



All Theses and Dissertations

---

2013-07-12

# Acceptance of Disability in College Students

Brian Charles Carl

*Brigham Young University - Provo*

Follow this and additional works at: <https://scholarsarchive.byu.edu/etd>



Part of the [Counseling Psychology Commons](#), and the [Special Education and Teaching Commons](#)

---

## BYU ScholarsArchive Citation

Carl, Brian Charles, "Acceptance of Disability in College Students" (2013). *All Theses and Dissertations*. 4180.  
<https://scholarsarchive.byu.edu/etd/4180>

This Dissertation is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in All Theses and Dissertations by an authorized administrator of BYU ScholarsArchive. For more information, please contact [scholarsarchive@byu.edu](mailto:scholarsarchive@byu.edu), [ellen\\_amatangelo@byu.edu](mailto:ellen_amatangelo@byu.edu).

Acceptance of Disability in College Students

Brian Carl

A dissertation submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

Mark Beecher, Chair  
Ellie Young  
Aaron Jackson  
Lane Fischer  
Marleen Williams

Department of Counseling Psychology and Special Education

Brigham Young University

June 2013

Copyright © 2013 Brian Carl

All Rights Reserved

## **ABSTRACT**

### Acceptance of Disability in College Students

Brian Carl

Department of Counseling Psychology and Special Education, BYU  
Doctor of Philosophy

This dissertation presents the findings of a study examining the following questions: How do students in a particular disability group differ from students in other disability groups in the degree to which they accept their disability? How are level of functional impairment and acceptance related? How are an individual's view of disability as a defining characteristic and acceptance related? How are functional impairment and the degree to which disability is seen as a defining characteristic related? Analysis using ANOVA indicated that there was not a significant difference in the level of acceptance between disability groups. Three Pearson's  $r$  correlation analyses were conducted using the total score on the Acceptance of Disability Scale-Revised (ADS-R), the clients' self-apprised level of functional impairment, and the degree to which disability is seen as a defining characteristic. All analyses resulted in significant correlations. Results of the first analysis indicated that there is a significant correlation between acceptance of disability and functional impairment. Results of the second analysis indicate that there is a significant correlation between acceptance of disability and the degree to which disability is seen as a defining characteristic. Results of the third analysis indicate that there is a significant correlation between functional impairment and the degree to which disability is seen as a defining characteristic.

Keywords: [Disability, acceptance, college students, postsecondary, disability group]

## ACKNOWLEDGEMENTS

I would like to thank my graduate committee for being there for me and helping with this project. Special thanks to my dissertation chair Mark Beecher for his patience, support, and encouragement throughout this difficult process. Mark, I would never have made it without you. I would also like to thank Michael Brooks of the University Accessibility Center for his help with data collection and Aaron Jackson who's easy going manner helped me to relax during many times of crisis. And Diane Hancock for keeping track of me and putting up with my madness over the last 5 years.

Special thanks to my wonderful cohort, Lisa Takara, Laurie Page, Mike Lyman and Kristina Hansen. You have been my family in Utah; I am a better person for having known each of you, thank you for being who you are.

I would like to thank my mom Caroline Carl, brother Eric Tschannen, and sister Suzanne Tschannen for their unconditional love and support. Even though you were far away, knowing you were there gave me the ability to persevere.

And finally I would like to thank God for giving me strength in times of weakness.

## TABLE OF CONTENTS

Introduction.....	1
Statement of the Problem.....	2
Statement of the Purpose.....	3
Research Questions.....	4
Method.....	4
Participants.....	4
Measures.....	5
The Acceptance of Disability Scale-Revised.....	5
The University Accessibility Center Research Questionnaire.....	7
Procedures.....	8
Data Analysis.....	9
Question 1.....	9
Question 2.....	9
Question 3.....	10
Question 4.....	10
Results.....	10
Discussion.....	13
Implications.....	14

Question 1.....	15
Question 2.....	15
Question 3.....	16
Question 4.....	18
Limitations.....	19
Future Research.....	20
References.....	21
Appendix A: Literature Review.....	28
Appendix B: Acceptance of Disability Scale.....	49
Appendix C: The University Accessibility Center Research Questionnaire.....	60

## Introduction

Individuals with disabilities make up a significant proportion of the United States population. According to the 2010 census 56.7 million Americans (18.7 % of the population) met the criteria for some level of disability, 38.3 million (12.6 % of the population) met the criteria for a severe disability and 12.3 million (4.4 % of the population) needed assistance with one or more activities of daily living (Brault, 2012). In fact, individuals with disabilities constitute the largest minority group in the United States (Olkin, 2002). It has been well documented that the impact of postsecondary education on individuals with disabilities is both positive and profound. Compared to individuals who never attended college, college graduates have greater lifetime earning potential and report higher levels of life satisfaction, individuals with disabilities who complete four years of college can expect virtually the same positive income and career outcomes as students without disabilities.

Despite the necessity postsecondary education is for people with disabilities, there appear to be significant roadblocks for disabled people as they attempt to obtain such education. In general individuals with disabilities are less likely than their non-disabled peers to attend college with only a third of them attending some postsecondary classes during the first two years after leaving high school (Wagner, Newman, Cameto, Garza, & Levine, 2005). According to Erickson, Lee, and Von Schrader (2010) 12.3% of individuals with disabilities had a bachelor's degree in comparison to 30.6% of people without disabilities. Despite the low rates of college/university attendance among students with disabilities, the numbers are rapidly rising. The most current statistics available from The National Center for Educational Statistics (2010) show that the number of students enrolled in postsecondary education increased from 892,000 (5.3%) in 1995 to 2,154,000 (11.3%) in 2003 and to 2,266,000 (10.8%) in 2008.

## **Statement of the Problem**

Students with disabilities typically face difficulties in their transition to college/university that their non-disabled counterparts do not face. Research has shown that students with disabilities overall tend to have higher levels of psychological distress than students without disabilities in college counseling centers at intake and at therapy termination (Schwalb, Pedersen, Preece, & Brooks, 2007). One particular issue that can have a significant impact on students with disabilities' transition to college/university is acceptance of one's disability.

Acceptance of disability is an important variable that can mediate the difficult transition between high school and university life for disabled students. Research done by Friedland (1990) found that adjustment to college and disability acceptance are related constructs. This study found that acceptance of disability positively impacted university adjustment in a number of different areas including academic adjustment, social adjustment, personal/emotional adjustment, attachment to the university, and overall adjustment.

According to Dembo, Leviton, & Wright, (1975) acceptance of loss is a process of value changes. The extent of acceptance of disability is associated with the degree that a person (a) recognizes values other than those that are in direct conflict with the disability; (b) deemphasizes those aspects of physical ability and appearance that contradict his or her disabling condition; (c) does not extend his or her handicap beyond actual physical impairment to other aspects of the functioning self; and (d) does not compare himself or herself to others in the areas of limitations but instead emphasizes his or her own assets and abilities. Because of its empirically derived nature, the concept of acceptance of disability can be measured by the Acceptance of Disability Scale (AD; Linkowski, 1971), which has been used in a number of studies (Belgrave, 1991;



Heinemann, Goranson, Ginsburg, & Schnoll, 1989; Heinemann & Shontz, 1982; Linkowski & Dunn, 1974; Starr & Heiserman, 1977).

### **Statement of the Purpose**

It is clear that acceptance of one's disability has a large impact on a student's potential success. The research shows that when individuals are able to accept their disability they have higher levels of self-esteem, better coping skills, higher goals, and are more motivated (Arnold-Oatley, 2005; Davenport, 1991; Heggoy, 1985). Despite these findings, research conducted on college students with disabilities has been limited.

The paucity of research on individuals with disabilities was highlighted in an article published by the American Psychological Association (APA) (Walters, 2000). According to the APA, although some progress has been made, there is still a dearth of research in the area of disability (Walters, 2000). There is a particular lack of research examining college students' acceptance of disability and differences between disability groups (Physical Disability, Chronic Illness, Deaf/Hard of Hearing, Emotional Disability, Learning/Attention Disabilities).

This body of literature is limited in several ways. First, the majority of the research on disability and acceptance has focused on single disability groups, predominantly physical disabilities. For instance Morgan and Leung, (1980) tested the effects of assertion training on individuals with disabilities but included only those with physical disabilities. Second, no research is available examining how disability groups differ in the acceptance of disability. For example a study done by Dahlbeck and Lightsey, (2008) examined a sample of children with a range of disabilities but failed to make any comparisons between the disability types. Third, an examination of relationships between disability type, functional impairment, and acceptance of disability appears important but missing in previous studies. Even among people with the same

disability, the conditions and functional impairments vary dramatically. Fourth, most disability studies compare individuals with disabilities to non-disabled individuals. A study done by Friedland, (1990) examined the relationship between adjustment to disability and belief systems. Comparisons were made between individuals with physical disabilities and their able bodied peers. No comparisons were made between disability groups. The purpose of this study is to study these comparisons.

### **Research Questions**

Current studies on disability and acceptance are limited. The majority of studies examining disability acceptance were conducted in the 1970s and early 1980s, and few recent studies have examined this variable (Mpofu & Houston, 1998). The current study is designed to remediate some of the limitations in this body of literature by examining the following questions:

1. How do students in a particular disability group differ from students in other disability groups in the degree to which they accept their disability?
2. How are level of functional impairment and acceptance related?
3. How are an individual's view of disability as a defining characteristic and acceptance related?
4. How are functional impairment and the degree to which disability is seen as a defining characteristic related?

### **Method**

The following participants, procedures, measures, and data analyses were used in the completion of this study.

## **Participants**

This study included 97 participants from the Brigham Young University Accessibility Center's (UAC) clientele of approximately 500 students. Only students with current documentation of disability were included. Participation in the study was solicited by email, an informational poster, fliers in the UAC office, and personal invitations from the UAC's reception staff. Many of the UAC clientele participated in conjunction with their regular clinical visits (i.e., they completed study questionnaires before or after visiting with their counselors). All clients with current documentation of disability were encouraged to participate after signing an informed consent form. This study was approved by BYU's Institutional Review Board and followed all ethical guidelines.

