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## Examining College Satisfaction in Students with and without Disabilities

Molly M. Butts

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Examining college satisfaction in students with and without disabilities

By

Molly M. Butts

A Dissertation  
Submitted to the Faculty of  
Mississippi State University  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy  
in Educational Psychology  
in the Department of Counseling, Educational Psychology and Foundations

Mississippi State, Mississippi

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2017

Examining college satisfaction in students with and without disabilities

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With the increase of students with disabilities attending post secondary education, it is important to have an understanding of how satisfied a student with a disability is with college. At present, the research on college satisfaction focuses on specific variables and how the specific variables moderate or mediate college satisfaction; however, there is limited research in the area of college satisfaction and students with disabilities. To address the current gap in research, the purpose of the current study was to address if there was a difference in overall satisfaction in students with a disability compared to students without a disability. Further, analysis of group differences in relation to domain scores was conducted, and how variables such as entrance status, gender, ethnicity, ACT scores, and grade point average mediate college satisfaction for students with disabilities. Additionally, it was important to examine the relationship between disability status and overall satisfaction, as well as examine the relationship of the 4 domains (e.g. Instruction and Life Skills, Quality of Student Services, and Quality of Undergraduate Experience) and overall satisfaction. Survey data were collected from 2009-2014 Undergraduate Survey from the Office of Institutional Research and Effectiveness at a university in the southeastern United States. The results indicated a statistically significant difference

between students with disabilities and students without disabilities in regards to perceptions of services provided, and undergraduate experience. Specifically, individual with disabilities are more satisfied in the area of services provided compared to students without disabilities, while students without disabilities are more satisfied with their undergraduate experience compared to students with disabilities. Further, numerous relationships were found between variables such as gender, ethnicity, entrance status, academic proficiency, and overall satisfaction. Lastly, instructional and life skills, quality of student services, quality of academic advising, and quality of undergraduate experience scores load onto the latent variable of overall satisfaction as hypothesized.

## DEDICATION

I would like to dedicate my dissertation first to my parents for their endless support, guidance, listening ears, and constant encouragement so that I could do this! Without both of y'all, none of this would have been possible, and I appreciate and love both of you! Thank you both for all you do!

To Josh, thank you for always being there to listen and encourage me through this process. Your selflessness and positive attitude has impacted the way I approach all things, and I appreciate you. Thank you!

Lastly, to MacKenzie and Hal, we made it! I will always be incredibly thankful for both of you, and I know without a doubt this would not have been possible or as much fun if we hadn't gone through it together. One of the best things that came out of graduate school were you two, thank y'all for everything!

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## CHAPTER I

### INTRODUCTION

To understand satisfaction and quality of college life (QCL), grasping what quality of life (QOL) is and also theories related to QOL are imperative. The idea of QOL first appeared when individuals began to make health related decisions by taking into account how treatments such as chemotherapy could affect their QOL (Katschnig, 2006). QOL contains both objective and subjective components (Wrosch & Scheier, 2003); however, an accepted definition has not been established in the literature (Verdugo, Schalock, Keith, & Stancliffe, 2005). While a lack of a concrete definition of QOL exists, particular theories of Bandura (2005), Lent (2004), and Tinto (1975), can be used as a theoretical framework to discuss QOL.

Previous literature in the area of satisfaction focused on QOL (Arslan & Akkas, 2014; Wilgosh, Scorgie, Sobsey, & Cey, 2010), life satisfaction (Zhang, Zhao, Lester, & Zhou, 2014), work satisfaction (Haar, Russo, Sune, & Ollier-Malaterre, 2014), and student satisfaction (Moro-Egido & Panades, 2010). However, there is limited research when examining college students with disabilities and their satisfaction with college, and how their satisfaction compares to that of college students without disabilities. Arslan and Akkas (2014) researched quality of college life of students in Turkey, focusing on life satisfaction and identification; however, the characteristics of the population did not include students identifying with a disability. There has been an increase of students with

disabilities attending post secondary education. NCES researchers presented data from the year 2007-2008, and found that 10.9% of students who attended postsecondary education had a disability, as for the 2011-2012 year there was a 0.2% increase. The majority of college students with disabilities are female (57.4%), Caucasian (65.5%), and between the ages of 15 to 23 years old (52.1%; NCES, 2015). With an increase in students with disabilities attending college, the importance of being aware of their satisfaction increases, and understanding what areas (e.g. academics, facilities, campus involvement) students with disabilities find to be most important, can have significant implications for the university the students attend.

### **Statement of Problem and Justification for Research**

Ample research has been conducted in the area of QOL, where current research focuses on mothers, fathers, and a family's QOL when having children or siblings with and without disabilities. Additionally, research has been conducted with college students and QCL. Specifically, researchers were interested in what factors moderate or mediate QCL, specifically in students without disabilities, and from different cultures and areas (e.g., Turkey, Mexico, Taiwan). Factors included in previous research were access to resources, accommodations, athletics, food services, and overall satisfaction with college. Currently, little research on QCL includes students with disabilities, and there is limited focus on college students with disabilities and their overall college satisfaction. With the increasing number of students with disabilities attending college, having knowledge of these students' satisfaction with college is imperative. The justification of comparing students with and without disabilities will be important for universities to be aware of

what factors students with disabilities find important and how universities improve services to increase satisfaction with this population.

### **Significance of the Study**

The current study contributes to the current literature on QOL and QCL, by examining QCL for students with disabilities, thereby helping to close the current gap in the literature. As stated, the population of students with disabilities attending college is increasing over time. To date, there is limited research in the area of QCL and students with disabilities, and the importance of being aware of their satisfaction, and what areas (e.g. academics, facilities, campus involvement) students with disabilities find to be most important, can have significant implications such as services provided for the university the students attend. With the limited knowledge of students with disabilities and overall college satisfaction, the present study is significant to provide valuable information to colleges and universities and extend the literature in the area of QCL.

### **Research Questions**

Research Question 1: Do college students with disabilities differ from students without disabilities in their mean scores on four domains of college satisfaction (instruction/life skills; academic advising; student services; and undergraduate experiences)?

Research Question 2: Do entrance status, gender, ethnicity, composite ACT, and college GPA mediate college satisfaction for students with and without disabilities?

Research Question 3: Do the four domain scores from a satisfaction measure used at a southeastern university confirm the influence of a single, underlying factor of college satisfaction?

## CHAPTER II

### LITERATURE REVIEW

#### **Quality of Life**

The idea of QOL originates from the field of positive psychology (Diener, Eunkook, Suh, & Smith, 1999), and social indicator research from the 1960s and 70s (Rapley, 2003). Additionally, during the 1960s and 70s, the consequence of individuals' dissatisfaction with medical treatment, the consumer movement began which influenced the idea of QOL. QOL initially gained importance in the area of oncology, when individuals began to ask the question of whether they should seek aggressive treatments or have an improved QOL (Katschnig, 2006).

QOL incorporates domains that make life valuable and satisfying. QOL is composed of both objective markers (e.g., life circumstances), and subjective markers (e.g., an individual's perception of their satisfaction with life), both of which contribute individually to overall QOL (Wrosch & Scheier, 2003). It is important to have both objective and subjective indicators to provide measurement of an individual's well-being (Andrews, 1974). Despite having both objective and subjective markers, QOL was defined in different ways, such as health related problems like drug abuse and cardiovascular disease, or QOL was described in terms of overall life satisfaction by examining the occurrence of positive affect, and the lack of negative affect (Carr & Higginson, 2001; Yu & Lee, 2008).

It was important to note, however that QOL is hardly defined in research articles (Verdugo et al., 2005). An example can be found in the research of Gill and Feinstein (1994), where out of 75 studies reviewed, only 15% of the articles defined QOL. However, QOL generally encompasses the areas of physical well-being, social relations, and an individual's mental state and domains include: social inclusion, interpersonal relationships, self-determination, physical well-being, emotional well-being, recreation and leisure, environment, family, and safety (Verdugo et al., 2005). Despite the fact that there was not an accepted, concrete definition of QOL, two types have been identified: Generic QOL and Health Related QOL. Generic QOL emphasizes the needs and goals of an individual, as well as how an individual copes with internal and external issues. Essentially, generic QOL examines domains that are not influenced by health (Quilty, Van Amerigen, Mancini, Oakman, & Farvolden, 2003). That being said, health related quality of life (HRQOL), emphasizes only disease-linked symptoms (Gladis, Gosch, & Crits-Christoph, 1999). Currently, QOL of life is measured in multiple ways: (a) QOL involves core domains and markers, (b) incorporates the use of objective and subjective measures, (c) QOL focused on a variety of environments (e.g. micro, meso, and macrosystems), and (d) QOL included individuals with intellectual disabilities with the implementation and design of research with QOL. The measurement of QOL had significant importance due to the fact that QOL is important for all individuals, including individuals with an intellectual disability. Additionally, it was important to measure QOL to have some understanding of what level of QOL individual's experience. Lastly, measuring QOL explores how individuals around the world understand QOL, as well as an individual's personal assessment on QOL (Verdugo et al., 2005).

## **Theories of Quality of Life**

While many areas of research have theoretical backgrounds founded in behavioral, biological, and developmental psychology, a leading theory has not been identified in the area of QOL (Graves, 2003). With that being said, social cognitive theory by Bandura (1986; 2005) has impacted the area of QOL, by influencing other theories such as Lent's (2004) cognitive theory of well-being, and Tinto's (1975) theory of retention. While there is not an exclusive theory linked to QOL, aspects of social cognitive theory by Bandura can be seen in the area of QOL.

### **Social Cognitive Theory**

Social cognitive theory (SCT) is used to predict behavior by categorizing expectations into self-efficacy and outcome expectations (Bandura, 1986; 2005). Past studies have shown how self-efficacy and outcome expectations influence behavior (Baker-Eveleth & Stone, 2008; Cheng & Chu, 2014). For example, Lin and Chiou (2010), explained the predictive nature of self-efficacy and outcome expectations by showing an increased likelihood of college students taking a second language competence test. Furthermore, according to Bandura (1986; 2005), self-efficacy is the belief that an individual has the ability to engage in a certain behavior needed to meet a goal or expectation, while outcome expectations are what an individual believes will happen after the behavior has been completed. Environmental supports are components that could act as a barrier or have a positive influence on goal attainment. Bandura suggested self-efficacy, outcome expectations, and environmental support are interconnected and can control an individual's behavior.

