities) as well as mean and standard deviations on four instruments: MAS, MCSDS, CSEI, and INDCOL. T-tests, ANOVA, and correlation analyses were conducted to answer each research question. These statistical analyses were conducted using SPSS student version 19.0.

The purpose of this study was to examine the attitudes of Ethiopian college students toward people with visible disabilities. The attitudes were measured using a recently developed instrument, the Multidimensional Attitude Scale Toward Persons with Disabilities (MAS); thus a confirmatory factor analysis (CFA) was essential to determine whether the MAS model, which was developed in Israel, was consistent with the Ethiopian sample. Although the Israeli model did not fit, the MAS was used to measure attitudes, and this decision is discussed later in the results. Statistical Analysis System (SAS) version 9.2 was used to conduct the CFA for the MAS.

The second part of the study investigated whether the variables of gender, education level, academic major, year in school, contact level, self-esteem, and cultural orientation affected students' attitudes as measured by the MAS. The research questions that guided this study were:

Question #1: What are the general attitudes of the Ethiopian college student population in Addis Ababa University as measured by the MAS subscales of Affect, Behavior, and Cognition?

Question #2: What is the relationship of select characteristics (gender, education level, year in school, academic major, contact level, self-esteem, and cultural orientation)

of Ethiopian college students at Addis Ababa University to their attitudes toward visible disabilities?

Participant Characteristics

The sample in this study consisted of 315 participants who were enrolled at the time of the study in Addis Ababa University in Ethiopia. The study took place from January 31 to February 20, 2011. Table 2 provides a summary of the demographic characteristics of the students who participated in this study.

Of the 315 participants in the final sample, 177 self-identified as male (56%) and 137 self-identified as female (43%). There were 216 undergraduate students (69%), 95 (30%) graduate students, and four students who did not indicate education level. Of the total of 315 students, 106 (33.6 %) were first-year college students, 114 (36.1%) were second-year college students, 47 (14.9%) were third-year college students, and 46 (14.6%) were fourth-year or more college students. From the original total of 312 participants, two subjects did not indicate a major and one subject indicated veterinary medicine; therefore, veterinary medicine was deleted from the ANOVA analyses. Participants indicated the following majors: Business (47; 15.0%); Law (32; 10.2%); Education (129; 41.3%); Journalism and Communication (24; 12.1%); and Social Science (22; 7.5%). The majority of students answered the question “Do you know someone with a disability?” (n=311) with 256 (82.3%) indicating “yes” and 55 (17.6%) indicating “no.” Out of the 303 participants who indicated that they knew a person with a disability, the majority of the students (151; 49.8%) indicated they knew an acquaintance with a disability from school or work, as a friend (80; 26.4%), and through casual contact (40; 13.2%). Of the 300 students who answered the question, “What type of disability does the person you know have?”, 57 (19.0%) indicated a physical disability, 72 (24.0%) indicated deafness or hard of hearing, and 170 (39.0%) indicated blindness.

Table 2. Demographic Summary for All Participants

Gender		Frequency	Percent
	Male	177	56.2
	Female	137	43.5
	Total	315	100
Education Level			
	Undergraduate	216	68.6
	Graduate	95	30.2
	Total	315	100
Year in School			
	First	106	33.7
	Second	114	36.2
	Third	47	14.9
	Fourth	45	14.3
	Fifth or more	1	0.3
	Total	315	100
Academic Major			
	Business	47	14.9
	Law	32	10.2
	Technology Information	8	2.5
	Education	129	41
	Journalism / Communications	24	7.6
	Medicine	38	12.1
	Engineering	12	3.8
	Social Science	22	7
	Total	312	99
Knowledge level of disabilities			
	(1= least 5=most knowledgeable)		
	1	39	12.4
	2	51	16.2
	3	65	20.6
	4	77	24.4
	5	49	15.6
	6	30	9.5
	Total	311	100
Base of knowledge about disabilities			
	1(personal experience)	73	23.2
	2(contact)	59	18.7
	3(reading or school work)	117	37.1

Table 2 (continued)

	4(other)	60	19
	Total	309	100
Do you know someone with a disability			
	Yes	256	81.3
	No	55	17.5
	Total	311	100
How do you know this person?			
	Friend	80	25.4
	Family Member	32	10.2
	School or work acquaintance	151	47.9
	Casual contact	40	12.7
	Total	303	100
Type of disability			
	Psychiatric	15	4.8
	Physical (mobility issues)	57	18.1
	Deafness or hard of hearing	72	22.9
	Blindness	117	37.1
	Missing limbs (arms or legs)	19	6
	Mental Retardation	12	3.8
	Epilepsy (seizures)	7	2.2
	Facial Disfigurement	1	0.3
	Total	300	100
Contact Level			
	1-2 a week	125	39.7
	3-5 a week	75	23.8
	Every day of the week	89	28.3
	Total	289	91.7
Do you have a disability?			
	Yes	26	8.3
	No	283	89.8
	Total	315	100
Visible disability			
	Yes	9	2.9
	No	305	96.8
	Total	314	100

The question about the level of contact with PWDs was answered by 289 students: 125 (43.2%) indicated 1-2 times per week, 75 (25.9%) indicated 3-5 times a week, and 89 (30.7%) indicated every day of the week. When asked if the student him or herself had a disability, 26 (8%) answered “yes,” 283 (89%) answered “no,” and 6 (1.9%) did not respond to the question, for a total of 309 who answered this question. Only one student did not answer the question, “Do you have a visible disability?” Out of 314 students, 9 (2.8%) students indicated that they had a visible disability and 305 (96.8%) indicated that they did not.

The CFA was conducted on the MAS with a sample of only 339 subjects. The inclusion criterion for the MAS data to be included in the CFA was 80% or more items on the MAS to be completed. Twenty-four students were omitted from the other analyses because the participants had too many missing data (20% or more) on the Self-esteem Inventory (CSEI), the Marlowe-Crowne Social Desirability Scale (MCSDS), the demographic sheet, and Individualism/Collectivism Scale (INDCOL); thus responses from only 315 participants were used to answer Question #2.

Description of Measures

The means and standard deviations for all four measures were computed and are reported in Table 3. Ethiopian college students in general demonstrated negative attitudes as measured by the MAS on the cognitive components ($M = 3.0$, $SD = .59$). The range for the MAS is 1-5. The higher the mean, the more negative the attitudes; thus a mean score of 3.0 is considered by the authors of the MAS as negative. However, the results need to be validated in relative context to others to make this conclusion valid.

Ethiopian college students had low scores on the MCSDS measuring social desirability, which suggests that this population of students were not attempting to be socially acceptable. According to Andrews and Meyer (2003), the following scoring guidelines can be used to assess the MCSDS: “the mean for the Fake Good condition was 24, whereas it was only 15 in the honest condition” (p. 485). The MCSDS was created to

measure social desirability; however, it has also displayed acceptable levels of reliability and validity when tested with ethnically diverse college students (Rudmin, 1999).

Table 3. Results of All Four Instruments for All Participants

Measure	Mean	SD
MAS (N= 339)	2.59	15.7
CSEI (N=315)	58.82	14.1
MCSDS (N=315)	16.8	3.9

On the INDCOL, Ethiopian college students were found to have higher scores on the horizontal collectivism subscale with a mean of 30.18 (SD = 6.0). There were no significant differences between the rest of the subscales: Horizontal Individualism (M= 28.63, SD= 5.8), Vertical Individualism (M = 26.97, SD= 5.4), and Vertical Collectivism (M = 27.62, SD = 5.7). Further correlation analysis was found to be significant (see Table 4), meaning that these Ethiopian college students were more likely to think in a collective manner.

Table 4. Summary of Results for Individualism/Collectivism Scale for All Participants

Measure (INDCOL)	Mean	SD
(VI)	26.97	5.4
(VC)	27.62	5.7
(HC)	30.18	6.0
(HI)	28.63	5.8

Data Analysis

Data Collection

Survey packets were developed for each participant, and each packet contained a letter introducing the study that also served as informed consent (see Appendix F). The letter explained that participation was completely voluntarily and participants could choose not to participate without any penalty at any time. It also explained the confidential nature of data collection for this study, provided contact information for the researcher in case participants had any further questions about the study, and gave instructions for completing each instrument. The consent letter also explained how to return the completed packets. The consent letter asked each participant to read the letter carefully and if they chose to participate, to begin by completing (a) the demographic sheet (see Appendix A), (b) Multidimensional Attitudes Scale Toward Persons With Disabilities (MAS; see Appendix B), (c) the Marlowe-Crowne Social Desirability Scale (MCSDS; see Appendix C, (d) the Coopersmith Self-Esteem Inventory Adult Form (CSEI; see Appendix D), and (e) the Individualism/Collectivism Scale (INDCOL; see Appendix E) .

Missing Data

A total of 365 surveys were collected from participants. Participants were eliminated if at least 80% of the items were not completed for each survey. The demographic sheet for each question has a different total; however, 311 participants completed at least 80% of the demographic sheet, but only 312 indicated a major, 311 indicated knowledge level of disabilities, 309 indicated the basis of the knowledge, 311 indicated whether they knew anyone with a disability, 303 indicated how they knew the person with a disability, 300 indicated the type of disability the individual had, 289 indicated contact level, and 314 indicated if the participant had a visible disability. Therefore, from the original 365, a total of 315 participants' demographic sheets were

included in the study and 50 participants were eliminated. The confirmatory factor analysis included 339 participants from the original 365, thus excluding 26 participants.

Process

Participants for this study were recruited mainly through classroom visits. First the researcher distributed letters describing the study to department deans to distribute to faculty of prospective departments. Each department set up a signup sheet for faculty members who volunteered to allow the researcher to recruit in their classrooms. The signup sheet required the faculty members to indicate a date and time the researcher could come and recruit potential participants. The researcher recruited and collected data during those designed times and dates.

The researcher visited each class and introduced the study, and prior to distributing the packet, the consent letter was read to the potential participants; then the researcher passed out survey packet to all students. Each student received a large blank envelope with all the instruments and the letter inside. It was explained to the students that by completing and returning the packets, they had consented to taking part in this study. Those students who chose not participate were instructed to return the unopened and incomplete packets to the locked box located in the researcher's office on campus. Students who chose to participate in the study returned the completed packets to the same office. These procedures were developed to comply with University of Iowa IRB requirements as well as to ensure student confidentiality and to ensure no advantages or disadvantages were associated with participating in the study.

Research Questions

Confirmatory Factor Analysis

The CFA answered the question, "*Does the factor structure of the MAS that has been demonstrated in prior research replicate in a sample of Ethiopian students?*" This question was answered by conducting a CFA on the MAS (n=339). A CFA was conducted because it is primarily used to determine "whether a particular model fits the

data better than the other” (Bryant & Yarnold, 1995, p. 119), and in this case whether the normative model, which is the (Israeli sample) model of the MAS, fit the Ethiopian sample. The primary goal of the CFA was to determine whether the observed variables loaded above .4 for each factor to determine the validity of the model. Model fit may be determined by inspection of the statistical significance of parameters and how well the original model fits the data (Weston & Gore, 2006). One method of determining model fit is to conduct a goodness of fit index (GFI) test. It is common practice to report three types of goodness of fit values to report fitness of the model: the Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and confidence interval. The CFI can range from 0-1.0, and values of the CFI that are closer to 1 indicate a good fit of the model. A CFI value greater than .90 is considered an acceptable fit to the data. Values for RMSEA must be lower than .10 to be acceptable.