All participants were provided with a \$10 gift card to the BYU Bookstore and a coupon for a free 24 oz. smoothie upon returning their three completed questionnaires. If a participant began the questionnaires but did not complete them, only the smoothie coupon was given. All subjects who completed the questionnaires were eligible for a drawing for a \$150 BYU Bookstore gift card awarded at the conclusion of the data gathering phase.

## **Measures**

Participants were asked to complete two questionnaires. These questionnaires were developed by previous researchers and measured identified variables for this study.

**The Acceptance of Disability Scale-Revised (ADS-R).** This scale developed by Groomes and Linkowski (2007) is a 32-item, four-point Likert-scale questionnaire which measures an individual's overall acceptance of a disability as well as four subscale areas that are described below. The overall reliability reported by Groomes and Linkowski (2007) was a

Cronbach's alpha of .93, or very good, and internal consistency ranging from moderate to high, supporting preliminary or emerging evidence of construct validity for the ADS-R. Further evidence of construct validity is shown by significant correlations between the original Acceptance of Disability Scale scores and measures of self-esteem and relationship satisfaction (Linkowski & Dunn, 1974). The significant correlation of .81 between the original ADS and the Attitudes Toward Disabled Persons Scale (Yuker et al., 1960) suggests that that the ADS has high concurrent validity (Linkowski, 1971). Since the original ADS and the revised version purport to measure the same underlying construct it follows that these studies provide initial evidence for the construct validity of the revised ADS. To date there have been no validation studies of the ADS-R. The four subscales are transformation, enlargement, containment, and subordination. The subscales and their internal consistency coefficients are as follows.

- Transformation (i.e., the degree to which an individual has moved beyond comparing his/her own limitations to others and has begun emphasizing his/her own assets and liabilities). Grooms and Linkowski (2007) reported relatively high internal consistency, Cronbach's alpha coefficient of .90, for items on this scale.
- Enlargement (i.e., the degree to which an individual has enlarged his/her scope of values from those that may have been lost with disability to those that do not conflict with one's disability). Grooms and Linkowski (2007) reported moderate internal consistency, Cronbach's alpha coefficient of .80, for items on this scale.
- Containment (i.e., the degree to which one does not generalize from his/her actual impairment to other aspects of functioning not objectively impaired by the disability). Grooms and Linkowski (2007) reported relatively high internal consistency, Cronbach's alpha coefficient of .85, for items on this scale

- Subordination (i.e., the extent to which individuals can minimize aspects of physical ability and appearance when in accordance with their disability). Groomes and Linkowski (2007) reported modest to low internal consistency, Cronbach's alpha coefficient of .71, for items on this scale.

**The University Accessibility Center Research Questionnaire (UAC-RQ).** Developed by Brooks (2008), this is a 24-question, demographic and opinion questionnaire. This questionnaire collects client data including age, gender, ethnicity/race, linguistic competencies, national origin, marital status, socio-economic status, disability type, and length of time since symptom onset and diagnosis, comfort with disclosure of disability-related information, and academic information (major, year in school, G.P.A.). It was designed primarily to obtain demographic information on clients with disabilities as well as information about client's perceptions of their disability. The measure was developed by the professional staff in the UAC. There have been no studies to date to examine its validity or reliability. The two principal items from this questionnaire that were used in this study are

- Participants were asked to assess what aspect of their life (Religion, Gender, Academic Major, Marital Status, Family SES, Disability Status, Ethnicity/Race) influenced them the most (1 being most important, 2 being next important, etc.). This question was used to assess the degree to which their disability is seen as a defining characteristic.
- Participants were asked to describe their subjective level of functional impairment secondary to their disability. Responses range from 1 ("My disability rarely impairs my ability to meet my goals") to 4 ("My disability very often impairs my ability to meet my goals"). This question was used to assess the degree to which the clients feel their disability impairs them.

## **Procedures**

Research packets were given to participants that met the criteria and opted into the study. These packets contained an informed consent form and two paper questionnaires. Questionnaires were completed on site at the UAC and returned to the reception desk staff. Research packets were transferred from reception desk staff to clinical staff for analysis. Accessible copies of protocol (e.g., Brailled versions, large-print) and readers and scribes were made available when needed to assist participants in completing the questionnaires. The research packets contained two questionnaires, which were described above.

Confidentiality was maintained throughout the study. Subjects did not place their names on any of the questionnaires. Rather, their BYU ID was used for identification. When the data was released for analysis each participant was identified using a random ID number instead of their BYU ID number. Questionnaires were completed within the UAC offices and housed in a locked drawer in the staffed UAC reception area after completion. Completed paper questionnaires (i.e., raw data) were then removed from this area on a daily basis and housed henceforth in a locked cabinet in the UAC Director's office on site (WSC 2176). Electronic data (including a master list of all client data transcribed from the paper questionnaires onto a spreadsheet) were housed on the UAC Director's password-protected computer housed in a locked office (WSC 2176) on site, and such data was tracked via BYU ID number. Paper materials will be maintained for seven years following any publication of the results and will then be shredded. Electronic data will be destroyed in accord with secure practices used for such disposal at that time.

## Data Analysis

In order to answer each of the research questions posed in the introduction of the study, the following analyses were completed. Each question had a specific analysis.

**Question 1.** How do disability groups differ in the degree to which they accept their disability? To answer this question we had a single categorical variable, disability group, and a single continuous variable, total score on the ADS. A One-way ANOVA was used to determine the relationship between disability group and level of acceptance, because it is designed to evaluate the significance of mean differences on a dependent variable between 2 or more groups or levels (Mertler, & Vannatta, 2001). For the purpose of this study the dependent variable is the total score on the ADS and the independent variable is the different disability groups. This analysis requires that the sample be broken down by disability groups. It is important to note that doing this reduces the sample size for each group, which may increase the difficulty of identifying assumption violations such as equality of variances. To control for this equality of variance was assessed using the Levene test for equality of variances.

**Question 2.** How does level of functional impairment relate to acceptance? To answer this question a correlation analysis (Pearson's  $r$ ) was run using each client's total score on the ADS and the client's self-apprised level of functional impairment. Pearson's correlation coefficient is used when data is parametric, and both measurements are continuous and normally distributed (Armitage, 1980). The data used in this analysis fit the assumptions for the Pearson's  $r$  correlation analysis. A correlation analysis was used because it is designed to measure the strength of relationship between two variables (Sirkin, 1999). The study sample of 97 individuals exceeded the required  $n$  to detect a moderate or strong correlation. To detect a moderate

correlation, .03-.07 and -.03--.07, with an Alpha of .05 and power of .8 a sample of between 11 and 67 individuals would be needed (Machin, Campbell, Fayers, & Pinol, 1997).

**Question 3.** How does viewing disability as a defining characteristic relate to acceptance? To answer this question a correlation analysis (Pearson's  $r$ ) was run using the total score on the ADS and the score on the UAC questionnaire item regarding disability as a defining characteristic. The rationale for the use of the Pearson's  $r$  correlation is the same as above.

**Question 4.** How does functional impairment relate to the degree to which disability is seen as a defining characteristic? To answer this question a correlation analysis (Pearson's  $r$ ) was run using items on the UAC questionnaire measuring functional impairment and degree to which disability is seen as a defining characteristic. The rationale for the use of the Pearson's  $r$  correlation is the same as above.

## Results

A total of 97 individuals participated in the study including 36 males and 61 females. The disability group demographics for this study and for the university are shown in Table 1 below. Characteristics of the sample are depicted in Table 2, including the frequency and percent scores of participants' sex, marital status, race/ethnicity, university status, age category, family socio-economic status, and disability category.

Variables were examined for outliers and the assumption of normality was assessed prior to analysis. This was diagnosed using three techniques. The first was visual inspection of a histogram of the data. The second was examination of the skewness and kurtosis values for the variables of research interest.



Table 1

*Disability Group Demographics*

Disability Category	n = 97	%
Physical Disability	21	21.6
Chronic Illness	16	16.5
Deaf/Hard of Hearing	6	6.2
Emotional Disability	17	17.5
Learning/Attention Disability	33	34.0
Other	4	4.1

*BYU Disability group demographics, 2011*

Disability Category	n = 947	%
Physical Disability	247	26.1
Chronic Illness	**	**
Deaf/Hard of Hearing	27	2.9
Emotional Disability	324	34.2
Learning/Attention Disability	243	25.7
Learning	106	11.2
Other	**	**

\*\* Data for the Chronic Illness and Other categories were not gathered in 2011. They were included in the table because these categories were represented in the study sample.

Table 2 Sample Characteristics  
Sample Characteristics (n=97)

Variables	n	%
Sex	36	37.1
Male	61	62.9
Female		
Marital Status		
Married	25	25.8
Single	70	72.2
Divorced	2	2.1
Race/Ethnicity		
Alaskan Native	2	2.1
Asian Heritage	6	6.2
Hispanic	14	14.2
Native American	12	12.4
Pacific Islander	26	26.8
Caucasian	33	30.0
No Answer	4	4.1
University Status		
Freshman	11	11.3
Sophomore	19	19.6
Junior	25	25.8
Senior	33	34.0
Master's Student	4	4.1
Law School	1	1.0
Ph.D. Student	1	1.0
Other	3	3.1
Age Category		
18-20	18	19.6
21-24	49	50.5
25-30	16	16.5
31-39	5	5.2
40-49	4	4.1
50+	4	4.1
Family-SES		
Less than \$30,000 per year	12	12.4
\$30,000-\$45,000 per year	7	7.2
\$45,000-\$60,000 per year	17	17.5
\$60,000-\$80,000 per year	12	12.4
\$80,000-\$100,000 per year	18	18.6
\$100,000 or more per year	29	29.9
No Answer	2	2.1

Skewness and kurtosis values are indicators of the normality of the distribution of data. Acceptable levels of skewness for a variable should not be outside -2 to +2 (Hair et al., 2010). Any values outside of this range are a threat to the accuracy of any future analysis and would prompt questions about the generalizability of the findings to the broader population beyond those sampled for the study (Field, 2000). In the case of the current study data, the skewness statistic of -.918 fell within acceptable parameters. Kurtosis values should not exceed  $\pm 10$ , if the score falls outside these established markers the assumption of normality will be violated (Morgan & Griego, 1998). In the current study data, kurtosis values of .858 fell within acceptable limits. No univariate or multivariate outliers were found, and therefore there was no need to transform any of the variables prior to the analyses or drop any outlier cases.