Interventions and actions based on SCT can impact health behaviors in a positive way (Bartholomew et al., 1997). As stated, SCT is comprised of self-efficacy, outcome expectations, and self-regulation, and can be labeled as multidimensional and subjective (Graves, 2003). Graves (2003) conducted a meta-analysis, which studied SCT components and whether the components had a positive influence on cancer patients QOL. Key terms used to gather studies included: intervention, quality of life, cancer, treatment, psychological, and psychosocial. Data analysis included a correction formula, effect size, chi-square, and a focused comparison, which was used to predict whether SCT interventions influenced effect size. Thirty-eight individual studies were used in the meta-analysis and inter-rater reliability was conducted and was judged acceptable (.694). Further, there was adequate power to identify differences. Overall, the analyses revealed in terms of effect size, interventions that incorporated SCT components had larger effect sizes ( $z = 3.72, p < .01$ ), compared to interventions with less or no SCT components. In terms of particular domains, greater effect sizes were found in regards to global affect ( $z = 4.69, p < .05$ ), depression ( $z = 2.49, p < .05$ ), social ( $z = 5.69, p < .05$ ), objective physical outcomes ( $z = 2.80, p < .05$ ), and specific QOL outcomes ( $z = 2.08, p < .05$ ), with SCT components included in interventions showed that QOL was improved when SCT components were used in an intervention or treatment. Furthermore, SCT components were found to have stouter effects on global QOL, physical (objective), social, depression, and certain QOL outcomes. SCT components were not interconnected with coping, anxiety, subjective, overall physical domain, and functional outcomes. In regards to limitations, difficulties arose when making comparisons due to the lack of a well-defined theoretical framework. Additionally, poor external validity was noted, and

studies included for analysis differed in terms of treatments (e.g., intensity and length). Finally, analyses were performed only on post-treatment measures of participants. The implications for future research included examining efficacy in regards to SCT QOL interventions, and comparing SCT interventions to other interventions that are based in research (Graves, 2003).

Bandura's (1986; 2005) SCT incorporated self-efficacy, setting goals, and outcome expectations to explain an individual's behavior. Ample research has been conducted to confirm the predictive nature of social cognitive theory and explain why individuals might engage in certain activities such as taking a second language course. (e.g. Lin et al., 2010). To understand satisfaction and QCL, Bandura's (1986; 2005) SCT laid the foundation for future theories, which helped explain satisfaction in individuals.

### **Lent's Social Well-Being Theory**

Lent (2004), incorporated SCT, well-being, and personality theories to develop the social cognitive model of well-being. Lent suggested there were basic connecting paths in relation to normative well-being. Overall, life satisfaction was believed to be manipulated by personality traits (e.g., optimism, neuroticism), as well as pursuing goals and making progress in certain life domains (i.e., domain-specific satisfaction). The domain-specific satisfaction was affected by personality variables, goal progress, outcome opportunities, self-efficacy, observed environmental resources and support systems. This was in line with the SCT by Bandura (1986; 2005). Essentially, when an individual feels that progress was being made toward their goals, feels knowledgeable, and feels their environment is supportive of their goals, the person is more likely to be satisfied with their life (Lent, 2004). An example of Lent's model of social well-being

can be found in Figure 1. As reported earlier, Lent’s well-being theory was adapted from the social cognitive theory developed by Bandura (Lent, 2004).

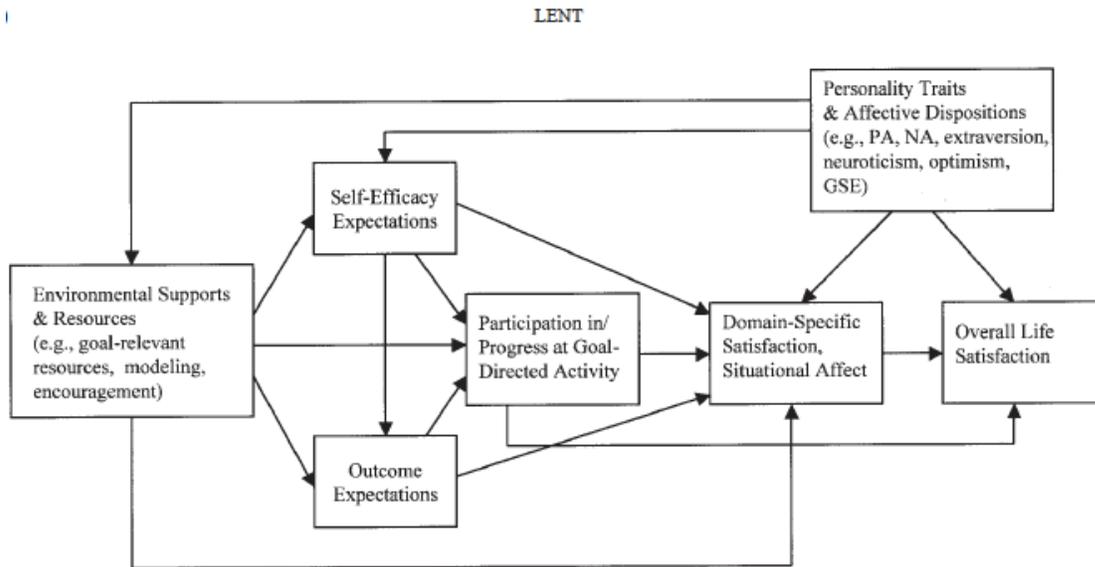


Figure 1. Lent’s Integrated Model of Social Well-Being (Lent, 2004).

Within Lent’s integrated model of social well-being, comprehensive life satisfaction and domain specific variables were related, and influenced the variables of personality (e.g., extroversion), and variables related to social cognition. Lent and colleagues tested the integrated model of well-being, by examining how well the model predicted global life satisfaction and satisfaction in two areas (e.g., academics and social life) among college students. Students completed measures related to global satisfaction, satisfaction in academics, and social life. The measures specifically explored academic self-efficacy, outcomes of academics and social life, goal progress in both academic and social domains, and environmental supports. Further, the Positive Affect scales from the

Positive and Negative Affect Schedule, and the Satisfaction with Life scale were also used. The sample was composed of 177 students in a psychology class, with the majority of students being female ( $n=105$ ), freshman, and European American. Data were analyzed using descriptive statistics, correlations, structural model covariance, as well as reliability and validity. In regards to reliability, the results showed measures had adequate internal consistency. Additionally, Lent and colleagues (2004) collected data via email recruitment in an additional study. The researchers chose 1,500 students randomly and sent an email. Of the 1,500 students asked, 299 students participated. Of the 299 students, 62% were women, 56% were European American, and the majority were seniors in college. In the study, measures differed slightly in regards to what environmental and personal factors contributed to how an individual made progress toward a goal. Measures also differed in the view of extraversion, and how extraversion related to global and domain satisfaction. Further, outcome expectations were not included in the study. The same statistical procedures were used in Study 2 as in Study 1.

Overall, the results of the two studies displayed a good fit of the integrated social cognitive theory of well-being. Further, the results displayed correlations among the main components of Lent's theoretical model. Specifically, self-efficacy and outcome expectations were correlated ( $r = .68$ ), while variables such as goal progress (.61, .32), importance of goals (.41, .22), resources (.30, .40), and satisfaction (.56, .41), were also correlated with self-efficacy and outcome expectations, respectively. Lent and colleagues also discovered life satisfaction was predicted better when there was satisfaction in two domains rather than in just one. Through the structural equation model (SEM), it was found that positive affect was predictive of domain and life satisfaction through the direct

and indirect interaction between environmental resources and self-efficacy. Limitations were noted in the study, which included the modification of measures, and the authors recommended that future research focus on the validation of measures, by looking specifically at global and specific satisfaction. The implications of the current research provided direction with individuals and their ability to self regulate (Lent et al., 2004). Ojeda, Flores, and Navarro (2011), further extended Lent's SCT by examining Mexican American college students.

To study Lent's (2004) theory, Ojeda et al. (2011), included the following variables: enculturation and acculturation, positive affect, college self-efficacy, college outcome expectancies, life satisfaction, and academic satisfaction. The model proposed by Ojeda and colleagues incorporated the same components of Lent's social cognitive model of well-being; however, their integration extended the current literature by testing the model on Mexican American students. Participants of the study included 457 individuals, with 58% being female, the majority were sophomores, and 38% were born in the United States. Surveys were distributed to students by their professors in class, and data were analyzed using a SEM, as well as a one-way multivariate analysis to examine possible gender differences. Additionally, a multi-group analysis was used to determine if gender moderated the relationship between variables included in the SEM. The authors' purpose was to analyze the validity of Lent's (2004) social cognitive well-being model on Mexican American students, and the results suggested that there is validity in Lent's (2005) model, which extended the model cross-culturally; however, there was no gender difference in relation to the selected variables (Ojeda et al., 2011). Sheu, Chong, Chen

and Lin (2014) examined the validity of Lent's (2004) model in relation to the well-being of Taiwanese and Singaporean college students.

Sheu and colleagues (2014), implemented Lent's (2004) model of well-being; however, they added another variable (e.g. independence and interdependence), and tested the amended model for validity in college students from Taiwan and Singapore. Specifically, Sheu and colleagues included how goal progress could be related to academic stress and academic satisfaction, while also determining if there was a relationship between academic satisfaction and academic stress on life satisfaction. Lastly, the current model differed from Lent's (2004) model with the inclusion of emotional stability and extraversion, and how those variables related to academic stress. Additionally, the researchers examined the invariance of Lent's (2004) modified model between the two groups. A total of 579 college students were administered scales (e.g., global life satisfaction, academic satisfaction, academic stress) to evaluate the soundness of Lent's (2004) well-being model, with measures reported to have adequate internal consistency. To analyze the results, a one-way multivariate analysis of variance (MANOVA) was conducted, as well as a structural equation model. The structural equation model was conducted for the Singaporean and Taiwanese students separately, and the results indicated a good model fit for both groups. Specifically, for the Taiwanese group, the root mean square error of approximation (RMSEA) was 0.054, and the CFI was 0.939. In regards to the Singaporean group, RMSEA was 0.053, and CFI was .938. Furthermore, estimated path coefficients were statistically significant for the Taiwanese sample in regards to academic supports and academic self-efficacy and outcomes. Within the Singaporean sample, significant paths were found in relation to academic supports

and outcomes, progress toward goals, satisfaction, and stress. When analyzing the variables of extraversion, emotional stability, independence, and interdependence, the variables correlated; however, there was no correlation between emotional stability and interdependence. Overall, the authors found an interdependent self, meaning individuals who seek to be connected and form relationships with others, predicted academic and global well-being for Taiwanese and Singaporean students, and results extended validation of the model to different cultures, similar to the results of Ojeda (2011; Sheu, et al., 2014). Social cognitive theory of well-being, and Lent's (2004) theory of well-being have impacted how we study QOL and QCL. Additionally, Tinto (1975) developed a model, which examined what variables increased the likelihood that a student would stay in college.

In short, Lent's (2004) SCT of well-being was adapted from Bandura's (1986; 2005) SCT with the inclusion of personality variables. Essentially, Lent (2004) proposed an individual's personality can influence how the individual will set goals, pursue goals, and attain goals, which falls in line with Bandura's (1986; 2005) theory. Lent suggested if an individual was making progress towards their goal, life satisfaction would be higher in relation to QCL, as in the study by Ojeda (2011) and Sheu et al. (2014) which examined satisfaction in students from different countries. Lent's theory established the importance of a student feeling they are making progress toward a goal, which could impact how satisfied the student was with college. Taken together, Bandura's (1986; 2005) SCT and Lent's (2004) SCT of well-being are theories which can be used to explain satisfaction in college students.

## **Tinto's Retention Model**

Due to the interest in retention, in 1975, Tinto developed a model focused strictly on student retention. It is first important to understand what Tinto defined as 'dropping out'. Tinto stated there were two types of dropouts. The first was an individual who leaves the school they had attended, and the second type of dropout was the individual who did not receive a college degree.