The analysis compared the factor structure obtained by an analysis of the Ethiopian subjects’ responses (N = 339) with that of responses obtained from the Israeli sample. A maximum likelihood estimate goodness of fit was significant (chi-sq = 1369, df = 524, p-value < 0.0001) indicating that the factor structure of the Ethiopian respondents’ responses was significantly different from that of the Israeli respondents’ responses. Table 5 shows that both the magnitude and the ordering of the factor loadings differed substantially between the two samples. Therefore, many of the questions appeared to be culturally based. Ethiopia and Israel have very different cultures, and friendliness may be interpreted differently. For example, in Ethiopia, people do not pay as much attention to time; thus, if you do not properly greet someone because you are in a rush, you may be perceived as unfriendly. However in Israel, time is very much respected and it is understood if you quickly say hello and leave; thus, such an interaction may not affect how friendly people perceive you to be. These examples of cultural differences may be responsible in part for some of the differences in loading for the items; while some loaded very high, other items loaded extremely low.

Table 5. Confirmatory Factor Analysis of the Original 34 Items on the MAS

Behaviors		Cognitions		Affects		
Ethiopia	Israel	Ethiopia	Israel	Ethiopia	Israel	MAS factors
				0.6	0.77	1. Tension
				0.63	0.77	2. Stress
				0.57	0.72	3. Helplessness
				0.29	0.69	4. Nervousness
				0.68	0.64	5. Shame
				0.18	0.62	6. Relaxation (~)
				-0.08	0.62	7. Serenity (~)
				-0.06	0.61	8. Calmness (~)
				0.61	0.61	9. Depression
				0.68	0.6	10. Fear
				0.66	0.59	11. Upset
				0.7	0.56	12. Guilt
				0.62	0.52	13. Shyness
				0.32	0.5	14. Pity
				0.59	0.49	15. Disgust
				-0.1	0.47	16. Alertness
		0.62	0.81			17. He/she seems to be an interesting guy/girl. (~)
		0.64	0.79			18. He/she looks like an OK person. (~)
		0.64	0.76			19. We may get along really well. (~)
		-0.71	0.75			20. He/she looks friendly.
		0.64	0.71			21. I enjoy meeting new people. (~)
		0.6	0.68			22. He/she will enjoy getting to know me. (~)
		0.64	0.66			23. I can always talk with him/her about things that interest both of us. (~)
		0.67	0.59			24. I can make him/her feel more comfortable. (~)
		0.38	0.52			25. Why not get to know him/her better? (~)
		0.59	0.51			26. He/she will appreciate it if I start a conversation. (~)
0.78	0.7					27. Move away
0.7	0.69					28. Get up and leave
0.43	0.67					29. Read the newspaper or talk on a cell phone
0.13	0.66					30. Continue what he/she was doing
0.37	0.57					31. Find an excuse to leave
0.81	0.57					32. Move to another table
0.15	0.53					33. If he/she doesn't make the first move, then initiate a conversation (~)
0.07	0.43					34. Start a conversation (~)

Note. Factor loadings >.4 in bold face.

Table 6. Confirmatory Factor Analysis of the Original 22 Items on the MAS

Behaviors		Cognitions		Affects		MAS factors
MAS 34	MAS21	MAS 34	MAS21	MAS 34	MAS21	
				0.6	.59	1. Tension
				0.63	.62	2. Stress
				0.57	.54	3. Helplessness
				0.68	.65	5. Shame
				0.61	.59	9. Depression
				0.68	.62	10. Fear
				0.66	.64	11. Upset
				0.7	.71	12. Guilt
				0.62	.59	13. Shyness
				0.59		15. Disgust
		0.62	0.81			17. He/she seems to be an interesting guy/girl. (~)
		0.64	0.79			18. He/she looks like an OK person. (~)
		0.64	0.76			19. We may get along really well. (~)
		0.64	0.71			21. I enjoy meeting new people. (~)
		0.6	0.68			22. He/she will enjoy getting to know me. (~)
		0.64	0.66			23. I can always talk with him/her about things that interest both of us. (~)
		0.67	0.59			24. I can make him/her feel more comfortable. (~)
		0.59	0.51			26. He/she will appreciate it if I start a conversation. (~)
0.78	0.7					27. Move away
0.7	0.69					28. Get up and leave
0.43	0.67					29. Read the newspaper or talk on a cell phone
0.81	0.57					32. Move to another table

Items that loaded poorly were serenity, calmness, and alertness. In conclusion, Ethiopian's attitudes loaded onto test factors differently than those in responses from the sample from Israel.

The second factor analysis was conducted using only 22 items out of the original 34. The 12 items that were deleted were the ones that did not load above .4. The results of the second CFA indicated that while the maximum likelihood estimate of goodness of fit

was significant ($\chi^2 = 451.4353$, $df = 206$, $p\text{-value} < 0.0001$), indicating that the factor structure of the second CFA was better compared to the first CFA, the model did not fit or coincide.

Research Question 1

What are the general attitudes of the Ethiopian college student population in Addis Ababa University as measured by the MAS subscales of Affect, Behavior, and Cognition?

Students' attitudes were measured on the MAS. Data analysis was conducted using SPSS version 19.0 ($n=339$) for the three subscales (affect, behavior, and cognition) and overall attitudes were measured by the total MAS score (see Table 6 for a comparison of MAS scores of the two samples). The Ethiopian sample had some similarities with the Israeli sample; for example, the Ethiopian and Israeli samples both indicated that the most negative attitudes were on the cognition subscale ($M = 3.0$, $SD=.59$) followed by the behavioral subscale ($M = 2.5$, $SD =.72$). Although the Ethiopian sample indicated the least negative attitudes on the affect subscale ($M = 2.3$, $SD = .66$), the Israeli sample had more negative attitudes on the cognition subscale ($M = 2.73$, $SD = .59$) than on the affect subscale ($M = 2.32$, $SD = .66$), and the behavioral subscale had the least negative attitudes with ($M = 1.99$, $SD = .72$). The Ethiopian sample had more negative attitudes compared to those of the Israeli sample because the Ethiopian sample had higher means across subscales. Higher means are interpreted as more negative attitudes. While the Israeli population had a very low mean on the behavioral subscale, the Ethiopian population had a mean that was greater by .5. The minimum score was 44 and the maximum was 139 for the entire instrument of the MAS. The scores ranged from 34-170, but the means ranged from 1-5.

To further illustrate the extent of the mean difference in MAS scores for both the Ethiopian and Israeli population, an independent t-test was performed to establish if the scores of the two independent groups were significantly different from one another.

There was no significant difference of the means for the affect subscale for both samples, and the affect mean score for participants from Ethiopia was 2.37 (SD=.66), and the mean score for Israeli participants was 2.32 (SD=.63). However, the Ethiopian samples had significantly higher means on the behavioral and affect subscales, and thus displayed more negative attitudes on those subscales compared to the Israeli sample.

Table 7. Ethiopian and Israeli Sample MAS Results

MAS	Mean (Ethiopian)	Mean (Israeli)	SD (Ethiopian)	SD (Israeli)	T	df	P
MAS- affect	2.37	2.32	.66	.63	.74	469	.545
MAS- behavior	2.5	1.99	.72	.62	7.16	469	.0001
MAS- cognition	3.0	2.73	.59	.70	4.22	469	.0001

Research Question 2

What is the relationship of selected characteristics (gender, education level, year in school, academic major, contact level, self-esteem, and cultural orientation) of Ethiopian college students in Addis Ababa University to their attitudes toward visible disabilities?

Question two had seven variables that also had seven hypotheses. An independent T-test was conducted on the variables of gender and level of education. A one-way ANOVA was conducted on the variables of year in school, academic major, and contact level. Each of these analyses was conducted using the original MAS with 34 items, then again with MAS-22 after those items that did not load above .4 were removed. A correlational analysis was conducted on the variables of self-esteem and MAS, INDCOL and MAS- 22, and a correlational table with all the surveys and the Marlowe-Crowne Social Desirability Scale.

Analysis 1: Gender

Hypothesis 1: Compared to males, female participants will have more favorable attitudes toward disabilities as measured by differences in total and subscale scores on the MAS.

The null hypothesis was rejected because male participants indicated more positive attitudes compared to females on the behavioral subscale of the MAS.

There were significant differences between males and females on the behavioral and cognition subscales as presented in Table 8. On the behavior subscales, male participants achieved a higher mean score of 20.41 (SD= 5.1), and female participants' mean score was 19.71 (SD=6.5; $t = -1.39$, $df = 273$, $p = .037$) as presented in Table 5. On the cognition subscale, males had more positive attitudes compared to females. On the cognition subscales, females had higher mean scores 27.34 (SD=6.7 $t = 1.10$, $df = 312$, $p = .012$) than males.

Table 8. T-test Analysis for Gender and MAS (34 items)

	Gender	N	Mean	SD	t	df	P
MAS total	Male	177	2.49	14.7	.168		.069
	Female	137	2.48	17.0		312	
MAS (a)	Male	177	2.38	10.4	.516		.967
	Female	137	2.34	10.3		294	
MAS (b)	Male	177	2.55	5.1	-1.395		.037
	Female	137	2.46	6.5		273	
MAS (c)	Male	177	2.63	5.9	1.10		.012
	Female	137	2.73	6.7		312	

Note: Bold = significant values.

The second independent t-test was conducted to examine the difference between females and males for each Multidimensional Attitudes Scale towards Person with Disabilities (22 item) index score indicated that overall there were significance on the cognition and behavioral subscales. On the cognition subscales men had higher means

27.70 (SD=6.5; $t = -1.39$, $df = 273$, $p = .037$) as presented in Table 5. On the cognition subscale men had more positive attitudes compared to women. Results on the behavior subscales females had higher mean scores 27.34 (SD=6.7; $t = 1.10$, $df = 312$, $p = .012$).

Women had more positive attitudes on the behavior subscale compared to men.

Table 9. T-test Analysis for Gender and MAS (22 items)

	Gender	N	Mean	SD	T	df	p
MASA-affect	Male	189	1.60	7.392	1.594	344	.108
	Female	157	1.52	8.316	1.577	315.274	
MASC-cognition	Male	189	2.77	3.287	3.969	344	.057
	Female	157	2.58	5.273	3.810	251.262	
MASB-behavior	Male	189	1.25	2.986	1.537	344	.041
	Female	157	1.18	3.434	1.518	311.527	
MAS Total:	Male	189	1.76	8.894	3.178	344	.061
	Female	157	1.75	12.804	3077	270.103	

Note: Bold = significant values.