Third, the Levene test was used to test for equality of variances between disability groups. The Levene test is used to test if samples have equal variances. A significant Levene test signifies that samples do not have equal variances and assumptions of normality may be violated. In this sample the Levine test was not significant  $F(5, 90) = 2.207, p = .060$ , indicating that we can assume that there is not a significant difference between the group's variances.

The first major goal of the study was to determine the relationship between disability group and level of acceptance in university students with disabilities. A one way ANOVA was used as a means of answering this question. For this analysis the total score on the ADS-R was used as well as each of the self-reported disability groups listed in Table 2. The results of the ANOVA indicated that there was not a significant difference in the level of acceptance between disability groups,  $F(5, 90) = 1.086, p = .0374$ . It appears that, in this sample, the type of disability does not significantly affect disability acceptance.

The second major goal of the study was to examine how level of functional impairment

relates to acceptance. To answer this question a correlation analysis (Pearson's  $r$ ) was used comparing each client's total score on the ADS-R and the client's self-apprised level of functional impairment. Results indicate a significant negative correlation between ADS-R Total score and self-apprised level of functional impairment,  $r(94) = -.575$ ,  $p = <.01$ . Subjects with the least degree of self-apprised impairment had the highest degree of acceptance while those with the most impairment had the lowest degree of acceptance.

The third major goal of the study was to examine how viewing disability as a defining characteristic relates to acceptance. To answer this question a correlation analysis (Pearson's  $r$ ) was used comparing participant's total score on the ADS-R with the degree to which the participant views their disability as a defining characteristic. The results indicate a significant positive correlation between viewing disabilities as a defining characteristic and acceptance,  $r(94) = .490$ ,  $p = .05$ . For this analysis a low score for viewing disability as a defining characteristic indicates that the participant views their disability as highly definitive thus the significant positive correlation indicates that participants who view their disability as a defining characteristic are the least accepting.

The fourth major goal of the study was to examine how functional impairment relates to the degree to which disability is seen as a defining characteristic. To answer this question a correlation analysis (Pearson's  $r$ ) was used comparing participants self-apprised level of functional impairment and the degree to which disability was seen as a defining characteristic. Results indicate a significant negative correlation,  $r(94) = -.433$ ,  $p = <.01$ . This result indicates that higher levels of functional impairment are associated with higher levels of viewing disability as a defining characteristic.

## Discussion

This study had four main goals. They are (a) to compare levels of disability acceptance between disability types, (b) to determine if level of functional impairment relates to levels of disability acceptance, (c) to assess whether viewing disability as a defining characteristic relates to levels of disability acceptance, and (d) to assess whether level of functional impairment relates to individuals viewing their disability as a defining characteristic.

No other study has compared levels of disability acceptance between disability types. Due to the lack of research in this area it is not possible to compare the results of the current study to findings of other studies to see if they are consistent. Most of the other studies on acceptance make comparisons to either self-esteem or to external outcome variables, like GPA or high school graduation rates, and no other study compares disability acceptance between disability categories. The present study compares acceptance to internal variables within the individual, such as level of self-appraised functional impairment and viewing disability as a defining characteristic.

In lieu of readily available comparison studies, results will be compared to the theoretical underpinning of the study, and assessed as to whether they are consistent with theory. Acceptance of loss theory has a central role in the disability literature and constitutes the theoretical underpinning of the Acceptance of Disability Scale used in this study. According to Dembo et al., (1975) acceptance of loss is a process of value changes. The extent of acceptance of disability is associated with the degree that a person (a) recognizes values other than those that are in direct conflict with the disability; (b) deemphasizes those aspects of physical ability and appearance that contradict his or her disabling condition; (c) does not extend his or her handicap beyond actual physical impairment to other aspects of the functioning self; and (d) does not

compare himself or herself to others in the areas of limitations but instead emphasizes his or her own assets and abilities.

### **Implications**

The following implications followed from each of the four research questions.

**Question 1.** In this study, type of disability was not significantly associated with disability acceptance. One reason for this could be that type of disability does not affect an individual's ability to go through Dembo et al.'s (1975) four part value change process that leads to acceptance. The acceptance process represents a shift in values (Dembo et al., 1975). This shift is dependent on an individual's ability to change the way they think about their disability from a negative devaluing system to a system where retained values are emphasized. Since acceptance is dependent on a shift in thinking, as long as the disability does not impair an individual's cognitive functioning and subsequently their ability to shift values, it would be consistent with theory that disability type does not affect acceptance.

One of the main implications of this finding is that certain disabilities are not more resistant or amenable to acceptance than others. Regardless of disability type an individual can go through the acceptance process. This has implication for clinicians; the process of disability acceptance can and should be applied to individuals regardless of disability type. Students with disabilities should be taught that acceptance is related to better functioning and that the type of disability they have does not inhibit them from achieving their goals.

**Question 2.** This study found a significant correlation between level of functional impairment and levels of disability acceptance. Subjects with the least degree of impairment had the highest degree of acceptance, while those with the most impairment had the lowest degree of acceptance. It appears that individuals with higher levels of functional impairment have a more

difficult time accepting their disability.

One reason for this could be that greater levels of functional impairment make it harder for an individual to go through the acceptance of loss process purported by Dembo, et al. (1975). According to this theory, acceptance of loss is a process of value changes that requires a person to: (a) recognize values that are not in conflict with the disability, (b) deemphasize aspects of ability and appearance that contradict his or her disabling condition, (c) not extend his or her impairment beyond actual impairment to other aspects of the functioning self, and (d) not compare himself or herself to others in the areas of limitations but instead emphasize his or her own assets and abilities. Since a greater level of impairment would imply a relatively lower level of values or abilities that are not impaired, individuals with greater impairment may have a more difficult time recognizing and capitalizing on retained abilities, and subsequently have lower levels of acceptance.

One implication of this finding is that clinicians should work to with clients to create a realistic picture of actual limitations. This personal picture can include what systems are actually impaired and to what degree, and what systems are still functional and how they can be improved and capitalized on. For some individuals with disabilities, especially ones whose disability occurred later in life, this will mean expansion of abilities that may have been previously overlooked. Clinicians can help clients identify abilities that they may not have noticed or cared to improve. Helping them to identify and improve latent abilities will aid clients in accepting the disability by creating values that can replace those lost.

**Question 3.** The results indicate that participants who view their disability as a defining characteristic are the least accepting of it. One reason for this finding could be difficulty with the first change in the acceptance process. The first change, enlargement of the scope of values,

happens when the person begins to recognize the importance of values that they still possess. According to Dembo et al., (1975) disability is commonly perceived as a misfortune or "value loss." When viewed as a misfortune or value loss, disability can lead to underestimation of existing abilities and a global devaluation of the person. Acceptance of disability, conversely, is an adjustment of a person's value system such that actual or perceived losses from disability do not negatively affect the value of existing abilities. Since individuals who view disability as a defining characteristic may have a difficult time recognizing retained values and subsequently underestimate actual ability, they are more likely to perceive disability as a value loss. It follows, then, that they would have lower levels of acceptance.

Another reason for this finding could stem from difficulty with the third change in the acceptance process, containment. It is possible that individuals who view their disability as a defining characteristic have a difficult time containing the effects of the disability so that it does not impair functional systems. Although a disability may impair only one area of functioning, when the individual views the disability as globally debilitating it can overreach its actual effects and impair other areas such as emotional and intellectual spheres, unaffected physical abilities, and overall self-value. This global devaluation is called the *spread effect* (Wright 1983). Spread is less likely if disability is perceived as a possession instead of as a personal characteristic (Dembo et al., 1975). If perceived as a personal characteristic the person and the impairment become a single whole, a disabled person. In contrast, if the disability is viewed as a possession, the person and the disability are perceived as separate. From this view the disability is not central but peripheral. The individual is not a disabled person but a person with a disability. Since viewing disability as a defining characteristic inhibits the acceptance process and contributes to "the spread effect" it follows that these individuals have lower level of acceptance.



One suggestion based on this finding is that clinicians can help clients learn that how they view their disability is an important part of the acceptance change process and affects their self-worth and overall functioning. This can be done by working with the client to ascertain if they have a healthy and realistic view of their disability. Is disability being seen as a possession or is it being over-emphasized and being seen as a defining characteristic? Since viewing disability as an integral part of self was associated with lower levels of disability acceptance, working with clients to put their disability into a more realistic perspective will help them come to accept their disability.

**Question 4.** This study found a significant correlation between level of functional impairment and viewing disability as a defining characteristic. Subjects with higher degrees of functional impairment were more likely to view their disability as a defining characteristic. Previous results indicate that higher levels of functional impairment and viewing disability as a defining characteristic are both associated with lower levels of acceptance. It follows that these constructs would also be related.

One reason for this could be that both functional impairment and viewing disability as a defining characteristic are related to difficulty identifying and capitalizing on retained values/abilities. This difficulty may lead these individuals to compare themselves to others in the area of lost abilities. This is the fourth part of the change process; transformations of comparative-status values to asset (intrinsic) values. Individuals with a high degree of functional impairment may be more likely to compare themselves to an external standard. This could lead to underestimation of actual existing values/abilities and, subsequently, a greater likelihood of viewing disability as a central aspect of personality.

Individuals should be taught that comparing self to external criteria or others, especially

in the area of impaired abilities, is not helpful in the process of acceptance and leads to negative outcomes. Clinicians should work with clients to identify if and how they have made these external comparisons and work to shift to a more productive and health intrinsic comparative system. This can be done by highlighting retained abilities and creating individual goals based on these abilities. This helps clients capitalize on the assets they possess while giving them a sense of progression and accomplishment. Clinicians can help clients track progress made and emphasize the shift from extrinsic to intrinsic comparisons. Further, clinicians should explore and highlight how the different comparative valuing systems affect client's self-concept with the goals of shifting from viewing disability as a defining characteristic, to viewing it as a possession and only one aspect of a dynamic and capable individual.