To determine the potential reasons or characteristics on why an individual might dropout, Tinto developed a theoretical model. Tinto (1975) suggested that students who incorporate themselves into the campus feel a sense of commitment to their school, and will have an increased likelihood of graduating. Specifically, Tinto suggested if an individual does not feel socially integrated into college, there is a higher likelihood the individual will dropout. To understand social integration, an individual would need to feel connected to others on campus (e.g., friend group), and also have the same values as those on campus. Secondly, a key component in why individuals might dropout was the idea of cost-benefit. An individual might dropout of college if they feel their time, energy, and resources were better spent in other ways. Finally, the last component of Tinto's model was the perception of the individual. Each person could perceive his or her integration socially with college and the cost-benefit of college very differently, and it would be important to take the characteristics of an individual into account.

An illustration of Tinto's (1975) model is shown in Figure 2. The figure depicts how goal commitment and institutional commitment are influenced by variables of teaching, learning support, and facilities, prior qualifications, individual characteristics, family background, personal history, social and academic integration. Goal commitment

and institutional commitment were related to dropout decisions, while academic and social integration was influenced by goal and institutional commitment. Specifically, teaching and learning support was defined as how students feel supported academically by the professors, and facilities. Prior qualifications included ACT and GPA. Family attributes included mother's education and personal history including past debt, medical history, and family events. Lastly, academic integration was defined as an individual feeling the classes they are taking are coming together to make progress towards a degree, while social integration was defined as feeling connected to the university.

Tinto (1975) suggested that retention was influenced by three core ideas of feeling connected, making progress towards a goal, and an individual's perception of college. Bandura (1986; 2005) and Lent (2004) relate back to Tinto's (1975) theory of retention in regards to goal progress and individual characteristics (e.g., perception). With the integration of the three core theories, satisfaction in college students could be better explained by highlighting the importance of self-efficacy, goal achievement, outcome expectations, personality, and perception of the individual.

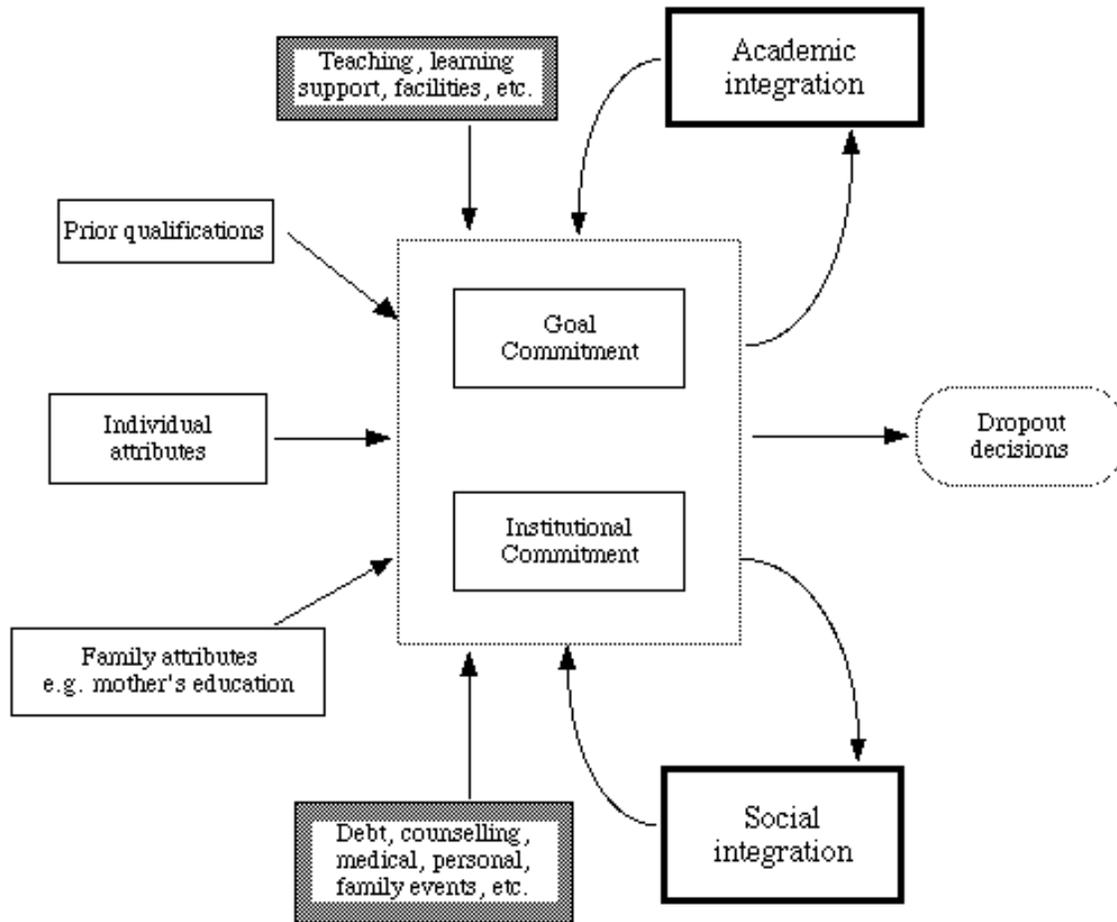


Figure 2. Tinto's Model of Student Retention (Tinto, 1975).

In summary, Bandura's (1986; 2005) SCT and Lent's (2004) SCT of well-being have provided a foundation for understanding QOL and QCL. SCT provided a starting point for Lent's (2004) theory of well-being and Lent's model has been studied in many ways, specifically in the area of college satisfaction. Tinto (1975) developed a model examining retention in college, and identified key aspects that could increase the likelihood of a student remaining in college. While the models were developed in isolation from one another, together the models explain the influence and importance of a

variety of variables such as personal as well as environmental characteristics and how those characteristics can influence how an individual completes goals, which influences satisfaction.

## **Satisfaction and College**

### **Satisfaction**

Focusing on improving college students' life satisfaction would help decrease the risks of mental disorder and physical injury among the college student population (Valois, Zullig, Huebner, & Drane 2004). Literature has shown life satisfaction is positively correlated with self-esteem, living conditions, social support (Campbell, 1981; Diener & Diner, 2009; Vennhoven, 1991), and negatively correlated with depression and suicidal ideation (Park, 2003; Valois et al., 2004). Zhang, Landmark, Reber, Hsu, Kwok, and Benz (2010) researched how family social economic status (SES) and living conditions affected an incoming college students' sense of life satisfaction. Additionally, the researchers hypothesized that living conditions (e.g., good living conditions and poorer living conditions) would not have an effect on life satisfaction. A questionnaire was administered to students attending Shandong University, which asked how satisfied they were with their life and if the students agreed with 'gender equalitarianism' (e.g., There is no difference between the relationships with a mother who works and their child compared to those who do not). The results showed that factors such as gender equalitarianism, self-esteem, and support were positively correlated with life satisfaction, while depression and suicide were negatively correlated with life satisfaction. Unlike previous research, better living conditions did not have an impact on overall life satisfaction at least not for Chinese college students (Zhang et al., 2010). Along with life

satisfaction, work satisfaction was equally important, and provided another line of research in the area of satisfaction.

Work-life balance (WLB) is the perception of an individual's balance of life (e.g., balancing work and life). Little research had been conducted in this area; however, the concept of work-life balance was hypothesized to be related to job and life satisfaction, and related negatively to anxiety and depression. Haar and colleagues (2014) sought to investigate work-life balance by studying the relationship between job satisfaction, anxiety and depression. Additionally, the authors wanted to look into the relationship between WLB and individual results (e.g., life satisfaction, job satisfaction, anxiety, and depression) across cultures. The authors also investigated how gender egalitarianism and collectivism/individualism related to WLB, like Zhang and colleagues (2010). Data were obtained from New Zealand, Spain, France, Italy, Malaysia, and China, by administering four scales (e.g., WLB, job satisfaction, life satisfaction, anxiety and depression). The results of the study confirmed the hypothesis that WLB related positively to life satisfaction, job satisfaction, and related negatively to anxiety and depression. When looking at collectivism/individualism based on country of participant, higher WLB was associated with job and life satisfaction in an individualistic society, compared to a collectivist society, which yielded a weaker relationship (Haar et al., 2014). As stated, many variables can impact an individual's satisfaction (e.g., WLB).

In summary, satisfaction can be divided from broad to specific. Specifically, life satisfaction can be positively or negatively impacted by a variety of variables, which goes back to Lent's social cognitive theory of well-being (e.g., goals and personality). Further, satisfaction subsumes more specific aspects such as work satisfaction or college.

## Quality of College Life

There has been increased interest in quality of life of students, satisfaction, and how students identify with their colleges (Yu & Kim, 2008). Arslan and Akkas (2014) investigated perceived QCL of students in Turkey, specifically looking in the areas of life satisfaction and identification. With the increase of students attending college, and lack of funding, universities have to concentrate on the budget, which could have an impact on student perceptions of QCL (e.g., accommodations, athletics, food service; Arslan & Akkas, 2014). Life satisfaction was the most important of satisfactions, and was influenced by many domains, such as college satisfaction (Sirgy et al., 2010; Sirgy, Grzeskowiak, & Rahtz, 2007). Arslan and Akkas (2014) examined how college satisfaction was influenced by life satisfaction. A total of 1,300 questionnaires were administered to students attending Duzce University in Turkey. The questionnaires incorporated four measures: Demographics, quality of college life, satisfaction with college life, and satisfaction with life scale. The researchers found that there were positive relationships between satisfaction with college life scale on identification ( $t = 0.29, f = 0.92$ ), QCL ( $t = 0.65, f = 0.58$ ), and satisfaction with life scale ( $t = 0.26, f = 0.79$ ). The authors suggested that university administrators' should concentrate on enhancing social services of college life, and then look at academic services (Arslan & Akkas, 2014). This investigation of students' perceptions of QCL yielded information that can be beneficial to universities. Another important area of research in quality of life of college was how certain factors such as job status influences QCL.

Moro-Egido and Panades (2014) studied the effect of having a job on a student's satisfaction with their degree program. They asked three basic questions: Was there a

difference between full-time college students compared to students who had a job in college and their satisfaction, do students in general favor assorted or specific curricula, and what other variables influenced students satisfaction. The researchers used a data set of 116 data that contained information from 2001 to 2004 from a public university in Spain. The survey items asked how satisfied students were with their program, and asked about other domains that related to their overall college experience. Further, to address the research question, the survey contained a question related to employment status. Overall, the results showed that part-time students were less satisfied with their program compared to full-time students. The results were not surprising given the fact part-time students were on the university campus less, which further provided evidence for Tinto's idea of college integration (Tinto, 1975). Additionally, students reportedly favored specific classes in college, and variables such as gender (e.g. being female), and GPA were positively correlated with overall satisfaction (Moro-Egido & Panades, 2010). Understanding variables that influenced QCL in students without disabilities provided beneficial information; however, it is equally important to understand which variables impacted QCL in students with disabilities.

### **College Students with Disabilities**

There has been an increase of students with disabilities attending post-secondary education, as reported by the National Center of Educational Statistics (2013). With an increase in students with disabilities attending college, it is important to understand the differences between students with disabilities compared to students who do not have disabilities. Research has shown students with disabilities face different obstacles compared to students without disabilities.