Analysis 2: Education Level

Hypothesis 2: Participants with a higher level of education (i.e., graduate) will have more positive attitudes toward disabilities compared to those with a lower level of education.

This hypothesis was accepted because there was a significant difference in attitudes toward persons with disabilities for those participants in undergraduate programs compared to those in graduate programs as presented in Table 10. In terms of overall scores on the MAS total score, level of education did not result in a difference in attitudes. For overall scores on the MAS 34-item total score, level of education did not result in a difference in attitudes. There were no significant p-values. For overall scores on the MAS (22) item total score, level of education did not result in a difference in attitudes. There were no significant p-values.

Analysis 3: Year in School

Hypothesis 3: Participants who are further along in their education will have more positive attitudes toward disabilities.

The ANOVA table indicated that the year in school made a difference in attitudes as measured by the MAS (34 items). However, on the cognition subscale ($p = .033$), as year in school increased, attitudes moved in increments toward positive.

Table 10. T-test Analysis for Education Level and MAS (34 items)

	Education	Mean	SD	t	df	p
MAS total	Undergraduate	2.46	15.8	-1.22	309	.332
	Graduate	2.53	15.6			
MAS (a)	Undergraduate	2.32	10.1	-1.38	309	
	Graduate	2.43	11.4			.229
MAS (b)	Undergraduate	2.43	5.5	1.51	309	
	Graduate	2.65	5.6			.698
MAS (c)	Undergraduate	2.71	6.1	-2.58	309	
	Graduate	2.61	6.4			.723

*n= 216 Undergraduate, n= 95 Graduate

Table 11. T-test Analysis for Education Level and MAS (22 items)

	Education	N	Mean	SD	t	df	p
MASA_TWO	Undergraduate	239	1.53	7.405	-1.938	339	.384
	Grad	102	1.64	8.381	-1.844	171.433	
MASC_TWO	Undergraduate	239	2.70	4.140	.620	339	.910
	Grad	102	2.67	4.219	.615	187.645	
MASB_TWO	Undergraduate	239	1.19	3.188	-2.291	339	.422
	Grad	102	1.29	3.025	-2.340	200.378	
MAS-total	Undergraduate	239	1.79	10.16	-1.869	339	.422
	Grad	102	1.86	11.14	-1.801	.073	.799

Table 12. Frequency Year in School

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	115	33.0	33.3	33.3
	2	131	37.5	38.0	71.3
	3	52	14.9	15.1	86.4
	4	47	13.5	13.6	100.0
	Total	345	98.9	100.0	
Missing	0	4	.9		
	Total	4	1.1		
Total		349	100.0		

Table 13. ANOVA for Year in School and MAS (34 items)

		Sum of Squares	df	Mean Square	F	Sig.
MASTOTAL	Between Groups	254.070	3	84.690	.336	.799
	Within Groups	77796.889	309	251.770		
	Total	78050.958	312			
MASA	Between Groups	138.458	3	46.153	.416	.742
	Within Groups	34285.523	309	110.956		
	Total	34423.981	312			
MASC	Between Groups	345.524	3	115.175	2.944	.033
	Within Groups	12087.389	309	39.118		
	Total	12432.914	312			
MASB	Between Groups	57.669	3	19.223	.606	.611
	Within Groups	9793.826	309	31.695		
	Total	9851.495	312			

Note: Bold= significant values, *n=349

A Scheffé post hoc test was conducted to see if there was a difference between the years in school and the participants' respective attitudes toward persons with disability. A significant F score for MAS-C ($F=2.94$, $DF=3,309$, $p = .033$) was found, but the post hoc analysis showed no significant pairs. Comparison of means of first year and fourth year students (27.34 versus 24.28) was almost a significant difference ($p = .055$), but comparison of the MAS-C subscale scores of participants with 2 and 4 years of college (27.07 versus 24.28) was not quite as close at $p = .092$. The difference in attitudes was only significant on the cognition subscale for MAS-34.

In conclusion, the year in school was not significant on the subscales regarding affect and behavior. However, differences in the MAS subscale scores on cognition reached significance as presented in Table 13 ($F = 2,94$, $df = 3,309$, $p = .033$). Pairwise *post hoc* comparisons showed no significant differences between adjacent pairs but rather a gradual increase across years.

Table 14. ANOVA for Year in School and MAS (22 items)

		Sum of Squares	df	Mean Square	F	Sig.
MASA_TWO	Between Groups	341.993	3	113.998	1.846	.139
	Within Groups	20997.728	340	61.758		
	Total	21339.721	343			
MASC_TWO	Between Groups	243.419	3	81.140	4.316	.005
	Within Groups	6392.601	340	18.802		
	Total	6636.020	343			
MASB_TWO	Between Groups	35.253	3	11.751	1.145	.331
	Within Groups	3489.678	340	10.264		
	Total	3524.930	343			
MAS total	Between Groups	1330.684	3	443.561	1.145	.331
	Within Groups	40399.174	340	118.821	3.733	.012
	Total	41729.858	343			

Note: Bold =significant values.

The second analysis with year in school and MAS (22) indicated that the total MAS score was significant. The cognition subscale was significant with $p=.005$ and MAS-total subscale was $p= .012$. Significant F scores were obtained for MAS-C ($F = 4.3$, $df=3$, $p = .005$) and MAS-total ($F = 3.7$ $df=3$, $p = .012$).

Analysis 4: Academic Major

Hypothesis 4: Attitudes toward persons with disabilities will be negative for business majors in comparison to other programs as measured by differences in total and subscale scores on the MAS.

Table 15. Descriptive for Academic Major Means and Standard Deviations for Results on the MAS (34)

		N	Mean	SD
MASTOTAL	Business	47	2.32	10.066
	Law	32	2.32	18.534
	Technology Information	8	2.69	20.817
	Education	129	2.60	15.970
	Journalism / Communications	24	2.35	18.468
	Medicine	38	2.43	12.398
	Engineering	12	2.48	12.435
	Social Science	22	2.60	14.706
	Total	312	2.49	15.707
MASA	Business	47	1.99	7.395
	Law	32	2.21	12.088
	Technology Information	8	2.34	13.638
	Education	129	2.57	10.741
	Journalism / Communications	24	2.30	10.507
	Medicine	38	2.27	8.618
	Engineering	12	2.22	9.346
	Social Science	22	2.48	7.333
	Total	312	2.36	10.457
MASC	Business	47	2.78	5.757
	Law	32	2.54	6.725
	Technology Information	8	3.17	7.833
	Education	129	2.60	5.859
	Journalism / Communications	24	2.55	7.419
	Medicine	38	2.79	5.465
	Engineering	12	2.78	6.926
	Social Science	22	2.76	7.518
	Total	312	2.68	6.295
MASB	Business	47	2.40	4.305
	Law	32	2.25	6.099
	Technology Information	8	2.81	6.071
	Education	129	2.67	5.701
	Journalism / Communications	24	2.20	6.358
	Medicine	38	2.32	5.022
	Engineering	12	2.64	5.114
	Social Science	22	2.63	5.178
	Total	312	2.51	5.623

Table 15 displays the scores on the MAS total and on three subscales for each major of the participants. From the table, it can be interpreted that the highest means had more negative attitudes compared to those with the lowest means, which indicated more positive attitudes when compared to participants in other majors. The table also provides the total number of participants, means, and standard deviations.

The hypothesis was accepted because academic major was a significant factor for attitudes toward persons with visible disabilities for these participants. Specifically, students having different academic majors had statistically significant differences on the subscales for affect ($p=.000$) and behavior ($p=.002$), and score differences on the cognition subscale ($p=.088$) were approaching significance, meaning that academic major was a factor that affected attitudes towards disabilities.

Table 16. ANOVA for Academic Major and MAS (34 items)

		Sum of Squares	Df	Mean Square	F	Sig.
MASTOTAL	Between Groups	5962.205	7	851.744	3.659	.001
	Within Groups	70762.975	304	232.773		
	Total	76725.179	311			
MASA	Between Groups	3517.061	7	502.437	5.009	.000
	Within Groups	30491.602	304	100.301		
	Total	34008.663	311			
MASC	Between Groups	488.957	7	69.851	1.794	.088
	Within Groups	11835.322	304	38.932		
	Total	12324.279	311			
MASB	Between Groups	694.726	7	99.247	3.302	.002
	Within Groups	9137.107	304	30.056		
	Total	9831.833	311			

Note: Bold= significant values.

The variable of academic major was significant for all subscales and for total MAS (34 item) scale. Academic major was also a significant variable for predicting attitudes for the MAS (22 item) scale.

Table 17. ANOVA for Academic Major and MAS (22 items)

		Sum of Squares	df	Mean Square	F	Sig.
MASA	Between Groups	5116.626	7	730.947	6.396	.000
	Within Groups	38397.371	336	114.278		
	Total	43513.997	343			
MASB	Between Groups	932.736	7	133.248	3.433	.001
	Within Groups	13041.357	336	38.814		
	Total	13974.093	343			
MASC	Between Groups	564.754	7	80.679	1.688	.111
	Within Groups	16054.827	336	47.782		
	Total	16619.581	343			
MASTOTAL	Between Groups	9710.238	7	1387.177	4.513	.000
	Within Groups	103280.201	336	307.382		
	Total	112990.439	343			

Note: Bold =significant values.

Analysis 5: Contact Level

Hypothesis 5: Participants with more direct contact with people with disabilities will demonstrate more positive attitudes toward disabilities relative to participants with no contact.

The hypothesis was rejected. The amount or level of contact with people with disabilities was not associated with positive attitudes for the Ethiopian college student population.

Table 18. Frequency for Level of Contact

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	134	38.4	42.4	42.4
	2	82	23.5	25.9	68.4
	3	100	28.7	31.6	100.0
	Total	316	90.5	100.0	
Missing	0	33	8.3		
	Total	33	9.5		
Total		349	100.0		

Table 19. ANOVA for Contact Level and MAS (34 items)

		Sum of Squares	df	Mean Square	F	Sig.
MASTOTAL	Between Groups	337.658	2	168.829	.667	.514
	Within Groups	72383.491	286	253.089		
	Total	72721.149	288			
MASA	Between Groups	189.931	2	94.965	.866	.422
	Within Groups	31374.485	286	109.701		
	Total	31564.415	288			
MASC	Between Groups	17.064	2	8.532	.220	.802
	Within Groups	11070.174	286	38.707		
	Total	11087.239	288			
MASB	Between Groups	12.886	2	6.443	.204	.816
	Within Groups	9029.792	286	31.573		
	Total	9042.678	288			

The variable of contact level was not significant for predicting attitudes on the MAS (34-item). There were no differences in the means for contact level and attitudes. The variable of contact level was significant at predicting attitudes on the MAS (22-item). Only the subscales of cognition and behaviors were significant: cognition subscale $p=.015$ and total MAS score $p=.054$

Table 20. ANOVA for Contact Level and MAS (22 items)

		Sum of Squares	df	Mean Square	F	Sig.
MASA_TWO	Between Groups	108.888	2	54.444	.883	.414
	Within Groups	19226.998	312	61.625		
	Total	19335.886	314			
MASB_TWO	Between Groups	18.704	2	9.352	.930	.396
	Within Groups	3137.696	312	10.057		
	Total	3156.400	314			
MASC_TWO	Between Groups	168.201	2	84.101	4.248	.015
	Within Groups	6176.370	312	19.796		
	Total	6344.571	314			
MASTOT_TWO	Between Groups	729.485	2	364.743	2.949	.054
	Within Groups	38585.258	312	123.671		
	Total	39314.743	314			

Note: Bold = significant values.