### **Limitations**

Every empirical exploration, no matter how rigorous, has weaknesses (Heppner et al., 2008). Therefore it is important to identify these weaknesses and frame any results within an understanding of the study's limitations.

To begin with, the generalizability of the results of this study is limited by the sample size and demographics of the participants. The sample consisted of 97 students with a variety of disability types from a large, private, religious university.

Rates of university attendance vary greatly with the type of disability (Wagner et al., 2005). Participants for this study were recruited from the Brigham Young University Accessibility Center's (UAC) clientele. Participation in the study was solicited by email informing students of the study, informational posters, fliers, and personal invitations from the UAC's reception staff. As such there was no way to control for which students opted into the study and get equal participants from each disability category. Also the disability demographics

of the university show a large disparity between disability groups, so differences in sample size for each group were expected.

Caution must be taken when interpreting the non-significant result of the ANOVA. For this analysis the total sample was broken down by disability type resulting in low samples sizes for some of the groups. As such the analysis may not have had sufficient power to detect differences.

### **Future research**

Disability research is an area in vital need of further exploration. This study adds to the existing body of research and begins to remediate the dearth of studies in this area. One of the main limitations of this study is the limited number of participants in some of the disability categories. Future studies could address this by collecting samples from other universities and combining them with the existing data. This would result in a more diverse sample and help remediate the low sample sizes. Doing this would increase the likelihood of detecting differences between disability groups that may have been missed by this study.

## References

- Armitage, P. (1980). *Statistical methods in medical research*. Oxford, UK: Blackwell Scientific Publications.
- Arnold-Oatley, A. E. (2005). *Students' with physical disabilities adaptation to university*. Master's thesis, York University, Canada.
- Belgrave, F. Z. (1991). Psychosocial predictors of adjustment to disability in African Americans. *Journal of Rehabilitation, 57*, 37-40.
- Brault, W. (2012). *Americans with disabilities: 2010, current population reports*, Washington, DC: U.S. Census Bureau.
- Dahlbeck, D. T., & Lightsey, O. R., Jr. (2008). Generalized self-efficacy, coping, and self-esteem as predictors of psychological adjustment among children with disabilities or chronic illnesses. *Children's Health Care, 37*(4), 293-315.
- Davenport, L. (1991). *Adaptation to dyslexia: Acceptance of the diagnosis in relation to coping efforts and educational plans*. Unpublished doctoral dissertation, The Fielding Institute. Santa Barbara, CA.
- Dembo, T., Leviton, G. L., & Wright, B. A. (1975). Adjustment to misfortune: A problem of social-psychological rehabilitation. *Rehabilitation Psychology, 22*(1), 1-100.
- Erickson, W., Lee, C., & Von Schrader, S. (2010). *Disability Statistics from the 2008 American Community Survey (ACS)*. Ithaca, NY: Cornell University Rehabilitation Research and Training Center on Disability Demographics and Statistics (StatsRRTC). Retrieved June 17, 2013 from [www.disabilitystatistics.org](http://www.disabilitystatistics.org)
- Field, A. (2000). *Discovering statistics using SPSS for Windows*. London: Sage.

- Friedland, C. D. (1990). *Relationship between adjustment to physical disability and belief systems in persons with physical disability*. Unpublished doctoral dissertation, Hofstra University, Hempstead, NY.
- Groomes, D.A.G., & Linkowski, D.C. (2007). Examining the structure of the Revised Acceptance of Disability Scale. *Journal of Rehabilitation*, 37, 3-9.
- Heggoy, S. J. (1985). *Motivation and the learning disabled college student: A qualitative study (self-actualization)*. Doctoral dissertation, University of Georgia, United States. Retrieved July 28, 2011, from Dissertations & Theses: Full Text. (Publication No. AAT 8519618).
- Heinemann, A. W., Goranson, N., Ginsburg, K., & Schnoll, S. (1989). Alcohol use and activity patterns following spinal cord injury. *Rehabilitation Psychology*, 34(3), 191-205.
- Heinemann, A. W., & Shontz, F. C. (1982). Acceptance of disability, self-esteem, sex role identity, and reading aptitude in deaf adolescents. *Rehabilitation Counseling Bulletin*, 25, 197-203.
- Hennessey, M. L., Roessler, R., Cook, B., Unger, D., & Rumrill, P. (2006). Employment and career development concerns of postsecondary students with disabilities: Service and policy implications. *Journal of Postsecondary Education and Disability*, 19(1), 39-55.
- Heppner, P. P., Wampold, B. E., & Kivlighan, D. M. (2008). *Research design in counseling* (3rd ed.). Belmont, CA: Thomson Brooks Cole.
- Linkowski, D.C., & Dunn, M. (1974). A., Self-concept and acceptance of disability. *Rehabilitation Counseling Bulletin*, 18(1), 28-32.
- Linkowski, D.C. (1971). A scale to measure acceptance of disability. *Rehabilitation Counseling Bulletin*, 4, 236-244.

- Machin D., Campbell M., Fayers, P., & Pinol A. (1997). *Sample size tables for clinical studies*. (2<sup>nd</sup> ed.) Blackwell Science.
- Mertler, C. A. (2001). *Advanced and multivariate statistical methods practical application and interpretation*. Los Angeles: Pyrczak.
- Morgan, G. A., & Griego, O. V. (1998). *Easy use and interpretation of SPSS for Windows: Answering research questions with statistics*. Mahwah, NJ: Lawrence Erlbaum.
- Mpofu, E., & Houston, E. (1998). Assessment of value change in persons with acquired physical disabilities: Current and prospective applications for rehabilitation counselors. *Canadian Journal of Rehabilitation*, 12(1), 53-61.
- National Center for Educational Statistics (2010). *The condition of education*. Alexandria, VA. Retrieved June 17, 2013 from <http://nces.ed.gov/>
- Olkin, R. (2002). Could you hold the door for me? Including disability in diversity. *Cultural Diversity and Ethnic Minority Psychology*, 8(2), 130-137.
- Scwalb, D.A., Pedersen, T.R., Preece, J.E., & Brooks, M.P. (2007, August). *Presenting problems and psychotherapy outcome of college students with disabilities*. Poster session presented at the annual convention of the American Psychological Association, San Francisco, CA.
- Sirkin, R. M. (1999). *Statistics for the social sciences* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Starr, P., & Heiserman, K. (1977). Acceptance of disability by teenagers with oral-facial clefts. *Rehabilitation Counseling Bulletin*, 20, 198-201.
- Wagner, M., Newman, L., Cameto, R., Garza, N., Levine, P., & SRI International, Menlo Park, CA. (2005). *After high school: A first look at the postschool experiences of youth with*

*disabilities. A report from the national longitudinal transition study-2.* Retrieved June 17, 2013 from [http://www.nlts2.org/reports/2005\\_04/nlts2\\_report\\_2005\\_04\\_complete.pdf](http://www.nlts2.org/reports/2005_04/nlts2_report_2005_04_complete.pdf)

Walters, J. (2000). Commission on Independent Colleges and Universities of the State of New York. *Postsecondary education and individuals with disabilities: Recommendations to New York State for strategies to increase access and opportunity.* New York, NY: Nelson A. Rockefeller Institute of Government.

Wright, B. A. (1983). Perceiving the causes and effects of disability: Some basic concepts. In B. A. Wright (Ed.), *Physical disability - a psychosocial approach (2nd ed.)*. (pp. 31-51). New York, NY: HarperCollins Publishers.

Yuker, H. E., Block, J. R., & Campbell, W. J. (1960). A scale to measure attitudes toward disabled persons. Human Resources Study number 5. In H.E. Yuker, J. R. Block & J.H. Young. (1970). *The measurement of attitudes toward disabled persons.* Albertson, New York: Human Resources.

## **Appendix A**

### **Review of Literature**

Individuals with disabilities make up a significant proportion of the United States population. According to the 2010 census, 56.7 million Americans (18.7 % of the population) met the criteria for some level of disability, 38.3 million (12.6 % of the population) met the criteria for a severe disability and 12.3 million (4.4 % of the population) needed assistance with one or more activities of daily living (Brault, 2012). In fact individuals with disabilities constitute the largest minority group in the United States (Olkin, 2002). It is also the only minority group that anyone can become a part of at any time.

#### **Disabled Persons and Employment**

Historically individuals with disabilities have been less economically successful than their peers without disabilities. The difficulty individuals with disabilities have securing and maintain employment contribute to higher rates of poverty and unemployment in this population (Markel & Barclay, 2009). The gap in employment rates for individuals with and without disabilities is approximately 40% (Pelkowski, 2007). This disparity in employment rates has been corroborated by other researchers. According to the National Organization on Disability (2004), 35% of all individuals with disabilities ages 18 through 64 are employed either full-time or part-time, compared to 78% of persons without disabilities. When employed, people with disabilities find it harder to retain jobs, and when out of work they find it harder to become re-employed (Polidano & Mavromaras, 2010). There are a number of reasons individuals with disabilities have difficulty finding and retaining employment. First, despite employment legislation, disability discrimination in employment still exists. One possible reason for this is that people with disabilities may be subject to employment discrimination based solely on their



disability (Kaye, 2009). Second, the functional limitations of a disability can delimit the number of jobs in which an individual is capable of working. Wagner et al., (2005), found that the number of functional domains affected by disability affects the likelihood of employment. A third cause is restricted access to postsecondary educational opportunities.

### **Disabled Persons and Postsecondary Education**

Restrictions to postsecondary education is particularly troubling. Though many people with disabilities do not go on to college after high school, a university education may be more important for an individual with a disability than for one without. According to Hill (1996), “educational credentials attest to skills, knowledge, and work ethic that can help focus an employer on a person’s abilities rather than on his or her disabilities” (p. 162).

It has been well documented that the impact of postsecondary education on individuals with disabilities is both positive and profound. Compared to individuals who never attended college, college graduates have greater lifetime earning potential and report higher levels of life satisfaction (Hennessey, Roessler, Cook, Unger, & Rumrill, 2006). According to Walters (2000), students with disabilities who complete four years of college and obtain employment can expect virtually the same positive income and career outcomes as nondisabled students. They report that students with four years of college on average can expect lifetime earnings of more than \$2 million compared to \$1.3 million for those who do not complete college. Individuals with disabilities with 12 years of education or less can expect to earn \$19,000 annually as compared to \$45,000 for those with 16 years of education or more (Walters, 2000).