Students with disabilities face obstacles that make it difficult to persist through college. Some of the obstacles include: lack of knowledge of resources, perceived perception of their disability in regards to students and faculty, inability to self-advocate, and faculties lack of knowledge of students with disabilities (Belch, 2004-2005; DaDeppo, 2009; Getzel, 2008; Wessel, Jones, Markle, & Westfall, 2009). Due to the obstacles students with disabilities face, these students attended and completed college at a lower rate compared to students without disabilities (Mamiseishvili & Koch, 2010). The National Center for Educational Statistics (2013) reported that there was an increase from the year 2007-2012 of 10.9% to 11.1% of students with disabilities attending college. Understanding how individuals with different diagnoses function in post-secondary education, and what obstacles are faced could provide valuable information to university administrators.

For example, students with Attention-deficit/hyperactivity disorder (ADHD), and students with Autism Spectrum Disorders (ASD) face a variety of additional challenges compared to students who are typically developing. The fraction of college students having ADHD has been estimated to be between 2% and 8% (Norvilitis, Ingersoll, Zhang & Jia, 2008), and those students who have a diagnosis of ADHD were reported to take longer to complete their degree, as well as withdraw from courses, and have a lower grade point average compared to students without ADHD. Further, students with ADHD reported higher levels of anxiety and depression (Rabiner, Anastopoulos, Costello, Hoyle, & Swatzwelder, 2008), and lower perceptions of quality of life (Shaw-Zirt, Popali-Lehane, Chaplin & Bergmann, 2005). Additionally, students with ASD, experience challenges in post-secondary education as well. Students with ASD have the ability to

attend college; however, they might not realize their potential and could benefit from individualized support systems (VanBergeijk, Lkin, & Volkmar, 2008). Furthermore, students with ASD might choose to not attend college, or dropout, which could be due to many factors such as: lack of socialization, independent living issues, changes in routine, and lack of guidance (Jobe & White, 2007). Further, transitioning to college for a student with ASD could be difficult due to poor planning skills, and comorbid psychiatric problems (White, Ollendick, & Bray, 2011). Students with ASD also have difficulty relating socially with other individuals on campus, which could result in becoming lonely or feeling rejected (Cederlund, Hagber, & Gillberg, 2010), as well as higher levels of depression (Sterling, Dawson, Estes, & Geenson, 2008). As stated previously, there has been an increase in students with disabilities attending college (NCES, 2015). College students with learning disabilities have access to support services that can be helpful; however, few actually take advantage of the services (Hartman-Hall & Haaga, 2002).

Hartman-Hall and Haaga (2002), sought to study individual differences and situations that could potentially influence help seeking behaviors in college students with disabilities. The study included 86 students and the authors looked at two different scenarios. In the first scenario, the participants were presented with a vignette that asked how the student would feel in different situations related to help-seeking behaviors (e.g. positive and negative responses to seeking help). Secondly, participants listened to a radio advertisement that focused on a learning program, which focused on extrinsic or task-focused goals. Participants were interviewed to gather more information about their learning disability and past experience with seeking help in the college setting. Additionally, participants were administered the Personal Characteristics Rating Scale,

Self-Perception Profile for College Students, and Self-Perceptions of One's Learning Disability. A hypothetical vignette was presented to the participant with four diverse conditions presented (e.g., negative/positive response from peer and professor). A scale was given to the participant to rate how likely they would be to seek services after reading the vignette. The second component of the study was a radio advertisement, which stressed extrinsic goals or task focused goals. After listening to the advertisement, the participant was asked to rate how likely they were to seek one service over the other. The results indicated that students were less likely to seek services when a professor expressed negativity, and students were more likely to seek help when professors were positive. When looking at the results of the advertisement, students chose the learning service based on performance goals, instead of learning goals (Hartman-Hall & Haaga, 2002). Hartman-Hall and Haaga stressed the importance of how professors react to students seeking help from student services, which influenced the likelihood that students will actually seek help. Zhang and colleagues (2010), examined university faculty knowledge and beliefs about accommodations for to students with disabilities.

Past studies have looked into attitudes towards students with disabilities and accommodations. Four factors have been identified that influence faculty practices in the classroom: (a) Knowledge of legal necessities, (b) individual attitudes, (c) support from the institution, and (d) ease of interacting with a student with a disability. To look deeper into the four factors, a survey was administered to 206 faculty members from a university in China, which contained questions related to five constructs: (a) Knowledge of legal obligations, (b) noticed support from the institution, (c) individual beliefs in reference to educating students with disabilities, (d) ease of interacting with students with disabilities,

and (e) delivery of accommodations. The results of the survey suggest that faculty members have knowledge of the legal obligations of supporting a student with a disability, and faculty feel supported by the institution. Additionally, faculty members believe students with disabilities should be educated; however, faculty members need to be educated on what students with disabilities can do, and faculty members need additional education on how to provide services to these students (Zhang et al., 2010).

Wilgosh et al., (2010) researched the quality of life of college students with physical and learning disabilities. Perceived quality of life of individuals (e.g., personal view) with disabilities has been linked to adjustment and other positive outcomes. In a study conducted by Bishop, Stenhoff, and Shepard (2007), with adults diagnosed with multiple sclerosis (MS), the researchers found perceived quality of life was high, notwithstanding the fact that individuals were experiencing fatigue and limitations in their daily activity. Wilgosh and colleagues (2010) were interested in self-reports of college students with disabilities concerning life managing issues, as well as personal, relationships, and ‘perspectival transformational’ results. Eight individuals partook in the study where they were interviewed, and the interview was then transcribed, and themes were identified (e.g., friendships and socialization, family support, public attitudes toward disability, accessing support and services, accessing appropriate education and employment, life transitions, and funding issues). Overall, each participant viewed each theme with mixed feelings (positively and negatively), although it could be said attending college could increase quality of life and empowerment (Carter, Lank, Pierson, & Stange, 2008; Wilgosh et al., 2010).

As stated, individuals with disabilities are attending college more frequently than in the past, and they experience more obstacles compared to typically developing peers. Specifically, individuals with ADHD and ASD might take longer to complete college, as well as feel excluded from others. It is important to understand whether the knowledge and perception of faculty members influence not only if students will seek help in a university setting, but also if students with disabilities will receive the appropriate accommodations in their classroom.

Multiple theories have been discussed such as Bandura's (1986; 2005) model of well-being, Lents' (2004) adaptation and formation of SCT of well-being, and as Tinto's (1975) theory of retention. Further, satisfaction has been discussed, specifically examining life satisfaction, and examining how work satisfaction as well as college satisfaction can be a major determinant of life satisfaction. Additionally, individuals with disabilities are attending college more frequently, and experience a variety of obstacles; however, there is a lack of understanding of how the obstacles effect students with disabilities and what needs to be done to combat the obstacles. Most research on college satisfaction or quality of college life has focused on students without disabilities, highlighting important variables such as academics, social satisfaction, and resources using models to determine relationships between variables and overall college satisfaction. To date, one study has examined college satisfaction among students with disabilities (e.g., Wilgosh et al., 2010), while the majority of articles related to college students with disabilities focused on adjustment (Murray, Lombardi, & Kosty, 2014), peer tutoring (Vogel, Fresko, & Wertheim, 2007), accommodations (Sharoni & Vogel, 2007), and transitions (Janiga & Costenbader, 2002). In regards to Wilgosh et al. (2010),

the study was qualitative in nature, with a more quantitative approach needed. The gap in literature can be found in the area of college satisfaction and students with disabilities, and further research should be conducted in this area, additionally, a model needs to be developed to research the gap. The models of Lent (2004) and Tinto (1975) will be used as a guide to determine the relationship between disability status and overall satisfaction, while also including variables that could potentially impact overall college satisfaction.

In sum, Bandura (1986; 2005), Lent (2004), and Tinto (1975) established the theoretical framework for satisfaction, with satisfaction being influenced by an individual's perception, self-efficacy, goal attainment, and outcome expectations. An individual's life satisfaction is influenced by a number of variables related to social cognitive theory, social cognitive theory of well-being, and the retention model, as well as work and college. Satisfaction in college is imperative, due to the fact college satisfaction impacts overall life satisfaction. Understanding particular variables and certain aspects of college life that influence college satisfaction is necessary. Currently, research has focused primarily on students without disabilities in relation to satisfaction. College satisfaction in students with disabilities is equally as important due to students with disabilities having higher rates of depression and anxiety (Rabiner et al., 2008). Increasing satisfaction in both students with and without disabilities could have lasting effects.

### **Current Study**

The present research study had a number of goals. First, it aimed to determine if domains (e.g., instruction/life skills; academic advising; student services; and undergraduate experience) differ in regards to students with disabilities and students

without disabilities. Research has been conducted on college students without disabilities, particularly with students from different cultures and ethnicities (Arslan & Arkkas, 2014), and with students with disabilities, using more qualitative measures (Wilgosh et al., 2010). Limited research has examined domains related to college, and how those domains impact satisfaction in both students with and without disabilities. Information gained from further investigation, could provide universities with what areas of college seem impact satisfaction the most, and also areas that could be improved upon.

Furthermore, as Tinto stated, individuals who feel part of their college, and perceive their college experience as beneficial, are less likely to dropout of college. Information gained from analyzing the four domains will contribute to the current literature regarding drop out rates. Secondly, entrance status, gender, ethnicity, Academic College Testing (ACT), and grade point average (GPA) are all important variables in college. Understanding if the variables account for a relationship between overall college satisfaction, could provide information to universities in identifying individuals who could have lower satisfaction in college and working with those students. Finally, it is important to understand if the domains used in the satisfaction measure load onto the latent variable of satisfaction. Including domains that relate to college satisfaction will further contribute to the literature on QCL. If domains do not load onto overall satisfaction, then those domains could be said to not be as important as other areas, which would be beneficial information for universities in understanding what aspects make up satisfaction in college.

## **Research Questions and Hypotheses**

Research question 1: Do college students with disabilities differ from students without disabilities in their mean scores on four domains of college satisfaction (instruction/life Skills; academic advising; student services; and undergraduate experiences)?

Hypothesis 1: Domain scores will differ in regards to students with disabilities and students without disabilities. Specifically, students with disabilities will score lower in the areas of instruction and life skills obtained, quality of academic advising obtained, quality of student services obtained, and quality of the undergraduate experience at a southeastern University. This is based on research suggesting that students with disabilities lack knowledge of resources, and difficulty advocating for themselves, which could impact certain domains. Further, if differences in domain scores are found in the predicted direction, it can be said that students with disabilities have lower overall college satisfaction scores.

Research question 2: Do entrance status, gender, ethnicity, composite ACT, and college GPA mediate college satisfaction for students with and without disabilities?

Hypothesis 2: Entrance status, gender, ethnicity, ACT, and college GPA have indirect effects of disability status on satisfaction in students with and without disabilities. Figure 3 displays the proposed structural equation model. The model brings together research questions 1, 2, and 3, by incorporating disability status, personal characteristics, academic proficiency, overall college satisfaction, and the four domains, and examining the relationships found among the variables. This is

based on previous research stating that variables (e.g. entrance status, gender, ethnicity, ACT, GPA) have effects on college satisfaction (Arslan & Akkas, 2014; Cheng, 2001). The hypothesized paths were developed by previous literature suggesting relationships could be found. When looking at the hypothesized path of disability status and academic proficiency Rabiner and colleagues (2008) reported individuals with disabilities take longer to earn their degree and withdraw from courses. Further, in regards to disability status and overall college satisfaction, the proposed path was selected due to Shaw et al. (2005) suggesting individuals with disabilities to have lower perceptions of QOL, which could impact their overall college satisfaction as well. Tinto (1975) suggested feeling integrated academically and socially reduces the risk of dropout, and increases the feeling of satisfaction and connectedness to the university. The relationship identified by Tinto, influenced the proposed path of academic proficiency and overall college satisfaction. In terms of personal characteristics, Zhang et al. (2014) as well as Arslan and Akkas (2014) examined how personal characteristics influence satisfaction, which lead to the inclusion of the proposed path of a relationship between personal characteristics and overall college satisfaction, as well as examining how disability status is related to personal characteristics and personal characteristics are related to academic proficiency. Lastly, Arslan and Akkas (2014) provided reason to include the path of overall college satisfaction and the relationship among the four domains.