Analysis 6: Self-esteem

Hypothesis 6: Higher self-esteem will be associated with more positive attitudes toward disabilities.

The Pearson correlation was calculated to examine the relationship between the participants' scores on the Coopersmith Self-Esteem Inventory and the three factors of the MAS. Self-esteem correlated significantly with all three factors: affect ($r = -.184$, $p < .001$), behavior ($r = -.207$, $p < .000$), and cognition ($r = -.087$, $p > .123$). Higher self-esteem correlated with positive attitudes on the three factors of the MAS. Thus, the higher the students' self-esteem, the more likely they were to display positive attitudes toward persons with visible disabilities as measured by the MAS.

The Pearson correlation was calculated to examine the relationship between the participants' scores on the Coopersmith Self-Esteem Inventory and the three factors of the MAS (34). Self-esteem correlated significantly with all three factors: affect ($r = -.111$, $p < .039$), behavior ($r = -.150$, $p < .005$), and cognition ($r = -.129$, $p > .016$). Higher self-esteem correlated with positive attitudes on all three factors of the MAS.

Table 21. Self-esteem and MAS (34) Correlation Table

		CSEI TOTAL
MASA	Pearson Correlation	-.184**
	Sig. (2-tailed)	.001
	N	315
MASC	Pearson Correlation	-.087
	Sig. (2-tailed)	.123
	N	315
MASB	Pearson Correlation	-.207**
	Sig. (2-tailed)	.000
	N	315
MASTOTAL	Pearson Correlation	-.230**
	Sig. (2-tailed)	.000
	N	315

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

Table 22. Correlation for Self-Esteem Inventory and MAS (22 items)

MAS- 22 items		Self-esteem Inventory
MASA AFFECT	Pearson Correlation	-.111*
	Sig. (2-tailed)	.039
	N	346
MASB BEHAVIOR	Pearson Correlation	-.150**
	Sig. (2-tailed)	.005
	N	346
MASC COGNITION	Pearson Correlation	.129*
	Sig. (2-tailed)	.016
	N	346
MASTOT TOTAL	Pearson Correlation	-.071
	Sig. (2-tailed)	.186
	N	346

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

Analysis 7: Cultural Orientation

The cultural orientation variables were used to determine how the participants may have identified culturally. This variable was measured by the Individualism/Collectivism Scale (INDCOL; Triandis, 1995). A correlation was conducted with the INDCOL and the 22-item MAS.

The Pearson correlation was calculated to examine the relationship between the participants' scores on four factors of the INDCOL and three factors of the MAS (22). The cultural orientation variable as measured by the INDCOL correlated significantly with all three factors: affect and the Horizontal Collectivism ($r = -.112, p < .037$). The cognition subscale correlated with all three subscales of the INDCOL except for Vertical Individualism; Cognition for HI: ($r = -.129, p > .016$). The total MAS (22) correlated with three subscales of the INDCOL, the HI, HC, and VC; there was no correlation with any of the MAS- 22 factors and the VI subscale.

Table 23. Correlation for INDCOL and MAS (34 items)

		ICS_HI	ICS_HC	ICS_VC	ICS_VI Individual Collectivism Scale VERTICAL INDIVIDUALISM
MASA	Pearson Correlation	-.018	-.106*	-.028	-.038
	Sig. (2-tailed)	.742	.048	.603	.479
	N	348	347	347	343
MASB	Pearson Correlation	.024	-.018	.068	.049
	Sig. (2-tailed)	.659	.734	.209	.369
	N	348	347	347	343
MASC	Pearson Correlation	-.045	-.098	-.040	-.062
	Sig. (2-tailed)	.406	.068	.462	.256
	N	348	347	347	343
MASTOTAL	Pearson Correlation	-.020	-.110*	-.009	-.031
	Sig. (2-tailed)	.714	.041	.871	.571
	N	348	347	347	343

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

Table 24. Correlation for INDCOL and MAS (22 items)

		INDCO L-HI	INDCO L-HC	INDCO L-VC	INDCOL -VI
MASA_TWO	Pearson Correlation	-.031	-.112*	-.043	-.043
	Sig. (2-tailed)	.568	.037	.430	.423
	N	348	347	347	343
MASC_TWO	Pearson Correlation	.165**	.150**	.126*	.033
	Sig. (2-tailed)	.002	.005	.019	.540
	N	348	347	347	343
MASB_TWO	Pearson Correlation	.035	-.040	.055	.031
	Sig. (2-tailed)	.512	.463	.308	.568
	N	348	347	347	343
MASTOT_TWO	Pearson Correlation	.054	-.032	.036	-.010
	Sig. (2-tailed)	.312	.552	.506	.857
	N	348	347	347	343

* Correlation is significant at the 0.05 level (2-tailed)

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

Analysis 8: Social Desirability

The purpose of this analysis was to determine how the participants scored on the surveys in relation to the social desirability scale. The Pearson correlation was calculated to examine the relationship between the participants' scores on the Marlowe-Crowne Social Desirability Scale, the Multidimensional Attitudes Scale Toward Persons with Disabilities, the Coopersmith Self-esteem Inventory, and the Individualism/Collectivism Scale. There were positive correlation between MAS-22 behavior and MAS-22 affect, and MAS-22 cognition and behavior. The subscales of the INDCOL also positively correlated with each other; Horizontal Individualism correlated with HC, VC, and VI. Horizontal Collectivism also correlated with VC, VI, and Vertical Collectivism also correlated with VI.

Summary

This study provided evidence that although Ethiopian college students had negative attitudes toward visible disabilities, specific variables affected those attitudes, such as gender and academic major. Overall this study also suggested that another measure for attitudes may need to be used in future studies. The MAS model for measuring attitudes did not fit the model for the Ethiopian sample. Although this study alone cannot be the authority on attitudes of Ethiopian college students toward visible disabilities, it has laid a foundation that there are factors affecting attitudes that should be further investigated. These findings may contribute to future attitudinal studies with more culturally appropriate measurements. Chapter V will discuss the results of these analyses.

Table 25. Multiple Correlation of Marlowe-Crowne Social Desirability Scale (MCSDS) Scale and Multidimensional Attitudes Scale Toward Persons with Disabilities (MAS), Self-esteem Inventory (CSEI), and Individualism/Collectivism Scale (INDCOL)

Variables	1	2	3	4	5	6	7	8	9	10
1. Marlowe-Crowne Social Desirability Scale	--									
2. MAS2 A	-.060	--								
3. MAS2 B	.008	.352***	--							
4. MAS2 C	.001	.146**	.056	--						
5. MAS TOTAL	-.040	.876***	.567***	.520***	--					
6. Individualism/Collectivism Scale (HI)	.041	-.031	.035	.165**	.054	--				
7. Individualism/Collectivism Scale (HC)	.042	-.112*	-.040	.150**	-.032	.682***	--			
8. Individualism/Collectivism Scale (VC)	.044	-.043	.055	.126*	.036	.674***	.803***	--		
9. Individualism/Collectivism Scale (VI)	-.028	-.043	.031	.033	-.010	.613***	.550***	.548***	--	
10. Self-esteem Inventory	.112*	-.111*	-.150**	.129*	-.071	.046	.120*	.007	-.093	--

CHAPTER V

DISCUSSION

Chapter Five will discuss the findings related to the study of Ethiopian college students' attitudes towards visible disabilities. The chapter will present (a) review of the study, (b) discussion of the confirmatory factor analysis and two research questions that guided the study, (c) limitations of the study, and (d) recommendations for future research.

Review of the Study

Negative attitudes have long been identified as societal barriers for people with disabilities (Burge et al., 2007; Hunt & Hunt, 2004; Mullins et al., 1997), especially those with visible disabilities. Since these visible disabilities mark the individual, the attitudes formed are without knowledge of the disability or the individual with the disability (Harper, 1995; Wright, 1984). These assumptions often lead to negative stereotypes and stigmatization of those individuals. The impact of negative attitudes in Ethiopia can be seen in the lack of participation of people with disabilities in society (Mulatu, 1999; Rhamet et al., 2000). In short, society negatively labels and ostracizes those with visible disabilities. Many studies of general attitudes toward disabilities have identified specific variables that affect that process.

College students have been surveyed in the past, not only because of convenient sampling, but because they are key stakeholders of future organizations, employers, and individuals who will have the power to grant access to individuals with disabilities (Stoval & Sedlacek, 1983). Past studies have demonstrated that certain variables such as gender, educational level, academic major, level of contact, self-esteem, and cultural orientation are factors that affect attitudes toward disabilities (Antonak & Liveh, 1988; Hunt & Hunt, 2004; Rao, 2004; Yucker, 1994). The current study examined the attitudes of Ethiopian college students toward persons with visible disabilities and sought to identify variables that may have affected those attitudes. According to the MCSDS,

Ethiopian college students demonstrated that they answered the questions with less concern about being socially biased ($M=14.7$, $SD=3.5$). The guidelines of the MCSDS state that a mean score of 15 was generally open.

Because the rejection of people with disabilities is culturally acceptable in Ethiopia, if students' attitudes coincided with the general beliefs, they had little reason to want to change their answers to seem more socially desirable; apparently they already are acceptable in their culture. Their attitudes were already largely expressed by the population. Unlike in the United States where it is considered undesirable to have negative attitudes, it is more likely that in the U.S., people are more likely to want to seem more socially desirable in their outlook. The Individualism Collectivism Scale that was used to identify the students' cultural orientations suggested that Ethiopian college students think in a horizontal collectivistic manner and are group oriented. For example, because studies indicate that people with disabilities are not socially accepted in Ethiopian culture, the participants are likely to adhere to cultural norms at the time and not display attitudes that may go against the group's cultural norms and beliefs, which indicate that disabilities are caused by supernatural events (Alem et al., 1995; Mulatu, 1999) and disabilities are contagious (Tekle-Haimnot et al., 1992). The practices of these beliefs have led people with disabilities in Ethiopia to experience stigma and social isolation (Fitaw & Boersma, 2006; Tirussew, 2005). The Individualism/Collectivism Scale (INDCOL) results indicated that Ethiopian college students were likely to follow the groups' norms. The mean score for the population for this instrument was 30.18 ($SD = 6.0$). Although there were no significant differences on the other four subscales, the participants scored the highest on the horizontal collectivism subscale.