Despite the fact that individuals with disabilities must overcome many barriers to gain a postsecondary education, doing so will greatly increase their chances of obtaining employment. For example, research done by Hennessey et al. (2006) found that a college education makes a

person with a disability three to five times more likely to be employed than a person with a disability who never attended college. Consequently, obtaining a good education and a college degree is critical to the future success of individuals with disabilities and a good first step toward self-sufficiency (Leotta, 2003).

Despite the need people with disabilities have for postsecondary education, there appear to be significant roadblocks for them as they attempt to obtain such education. In general, individuals with disabilities are less likely than their non-disabled peers to attend college, with only a third of them attending some postsecondary classes during the first two years after leaving high school (Wagner et al., 2005). According to Erickson, Lee, and Von Schrader, (2010) 12.3% of individuals with disabilities had a bachelor's degree in comparison to 30.6% of people without disabilities.

Rates of education for disabled individuals vary between the types of educational institutions and between disability categories. Students with disabilities are far less likely than their peers to attend four year universities. Rates of students with disabilities attending four year universities vary between studies, some studies reporting as few as 5.7% to 9% and others reporting as many as 28.3% of all students (Henderson, 1995). This is in contrast with the numbers for community or two year colleges, where students with disabilities are nearly as likely as their nondisabled peers to be enrolled (9.7 percent versus 12.2 percent) (Wagner et al., 2005).

Rates of university attendance vary greatly with the type of disability. Students with hearing or visual impairments are as likely as non-disabled students to have done some postsecondary work. However, only one in five students with emotional disabilities is reported to have received postsecondary education in the two years following high school (Wagner et al., 2005). Attendance rates between disability groups are greatest at four year universities. Wagner

et al., (2005) found that individuals with visual and hearing impairments are most likely to attend four year universities, with 41.5% and 36.7% enrolled respectively. Individuals with speech/language and orthopedic impairments were enrolled at rates of 20.8% and 17.7%, respectively. After this, enrollment rates drop drastically as follows: learning disabilities 9.7%, traumatic brain injuries 6.5%, emotional disturbance 4%, and autism 0.9% enrollment. No individuals with developmental disorders were enrolled at four year universities (Wagner et al., 2005).

### **Legislation to Help the Disabled Get Education**

Despite the low rates of college/university attendance among students with disabilities, the numbers are rapidly rising. Three pieces of legislation, (a) The Rehabilitation Act of 1973, (b) The Americans with Disabilities Act (ADA) 1990, and (c) The Individuals with Disabilities Education Act (IDEA) 1997, have played a profound role in this rise.

The Rehabilitation Act prohibits discrimination on the basis of disability status in programs conducted by Federal agencies, receiving Federal financial assistance, and run by Federal contractors (West et al., 1993). As virtually all American universities and colleges receive some type of federal financial assistance they must comply with the stipulations set forth in this legislation. Section 504 of the Rehabilitation Act requires job sites and schools to provide reasonable accommodations for people with disabilities, facilitate program accessibility, and maintain effective communication with people who have hearing or vision disabilities (Public Law 93-112, 1973).

The ADA expands on the rights established in the Rehabilitation Act by extending them to include education, employment, public accommodations, transportation, and telecommunications (Martin, Martin, & Turman, 1996). Amendments to the Americans with

Disabilities Act define disability as a physical or mental impairment that substantially limits one or more major life activities of an individual. Major life activities include, but are not limited to caring for oneself, performing manual tasks, seeing, hearing, eating, sleeping, walking, standing, lifting, bending, speaking, breathing, learning, reading, concentrating, thinking, communicating, and working. It should be noted that services under ADA are designed to provide equal access to the academic environment, not necessarily to help students be academically successful (Beecher, Rabe, & Wilder, 2004).

The Individuals with Disabilities Education Act (IDEA), formerly called the Education for all Handicapped Children Act of 1975, requires public schools to make available to all eligible children with disabilities a free appropriate public education in the least restrictive environment appropriate to their individual needs. It also requires public school systems to develop appropriate Individualized Education Programs (IEP's) for each child. The specific special education and related services outlined in each IEP reflect the individualized needs of each student. The purpose of this law is not only to allow children with disabilities to gain access to a free and appropriate education but also to help these students be academically successful (Beecher et al., 2004).

The Americans with Disabilities Act (ADA), The Rehabilitation Act, and The Individuals with Disabilities Education Act (IDEA), seem directly related to the greater rates of people with disabilities gaining access to higher education. The first generation of children born after the Americans with Disabilities Act (ADA) of 1990 is now entering young adulthood and the university system. This new access has enabled ever-increasing numbers of individuals with disabilities to enroll in colleges and universities (Gilson, 1996). The greatest increase in enrollment rates of postsecondary students with disabilities can be traced to the time of the

passage of the Americans with Disabilities Act (Henderson, 1995). The IDEA has also had a significant impact. According to the U.S. Department of Education (2001), the number of students being served under IDEA increased steadily 30.3 % in the ten years between 1990 and 2000. Although reports of exact numbers vary slightly, a definite trend can be seen. The number of students with disabilities entering postsecondary education has been steadily increasing since the late seventies.

According to Henderson (1995), the proportion of first time, fulltime freshmen with disabilities attending college more than tripled between 1978 and 1994 from 2.6% to 9.2%. Another report indicated that “percentage of full-time freshmen that reported a disability grew from 1978 to 1991, with 2.60% in 1978 and 8.80% in 1991” (Werner, 1992, p. 3). Other researchers state that the proportion of college students reporting at least one disability has increased from two percent to more than 10% of students or approximately 1.3 million (Hartman, 1993; Henderson, 1999).

The most current statistics available from The National Center for Educational Statistics (2010) show that the number of students enrolled in postsecondary education increased from 892,000 (5.3%) in 1995 to 2,154,000 (11.3%) in 2003 and to 2,266,000 (10.8%) in 2008. It should be noted that the increase of total number enrolled from 2003 to 2008 represents a drop in percentage rate from 11.3% in 2003 to 10.8% in 2008. This is due to the fact that the percentage rate was calculated by comparing total number of disabled students enrolled to total number of nondisabled students enrolled; there were a significantly larger number of students without disabilities enrolled in 2008 compared to 2003.

## **Challenges of Disabled College Students**

As students with disabilities are increasingly attending colleges and universities and are seen as a distinct cultural and civil rights group, it is important to understand how the university experience affects them and how they can be helped to be as successful as possible. The transition from high school and living at home to university life and independent living can be difficult for any first-time college student. These years can be especially difficult for students with disabilities who may encounter additional challenges in navigating the transition to young adulthood.

Research has shown that students with disabilities overall tend to have higher levels of psychological distress than students without disabilities in college counseling centers at intake and at therapy termination (Schwalb et al., 2007). Further, McGlynn (1983) found that students with learning disorders exhibit greater self-criticism, conflict in self-perception, and problems in psychosocial adjustment than students without learning disorders. Students whose disabilities impair social adjustment and interaction (e.g., autism and emotional disturbances) may have a hard time establishing and maintaining interpersonal relationships that are a vital foundation for successful employment, healthy friendships, and romantic relationships in young adulthood (Wagner et al., 2005). Clearly, these findings suggest that students with disabilities face difficulties in their transition to college/university that their counterparts without disabilities do not face. One additional factor that may make transition to college/university difficult for students with disabilities is acceptance of one's disability.

According to Dembo et al., (1975) acceptance of loss is a process of value changes. The extent of acceptance of disability is associated with the degree that a person (a) recognizes values other than those that are in direct conflict with the disability; (b) deemphasizes those aspects of

physical ability and appearance that contradict his or her disabling condition; (c) does not extend his or her handicap beyond actual physical impairment to other aspects of the functioning self; and (d) does not compare himself or herself to others in the areas of limitations but instead emphasizes his or her own assets and abilities. Acceptance of disability is an important variable that can mediate the difficult transition between high school and university life for students with disabilities. Research done by Friedland (1990) found that adjustment to college and acceptance of disability are related constructs. This study found that acceptance of disability positively impacted university adjustment in a number of different areas including academic adjustment, social adjustment, personal/emotional adjustment, attachment to the university, and overall adjustment.

### **Acceptance of Disability**

Disability is commonly perceived as a misfortune or "value loss" (Dembo et al., 1975). When viewed as a misfortune or value loss, disability can lead to underestimation of existing abilities and a global devaluation of the person. Acceptance of disability, conversely, is an adjustment of a person's value system such that actual or perceived losses from disability do not negatively affect the value of existing abilities. It is believed that rehabilitation is more successful when individuals with disabilities and their significant others are accepting of the disability and are willing to adapt to the changes that may stem from disability (Martinelli & Dell Orto, 1984).

Acceptance of loss theory purported by Dembo et al. (1975) takes a central role in the understanding of the acceptance process. They suggest four major changes that have to take place in an individual's value system if acceptance is to be achieved and devaluation limited. These four changes are: (a) enlargement of the scope of values, (b) subordination of physique

relative to other values, (c) containment of disability effects, and (d) transformations of comparative-status values to asset (intrinsic) values.

The first change, enlargement of the scope of values, happens when the person begins to recognize the importance of values that they still possess. Recognition is often stimulated by the need to manage activities of daily living and the need to seek relief from grief. When a person can find meaning in events, retained abilities, and goals, the person has started to enlarge the scope of their values.

The second change, subordination of physique relative to other values, happens when an individual is able to look past physical imperfection and base self-worth on other abilities and values. In our society physical attractiveness and ability are highly valued. When an individual with impairment feels that they have lost some attributes of physique, their focus on physical attractiveness and physical ability may be increased. This over-focusing on physique may lead to an individual overlooking other important values such as friendship, intelligence, work, and creativity (Keany & Glueckauf, 1993). As an individual broadens the scope of their value system, the emphasis on physique decreases and self-worth begins to be determined by abilities and characteristics in addition to those related to physique.