Research question 3: Do the four domain scores from a satisfaction measure used at a Southeastern University confirm the influence of a single, underlying factor of college satisfaction?

Hypothesis 3: The observed mean scores for the four domains will load onto a single, latent factor representing overall college satisfaction. Past research by Arslan and Akkas (2014), suggested domains such as services provided and academics are related to overall college satisfaction, which provided justification for the hypothesis that the four domains will load onto a single, latent factor representing overall college satisfaction.

Taken together, there are numerous goals for the present research study. As mentioned previously, research has been conducted in the area of college satisfaction or QCL, however with students from different countries, not with students with disabilities. Evidence has shown an increase in students with disabilities, and understanding their perception of college is imperative. Further, understanding how key aspects of college such as entrance status, ethnicity, GPA, ACT, and gender mediate or help explain the relationships with college satisfaction, can provide vital information to universities on how to provide for students and to increase their overall satisfaction in college. Lastly, being able to identify domains that load onto overall satisfaction provides valuable information in determining which domains are important. All information taken together will contribute the current literature on quality of college life.

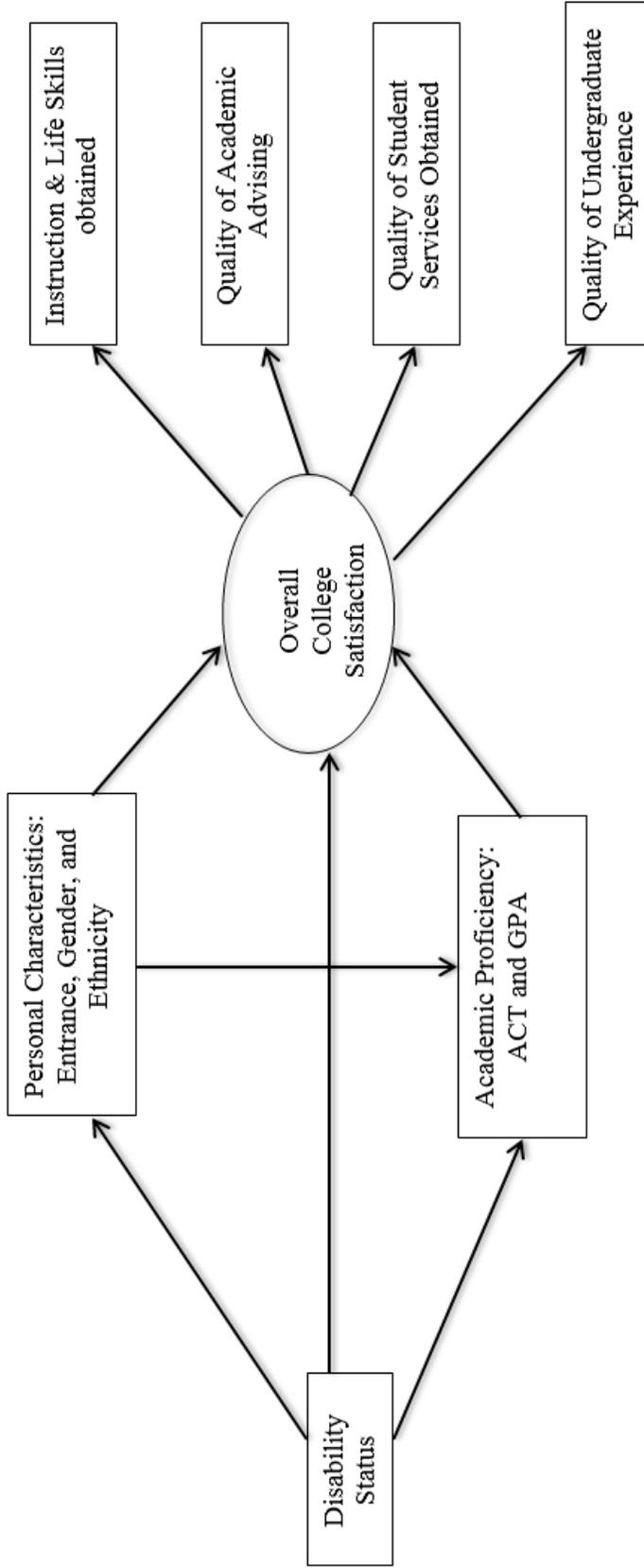


Figure 3. Proposed Structural Equation Model

## CHAPTER III

### METHODOLOGY

The following sections are provided in this chapter to discuss the detailed methods for investigating the research goals and questions surrounding universal screening for internalizing behavior in education. These sections include: (a) description of data; (b) participants; (c) instruments used; and (d) data analysis including types of validation and additional statistical processes.

#### **Description of Data**

The data used from this study were obtained from the archival data from the years 2009 to 2014 of the Undergraduate Exit Survey, from the Office of Institutional Research and Effectiveness at a university in the southeastern United States.

#### **Participants**

Data were collected by surveying graduating seniors as they were registering for graduation, resulting in a total of 14,753 respondents who gave permission to use their data for research purposes. From spring 2010 to fall 2014, a total of 511 students with disability graduated from the southeastern university, which is 3.9% of graduating students, a value that matches the included disability sample closely. Participant demographics can be found in Table 1. A majority of individuals who participated in the study were Caucasian, with nearly even percentages of females and males each year.

Further, the majority of the students who participated in the study did not have a disability. In regards to the last column of ‘student support report’, the information provided indicates how many seniors were registered with Student Support Services as having a disability, which resulted in about 4% of students. The difference between the national average of students with disabilities (i.e., 11%) compared to the sampled university could be due to the method of identification. Specifically, relying on those students who register with student support services as the indicator of having a disability could result in an undercount of students who would otherwise self-identify as having a disability. Further, another reason for the discrepancy between students with disabilities identified by the survey, compared to Student Support Services report could be that some students withheld permission for their data to be used for research purposes. Additionally, a list of the specific disabilities served at the southeastern university is provided in Table 2.

Table 1

*Demographics of Undergraduate Exit Survey*

Year	Ethnicity	Gender	Students with Disability	Student Support Services Report of Seniors with Disabilities
2009-2010	78.5%-Caucasian 16.7%-African American 4.8%-Other	49.8%- Female 50.2%- Male	81	50
2010-2011	78%-Caucasian 15.3%- African American 6.7%- Other	50.3%-Female 49.7%Male	85	81
2011-2012	78.5%- Caucasian 14.9%- African American 6.6%- Other	49.7%-Female 50.3%-Male	68	88
2012-2013	77.5%- Caucasian 15.6%- African American 6.9%- Other	51.7%-Female 48.3%-Male	83	117
2013-2014	77.6%- Caucasian 16%- African American 6.4%- Other	48.3%- Female 51.7%-Male	122	147

Table 2

*Number of Disabilities Reported by Student Support Services*

Hyperactivity Disorder	44.2%
Learning Disability	18.9%
Chronic Illness	10.7%
Mental Illness	9.8%
Multiple Disability	5.1%
Visual Impairment	3.4%
Orthopedic Impairment	2.6%
Autism Spectrum Disorder	1.9%
Hearing Impairment	1.7%
Traumatic Brain Injury	1.3%
Other	0.4%
Pregnancy	0.2%

**Instrument**

An ad hoc committee developed the Undergraduate Exit Survey with representation from faculty, student services, student associations, university library, academic, advising, and a satellite campus of a southeastern university. The committee analyzed exit surveys from other universities and evaluated the surveys based on categories applicable to the university. Staff from the university Information Technology Systems (ITS) developed the capability for the survey to be administered to the students when they were applying for graduation through the online portal. The survey focused on the areas of: (a) Principal activity upon graduation, (b) satisfaction of the graduates' in the area of life skills and instruction obtained, (c) quality of academic advising, quality of students services, and (d) quality of undergraduate experiences at the southeastern university. A total of 63 questions made up the survey, using a Likert-type response scale of '5', which means "strongly satisfied" to '1', which means "strongly dissatisfied."

Respondents were asked to indicate their level of satisfaction in different domains (e.g., academics, student services, etc.), which were important scales that were shown to impact college satisfaction in past research (Yu & Lee, 2008). As stated, administration of the survey was conducted as a student applied for graduation. Reliability and validity were not analyzed.

### **Data Analysis**

Analyses of the data were conducted based on the research questions, and codes/quantifications used for variables are given in Table 3. For an individual's answers to be included in the analysis, 80% of the questions were required to have been answered within each domain. In all, four questions were observed to differ on the specific version of the surveys used from 2009-2014; these were excluded from analysis (e.g., business office, career center, health education wellness, and "My overall academic experience within my degree at the university was positive").

### **Analysis of Group Differences in Relation to Domain Scores**

The first research question was whether there were differences on the set of domain scores between students with and without disabilities domains were: (a) instruction and life-skills obtained, (b) quality of academic advising, (c) quality of student services, and quality of undergraduate experience. To measure the group differences on domain scores, a MANOVA was used. The independent variable was disability status, while the dependent variables were mean domain scores for: (a) instruction and life skills, (b) quality of academic advising, (c) quality of student services, and (d) quality of undergraduate experience.

## **Analysis of Variables Mediates College Satisfaction with Students With and Without Disabilities and Factor Loadings**

The second research question for analysis was whether variables including: Entrance status, sex, ethnicity, composite ACT score, and GPA, mediate college satisfaction for students with and without disabilities. ACT scores were missing for 1,722 student records. These cases were removed resulting in a total of 13,031 respondents. The relationship of the four domains with overall satisfaction was examined. In order to include entrance status and ethnicity in the analysis, the variables were dummy coded. When variables do not have a fixed unit of measure, it was necessary to dummy code those variables. When dummy coding for ethnicity, there were seven categories (i.e., American Indian or Alaskan Native, Asian Pacific Islander, African American, White, Multi, Unknown, and Hispanic). Categorical variables having more than two levels can be re-expressed as a set of  $k - 1$  dummy variates. As an example, ethnicity (with seven categories), to capture the information six (i.e.,  $7 - 1$ ) dummy variates were needed. For each dummy variate, one of the categories could be assigned a value of “1”; all other categories would be assigned a value of “0.” In regards to Ethnicity, the variables of Asian Pacific Islander and Native Hawaiian or Other Pacific Islander were combined, thus resulting in six ethnicities instead of seven. For the final statistical analysis, only one of the five variates was used (e.g., African American vs. all other). Entrance status had three categories of freshman, transfer, and other. “Other” was not defined in the survey, and was dropped from analyses. Dummy coding of variates of entrance status was also conducted and in a similar manner as dummy coding for ethnicity: a single variate was created, coded as “1” if the case was freshman, and “0” otherwise.