A confirmatory factor analysis (CFA) was conducted to determine if the sample data model fit of the MAS based on the earlier results. The Ethiopian sample collected as a part of this study was compared to the Israeli sample obtained from Findler et al., 2007. The results of the CFA suggested that the MAS model for the Israeli sample did not fit

the Ethiopian sample; it also identified items on each of the three subscales that did not load to fit the model. The results suggested that in general, Ethiopian college students do have negative attitudes toward those with disabilities. For example, level of education was not significantly related to any of the subscales. The variable of academic major was significant on both the affect and behavioral subscales, and self-esteem correlated with all three subscales. Self-esteem had the highest correlation compared to the other variables and the MAS.

Discussion of the Findings

The research questions that guided this study were:

The preliminary analysis: Does the factor structure of the MAS fit the Ethiopian college student participants in Addis Ababa University in the same way as the Israeli college student population?

Question #1: What are the general attitudes of Ethiopian college student participants in Addis Ababa University as measured by the MAS subscales of Affect, Behavioral, and Cognition?

Question #2: What is the relationship of select characteristics (gender, education level, year in school, academic major, contact level, self-esteem, and cultural orientation) of Ethiopian college students at Addis Ababa University to their attitudes toward visible disabilities?

The following section will discuss the sample population and the findings of each research question.

Sample Population

A total of 339 students from Addis Ababa University in Ethiopia were surveyed for this study in January 2011. All participants were registered students at the time of the study. The sample was comprised of 177 males and 137 females. There were 26 students who self-identified as having a disability, and 9 who indicated they had a visible

disability. The majority of the students were undergraduates (68.6%) and 41% were education majors.

Results for Confirmatory Factor Analysis

This study was the first of its kind in Addis Ababa University to explore the college students' attitudes toward visible disabilities using the MAS.

The CFA addressed the appropriateness and statistical fit of the MAS model generated on the Israel sample for the Ethiopian sample collected as a part of the present study. The results suggested that the model of the MAS used in Israel did not agree with the Ethiopian sample. The CFA indicated that Israel college students were different from Ethiopian college students in their responses to this measure. This outcome was demonstrated in part based on the different loadings that appeared across the items. The two groups are culturally different from each other, and the findings may represent both a difference in disposition in responding and cultural differences.

Several factors may have been responsible for the MAS subscales not loading the same way in Ethiopia as they did in Israel. The CFA of the MAS in Ethiopia had a sample of 339, and in Israel the sample was 132. The Ethiopian sample size was determined using the logic that a larger sample size would benefit the study by increasing power, confidence, and reliability of the confidence interval. The difference in sample size may have affected the results as much as the cultural differences of the two countries.

Several items loaded below .4 on the MAS, for example, the question about friendliness. This question was very subjective and culturally based. The way in which Ethiopians approach and model friendliness could be interpreted differently than in Israel. Many Ethiopian youth struggle to adjust to life in Israel as immigrants because the cultures are vastly different. Goldblatt and Rosenblum (2007) studied the adjustments of Ethiopian Jews in Israeli and documented that most youth struggle with "transition from a traditional to a Western culture" (p. 585). Israel is much more technologically advanced

and modern compared to Ethiopia, which is still regarded by many researchers as a very traditional and ancient culture (Palmer, 2010). Therefore, it is very likely that the cultures of everyday society differ, as documented by Goldblatt and Rosenblum. As a result, cultural interpretations of customs such as friendliness will differ and are not likely to be displayed in the same way. This difference may have been captured by the low loadings of certain items on the MAS.

Other items that loaded poorly (below .04) were serenity, calmness, and alertness. Again the cultural variations may be a reason for the large difference in item loadings. It is acknowledged that the two cultures are dissimilar (Goldblatt & Rosenblum, 2007); therefore, it is likely that the cultural differences may have been responsible for the way the two populations measured on the MAS. Twelve out of the 34 items on the MAS did not load above .4. These results suggest that the MAS model used to measure attitudes in the Israeli sample did not measure attitudes the same way in Ethiopia.

A second confirmatory analysis was conducted using only 22 items from the MAS that were selected because in the first CFA these 22 of the items loaded above .4. The second CFA examined whether the model would fit if only the items that loaded above .4 were included. The results indicated that although there was improvement, the model still did not resolve discrepancies between the samples. The criteria for determining model fit were based on the CFI and GFI. The CFI can range from 0 to 1.0, and values of the CFI that are closer to 1 indicate a good fit of the model. A CFI value that is greater than .90 is considered an acceptable fit to the data. The results of the first CFA with the 34-item MAS indicated that the GFI was 2.9. Ideally, in a larger sample, the GFI should be less than 2; the first CFA produced a GFI of 2.9 indicating the model did not fit. The GFI is calculated by dividing the chi-square by the degrees of freedom ($\text{chi-sq} = 1524, \text{df} = 524$) = 2.9. In the second CFA with the 22-item MAS, the GFI was 2.19. Again, based on these criteria, the model still did not fit because it was above 2. Although the second CFA was closer to fitting the model than the first CFA, it still did

not fit the model. The CFI for the CFA was .72 and for the second CFA it was .88; both indicated not a good fit because the CFI should be greater than .9 and it was not.

In summary, the first analysis indicated that because the model of the normative population did not fit the Ethiopian population, the instrument that measures attitudes adequately in Israel may not measure attitudes adequately in Ethiopia. Also, the model fit did not indicate valid instruments. A maximum likelihood of goodness of fit was significant ($p\text{-value}=0.0001$) indicating that the factor structure of the second CFA was better compared to the first CFA; however, the model still did not fit. Due to Ethiopia and Israel being different from each other, it was logical to examine if a valid instrument in Israel would also be appropriate for use in Ethiopia. The first CFA was conducted and compared the loading factors against the current CFA, which was conducted in Israel. All the tests used to examine a CFA provided that it was not a good fit to measure attitudes in Ethiopia. The researcher made the assumption that it was probably due to cultural interpretations of the items on the MAS. Although the students spoke and read English in Ethiopia, some difficulties can be experienced when interpretation occurs from one language to another, which may affect the meaning of terms and definitions. Students in Ethiopia on average speak three languages.

The first language a person in Ethiopia learns to speak is the tribal language. There are many tribes in Ethiopia, and growing up that becomes the first language a person learns to speak. The second language a person learns is the national language, Amharic. Individuals have to learn to speak the Amharic language because it is the national language and all documents are written and primary education is taught in this language. Although the Amhara tribe themselves are a minority, very few people in Ethiopia speak only Amharic. The third language the average university student speaks is English. This is mandatory since all courses except language courses are taught in English. Therefore, the participants are likely to have been speakers of multiple languages, and thus must translate the instruments and the items in various languages.

Hence, it could be expected that some definitions of words and meanings were lost in translation. This occurred on the cognition subscales in which a question asked participants to rate the item, “He/she looks friendly.” This was a difficult task because for Ethiopian students, friendliness is expressed through behavior not just being seen; therefore, looking friendly was a difficult concept to understand. In Ethiopia, friendliness is defined in terms of behavior: Do you stop and properly greet people when you see them, which involves kissing and hugging people even if you are in a rush? Do you stop and respectfully have a conversation with a person? These are the measures of friendliness. These tasks that measure friendliness are all behavior based. For Ethiopians, a person is friendly by behaviorally being friendly not by looking friendly. These types of misunderstandings of concepts could have potentially been responsible for the unfit model of the MAS for the Ethiopian student sample.

Results for Research Question 1

The first research question explored the attitudes of Ethiopian college students as measured by the MAS. The study results for this question indicated that Ethiopian college students’ attitudes in general were negative, based on the means and standard deviations calculated for the entire sample population. The scores for the MAS (mean and standard deviations) were compared to the Israeli college student population, which were also negative. The results indicated that on the affect subscale, the differences between both samples were not significant ($p=.545$), with both samples scores being interpreted as having negative attitudes. On the behavioral subscale, the difference was significant ($.0001$). The Israeli population actually displayed more negative attitudes. Results on the cognition subscale were also significant ($p=.0001$), and those results indicated that the Israeli sample’s attitudes were more negative compared to those of the Ethiopian group.

In general the MAS indicated that Ethiopian students had negative attitudes toward disabilities. According to the MAS, attitudes are measured in three subscales:

affect, behavior, and cognition. Within the three subscales, Ethiopian college students scored the highest means on the cognition subscales; they scored 3 out of a possible 5. Although all three means on the subscales were negative; cognition was the highest mean. The cognition subscale was influenced by the College Interaction Self-Statement Test (CISST; Amsel & Fichten, 1988). The rationale they provided for having the cognition scales was to measure college students' social interactions, and thus on the MAS, it was intended to measure the same level of thoughts about students' willingness to socially interact with individuals with and without disabilities. Ethiopian college students had the most negative attitudes when questions were intended to measure how willing they were to interact with others with visible disabilities.

The results of the data collected in this study closely resemble other studies conducted in Ethiopia. Other studies about beliefs and attitudes toward disabilities in Ethiopia indicated that attitudes were negative and culturally influenced. Tirussew (2005) found that the involvement in community participation of people with disabilities re limited due to negative attitudes and beliefs. Shilbre et al. (2001) examined the beliefs of Ethiopians toward disabilities and found that most people largely believed disabilities were due to supernatural causes; this carried strong stigma and spread affect to family members, thus increasing the segregation of people with disabilities. The most poignant belief of Ethiopians about disabilities is that they are caused by God and are a form of punishment (Rhamet et al., 2000). Reflecting a superstitious society, the participants' responses on the MAS showed that they were closely adhering to this belief system that promotes social exclusion. The cognition subscale was intended to measure social interaction; scoring high on that particular subscale communicated that Ethiopian students were not open to socially interacting with people with disability. This is contradictory to the culture, because in the Ethiopian culture it is difficult to conduct daily activities without social and physical interactions. Ethiopians kiss and hug as a form of greeting; if they are not interacting with people with disabilities in such a manner, their

lack of interaction could point to the fact that people with disabilities are treated much differently and possibly shunned from society. The participants' attitudes also suggested that people are deliberately choosing not to socially include and interact with people with disabilities, since the culture requires daily social and physical interactions.

Results for Research Question 2

This question examined how the variables of gender, education level, year in school, academic major, contact level, self-esteem, and cultural orientation affected attitudes as measured by the MAS. This question was associated with Hypotheses 1 through 7. The study found that gender, academic major, year in school, and contact level significantly affected attitudes of the Ethiopian students. The first hypothesis stated that compared to males, females would have more favorable attitudes toward disabilities as measured by the MAS (Hunt & Hunt, 2004, Pitman & Slate, 1994; Upton & Harper, 2000; Yucker, 1994). The t-test of gender and MAS-34 indicated that females had more positive attitudes compared to males in this study. In the t-test with MAS-22, the results were similar to the analysis of the 34-item MAS, and both analyses indicated significant differences between male and female respondents on the cognition and behavior subscales. However, both analyses indicated no significant differences on the affect and total MAS scores of male and female respondents on the 22- and 34-item MAS analyses. For both analyses, males had more positive attitudes on the cognition subscale compared to females. On the behavior subscale, females had more positive attitudes compared to males.