The third change, containment of disability, happens when an individual is able to contain the effects of the disability so that it does not impair functional systems. Although a disability may impair only one area of functioning, when the individual views the disability as globally debilitating it can overreach its actual effects and impair other areas such as emotional and intellectual spheres, unaffected physical abilities, and overall self-value. Dembo et al. (1975) and Wright (1983), call this overreaching effect of disability the *spread effect*. Spread is less likely if disability is perceived as a possession instead of a personal characteristic (Dembo et al., 1975).



If the impairment is perceived as a personal characteristic then the person and the characteristic, impairment, become a single whole, a disabled person. When this happens spread is more likely to take place because feelings about the disability being viewed as a personal characteristic can affect other areas of the individual just as any other personal characteristic can. In contrast if the disability is viewed as a possession, the person and the disability are perceived as separate. From this view the disability is not central but peripheral. The individual is not a disabled person but a person with a disability.

The fourth value system change is the transformation of comparative-status values to asset (intrinsic) values. Comparative status values are created when an individual compares a personal quality or ability to some standard. Asset (intrinsic) values are created when a thing is evaluated on its inherent qualities, worth, and usefulness. With an asset value the focus is on the intrinsic quality of the object, ability, or person being evaluated instead of on its standing compared to something or someone else. Asset valuing makes it possible to appreciate the value of something that would normally be devalued when compared to a higher standard. Comparative status value statements are detrimental to the acceptance process as they constitute negative judgments of personal worth and may have a negative impact on self-worth and self-esteem.

When an individual makes the changes mentioned above they will be more accepting of their disability and will function more adaptively. One of the main ways acceptance is effective in increasing functioning is by increasing self-esteem and self-concept. Giles (1989), found a significant correlation between acceptance of disability and self-esteem. These findings along with research done by Arnold-Oatley (2005), show that the relationship between acceptance and self-esteem is bidirectional, increases in acceptance increase self-esteem and vice versa.

Acceptance also impacts the way individuals with disabilities relate to and perceive others.

Wissel (1981) found that quadriplegics who were accepting of their disability had more positive attitudes toward others with disabilities and better self-concepts. Another study found a significant relationship between acceptance of disability and overall satisfaction with social relationships as well as increased self-esteem (Linkowski & Dunn, 1974).

Students with disabilities who accept their disability have been found to adapt and cope with their impairments better than those who do not (Davenport, 1991). Whether or not students are accepting of their disabilities impacts not only how they will adapt to functional impairment, but also impacts their goals for the future and levels of motivation. Heggoy (1985) found that students who were accepting of their learning disabilities were more motivated than non-accepting students. Another study found that individuals with dyslexia who accepted their diagnosis had higher educational goals than those who did not accept their diagnosis even though functional impairment between the two groups was similar (Davenport, 1991). This study also found that students who accepted their diagnosis placed more emphasis on *problem focused coping*, and were more likely to obtain substantive help from others when trying to master difficult material, and were more likely to emphasize the value of social support. This led them to be able to tolerate the discomfort of attempting to overcome limitations. Conversely it was found that *diagnosis-rejecting clients* were more likely to deny reality in attempts to gain perspective on the problem, to emphasize avoiding exposure of deficits, and to deny painful feelings about disability.

It is clear that acceptance of one's disability has a large impact on a student's potential success. The research shows that when individuals are able to accept their disability they have higher levels of self-esteem, better coping skills, higher goals, and are more motivated.

Obviously the benefits of acceptance will help students be more successful in their academic and personal lives. However, little research has been done in this area.

### **Limited Research on College Students with Disabilities**

Research conducted with college students with disabilities has been limited. The paucity of research on individuals with disabilities was highlighted in an article published by the American Psychological Association (APA) (Walters, 2000). According to the APA although some progress has been made, there is still a dearth of research in the area of disability (Walters, 2000). There is a particular lack of research examining college students' acceptance of disability and differences between disability groups (Physical Disability, Chronic Illness, Deaf/Hard of Hearing, Emotional Disability, Learning/Attention Dis). This body of literature is limited in several ways. First, the majority of the research on disability and acceptance has focused on single disability groups, predominantly physical disabilities. For instance, Morgan and Leung (1980) tested the effects of assertion training on individuals with disabilities but included only those with physical disabilities. Another study done by Kaiser, Wingate, Freeman, and Chandler (1987) examined the relationship between acceptance of disability and attitudes toward personal appearance. Despite sampling from two universities in each state and a relatively large sample (322), only individuals with physical disabilities were included. No effort was made to sample individuals from other disability groups.

A second way that the literature is limited in this area is that no research is available examining how disability groups differ in the acceptance of disability. For example a study done by Dahlbeck and Lightsey (2008) examined a sample of children with a range of disabilities but failed to make any comparisons between the disability types. Another study conducted by Grand (1972) assessed the relationship between acceptance of disability and reactions to negative

evaluations of the self. Again, the sample included only individuals with physical disabilities and made no comparisons between disability groups.

A third limitation of the literature arises in that an examination of relationships between disability type, functional impairment, and acceptance of disability appears important; however, this analysis is missing in previous studies. Even among people with the same disability, the conditions and functional impairments vary dramatically. A fourth limitation is that most disability studies compare individuals with disabilities to non-disabled individuals. A study done by Friedland (1990) examined the relationship between adjustment to disability and belief systems. Comparisons were made between individuals with physical disabilities and their able-bodied peers. No comparisons were made between disability groups. A further study conducted by Turner and Turner (2004) explored the relationship between mental health, unemployment, and disability. The researchers compared a sample of 967 individuals with disabilities to a matching sample of 850 non-disabled people, but no comparisons were made within groups.

Finally, the lack of current studies on disability and acceptance limits this body of literature. The majority of studies examining disability acceptance were conducted in the 1970s and early 1980s. Few recent studies have examined this variable (Mpofu & Houston, 1998). The current study is designed to remediate some of the limitations in this body of literature by examining the following questions:

1. How do students in a disability group differ from students in other disability groups in the degree to which they accept their disability?
2. How are level of functional impairment and acceptance related?
3. How are an individual's view of disability as a defining characteristic and acceptance related?

4. How are functional impairment and the degree to which disability is seen as a defining characteristic related?

## References

- Armitage, P. (1980). *Statistical methods in medical research*. Oxford, UK: Blackwell Scientific Publications.
- Arnold-Oatley, A. E. (2005). *Students' with physical disabilities adaptation to university*. Master's thesis, York University, Canada.
- Beecher, M. E., Rabe, R. A., & Wilder, L. K. (2004). Practical guidelines for counseling students with disabilities. *Journal of College Counseling*, 7(1), 83-89.
- Belgrave, F. Z. (1991). Psychosocial predictors of adjustment to disability in African Americans. *Journal of Rehabilitation*, 57, 37-40.
- Brault, W. (2012), *Americans With Disabilities: 2010, Current Population Reports*, pp.70-131. Washington, DC: U.S. Census Bureau.
- Dahlbeck, D. T., & Lightsey, O. R., Jr. (2008). Generalized self-efficacy, coping, and self-esteem as predictors of psychological adjustment among children with disabilities or chronic illnesses. *Children's Health Care*, 37(4), 293-315.
- Davenport, L. (1991). *Adaptation to dyslexia: Acceptance of the diagnosis in relation to coping efforts and educational plans*. Unpublished doctoral dissertation, The Fielding Institute. Santa Barbara, CA
- Dembo, T., Leviton, G. L., & Wright, B. A. (1975). Adjustment to misfortune: A problem of social-psychological rehabilitation. *Rehabilitation Psychology*, 22(1), 1-100.
- Erickson, W., Lee, C., & Von Schrader, S. (2010), *Disability Statistics from the 2008 American Community Survey (ACS)*. Ithaca, NY: Cornell University Rehabilitation Research and

- Training Center on Disability Demographics and Statistics (StatsRRTC). Retrieved June 17, 2013 from [www.disabilitystatistics.org](http://www.disabilitystatistics.org)
- Everitt, B. S., Landau, S., Leese, M., & Stahl, D. (2011). *Cluster Analysis* (5th ed.). Chichester West Sussex U.K.: Wiley.
- Field, A. (2000). *Discovering statistics using SPSS for Windows*. London: Sage.
- Friedland, C. D. (1990). *Relationship between adjustment to physical disability and belief systems in persons with physical disability*. Unpublished doctoral dissertation, Hofstra University, Hempstead, NY.
- Giles, F. L. (1990). *College students with disabilities: An evaluation of disability as related to acceptance of disability and self-esteem*. Unpublished doctoral dissertation, The University of Wisconsin, Madison.
- Gilson, S. F. (1996). Students with disabilities: An increasing voice and presence on college campuses. *Journal of Vocational Rehabilitation*, 6, 263-272.
- Grand, S. A. (1972). Reactions to unfavorable evaluations of the self as a function of acceptance of disability: A test of Dembo, Leviton, and Wright's misfortune hypothesis. *Journal of Counseling Psychology*, 19(2), 87-93.
- Groomes, D.A.G., & Linkowski, D.C. (2007). Examining the structure of the Revised Acceptance of Disability Scale. *Journal of Rehabilitation*, 37, 3-9.
- Hair, J. F., Black, W. C. Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. (7th Ed.). Upper Saddle River, NJ: Prentice Hall.