To estimate the relationship among the variables a SEM was used. SEM is a family of models whose purpose was to explain the relationships between one or more independent variables and one or more dependent variables, and can also incorporate latent variables. For this study, the overall satisfaction score was the dependent or outcome variable, and was considered a latent variable (factor). The indicator variables would be the individual major domains. For example, instruction and life skills obtained at the university would be considered an indicator variable. The score was obtained by taking the average of the scores under the domain, resulting in an overall score. Additionally, variables such as if an individual was a freshman, transfer, or other, gender, ethnicity, composite ACT/SAT, and grade point average were included in the model to examine mediating effects. Specifically, freshman, female, and African Americans were used as the target category for each of the personal characteristic variables (e.g., for entrance status, freshman was coded as 1, all others were coded as 0). African American was selected as the reference category to compare to other ethnicities, due to African Americans comprising a large majority of the data set. The application of SEM displayed the contribution of each indicator variable in representing its related construct (College Satisfaction), and measured how well the indicators represent the construct, which was the examination of reliability and validity.

The following indices of model-data fit were reported for the proposed structural equation model: Root mean square error of approximation (RMSEA); Standardized root mean square residual (SRMR); Model chi-square; and the Comparative fit index (CFI). The RMSEA tells how well the proposed model would fit reproduces the observed covariance matrix. According to Kline (2005), the RMSEA provides the most

information of all the fit indices, due to the sensitivity to the number of parameters in the model. Additionally, the RMSEA provided a confidence interval, which allows more precision in estimation of the degree of model-data (mis)fit. Lower values for the RMSEA signify better model data. According to Hooper, Coughlan, & Mullen (2008), a good fit of model and data is indicated by an obtained RMSEA of .06 or below, with an upper limit of .07. The SRMR represents the square root of the difference between the residuals of the sample of the standardized covariance matrix and the hypothesized model. The SRMR score ranges from 0 to 1.0, with good fitting models falling in the .05 range and below, while values as high as .08 are considered acceptable (Hu & Bentler, 1999). The chi-square is traditionally reported when using a structural equation model. The chi-square fit reports the difference between the sample and fitted covariance. The .05 significance threshold was used to determine if the model is a good fit to the data. Essentially, the chi-square quantifies the misfit: higher values signify worse model-data fit. It is important to note the chi-square statistic is sensitive to sample size, meaning the chi-square almost always yields a statistically significant result when large sample sizes are used. Lastly, the CFI is reported. The CFI assumes the latent variables are uncorrelated (null model), and compares the sample covariance matrix with this null model. The values range from 0.0 to 1.0, with values closer to 1.0 indicating a good fit. The CFI is regarded as a beneficial statistic to report due to the CFI being least affected by the sample size. The original coding of demographic variables is presented in Table 3, and the proposed model can be found in Figure 3. The coding of variables used in structural equation model can be found in Table 4.

Table 3

*Original Coding of Demographic Variables*

Variable	Coding
Entrance Status	Freshman-1
	Transfer-0
Gender	Male-1
	Female-2
Ethnicity	Unknown-0
	Caucasian-1
	African American-2
	Hispanic-3
	Asian-4
	Native American-5
	Multi-6
Disability Status	Yes-1
	No-2

Table 4

*Coding of Variables of Structural Equation Model*

Variable	Coding
ACT	Actual Score (e.g., 22)
GPA	Actual Score (e.g., 3.5)
Instruction/Life Skills Obtained	Score From Each Respondent (e.g., 3.67)
Academic Advising	Score From Each Respondent (e.g., 3.67)
Services Obtained	Score From Each Respondent (e.g., 3.67)
Undergraduate Experience	Score From Each Respondent (e.g., 3.67)
Overall Satisfaction	Average Score from Each Domain (e.g., 3.67)
Entrance Status	Freshman-1 Transfer-0 Other-0
Gender	Female-1 Male-0
Ethnicity	African American-1 All other ethnicities-0
Disability Status	Yes-1 No-0

## CHAPTER IV

### RESULTS

In the present study three primary research questions were asked: 1) Are there differences based on disability status in relation to domain scores: Instruction and Life-Skills Obtained, Quality of Academic Advising Obtained, Quality of Student Services Obtained, and Quality of the Undergraduate Experience at a southeastern university? 2) Do variables such as: Entrance Status, Gender, Ethnicity, Composite ACT, and college GPA mediate college satisfaction with students with disabilities, and 3) Do the loadings suggest correspondence with a single underlying factor, college satisfaction?

To answer the questions, both MANOVA and SEM analyses were conducted.

#### **Research Question 1: MANOVA**

To answer the question of if there was a difference between disability status groups on satisfaction domain scores a MANOVA was conducted. In the analysis the independent variable was disability status with Level 1 = students with disabilities and Level 2 = students without disabilities, while the dependent variables included mean scores on the four domains of: (a) instruction and life skills, (b) quality of academic advising, (c) quality of student services, and (d) quality of undergraduate experience.

When checking for assumptions, the Box M was analyzed for the assumption of homogeneity. Homogeneity was not met,  $p < .001$ . When looking at the assumption of normality, (Shapiro-Wilk), univariate normality was not met,  $p < .001$ . Transformation

statistics were implemented, however homogeneity and normality were not met. The results should be interpreted with caution. Summary statistics in regards to the domains and students with and without disabilities can be found in Table 5.

Table 5

*Summary Statistics of MANOVA*

Domain	Disability Status	<i>N</i>	<i>M</i>	<i>SD</i>
Instruction and Life Skills	Disability	461	4.22	0.58
	No Disability	12570	4.25	0.51
Quality of Academic Advising	Disability	461	3.45	0.81
	No Disability	12570	3.42	0.80
Quality of Services Obtained	Disability	461	3.29	0.90
	No Disability	12570	3.14	1.01
Quality of Undergraduate Experience	Disability	461	4.22	0.59
	No Disability	12570	4.27	0.54

The correlations among the dependent variables of instruction and life skills, quality of academic advising, quality of services obtained, and quality of undergraduate experience can be found in Table 4.

Table 6

*Pearson Correlation of Dependent Variables*

	Instruction and Life Skill	Quality of Academic Advising	Quality of Services Obtained	Quality of Undergraduate Experiences
Instruction and Life Skills	1.00	.523	.378	.721
Quality of Academic Advising	.523	1.00	.542	.829
Quality of Services Obtained	.378	.542	1.00	.821
Quality of Undergraduate Experience	.721	.530	.461	1.00

The results of the MANOVA showed there was a statistically significant difference based on disability status and the four domains (i.e., Instruction and Life Skills, Quality of Academic Advising, Quality of Services Obtained, and Quality of Undergraduate Experience),  $F(4, 13026) = 7.24, p < .05$ , Wilk's  $\Lambda = .998$ , partial  $\eta^2 = .002$ . The univariate results showed there was no statistically significant difference based on disability status on the domain scores of Instruction and Life Skills obtained ( $p = .205$ ), and Quality of Academic Advising Obtained ( $p = .438$ ), compared to disability status. However, a statistically significant difference was found in regards to Quality of Student Services Obtained, and Quality of Undergraduate Experience. Specifically, in regards to Quality of Student Services  $F(1,13029) = 10.74, p = .001$ , and an effect size of  $\eta^2 = .001$ , and Quality of Undergraduate Experience  $F(1, 13029) = 5.07, p = .024$ , and an effect size of  $\eta^2 = .001$ . The effect size of both Quality of Student Services and Quality of Undergraduate Experience are small, suggesting a small difference between students with

and without disabilities in regards to services and undergraduate experience. Upon further review, and to gain more understanding on where the differences were found, univariate follow-up tests were conducted. The results of the univariate follow-up tests showed statistically significant results in regards to both Quality of Student Services,  $F(1, 13029) = 9.24, p = .002$ , and *Cohen's D* (0.18), and Quality of Undergraduate Experience,  $F(1, 13029) = 6.31, p = .012$ , and *Cohen's D* (-0.085). To determine specific differences, analyses of means were conducted. The results found in regards to services obtained, students with disabilities ( $M = 3.29, SD = 1.01$ ) reported slightly higher satisfaction in this area compared to students without disabilities ( $M = 3.14, SD = .90$ ; *Cohen's d* = -0.18). From the summary statistics for Quality of Undergraduate Experience, students with disabilities ( $M = 4.22, SD = 0.54$ ) were slightly less satisfied compared to students without disabilities ( $M = 4.27, SD = 0.59$ ; *Cohen's d* = -0.085). The magnitude of the differences between students with and without disabilities is quite small when looking at both mean differences and *Cohen's d*, which suggests small, however significant differences that should be paid attention to when looking at services and undergraduate experience.

### **Research Question 2: SEM**

To answer the second research question, which aimed to determine interactions between variables such as disability status, personal characteristics (i.e., entrance status, gender, ethnicity), academic proficiency (i.e., ACT, GPA), overall satisfaction, and the four domains mediate overall satisfaction. To determine if any relationships existed, a structural equation model was developed, and results were obtained. Specifically, the structural equation model consisted of ACT, GPA, sex, disability status, overall

satisfaction, and the four domains. Further, target variables were selected in regards to entrance status (e.g., freshman and transfer), and dropping “other,” and also ethnicity (e.g., Caucasian and African American). The purpose of including the target variables of freshman and transfer was due to “other” contributing a small percentage (i.e., less than 10%) the data set, as well as the “Other” category having no operational definition. In regards to ethnicity, the purpose of using fewer than seven ethnicity values was due to Caucasian and African American respondents comprising the majority of the data set. Further, African American was chosen as the lone variate for ethnicity such that African American was used as reference category to compare to other ethnicities. In regards to the path connecting ACT to GPA, it was hypothesized a direct relationship would be found from ACT to GPA (e.g., ACT is predictive of college GPA), and inclusion of the path in the structural equation model was necessary.

The maximum likelihood estimation method was used for analysis of the hypothesized model. All path coefficients presented in Figure 4 are standardized coefficients. Standardized coefficients can be viewed as the estimated change, in standard deviation units, of an influenced variable per unit change in the influencing variable. In the case of the four measures, the values represented standardized loadings of each score on the proposed factor of college satisfaction. In regards to model fit, a chi square, RMSEA, SRMR, and CFI were calculated. Specifically, chi square was found to be statistically significant at  $p < .001$ . Given the large sample size, this result was judged not to be important in appraising overall model-data fit. Further, the estimated RMSEA was .083, which suggested marginal model-data fit. The estimated SRMR was .043, which

was below the target value of .05, and was judged to indicate a good model-data fit. The estimated CFI was .934, suggesting good model-data fit.