On both analyses, males scored lower means on the cognition subscale, indicating more positive attitudes in their thinking toward disabilities. The authors of the MAS defined the cognition component as “an individual’s ideas, thoughts, perceptions, beliefs, opinions, or mental conceptualization of the referent (Findler et al., 2007, p.167). It is the assumption of the researcher females had more negative attitudes toward disabilities on the cognition subscale because females are held responsible when they have children who

have disabilities; therefore, their thoughts are more negative because their experiences with disabilities are negative. Women are blamed for having children with disabilities, and this train of thought translates to when they encounter individuals with disabilities. Therefore, the females who participated in the study may be relating their thoughts to how women are the ones blamed for disabilities. Research found that fathers blamed the mothers for having children with disabilities (Rhamet et al., 2000). Therefore, it is logical to assume that the females' thoughts about disabilities may be more negative because they are held accountable for causing them. Males are not as responsible for creating the disability; therefore, the thoughts and beliefs may not be as relevant to them and their direct contribution to the individual with the disability. The beliefs of cause of disability may account for the differences in attitudes between males and females. Since women carry the children, they are believed to be solely responsible for having a non-disabled child and when they have a child with a disability, it is attributed to something they did and the punishment is a child with a disability.

The second hypothesis stated that participants with a higher level of education (i.e., graduate level) would have more positive attitudes toward disabilities compared to those with a lower level of education (undergraduate level). The results of first t-test with the 34-item and 22-item MAS suggested that when the total MAS scores were reviewed, no significant differences were found on all three subscales of the MAS for the two education levels. Therefore, in this study level of education made no difference in attitudes as measured by the MAS.

The difference in education level did not measure difference in attitudes possibly because there may be nothing to distinguish the experiences of undergraduates and graduate students in relation to disability knowledge or exposure. Studies indicate that the variable that is responsible for change in attitudes is contact or knowledge of disabilities. The students in Ethiopia did not indicate differences in experience in their knowledge of disability from their years as undergraduate students to when they were graduate

students; therefore it is not logical to expect a difference in attitudes. Also, their knowledge of disabilities could not be assumed to be vastly different from one education level to the other. The other possible reason not to assume major disability knowledge is that students in Ethiopia generally stay in the same field of study. Therefore, if the field of study did not expose them at the undergraduate level to disability, it is not likely to make a difference at the graduate level either. The study found academic major to be the most significant variable affecting attitude difference. Therefore, it is the field of study that made a difference in attitudes and not necessarily the level of education.

The third hypothesis assumed that participants who were further along in their education would have more positive attitudes toward disabilities. This variable examined the differences in reported attitudes between students whose years in school varied. The results of the both the 34-item and 22-item MAS ANOVA analyses indicated that there were differences. The results of year in school indicated that there were only significant differences on the cognition subscales and not on the other subscales for fourth year students.

The lack of significance in attitudes on the affect and behavior subscales may be explained by the lack of knowledge regarding disabilities, or limited exposure to more positive attitudes towards disabilities. If the students were not exposed to disability literature and scholarship as an undergraduate or graduate student, then their level of knowledge may not be likely to change, and therefore their attitudes on testing may not have been affected. This circumstance can be assumed because in general those with knowledge of disabilities tend to have more positive attitudes compared to those with no knowledge (Hunt & Hunt, 2004; Yunker, 1994).

The years in school variable did not affect attitudes on the other subscales. The post-hoc analysis results suggested that only the difference between first and fourth year students caused a significant difference in attitudes. The difference observed in attitudes was on the cognition subscale, which measured their thoughts and beliefs. This could be

attributed to the fact that a student's ability to think about concepts in general should improve with years in school. Therefore, it is expected that a student's thoughts and beliefs about disability would be different between the first year and that fourth year, which is exactly what the analysis showed. There was very little difference in attitudes between first and second, and second and third year students. However, differences were observed between the first and fourth year students on the post-hoc. This is to be expected since there are differences in how students think in general who are first year and fourth year. The difference in attitudes does not necessarily translate to positive or negative there was simply a statically significant difference that cannot be assumed would make a practical difference.

The fourth variable was academic major. In order to interpret the results of the academic major variables, a discussion of how major areas are chosen in Ethiopia is necessary. This variable is an interesting one in Ethiopia because students do not choose their academic major as they do in the United States. In Ethiopia, once students have an acceptable academic record to attend college, they are allowed to take a college entrance exam, and that exam determines public university placement. Students are assigned to an educational program based on placement exams. Although a private college is a choice, most students desire to attend a public university, specifically Addis Ababa University (AAU) because it was founded by the former King Haile Selassie I and is the oldest and largest university in the country (Zewde, 2010). When students arrive at the University of Addis Ababa, they are assigned to an educational curricula and major based on entrance exam scores. In Ethiopia, students do not choose their majors, and it is not a variable that would be expected to predict or be as strongly related to their attitudes or biases toward other persons. For example, in the United States, many young persons with favorable views toward inclusion of persons who are differently able may self-select into college programs such as K-12 education. Thus participants selected from samples of K-12 education majors in the U.S. typically display positive attitudes. In Ethiopia, that is not

the case (Hunt & Hunt, 2004). Those participants who indicated they majored in education may not necessarily have chosen to be a business major.

The fourth hypothesis was that attitudes would be significantly more negative for business majors in comparison to those of students from other programs. The MAS 34- and 22-item ANOVA results indicated that results on all of the subscales were significantly different for attitudes of the respondents. Academic major was a significant factor in predicating attitudes of the Ethiopian students, especially on the subscales of affect and behavioral. When examining the specific differences in attitudes of students in the different majors, the results are different than those found in other studies of participants from the United States (i.e., Hunt & Hunt, 2004; Yuker, 1994). In general, Ethiopian business, law, and journalism major students had less negative attitudes compared to those with social science and education majors.

The results indicated that technology majors had the highest level of negative attitudes toward persons with visible disabilities. However, this result may have been influenced by the number of participants. The technology major group had 8 participants, whereas majors such as business included 47 participants. The lower participant rate that may have led to the overemphasis of the responses of a few persons may have occurred because the social science and technology majors are not housed on the main campus. They were further away, and during the months of data collection, these two campuses had midterms; thus many of the students did not want to participate due to other time commitments.

The fifth variable was contact level. The hypothesis assumed that participants with more direct contact with people with disabilities would demonstrate more positive attitudes toward disabilities relative to participants with no contact. This hypothesis was rejected for MAS-34 because contact level was not significant for any of the subscales on the MAS. The ANOVA that was conducted on contact level for the MAS-34 indicated that the level of contact students had with people with disabilities made no significant

difference on any of the subscales, meaning that the p-values for all three subscales were not significant. The second ANOVA with contact level for the 22-item MAS indicated that contact level was significant for the cognition subscale and the total MAS score.

The researcher assumed that the variable of contact did not make a difference because the contact was not in a context where attitudes could change. At the university Although there are students with disabilities at the university, those disabilities are limited to hearing and visually impaired. Therefore, the general population at the university has limited contact with various disabilities. Therefore, even if students indicated a contact level, it may not necessary mean social interaction. It may simply indicate having a classmate who is blind or deaf. The contact may be simply being aware of that individual in class or around campus, not necessarily having an interpersonal relationship. Yuker (1994) explained that attitudes are changed through interpersonal interactions. In this study, the question about contact did not include interpersonal interactions. This statement is rather vague and could be difficult to interpret. However, since the contact level variable did not make a difference in attitudes, it logical to assume that these contacts were superficial and not intimate in nature.

The sixth variable to be examined was self-esteem. This variable was identified in prior studies conducted in Western cultures that predicted attitudes toward disabilities. For this study, the null hypothesis assumed that higher self-esteem would be associated with more positive attitudes toward disabilities. A Pearson correlation analysis was conducted for both the 34- and 22-item MAS versions. The results for both the 34- and 22-item MAS indicated that all subscales of affect, behavior, and cognition were significant. A correlation analysis was conducted with the self-esteem variables and attitudes as measured by the MAS. The correlation of these variables was consistent with the findings of other studies (Findler et al.; 2007; Yuker, 1994) that high self-esteem is correlated with positive attitudes. On the SEI, the Ethiopian college students were found

to have average levels of self-esteem, based on the Self-esteem Inventory, with a mean score for the participants of 58.2 (SD = 14.1).

The seventh variable was cultural orientation, which was measured using the Individualism/Collectivism Scale. This scale measured whether the participants thought in a more collectivistic or more individualist style. The scores on the INDCOL indicated that the majority of college students at the University of Addis Ababa culturally identified with horizontal collectivism, meaning that students adhered to group norms and beliefs in their thoughts and opinions, including attitudes. The Pearson correlation analysis of the 22-item MAS indicated that cultural orientation correlated with horizontal collectivism and MAS-affect; and the MAS-cognition subscale also had a positive correlation with horizontal individualism, horizontal collectivism, and vertical collectivism. There was no connection between any of the MAS subscales and the INDCOL subscales.

Limitations of the Study

It is critical to discuss limitations that may have affected the results associated with this study. Several issues were identified that may have influenced the results of this study. The biggest limitation of this study may be due to the cultural limitations of the MAS survey. Both the 34-item and the revised 22-item MAS were not valid instruments to measure attitudes for this sample. This was evident by the results from the CFAs that were conducted and from the seven different analyses. Although the analyses with the 22-item MAS did result in more subscales reaching the level of significance as compared to the original instrument, both the original and the revised versions reflected factors within Ethiopian society that may be more indicative of shared social conditions than individual belief.

A second issue that may have influenced the study is the sample of Ethiopian college students because the sample used was small and specific to a small population of Ethiopians. Although the country has a population of 85 million, only 339 college

students were surveyed. Although for the CFA, that was a sufficient sample to conduct a CFA in general, the sample size used was not sufficient to make generalizable statements about Ethiopians and their attitudes.

The MAS scores do not reflect people's intentions nor do they predict behavior. As past studies have shown (LaPiere, 1934; Vroom, 1964; Wicker, 1969; Wilgosh, & Skaret, 1987), there is no correlation between attitudinal surveys and people's behaviors. Although the present study provides insight into the attitudes of the Ethiopian participants, the data offer no insight into the behavior of participants toward those with disabilities. However, based on the importance of collectivism, cultural norms of behavior may play a prominent role in how persons with disabilities are treated by the participants regardless of the participants' attitudes. How the data are interpreted is limited to only stating what the MAS scores mean, but behaviors or intentions can not be interpreted based on these results.