- Hartman, R. C. (1993). Transition to higher education. In S. Kroeger & J. Schuck (Eds.), *Responding to Disability Issues in Student Affairs*. (pp. 31-43). San Francisco, CA: Jossey-Bass.
- Heggoy, S. J. (1985). *Motivation and the learning disabled college student: A qualitative study (self-actualization)*. Doctoral dissertation, University of Georgia, United States. Retrieved July 28, 2011, from Dissertations & Theses: Full Text.(Publication No. AAT 8519618).
- Heinemann, A. W., Goranson, N., Ginsburg, K., & Schnoll, S. (1989). Alcohol use and activity patterns following spinal cord injury. *Rehabilitation Psychology*, 34(3), 191-205.
- Heinemann, A. W., & Shontz, F. C. (1982). Acceptance of disability, self-esteem, sex role identity, and reading aptitude in deaf adolescents. *Rehabilitation Counseling Bulletin*, 25, 197-203.
- Henderson, C. (1999). *1999 college freshman with disabilities: A biennial statistical profile*. Washington, DC: American Council on Education.
- Henderson, C., & American Council on Education Health Resource Center. (1995). *College freshmen with disabilities: A triennial statistical profile*. Washington, DC.
- Hennessey, M. L., Roessler, R., Cook, B., Unger, D., & Rumrill, P. (2006). Employment and career development concerns of postsecondary students with disabilities: Service and policy implications. *Journal of Postsecondary Education and Disability*, 19(1), 39-55.
- Heppner, P. P., Wampold, B. E., & Kivlighan, D. M. (2008). *Research design in counseling* (3rd ed.). Belmont, CA: Thomson Brooks Cole.
- Hill, J. L. (1996). Adults with Disabilities: Barriers to Post-Secondary Education. In B. Galaway and J.H. Hudson (Eds.). *Youth in Transition: Perspectives on research and policy* (pp. 118-126). Toronto: Thompson Educational Publishing, Inc.



- Hutchison, T. (1995). The classification of disability. *Archives of Disease in Childhood*, 73, 91- 99
- Keany, K. C., & Glueckauf, R. L. (1993). Disability and value change: An overview and reanalysis of acceptance of loss theory. *Rehabilitation Psychology*, 38(3), 199-210.
- Kaiser, S. B., Wingate, S. B., Freeman, C. M., & Chandler, J. L. (1987). Acceptance of physical disability and attitudes toward personal appearance. *Rehabilitation Psychology*, 32(1), 51-58.
- Kaye, H. (2009). Stuck at the bottom rung: Occupational characteristics of workers with disabilities. *Journal of Occupational Rehabilitation*, 19(2), 115-128.
- Leotta, J. (2003). Theory and practice: Establishing a career path for students with disabilities (electronic version). *Profiles in Excellence*, 1-3.
- Levene, H. (1960) Robust tests for equality of variances. In I. Olkin et al. (Eds.), *Contributions to probability and statistics: essays in honor of Harold Hotelling*, (pp. 278-292) Stanford, CA: Stanford University Press.
- Linkowski, D.C., & Dunn, M. (1974). A., Self-concept and acceptance of disability. *Rehabilitation Counseling Bulletin*, 18(1), 28-32.
- Linkowski, D.C. (1971). A scale to measure acceptance of disability. *Rehabilitation Counseling Bulletin*, 4, 236-244.
- Llewellyn, A., & Hogan, K. (2000). The use and abuse of models of disability. *Disability & Society*, 15(1), 157-165.
- Machin D., Campbell M., Fayers, P., & Pinol A. (1997). *Sample size tables for clinical studies*. (2<sup>nd</sup> ed.) Blackwell Science.

- Marinelli, R. P., & Dell Orto, A. E. (1984). *The psychological and social impact of physical disability*. New York: Springer Publishing Co.
- Markel, K. S., & Barclay, L. A. (2009). Addressing the underemployment of persons with disabilities: Recommendations for expanding organizational social responsibility. *Employee Responsibilities and Rights Journal*, 21(4), 305-318.
- Martin, E. W., Martin, R., & Turman, D. (1996). The legislative and litigation history of special education. *Future of Children*, 6(1), 25-39.
- McGlynn, M. J. (1983). *Differences in self-concept in learning disabled versus non-learning disabled adults*. Doctoral dissertation, University of Massachusetts, Amherst. Retrieved October 24, 2008, from Dissertations & Theses: Full Text database. (Publication No. AAT 8310317).
- Mertler, C. A. (2001). *Advanced and multivariate statistical methods practical application and interpretation*. Los Angeles: Pyrczak.
- Morgan, G. A., & Griego, O. V. (1998). *Easy use and interpretation of SPSS for Windows: Answering research questions with statistics*. Mahwah, NJ: Lawrence Erlbaum.
- Mpofu, E., & Houston, E. (1998). Assessment of value change in persons with acquired physical disabilities: Current and prospective applications for rehabilitation counselors. *Canadian Journal of Rehabilitation*, 12(1), 53-61.
- National Center for Educational Statistics (2010). *The condition of education*. Alexandria, VA. Retrieved June 17, 2013 from <http://nces.ed.gov/>
- National Organization on Disability (2004) New York, NY. Retrieved June 17, 2013 from [http://nod.org/contact\\_us/](http://nod.org/contact_us/)

- Olkin, R. (2002). Could you hold the door for me? Including disability in diversity. *Cultural Diversity and Ethnic Minority Psychology*, 8(2), 130-137.
- Pelkowski, J. (2007). Where will businesses find the workers they need in the future. In M. Lengnick-Hall (Ed.), *Hidden talent: how leading companies hire, retain, and benefit from people with disabilities*. Westport, CT: Greenwood.
- Pledger, C. (2003). Discourse on disability and rehabilitation issues: Opportunities for psychology. *American Psychologist*, 58(4), 279-284.
- Polidano, C., Mavromaras, K., & National Centre for Vocational Education Research. (2010). *The role of vocational education and training in the labour market outcomes of people with disabilities*. National Centre for Vocational Education Research (NCVER).
- Rehabilitation Act of 1973, Public Law 93-112, 93rd Congress, H. R. 8070 (1973).
- Scwalb, D.A., Pedersen, T.R., Preece, J.E., & Brooks, M.P. (2007, August). *Presenting problems and psychotherapy outcome of college students with disabilities*. Poster session presented at the annual convention of the American Psychological Association, San Francisco, CA.
- Sirkin, R. M. (1999). *Statistics for the social sciences* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Starr, P., & Heiserman, K. (1977). Acceptance of disability by teenagers with oral-facial clefts. *Rehabilitation Counseling Bulletin*, 20, 198-201.
- Turner, J. B., & Turner, R. J. (2004). Physical disability, unemployment, and mental health. *Rehabilitation Psychology*, 49(3), 241-249.
- U.S. Department of Education. (2001). *Twenty-second annual report to Congress on the implementation of the Individuals with Disabilities Act*. Washington, DC.

- Wagner, M., Newman, L., Cameto, R., Garza, N., Levine, P., & SRI International, Menlo Park, CA. (2005). *After high school: A first look at the postschool experiences of youth with disabilities. A report from the national longitudinal transition study-2*. Retrieved June 17, 2013 from [http://www.nlts2.org/reports/2005\\_04/nlts2\\_report\\_2005\\_04\\_complete.pdf](http://www.nlts2.org/reports/2005_04/nlts2_report_2005_04_complete.pdf)
- Walters, J. (2000). Commission on Independent Colleges and Universities of the State of New York. *Postsecondary education and individuals with disabilities: Recommendations to New York State for strategies to increase access and opportunity*. New York, NY: Nelson A. Rockefeller Institute of Government.
- Werner, K. (1992). *College students with disabilities*. Western Michigan University: Center for Teaching and Learning.
- West, M., Kregel, J., Getzel, E.E., Zhu, M., Ipsen, S.M., & Martin, E.D. (1993). Beyond Section 504: Satisfaction and empowerment of students with disabilities in higher education. *Exceptional Children*, 59 (5), 456-457.
- Wissel, E. (1981). *An analysis of self-concept and acceptance of disability with the traumatic spinal cord injured*. Unpublished doctoral dissertation, The Catholic University of America Washington, DC.
- Wright, B. A. (1983). Perceiving the causes and effects of disability: Some basic concepts. In B. A. Wright (Ed.), *Physical disability - a psychosocial approach (2nd ed.)*. (pp. 31-51). New York, NY: HarperCollins Publishers.

## Appendix B

AD Scale-Revised<sup>©</sup>

Groomes, D.A.G. (2004)

Derived from the AD Scale (Linkowski, D.C., 1971)

1

Read each statement below and circle the number that indicates to what extent you agree or disagree with the statement.				
	Strongly Disagree	Disagree	Agree	Strongly Agree
c 1. With my disability, all areas of my life are affected in some major way.	1	2	3	4
T 2. Having my disability, I am unable to do things like people without disabilities do.	1	2	3	4
E 3. Disability or not, I am going to make good in life.	1	2	3	4
T 4. Because of my disability, I have little to offer other people.	1	2	3	4
S 5. Good physical appearance and physical ability are the most important things in life.	1	2	3	4
E 6. A person with a disability is restricted in certain ways, but there is still much s/he is able to do.	1	2	3	4
T 7. No matter how hard I try or what I accomplish, I could never be as good as the person who does not have my disability.	1	2	3	4
c 8. It makes me feel very bad to see all the things that people without disabilities can do that I cannot.	1	2	3	4
S 9. The most important thing in this world is to be physically capable.	1	2	3	4
T 10. Because of my disability, other people's lives have more meaning than my own.	1	2	3	4
c 11. Because of my disability, I feel miserable much of the time.	1	2	3	4

Read each statement below and circle the number that indicates to what extent you agree or disagree with the statement.				
	Strongly Disagree	Disagree	Agree	Strongly Agree
E 12. Though I have a disability, my life is full.	1	2	3	4
T 13. The kind of person I am and my accomplishments in life are less important than those of persons without disabilities.	1	2	3	4
S 14. A physical disability affects a person's mental ability.	1	2	3	4
C 15. Since my disability interferes with just about everything I try to do, it is foremost in my mind practically all of the time.	1	2	3	4
E 16. There are many things a person with my disability is able to do.	1	2	3	4
C 17. My disability in itself affects me more than any other characteristic about me.	1	2	3	4
E 18. There are many more important things in life than physical ability and appearance.	1	2	3	4
T 19. Almost every area of life is closed to me.	1	2	3	4
C 20. My disability prevents me from doing just about everything I really want to do and from becoming the kind of person I want to be.	1	2	3	4
E 21. I feel like an adequate person regardless of the limitation of my disability.	1	2	3	4