Specifically examining the relationship between variables, the results of the structural equation model yielded statistically significant relationships ( $p < .05$ ) between the overall satisfaction latent variable and the indicator variables of Quality of Instruction and Life Skills obtained ( $p < .001$ ), Quality of Academic Advising Obtained ( $p < .001$ ), Quality of Services obtained ( $p < .001$ ), and Overall Undergraduate Experience ( $p < .001$ ). Furthermore, when looking at specific indicator variables, statistically significant relationships were found. However it is important to report proposed relationships that were not statistically different from zero, such as sex and disability status ( $p = .832$ ), the direct relationship of disability status and satisfaction ( $p = .330$ ), and direct relationship of GPA and satisfaction ( $p = .082$ ). In terms of significant relationships, results of the structural equation model indicated that, freshman and disability ( $p < .001$ ), were positively related, suggesting more freshmen indicate having a disability compared to transfer students. Additionally, in regards to ethnicity (African Americans vs. others) and disability status ( $p < .001$ ), a positive relationship was found, suggesting more African Americans indicate having a disability compared to other ethnicities. A negative relationship was observed between ACT and disability ( $p < .001$ ), suggesting individuals with a disability have lower ACT composite scores compared to students without disabilities. In regards to ACT and freshman ( $p < .001$ ), ACT and sex ( $p < .001$ ), ACT and African American ( $p < .001$ ), there was a positive relationship between ACT and freshmen suggesting entering freshmen have higher ACT composite scores compared to transfer students, while there were negative relationships between ACT and female and

ACT and African American status, suggesting if you are a female (or African American), your ACT will be lower compared to males (or other ethnicities). In terms of GPA and disability ( $p < .001$ ), freshmen ( $p < .001$ ), female ( $p < .001$ ), African American ( $p < .001$ ), and ACT ( $p < .001$ ), statistically significant path coefficients were found.

Specifically, there were positive relationships between female status and GPA and ACT and GPA, suggesting females have higher GPAs compared to males, while students who come to college with higher ACT composite scores tend to earn higher GPAs. Negative relationships were found in regards to disability status, freshmen, and African Americans, suggesting individuals who indicate having a disability have lower GPAs compared to individuals without disabilities, while freshmen and African Americans have lower GPAs compared to transfer students, and other ethnicities. In terms of direct links to satisfaction, freshmen ( $p < .001$ ), female ( $p < .001$ ), African American ( $p < .001$ ), and ACT ( $p < .001$ ), were found to have statistically significant path coefficients.

Specifically, positive relationships were found when looking at freshmen, female, and African Americans status, suggesting freshmen, females, and African-Americans are more satisfied with their college experience compared to transfer students, males, and other ethnicities, respectively. Further a significant negative relationship was found between ACT and satisfaction suggesting individuals with higher ACT scores are more dissatisfied with college. Results of the SEM can be found in Figure 4.

Mediator variables were used to understand how or why an independent variable (i.e., ACT, GPA, disability status, ethnicity, sex) influenced the outcome variable (overall college satisfaction). Results of the SEM supported some of the mediation effects that were hypothesized. Specifically, the influence of disability on satisfaction was mediated

only by ethnicity (estimated indirect effect =  $0.007 = 0.078 \times 0.087$ ), where both indices (path coefficients for disability and ethnicity, ethnicity and satisfaction) were reported to be significantly non-zero. Disability on satisfaction was also mediated by entrance status (e.g., freshman) (estimated indirect effect =  $0.002$ ), where both indices (disability and entrance status, entrance status and satisfaction) were reported to be significantly non-zero. Lastly, disability status on satisfaction was mediated by ACT scores ( $0.002$ ), where both indices (disability and ACT, ACT and satisfaction) were significantly non-zero. Small mediating effects were found in regards to disability status, with ethnicity ( $0.007$ ), entrance status ( $0.002$ ), and ACT composite scores ( $0.002$ ), suggesting the variables in a small way explain the relationship between disability status and overall college satisfaction. Even though the relationship is small among mediating variables, the implication of the relationships are important. Table 6 provides the significant results of the structural equation model.

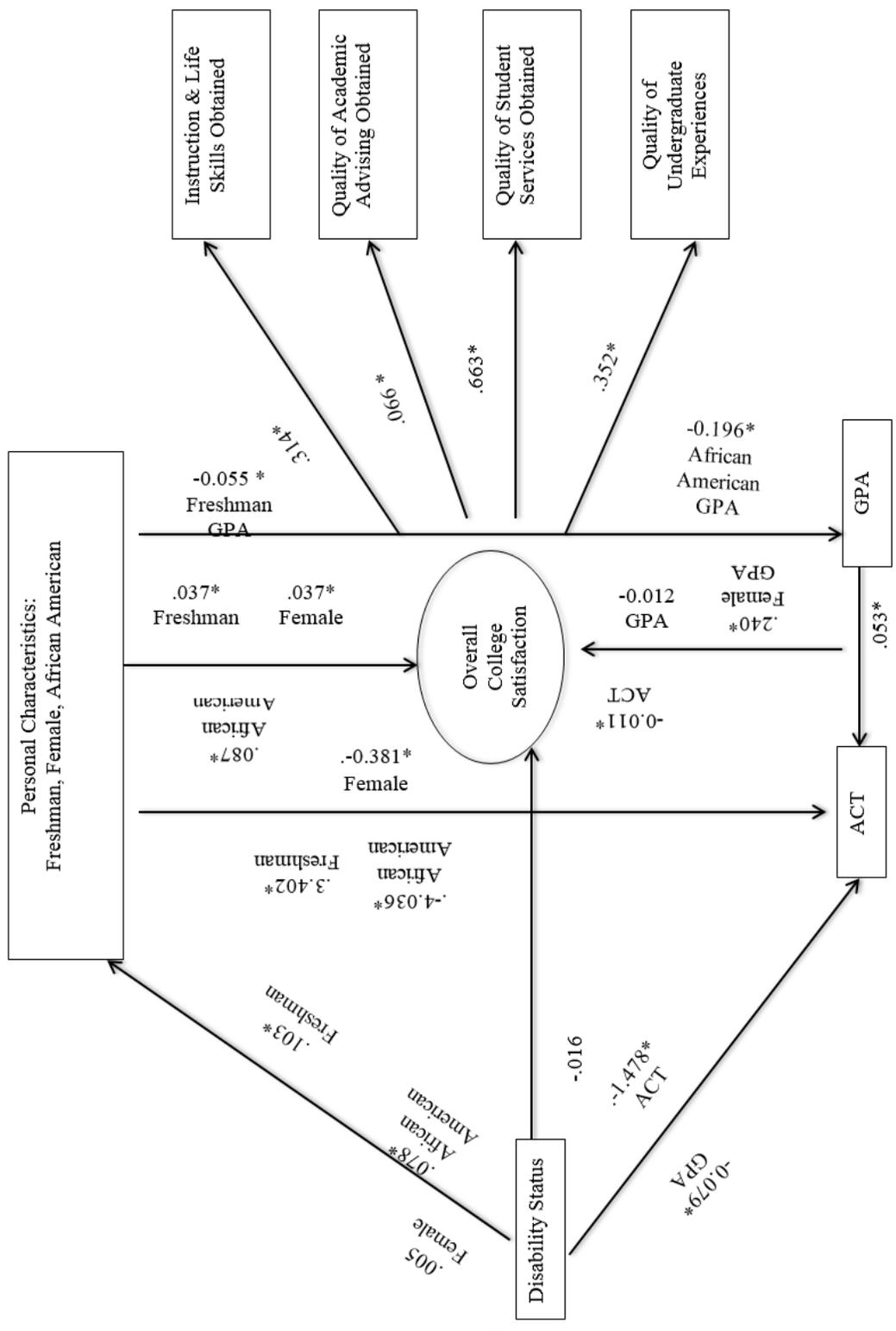


Figure 4. Standardized Estimate Results of Structural Equation Model \*p < .05

Table 7

*Estimated Path Coefficients for Structural Equation Model.*

Variable	Estimated Relationship	Estimated Standard Err	Significance	z-Value	Standardized Variables
Freshman Disability	0.103	0.023	<. 001	4.402	0.039
Female	0.005	0.024	.832	0.213	0.002
African American	0.078	0.017	<. 001	4.637	0.041
Disability ACT	-1.478	0.187	<. 001	-7.909	-0.060
Freshman	3.402	0.070	<. 001	48.768	0.372
Female	-0.381	0.069	<. 001	-5.529	-0.042
African American	-4.036	0.098	<. 001	-41.361	-0.316
Disability GPA	-0.079	0.021	<. 001	-3.674	-0.027
Freshman	-0.055	0.009	<. 001	-6.314	-0.051
Female	0.240	0.008	<. 001	30.391	0.225
African American	-0.196	0.012	<. 001	-16.531	-0.130
ACT	0.053	0.001	<. 001	52.628	0.448
Freshman Satisfaction	0.037	0.007	<. 001	5.544	0.058
Female	0.037	0.006	<. 001	5.901	0.059
Disability	-0.016	0.016	0.330	-0.975	-0.009
African American	0.087	0.009	<. 001	9.382	0.098
ACT	-0.011	0.001	<. 001	-13.007	-0.161
GPA	-0.012	0.007	0.082	-1.738	-0.020

Note: Values reported are standardized path coefficients.

### **Research Question 3: Underlying Factor**

The question of whether loadings of the four satisfaction domain scores suggest correspondence with a single underlying factor, college satisfaction, was determined through the SEM (see Figure 4). The results suggested the four domain scores (e.g., Instruction and Life Skills Obtained, Quality of Student Services Obtained, and Quality

of Undergraduate Experience Obtained) load positively on the latent variable of overall satisfaction ( $p < .001$ ). The results suggested in general, the mean scores of all domains load onto the latent variable of overall satisfaction as hypothesized.

Table 8

*Estimated Path Coefficients for Latent Variable of Overall Satisfaction*

Latent Variable	Domains	Standardized Variables	Standard Error
Satisfaction	Instruction and Life Skills	0.617	
	Academic Advising Services Obtained	0.824	0.038
	Undergraduate Experience	0.662	0.038
		0.652	0.013

Note: *Values reported are standardized path coefficients.*

### Summary

In summary, in regards to disability status, there were statistically significant differences in regards to services obtained at a southeastern university, and undergraduate experience, suggesting students with disabilities were more satisfied in regards to services compared to students without disabilities, while there was a slight difference in satisfaction with students disabilities being less satisfied with their undergraduate experience compared to students without disabilities. The difference between services obtained and undergraduate experience between students with and without disabilities was quite small (i.e., less than a point), suggesting a negligible difference, however a difference that should be addressed. Moreover, there was a statistically significant relationship between the four domains and overall satisfaction, suggesting the domains

load onto a single, overall factor of overall satisfaction. It is important to note disability status does not have a direct effect on overall satisfaction. There is support for disability exerting an indirect influence on overall college satisfaction, as mediated by ethnicity, entrance status, and academic performance. In regards to influence of the mediating variables, the relationship was small, however with the variables such as ethnicity, entrance status, and ACT composite scores, and the relative ease of collecting this data, warrants further investigation for universities.

## CHAPTER V

### DISCUSSION

The purpose of the following study was to investigate overall college satisfaction in student with and without disabilities, and further determine what factors (i.e., ACT, GPA, gender, ethnicity, entrance status), mediate college satisfaction. Currently, research has focused on college students' satisfaction (Arslan & Akkas, 2014; Yu & Kim, 2008); however, there is limited research in the area of college satisfaction and students with disabilities, with Wilgosh et al. (2010), conducting one of the only studies with this population. The limited research in the area of students with disabilities, particularly focusing on satisfaction is troubling, due to the fact students with disabilities are estimated to represent about 1 in 9 college students (National Center for Education Statistics, 2013). Further, there is a lack of research regarding how specific student attribute variables relate to satisfaction and in what direction (i.e., positive or negative). Understanding the relationships among such variables has numerous implications for college administrators, professors, and staff.