Caution should be used in interpreting the results because participant recruitment biases may have occurred. As an Ethiopian native, the researcher had very different access to the culture, students, and university than an outsider may have had. Accessing this sample to collect data is extremely difficult and requires knowledge outside of just data collection. It requires researchers to be culturally sensitive and to know how to conduct themselves in ways that do not isolate the participants. Multicultural research skills are critical when attempting to study non-traditional groups especially outside the United States. Being viewed as a respectful person is a way to be granted access, and being viewed as disrespectful to cultural values may isolate the researcher and make access very difficult. Knowing the culture and how to navigate through it was a positive factor. It allowed access without having to compromise scientific rigor. It also made culturally competence more relevant. This is a case where the entire Western model of scientific methods may not be accepted because it is an Eastern culture. For example, if faculty members want to meet with the researcher first and get to know the researcher

before granting access to class, and the researcher does not deem the meeting important, it could cost the researcher access to participants. Knowing these cultural interactions ahead of time are critical, without these cultural competences access is limited, which could affect the results if not enough data were collected. It was a positive factor to be aware of the culture because the participants' culture was not lost in the interpretation of the data. Because the Ethiopian culture was observed throughout the entire process, it made access to the sample possible. However, gender was a disadvantage when it came to enlisting male faculty members to recruit participants from their classrooms. Although it is not explicitly communicated, there is a gender hierarchy in Ethiopia. The researcher observed that female faculty and researchers had more difficulty accessing data compared to male researchers. The gender of the researcher could have affected access to only specific classes and a specific sample, therefore not having as many diverse participants. For example, the majority of the participants were from the college of education, which had many female faculty members who were more open to a female researcher collecting data compared to the medical and engineering college, which had more male faculty. Those colleges were more difficult to access due to the gender of the researcher resulting in fewer participants from those colleges, which may have affected the results. Also, although classes are taught in English, many students needed an explanation of the study in the native language. For those who do not speak Amharic, this barrier may have limited access to students and affected students' decision to participate in general.

Therefore, recruiting was a limiting factor. For example, while 1280 packets were made and distributed, only 365 were collected, and out of those packets, only 339 were valid for the use in the study. Studies that achieve a response rate of 20% could actually calculate more accurate measurements compared to those with larger response rate of 60% or above (Visser, Krosnick, Marquette, & Curtin, 1996). Therefore, small response rate in itself is not a factor in accuracy of measurements; it only affected the length of recruitment, and recruiting had to continue until the needed sample population of 340 was

reached. During recruiting, students had many questions and often times these questions were in the native language of Ethiopia.

The use of paper survey instruments to collect data was a limitation because it affected students' decision to participate in the study. Many of the students were uncomfortable with completing the surveys because they were unsure of confidentiality, and a statement of confidentiality from a university in the United States was insufficient endorsement of the privacy of answers.

Finally, the study participants were highly educated and elite individuals who lived in the capital city and studied at the most prestigious university in Ethiopia. The sample had little contact with individuals with disabilities, and contact was primarily with persons with disabilities related to sensory impairment (blind, deaf). Thus the results of the study need to be interpreted cautiously as the availability of experiences of Ethiopians with individuals with other types of disabilities may be limited. Individuals with severe disabilities are not likely to survive birth and those who do are rare. The UN and WHO reported that poverty is the main cause of disability in Ethiopia, which is aggravated by lack of medical access, safe living, rehabilitation services, and sanitation in general (WHO, 2006). WHO also reported that disability prevalence is difficult to assess in Ethiopia due to inconsistent measures of disability (Jamison et al., 2006). Furthermore, Fitaw and Boersma (2006) conducted a study of disability prevalence in Ethiopia and found that the most frequent disability reported was lower motor disability at 47%, followed by blindness at 28.6%, upper motor associated disabilities at about 16.1 %, mental retardation at 10.3%, and hearing loss at 8.3%. To date no studies have been conducted on individuals with severe disabilities, which logically led the researcher to believe that due to extreme poverty and lack of access to medical care, those with severe disabilities may not survive.

Another limitation for this study was the timing of when data were collected, which affected students' decision to participate; that potentially could have an affect on the data collected.

Research and Recommendations

This study has provided additional information needed in Ethiopia to better understand attitudes toward visible disabilities. Much literature supports that attitudes are barriers to gainful employment and education, and in Ethiopia, the negative attitudes are a barrier to participation in general society (Antonak & Livneh, 1988; Mulatu, 1999; Rhamet et al., 2000; Yaker, 1994). To decrease obstacles and increase inclusion, attitudes of stakeholders must be addressed.

Further studies in the area of attitude toward disabilities in Ethiopia need to be conducted, because one study alone is insufficient to explore the complexities of the topic. Specifically, this study should be replicated with several improvements and extensions. First, different culturally appropriate attitudinal instruments should be utilized to provide data that are generalizable to the rest of the Ethiopian population. For example, samples from school-age children in Grades K-12 might provide some insight into the cultural beliefs that children carry into adulthood. Studies with school-age children would provide some insight into the type of attitudes children have and what that means for inclusion of children with disabilities into primary schools. If children with disabilities are not admitted into primary schools, it is unlikely they will be accepted into higher education. A study with school-aged children would contribute to the literature about Ethiopian and what aspect of the culture influences attitudes, since socio-cultural socialization is a big aspect of attitude formation (Arokiasamy et al., 1995). Also, in a collectivistic culture such as Ethiopia, it is critical to understand that individuals will adhere to the group norms and values (Katz, 1960). Studying children will identify which aspects of the culture children adhere to and what aspect of the culture is involved in shaping attitudes towards disabilities

Another suggestion would be to use non-school samples. Different communities need to be surveyed for the attitudes they have. It is critical to examine the attitudes of as many sample populations as possible in Ethiopia, because attitudes surveys regarding disabilities are fairly new, and thus to establish a generalizable results, more studies with more different samples need to be conducted. Furthermore, to have generalizable results even for college students, more studies need to be conducted specifically with larger sample size of participants, but especially with even larger sample of students with disabilities. It is vital to examine the attitudes of student with disabilities because they have a unique perspective that without their participation would be lost and not considered. The other recommendation is not only the sample but what is being asked of the participants.

This study had seven variables that were examined in relation to participants' attitudes. Future studies need to examine these variables in detail. The seven variables have been studied and found to be factors which affect attitudes toward disabilities (Rao et al., 2010). First, while contact level is a strong variable in many studies on attitudes, that was not the case in Ethiopia. More specifically, the variable of contact level needs to be further explored. Although the variable of contact was not significant in this study, the context of participants' contact with individuals with disabilities was unknown. It is unknown how the participants made contact with people with disabilities. It is critical to examine if the contact took place where the status of the individual with and without disabilities were equal. This is important because Allport's theory of Contact Hypothesis determines the conditions in which interpersonal contact was made. He argued that one of the ways that group' interactions could potentially be changed is if both people from the different groups could interact on the same status level. Therefore, because this study did not explore the context of the contact that was made, exploring that piece of critical detail may provide another clue into what may affect Ethiopians' attitudes toward disabilities. For future research, if contact can be defined and further

explored, the researcher would be able to identify variables that could be used to change attitudes and increase inclusion opportunities. For example, the section on contact level should also include the type of contact, such as where contact takes place and not just how often. The context of the contact level is relevant. In this study, contact was not significant, but if more context had been provided about the contact level, it may have answered the question why contact was not significant. Second, more effort needs to be made to increase the number of participants from other academic majors. Since major was a significant variable, it is critical to have as much diversity of majors as possible. This study had an overwhelming proportion of education majors (41%).

Third, studies with self-esteem need to take place to establish whether the concept of self-esteem is interpreted or translated the same way in an Eastern culture as it is in a Western culture. Self-esteem is a Western concept and an extremely individualistic concept, and it was not the scope of this study to conduct a factor analysis of these items in the self-esteem instrument to see if the model of self-esteem in the United States would fit Ethiopian college students; this would provide even further insight into the self-esteem of Ethiopian college students and definitive statements could be made about their self-esteem. Although the factor analysis of self-esteem was beyond the scope of this study, other studies should explore it to add to the gap in the literature.

Summary

Chapter V presented a discussion of the results associated with the attitudes of Ethiopian college students toward visible disabilities. This study was guided by two research questions, and involved a preliminary analysis of the how well the MAS fit as a measure for the attitudes toward disabilities of an Ethiopian student sample. This first concern required a preliminary analysis of CFA to be conducted, and that analysis suggested that the MAS model developed in Israel did not fit the Ethiopian college student population. The first of the main research questions asked about the general

attitudes of Ethiopian college students, and those results suggested that Ethiopian college students have negative attitudes toward individuals with visible disabilities. On all three subscales of affect, behavior, and cognition, students' scores indicated that they held negative attitudes.

The second research question asked whether the characteristics of gender, education level, year in school, academic major, contact level, self-esteem, and cultural orientation were significant factors affecting attitudes as measured by the MAS. The results of this question suggested that educational level had no significant effects. Whether students were undergraduates or graduate students, this variable made no difference in predicting attitudes. The variables of both gender and year in school were significant on the cognition subscale. Academic major was one of the strongest variable which affected attitudes; it was significant on both the affect and the behavioral subscales. Strong correlation was found between self-esteem and attitudes toward disabilities. Those with high self-esteem also had more positive attitudes.

In conclusion, the creators of the MAS stated that positive scores on one subscale should not be interpreted as positive attitudes nor should positive attitudes be interpreted as behaviors leading toward inclusion of people with disabilities; rather it should be used to investigate further the dimensionality of behavior and real-life situations. Ethiopian university students scored high on the affect subscales, and for example, while it was statistically significant, it cannot be stated that it is significant in real life. A high score on the affect subscale does not necessarily translate into positive attitudes nor does it necessarily predict actions toward inclusion of people with disabilities.

APPENDIX A
DEMOGRAPHIC SHEET

For the purposes of this study the following definition will be used.

Disability: an individual who (a) has a physical or mental impairment, which limits their life activity, (b) has a record of such impairment, or (c) is regarded as having such impairment. The impairment may be visible or invisible permanent or temporary in nature.

1. Gender: 1. Male 2. Female

2. In what level of school are you? 1. Undergraduate student 2. Graduate student

3. In what year in school are you?

1. First
2. Second
3. Third
4. Fourth
5. Fifth year or more

4. In what school or college is your major (area of study)?

1. Business
2. Law
3. Technology information
4. Education
5. Journalism and communications
6. Medicine
7. Engineering
8. Veterinary medicine
9. Social Science

5. What is your level of knowledge level about disabilities? Using the definition above, please circle the number that reflects your knowledge level.

Not knowledgeable at all

very knowledgeable

1

2

3

4

5

6

6. What is this knowledge based on?

1. Personal experience
2. Contact
3. Reading or school work
4. Other

7. Do you know anyone with a disability? Using the definition above.

1. Yes
2. No

If yes:

8. How do you know this person?

1. Friend
2. Family member
3. School or work acquaintance
4. Casual contact

9. What type of disability does this person have?

1. Psychiatric
2. Physical (mobility issues)
3. Deaf or hard of hearing
4. Blind
5. Missing limbs (arms or legs)
6. Mental retardation
7. Epilepsy (seizures)
8. Cerebral palsy
9. Facial disfigurement

10. How often do you have contact with this person?

1. 1-2 a week
2. 3-5 a week
3. Every day of the week

11. Do you have a disability?

1. yes
2. no

12. Do you have a Physical Disability?

1. yes
2. no

APPENDIX B
MULTIDIMENSIONAL ATTITUDES SCALE
TOWARD PERSONS WITH DISABILITIES

Directions

Please complete the following instrument by circling the desired number ranging from 1-5. Please answer all questions. Only answer each question once.