Read each statement below and circle the number that indicates to what extent you agree or disagree with the statement.				
	Strongly Disagree	Disagree	Agree	Strongly Agree
C 22. My disability affects those aspects of life that I care most about.	1	2	3	4
T 23. A disability such as mine is the worst possible thing that can happen to a person.	1	2	3	4
S 24. You need a good and whole body to have a good mind.	1	2	3	4
E 25. There are times that I completely forget that I have a disability.	1	2	3	4
T 26. If I didn't have my disability, I think I would be a much better person.	1	2	3	4
C 27. When I think of my disability, it makes me so sad and upset that I am unable to do anything else.	1	2	3	4
T 28. People with disabilities are able to do well in many ways.	1	2	3	4
E 29. I feel satisfied with my abilities and my disability does not bother me too much.	1	2	3	4
C 30. In just about everything, my disability is annoying to me so that I can't enjoy anything.	1	2	3	4
S 31. Physical wholeness and appearance make a person who s/he is.	1	2	3	4
E 32. I know what I can't do because of my disability, and I feel that I can live a full life.	1	2	3	4

**The University Accessibility Center Research Questionnaire**  
**(Please answer all 24 questions)**

Subject's BYU ID #: \_\_\_\_\_ Date: \_\_\_\_\_

(1.) Gender: M F (circle one)

(2.) Current Age (circle the number [1-6] corresponding to your age range):

1. 18-20
2. 21-24
3. 25-30
4. 31-39
5. 40-49
6. 50 and above

(3.) Disability Category (circle one; if you have been diagnosed with conditions falling in more than one category, please pick the primary condition for which you seek services)

1. Physical Disability
2. Chronic Illness
3. Deaf/Hard of Hearing
4. Emotional Disability
5. Learning/Attention Disability
6. Other

(4.) Disability Visibility (circle most applicable category)

1. Invisible (those whom were not told would not know I have a disability)
2. Partially visible (brief but close observance might inform others of my disability)
3. Visible (others could quickly tell that I have a disability)

(5.) Length of Time Since Symptom Onset

1. I have experienced symptoms associated with my disability since birth



2. It has been 10 years or more since my symptoms began
3. It has been 5-9 years since my symptoms began
4. It has been 2-4 years since my symptoms began
5. My symptoms began within the last 2 years

(6.) Length of Time Since Diagnosis Was Determined

1. I was diagnosed at or near the time of my birth
2. It has been 10 years or more since my diagnosis was determined
3. It has been 5-9 years since my diagnosis was determined
4. It has been 2-4 years since my diagnosis was determined
5. My diagnosis was determined within the last 2 years
6. My diagnosis is still not fully determined at this time

(7.) Age at Time of Diagnosis

1. Birth or infancy
2. Age 4 – 10
3. Age 11 – 15
4. Age 16 – 19
5. Age 20 – 25
6. Age 26 – 29
7. Age 30 – 39
8. Age 40 or above

(8.) Comfort with Disclosure of ‘Invisible’ Disability (if disability is readily or partially visible, please proceed to the next question)

1. I would never disclose my disability to others unless absolutely necessary to get accommodations for school or work

2. I would disclose my disability to select others in addition to disclosures needed for accommodations
3. I do not have strong feelings regarding disclosure of my disability.
4. I welcome the opportunity to discuss my disability and educate others about it.
5. I am a strong advocate for individuals with disabilities and actively seek opportunities to disclose my experiences to others

(9.) Comfort in Sharing Information Regarding Visible Disabilities

1. I would never share additional information regarding my disability with others unless absolutely necessary to get accommodations for work or school.
2. I would share limited information regarding my disability with select others in addition to disclosures needed for accommodations
3. I do not have strong feelings regarding sharing information about my disability
4. I welcome the opportunity to share additional information regarding my disability and to educate others about it.
5. I am a strong advocate for individuals with disabilities and actively seek opportunities to share information about my disability with others.

(10.) Functional Impairment Rating (circle the most accurate descriptive statement)

1. My disability rarely impairs my ability to meet my goals.
2. My disability sometimes impairs my ability to meet my goals
3. My disability often impairs my ability to meet my goals.
4. My disability very often impairs my ability to meet my goals.

(11.) This question only applies to subjects with Emotional or Learning/Attention Disabilities  
Prior to Receiving Your Current Diagnosis, Were You Ever Told That You Did Not Qualify for a Diagnosis and should just 'work harder' despite having the same/similar symptoms that you do now?

1. Yes

2. No

(12.) Marital Status (circle one)

1. Married

2. Single

3. Divorced

4. Separated

5. Widow/Widower

(13.) Religious Affiliation

1. Church of Jesus Christ of Latter-day Saints (LDS)

2. Roman Catholic

3. Protestant

4. Other Christian

5. Buddhist

6. Hindu

7. Jewish

8. Moslem

9. Sikh

10. None

11. Other

(14.) Strength of Religious Affiliation

1. Low (affiliated in name only)

2. Low-Medium (occasional religious observance)

3. Medium (religious observance similar to most of my faith)

4. Medium-High (above-average attendance at religious worship/social activities and/or adherence to religious teachings)
5. High (well above-average attendance and adherence to religious teachings)

(15.) Ethnicity/Race

1. African-American
2. Alaskan Native
3. Asian Heritage
4. Hispanic
5. Native American
6. Pacific Islander
7. Caucasian
8. Multi-Ethnic

(16.) National Origin

1. I was born in the United States
2. I was born outside of the United States

(17.) Language

1. I am a native English speaker (includes bilingual individuals from English-speaking homes).
2. English is my second language

(18.) Family – Father's Educational Background

1. Did not finish high school
2. Finished high school only
3. Some college but did not graduate

4. Graduated from college
5. Has a master's degree
6. Has a doctorate degree

(19.) Family – Mother's Educational Background

1. Did not finish high school
2. Finished high school only
3. Some college but did not graduate
4. Graduated from college
5. Has a master's degree
6. Has a doctorate degree

(20.) Family – Socioeconomic Status (family of origin's total yearly income)

1. Less than \$30,000 per year
2. \$30,000 - \$45,000 per year
3. \$45,000 - \$60,000 per year
4. \$60,000 - \$80,000 per year
5. \$80,000 - \$100,000 per year
6. \$100,000 or more per year

(21.) University Status

1. Freshman

2. Sophomore
3. Junior
4. Senior
5. Master's Student
6. Law School
7. Ph.D. Student
8. Other

(22.) Cumulative Grade Point Average

1. 3.80 – 4.00
2. 3.50 - 3.79
3. 3.00 – 3.49
4. 2.50 – 2.99
5. 2.00 – 2.49
6. 1.00 – 1.99
7. 0.00 – 0.99

(23.) Academic Major (select college in which your major resides)

choices continued on next page

1. College of Engineering and Technology
2. College of Family, Home, and Social Sciences
3. College of Fine Arts and Communications
4. College of Health and Human Performance
5. College of Humanities

6. College of Life Sciences
7. College of Nursing
8. College of Physical and Mathematical Sciences
9. College of Education
10. Marriott School of Management
11. Kennedy Center for International Studies
12. J. Reuben Clark Law School

(24.) Please rank how important each of the following factors is in influencing who you are as a person (“1” is most important, “2” is next most important, etc.)

- \_\_\_ academic major
- \_\_\_ disability status
- \_\_\_ ethnicity/race
- \_\_\_ family socio-economic status (parents’ educational level/family income)
- \_\_\_ gender
- \_\_\_ marital status
- \_\_\_ religion

## Appendix C

### Understanding the Self-Concept of University Students with Disabilities Consent to be a Research Subject

#### Introduction

This research study is being conducted by Michael P. Brooks, Ph.D., J.D. and Jenny B. Brooks, Ph.D., at Brigham Young University to determine what characteristics factor into the self-concepts of university students with disabilities. You were selected to participate because you are a student client of the University Accessibility Center (UAC) with documentation of a disability on file.

#### Procedures

You will be asked to complete three questionnaires in 2170 WSC. The three questionnaires consist of a total of 138 questions and will take approximately 40 minutes to complete. Questions will focus on demographic factors (e.g., your age, academic major, etc.) as well as your beliefs and feelings about yourself and your disability.

#### Risks/Discomforts

There are minimal risks for participation in this study. However, you may feel mild emotional discomfort when answering questions about yourself and your disability. Should you desire to discontinue your participation because of such discomfort, please immediately return your materials to the UAC receptionist. You will be given a coupon for a free 24 oz. Jamba Juice smoothie for your time and participation. Should you wish to speak with someone immediately about your concerns or discomfort, please ask to speak with either your UAC coordinator or the UAC director (the study's principal investigator) at the reception desk.

#### Benefits

There are no direct benefits to subjects. However, it is hoped that through your participation researchers will learn more about the belief systems of university students with disabilities to better assist such students in areas such as academic and career advisement.

#### Confidentiality

All information provided will remain confidential and will only be reported as group data with no identifying information. All written data will be kept in a locked storage cabinet, while electronic data will be stored on a password-protected computer. Only those directly involved with the research will have access to data. All data, both in paper and electronic form, will be destroyed seven years after the conclusion of the study.

#### Compensation

Participants completing all three questionnaires will receive a \$10 BYU Bookstore gift card and a coupon for a free 24 oz. Jamba Juice smoothie. Additionally, all subjects completing the three questionnaires will be entered into a drawing for a \$150 BYU Bookstore gift card to be awarded at the conclusion of the study. The odds of winning the \$150 gift card are 1%.

#### Participation

Participation in this research study is voluntary. You have the right to withdraw at anytime or refuse to participate entirely without jeopardy to your standing with the UAC or the university.  
(Continued on other side)



**Questions about the Research**

If you have questions regarding this study, you may contact Michael P. Brooks, Ph.D., J.D. at 422-6020, [michael\\_brooks@byu.edu](mailto:michael_brooks@byu.edu), or Jenny B. Brooks, Ph.D. at 478-696-1293, [jennybartholomew@yahoo.com](mailto:jennybartholomew@yahoo.com).

**Questions about your Rights as Research Participants**

If you have questions regarding your rights as a research participant, you may contact Christopher Dromey, Ph.D., IRB Chair, 422-6461, 133 TLRB, Brigham Young University, Provo, UT 84602, [Christopher\\_Dromey@byu.edu](mailto:Christopher_Dromey@byu.edu).

I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name (Printed): \_\_\_\_\_

BYU ID #: \_\_\_\_\_