#### **Overview of Findings**

The findings of the current study examined a number of areas specifically related to college satisfaction in students with and without disabilities. First, a MANOVA was conducted to identify if there were statistically significant differences between the domains of Instruction and Life Skills Obtained, Quality of Academic Advising

Obtained, Quality of Student Services Obtained, and Quality of Undergraduate Experience and disability status. The results of the MANOVA indicate that the groups were statistically significantly different on the set of domain scores. However, univariate comparisons on individual domain scores indicated that groups differed significantly only on Quality of Student Services Obtained and Quality of Undergraduate Experience. These differences were such that students with disabilities had slightly higher scores on Quality of Student Services and slightly lower scores on Quality of Undergraduate Experience. The differences were small (i.e., a difference of 0.15 of a point for services obtained, and 0.05 of a point for undergraduate experiences), however significant due to the sample size. The finding suggests individuals with and without disabilities have different experiences in these two areas. Even though small differences were found (i.e., less than a point difference), attention should still be paid to the difference in experiences of students with and without disabilities. This suggests individuals with disabilities are more satisfied with student services available in college; however, less satisfied of their overall undergraduate experience compared to students without disabilities. A discussion of how the results relate to previous literature is included in the implications section, below.

Furthermore, it is important to understand the relationship among variables such as personal characteristics, disability status, academic proficiency, overall satisfaction, and the four domains. Specifically, a SEM was developed, which was structured after Lent's (2004) SCT of well-being as well as Tinto's (1975) retention model. The results of the structural equation model suggested an overall good fit. Most of the proposed relationships were found to be statistically significant. Three proposed relationships: (a)

female and disability status, (b) disability status and satisfaction, and (c) satisfaction and GPA were found to not be statistically significant. Concerning the four domain scores as tapping a single, latent variable of college satisfaction, all domains were statistically significant indicator variables in relation to overall satisfaction. Further, it was important to note the statistically significant negative relationships that were found. Specifically, ACT and disability status was found to be negatively related, suggesting students with disabilities tend to have lower average ACT scores by 1.3 points. Previous literature that included individuals Autism and ADHD; indicated that such students had a lower overall GPA (Rabiner et al., 2008). The current findings indicate that individuals with disabilities have lower composite ACT compared to students without disabilities. Further, in regards to ACT scores, there was a negative relationship between females and African Americans. In terms of GPA, a negative relationship was found in regards to disability status, freshman, and African American students. Finally, a slight negative relationship was observed between female status with ACT composite scores showing a small difference between females and males, while a stronger relationship was found between ACT composite scores and African American status. Finally, a weak negative relationship (i.e., estimated path coefficient of 0.01) was found between ACT and overall satisfaction. Numerous implications can be gleaned from the results of the structural equation model, which will be discussed later in the paper. In regards to loadings on the latent variable of overall satisfaction, all indicator variables (e.g., four domains) load onto the proposed factor of overall satisfaction variable implying the importance of including the domains in the structural equation model, as well as confirmation that all four contribute to a global college satisfaction factor.

## **Implications**

As stated, many implications can be taken from the results of the study. First, it was important to understand how students with and without disabilities feel about college in general and how specific domains influence college satisfaction. Past research has examined the importance of academics and social interactions (Arslan & Akkas, 2014), however, the current study examined the broad domains of instruction and life skills, academic advising, services, and undergraduate experience, and how those differed across students with and without disabilities. The results suggested that services and overall undergraduate experience differ between the two groups, specifically with students with disabilities' reporting being slightly more satisfied with services compared to students without disabilities, however, they were slightly less satisfied with overall experience. While the results are statistically significant, the difference between the two groups is negligible. The results of the MANOVA challenged previous research of Cederlund et al. (2010), suggesting students with disabilities might not be aware of services provided on campus, and has difficulty attaining those services. This information could provide valuable information to administrators and staff when working with students with disabilities and continuing to provide helpful services to students with disabilities. However, it is important to bring light to the fact students with disabilities report being slightly less satisfied with their overall college experience, which suggests further exploration into the academics and social aspects of college (Arslan & Akkas, 2014), and how those areas could potentially be improved in regards to students with disabilities.

The finding of the structural equation model displayed valuable information and provides numerous implications for colleges and universities. When examining variables that impacted overall satisfaction, it would be important for educators, administrators, and staff to be aware of the negative relationship between ACT and overall satisfaction. Even though a small difference was found between ACT and satisfaction (i.e., less than a point), students who come to college with higher ACT scores could be potentially more dissatisfied with college. Further, if a student does have a disability, the derived model predicts that it will affect their ACT composite score and GPA scores, which provides another area for administrators to include as they consider conditions that can put students at risk. This information can help in targeting these students earlier, and being proactive in the services provided to these students. Also, one of the more important findings concerns the relationship of disability status and overall satisfaction.

The structural equation model did not confirm a significant direct relationship between the two variables, suggesting disability status does not have a direct effect on overall satisfaction. However ethnicity, entrance status, and ACT mediate the relationship of disability status on overall college satisfaction. In terms of personal characteristics, individuals who are female and African American have lower ACT scores compared to males and other ethnicities, respectively. Further, in terms of GPA, students who come into college as freshman, and are African American tend to have a lower GPA compared to other students. However, female status was positively related to GPA, indicating that despite having lower ACT composite scores, females outperform males in academic achievement as indicated by grades, by about 0.25 of a point. To put into context, it would be equivalent to the difference between GPAs of 3.25 and 3.00. Again,

implications can be gained; suggesting targeted programs could be needed for these students, to give them the best opportunities to succeed. Further, in terms of disability status, African Americans and entering freshman were more likely to have a disability compared to other students. Specifically, the estimated relationship between freshman and disability status was (.103), while African American and disability status was (.0780), compared to female status and disability, which was (.005). As reported, the most important information gained from the structural equation model is the lack of a statistically significant direct relationship between disability status and overall satisfaction, suggesting overall satisfaction is not directly impacted by disability status, however, it is very slightly mediated by personal characteristics, academic proficiency, and entrance status, suggesting a need for more research with these variables. Lastly, the four satisfaction domain scores included in the survey were significantly related to overall college satisfaction. The findings of the current study contribute to the literature in terms of finding specific attributes and outcomes where students with disabilities differ compared to students without disabilities, specifically in the areas of services and overall undergraduate experience, however the differences were far less than a point (i.e., 0.15 and 0.05, respectively), suggesting a small, but significant difference. Further, the current study addressed the gap in literature in regards to lack of research in general being conducted with this population. However, the information gained from the analyses showed differences between personal characteristics, which could help guide universities in the programs being offered to students, and bring awareness to populations who might be at risk for dropping out (Tinto, 1975).

Interventions and programs aimed to create smaller learning environments with access to tutors would be beneficial to increase GPA. Programs should be available to individuals without disabilities, as well as those with disabilities. Programs that target small groups of students could potentially also increase social integration, which is a key component of overall college satisfaction. To identify students who would benefit from the programs, university administrators could send surveys to incoming freshman and transfer students to identify students earlier. For university administrators, the strong indirect effects would be necessary to create programs aimed at students who might be at risk, such as females, African Americans, and entering freshman. Areas to include studying for indirect effects on overall college satisfaction would be academic proficiency, entrance status, and ethnicity. The time to collect the data on the areas (e.g., academic proficiency, entrance status, and ethnicity) would not be problematic for university administrators. Further, results from the study were interesting in regards to students with disabilities being satisfied with student services, when previous research suggested services to be most difficult for students with disabilities to obtain (Cederlund et al., 2010). Greater attention should be paid to socially integrate all students into college, which could potentially increase satisfaction not only in students with disabilities, however from other backgrounds as well.

## **Limitations and Future Directions**

### **Limitations**

There were several limitations to the current study. Major limitations to the study were the missing ACT scores for many of the participants in the study. This could have potentially impacted the results in regards to the significant results found in relation to

ACT scores. Further, data were collected from one university, which could affect generalizability. Additionally, it would have been helpful to understand the different categories for entrance status, which were freshman, transfer, and other. With lack of knowledge of “other”, it was considered unwise to incorporate this category in analysis. A limitation to the study was the lack of knowledge of the actual disabilities reported by students on the survey, as well as the fact that specific services obtained were not identified.

### **Future Research**

Future research should continue to focus on individuals with disabilities who attend college. Specifically, more information should be gained in terms of what specific variables impact a student’s undergraduate experience, and of these, which seem to be most important. Academic and social variables would be of most interest due to past research suggesting academics and social integration plays a major role in overall college satisfaction (Arslan & Akkas, 2014), as well as both being relevant in theory.

Furthermore, in terms of ACT and GPA and the relationship between the two and overall satisfaction, more research should be conducted in this area, that could help guide administrators and staff be more knowledgeable. As stated, a limitation to the study was the lack of knowledge of the actual disabilities. Future research should ask students to identify what disability they have, and determine if a type of disability affects overall college satisfaction differently. As Norvilitis et al. (2008) reported, students with ADHD and ASD face specific challenges in college; however, additional information regarding overall college satisfaction of students with other types of disabilities (e.g., specific learning disability, anxiety, depression) would be beneficial. To increase generalizability

to other areas, students at other universities could be similarly surveyed to determine if comparable relationships exist elsewhere. Lastly, a specific survey should be administered to examine particular variables that could be improved upon, as well as areas that prove to be beneficial to students, and that students enjoy. Finally, the survey should be administered prior to students graduating, with the aim of being proactive and identifying areas that could be corrected earlier, to increase overall college satisfaction later.

### **Summary**

In summary, three research questions were asked to understand the potential relationship between students with disabilities and overall satisfaction with college. As stated previously, limited research has been conducted in this area, and the current study contributed to the literature in a variety of ways. Overall, results of the MANOVA suggest no statistically significant difference in the domains of academic advising and instructional and life skills obtained at the university, however there were significant differences found within student services and undergraduate experience, suggesting students with disabilities are slightly more satisfied with student services, but are slightly less satisfied with their undergraduate experience. Further, variables such as, entrance status, ethnicity, and academic proficiency do mediate overall satisfaction (i.e., there is a relationship). Further, the four domains do load onto the latent factor of overall satisfaction. Taken all together, the results provide important information to administrators, suggesting more information is needed in the area of undergraduate satisfaction and how to improve satisfaction in students with disabilities. Further, students who are minority, and are admitted as a freshman have lower overall GPAs.

With this information, administrators and staff could develop targeted programs to identify these students and address the concerns. In terms of ACT, individuals who are female or African American have a lower ACT composite scores compared to males and other ethnicities. Further, individuals with disabilities have lower ACT composite scores compared to students without disabilities. In regards to GPA, students with disabilities tend to have slightly lower GPAs; similarly, freshmen and African Americans tended to have lower GPAs compared to their peers. A direct relationship was found between ACT composite scores and satisfaction, suggesting individuals with higher ACT scores are more dissatisfied with college. Lastly, in terms of satisfaction, only GPA and ACT were found to have a direct negative relationship, and statistically significant results were not found in regards to disability status and overall satisfaction, however indirect effects were found. Ethnicity, ACT, and entrance status mediate the relationship of disability status and overall college satisfaction. Study limitations were noted. Overall, results of the structural equation model displayed disability status shows a non-significant direct relationship between overall satisfaction, however with variables (e.g., personal characteristics, academic proficiency, entrance status) mediating the effects of overall satisfaction. These results help to fill, in part, the gap in literature noted in Chapter II.

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