Vignette:

Imagine the following situation. Joseph/Michelle went out for lunch with some friends to a coffee shop. A man/woman in a wheelchair, with whom Joseph/Michelle is not acquainted, enters the coffee shop and joins the group. Joseph/Michelle is introduced to this person, and shortly thereafter, everyone else leaves, with only Joseph/Michelle and the man/woman in the wheelchair remaining alone together at the table. Joseph/Michelle has 15 minutes to wait for his/her ride. Try to imagine the situation.

People experience a variety of emotions when they are involved in such a situation. In the next column is a list of possible emotions, which may arise before, during, and/or after such a situation. Please rate on each line the likelihood that this emotion might arise in Joseph/Michelle.

Affect	Degree of likelihood				
	Not at all				Very much
1. Rejection	1	2	3	4	5
2. Pity	1	2	3	4	5
3. Fear	1	2	3	4	5
4. Helplessness	1	2	3	4	5
5. Shame	1	2	3	4	5
6. Guilt	1	2	3	4	5
7. Shyness	1	2	3	4	5
8. Tension	1	2	3	4	5
9. Nervousness	1	2	3	4	5
10. Stress	1	2	3	4	5
11. Upset	1	2	3	4	5
12. Depression	1	2	3	4	5
13. Calmness	1	2	3	4	5
14. Serenity	1	2	3	4	5
15. Relaxation	1	2	3	4	5
16. Alertness	1	2	3	4	5

People experience a variety of cognitions when they are involved in such a situation. Following is a list of possible thoughts that may arise before, during, and/or after such a situation. Please rate on each line the likelihood that this cognition might arise in Joseph/Michelle:

Cognitions	Degree of likelihood				
	Not at all				Very much
1. Why not get to know him/her better?	1	2	3	4	5
2. She/he will enjoy getting to know me.	1	2	3	4	5
3. I enjoy meeting new people.	1	2	3	4	5
4. She/he looks friendly.	1	2	3	4	5
5. I can make him/her feel more comfortable.	1	2	3	4	5
6. She/he seems to be an interesting guy/girl.	1	2	3	4	5
7. We may get along really well.	1	2	3	4	5
8. She/he looks like an OK person.	1	2	3	4	5
9. She/he will appreciate it if I start a conversation.	1	2	3	4	5
10. I can always talk with him/her about things that interest both of us.	1	2	3	4	5

People experience a variety of behaviors when they are involved in such a situation. Following is a list of possible behaviors that may arise before, during, and/or after such a situation. Please rate on each line the likelihood that Joseph/Michelle would behave in the following manner:

Behaviors	Degree of likelihood				
	Not at all				Very much
1. Get up and leave	1	2	3	4	5
2. Start a conversation	1	2	3	4	5
3. Move to another table	1	2	3	4	5
4. Move away	1	2	3	4	5
5. Read the newspaper or talk on a cell phone	1	2	3	4	5
6. Continue what he/she was doing	1	2	3	4	5
7. Find an excuse to leave	1	2	3	4	5
8. Initiate a conversation if he/she doesn't make the first move	1	2	3	4	5

APPENDIX C
MARLOWE-CROWNE SOCIAL
DESIRABILITY SCALE

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally. It's best to go with your first judgment and not spend too long mulling over any one question. Please answer each question by making only one marking.

1. Before voting I thoroughly investigate the qualifications of all the candidates.

- a. True
- b. False

2. I never hesitate to go out of my way to help someone in trouble.

- a. True
- b. False

3. It is sometimes hard for me to go on with my work if I am not encouraged.

- a. True
- b. False

4. I have never intensely disliked anyone.

- a. True
- b. False

5. On occasions I have had doubts about my ability to succeed in life.

- a. True
- b. False

6. I sometimes feel resentful when I don't get my way.

- a. True
- b. False

7. I am always careful about my manner of dress.

- a. True
- b. False

8. My table manners at home are as good as when I eat out in a restaurant.

- a. True
- b. False

9. If I could get into a movie without paying and be sure I was not seen I would probably do it.

- a. True
- b. False

10. On a few occasions, I have given up something because I thought too little of my ability.

- a. True
- b. False

- 11. I like to gossip at times.**
a. True
b. False
- 12. There have been times when I felt like rebelling against people in authority even though I knew they were right.**
a. True
b. False
- 13. No matter who I'm talking to, I'm always a good listener.**
a. True
b. False
- 14. I can remember "playing sick" to get out of something.**
a. True
b. False
- 15. There have been occasions when I have taken advantage of someone.**
a. True
b. False
- 16. I'm always willing to admit it when I make a mistake.**
a. True
b. False
- 17. I always try to practice what I preach.**
a. True
b. False
- 18. I don't find it particularly difficult to get along with loudmouthed, obnoxious people.**
a. True
b. False
- 19. I sometimes try to get even rather than forgive and forget.**
a. True
b. False
- 20. When I don't know something I don't mind at all admitting it.**
a. True
b. False
- 21. I am always courteous, even to people who are disagreeable.**
a. True
b. False

- 22. At times I have really insisted on having things my own way.**
a. True
b. False
- 23. There have been occasions when I felt like smashing things.**
a. True
b. False
- 24. I would never think of letting someone else be punished for my wrong-doings.**
a. True
b. False
- 25. I never resent being asked to return a favor.**
a. True
b. False
- 26. I have never been irked when people expressed ideas very different from my own.**
a. True
b. False
- 27. I never make a long trip without checking the safety of my car.**
a. True
b. False
- 28. There have been times when I was quite jealous of the good fortune of others.**
a. True
b. False
- 29. I have almost never felt the urge to tell someone off.**
a. True
b. False
- 30. I am sometimes irritated by people who ask favors of me.**
a. True
b. False
- 31. I have never felt that I was punished without cause.**
a. True
b. False
- 32. I sometimes think when people have a misfortune they only got what they deserved.**
a. True
b. False

33. I have never deliberately said something that hurt someone's feelings.

- a. True
- b. False

APPENDIX D
COOPERSMITH SELF-ESTEEM INVENTORY

(Permission was not granted to publish instrument)

APPENDIX E
INDIVIDUALISM/COLLECTIVISM SCALE

Please respond to the statements using the following scale: Place a checkmark on the blank next to your answer:

1. One should live one's life independently of others.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
2. If a relative were in financial difficulty, I would help within my means.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
3. Before taking a major trip, I consult with most members of my family and many friends.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
4. I enjoy being unique and different from others in many ways.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
5. Without competition, it is not possible to have a good society.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
6. Some people emphasize winning; I am not one of them.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
7. Children should be taught to place duty before pleasure.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
8. I like my privacy.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
9. Winning is everything.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
10. It is important to maintain harmony within my group.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
11. I would sacrifice an activity that I enjoy very much if my family did not approve of it.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
12. We should keep our aging parents with us at home.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
13. What happens to me is my own doing.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
14. When another person does better than I do, I get tense and aroused.
 Strongly Disagree Disagree Neutral Agree Strongly Agree

15. I like sharing little things with my neighbors.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
16. I usually sacrifice my self-interest for the benefit of my group.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
17. My happiness depends very much on the happiness of those around me.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
18. I am a unique individual.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
19. It annoys me when other people perform better than I do.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
20. The well-being of my co-workers is important to me.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
21. I would do what would please my family even if I detested the activity.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
22. Children should feel honored if their parents receive a distinguished award.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
23. I feel good when I cooperate with others.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
24. Competition is the law of nature.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
25. When I succeed, it is usually because of my abilities.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
26. I hate to disagree with others in my group.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
27. To me, pleasure is spending time with others.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
28. It is important that I do my job better than others.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
29. I prefer to be direct and forthright when discussing with people.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree

30. I enjoy working in situations involving competition with others.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
31. I often “do my own thing.”
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree
32. If a co-worker gets a prize, I would feel proud.
___ Strongly Disagree ___ Disagree ___ Neutral ___ Agree ___ Strongly Agree

APPENDIX F
CONSENT LETTER

FOR IRB USE ONLY APPROVED BY: IRB-02 IRB
ID #: 201012706 APPROVAL
DATE: 12/29/10
EXPIRATION DATE: 12/29/11

Dear Student,

We invite you to participate in a research study. The purpose of the study is measure Ethiopian college students' attitudes towards visible disabilities

We are inviting you to be in this study because you are a registered student at Addis Ababa University. You are being provided this packet because you were a registered student in the class where recruitment took place. Approximately 500 students will take part in this study at Addis Ababa University conducted by a researcher from the University of Iowa, United States of America.

If you agree to participate, we would like you to complete the demographic sheet and all four surveys that are enclosed in this study packet. You will be asked to answer questions about your personal feelings, attitudes, and behaviors including specific questions about your attitudes toward persons with disabilities. You also be asked to provide information about yourself including your gender, your year in school/college, your level of knowledge about disabilities, whether or not you have a disability, and whether or not you know a person with a disability and your relationship with this person. It will take about one hour to complete the study materials. You may skip any questions you do not wish to answer.

After completing the study forms, you will be asked to place them in the packet, seal the packet, and return the packet containing the study demographic sheet and surveys to the Principal Investigator. You will return the packet to a locked box in the office of the Department secretary or in the office of the Principal Investigator.

We will keep the information you provide confidential; however, federal regulatory agencies and the University of Iowa Institutional Review Board (a committee that reviews and approves research studies) may inspect and copy records pertaining to this research. To protect your confidentiality, we will not collect any identifying information on the surveys. Do not write your name or any other identifying information on the study forms or on the packet envelope. The study forms you complete will have a participant number. This number will not be linked to your name or any identifying information about you. The participant number is only to keep all materials together and for accuracy in data collection. It will not be possible for us to link you to your responses. If we write a report about this study we will do so in such a way that individual participants cannot be identified.

There are no known risks from being in this study, and you will not benefit personally. However we hope that others may benefit in the future from what we learn as a result of this study.

You will not have any cost for being in this research study. You will not be paid for being in this research study. Taking part in this research study is completely voluntary. If you decide not to be in this study, or if you stop participating at any time, you won't be penalized or lose any benefits for which you otherwise qualify. If you do not wish to be in the study, do not answer the questions on the study forms; seal the forms in the packet and return the packet to the collection box.

If you have any questions about the research study itself or to report a research related problem, please contact Almaz Mimi Getachew - phone number is 336-965-7612, and email is almaz-getachew@uiowa.edu. Local number in Addis Ababa is 091-367-2787

If you have questions about the rights of research subjects, please contact the Human Subjects Office, 105 Hardin Library for the Health Sciences, 600 Newton Rd, The University of Iowa, Iowa City, IA 52242-1098, (319) 335-6564, or e-mail irb@uiowa.edu. To offer input about your experiences as a research subject or to speak to someone other than the research staff, call the Human Subjects Office at the number above.

Thank you very much for your consideration. A completed packet will indicate consent that you are willing to participate in the study

Sincerely,

Almaz Mimi Getachew
Principal Investigator

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