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**ATTITUDES TOWARD ACCOMMODATIONS AND ACADEMIC WELL-
BEING OF COLLEGE STUDENTS WITH DISABILITIES**

by

Alex Elizabeth Troccoli

A Thesis

Submitted to the
Department of Educational Services and Leadership
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Thesis Chair: Carmelo Callueng, Ph.D.

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Abstract

Alex Elizabeth Troccoli
ATTITUDES TOWARD ACCOMMODATIONS AND ACADEMIC WELL-BEING OF
COLLEGE STUDENTS WITH DISABILITIES
2016-2017
Carmelo Callueng, Ph.D.
Master of Arts in School Psychology

College students with disabilities remain an understudied population, especially on topics relating to academic success. As more students with disabilities are struggling to complete their college education it calls for more research to be done to ensure students are taking advantage of any resources that can be beneficial for them. This study can contribute to empirical literature about how accommodations and other support service for college students with disabilities can impact academic wellbeing. The research questions advanced in the study are: 1) Is there a difference in the attitudes of students who are availing and not availing to accommodations? and (2) Is there a difference in the academic well-being of students who are availing and not availing to accommodations? Participants are 92 college students with disabilities from a medium size public university in New Jersey. Two validated Likert-type scales and a demographic questionnaire comprised an online survey completed by the participants. Data were analyzed using descriptive statistics and the Mann-Whitney U test. Key findings indicated students availing of accommodations have significantly more favorable attitudes and higher academic satisfaction than their peers who were not availing of accommodations.

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Chapter 1

The Problem

The number of students with disabilities attending college has greatly increased within the past 25 years (Carney, Ginsberg, Lee, Li, & Orr, 2007). Despite the overwhelming increase, more than half of the students who reported having disabilities were at risk of failing out of college, or on average, it was taking them twice as long to graduate as compared to the general student population (Wolanin & Steele, 2004). Colleges and universities attempt to bridge this academic gap for students with disabilities by providing academic accommodations.

Section 504 is a federal mandate that higher education institutions use to provide accommodations and other services for students with disabilities (Madaus & Shaw, 2004). Prior to attending college, elementary and high school students would have had accommodations assigned to them (Monagle, 2016). The same cannot be said in higher education, where accommodations are not provided directly to the students; instead, students need to identify themselves as students with disabilities to be able to request accommodations (Barnard-Brak, Sulak, Tate, & Lechtenverger, 2010).

Despite the fact that accommodations are beneficial to student's wellbeing, there are still a significant number of students who may not avail of accommodation services at their colleges/universities (Monagle, 2016). One of the factors that may influence the decision of college students with disabilities to request accommodations is attitudes. Barnard-brak et al. (2010) indicated that ensuring more positive attitudes towards requesting accommodations for students with disabilities may be necessary for their academic success. This research would promote the use of accommodations to ensure

students with disabilities are receiving the same quality of education as students in the general population.

According to the Resilience Theory (Masten, 2011), accommodations are a positive resource for students with disabilities that may likely contribute to academic well-being. Resource factors assist in students' ability to adapt to situations and create positive outcomes in their lives (Yates, Tyrell, & Masten, 2015). Well-being has been explored in students with low socioeconomic status, as well as those struggling with racism, sudden loss of a loved one, medical illness, and natural disaster (Yates, Tyrell, & Masten, 2015). Academic well-being is considered an understudied topic in college students with disabilities.

As stated earlier, attitudes may be a precursor to students' decision to avail or not avail of accommodations. Because the Resilience Theory would consider accommodations as positive resource factor for students with disabilities; it may be interesting to explore if a negative attitude towards accommodations could be a risk factor to academic success of students (Masten 2011; Masten & Powell, 2003; Yates, Tyrell, & Masten, 2015; Zimmerman, 2013).

Purpose of the Study

This study explored on the attitudes to request accommodations and academic well-being of college students with disabilities in a northeast public university.

Research Questions

The specific questions derived from the general purpose of the study were:

1. Is there a difference in the attitudes of students who are availing and not availing to accommodations?
2. Is there a difference in the academic well-being of students who are availing and not availing to accommodations?

Hypotheses

1. There is a significant difference on the attitudes of college students with disabilities who were availing and not availing of accommodations. Compared to students who were not availing of accommodations, students who were availing of accommodations have more positive attitudes regarding accommodations.

2. There is a significant difference on well-being of college students with disabilities who were availing and not availing of accommodations. Compared to students who were not availing of accommodations, students who were availing of accommodations had higher academic wellbeing.

Significance of the Study

College students in higher education with disabilities remain an understudied population (Barnard, Stevens, Siwatu, & Lan, 2008), especially on topics relating to academic success. As more students with disabilities are struggling to complete their college education it calls for more research to be done to ensure students are taking advantage of any resources that could be beneficial for them. This study will contribute to

empirical literature about accommodations for students with disabilities. It promotes the use of accommodations to ensure that students with disabilities are optimizing support services and programs during their college education.

Furthermore, it will extend existing literature by specifically exploring the idea that accommodations can enhance student's academic wellbeing.

Limitations

As with all researches, this study is not without limitations. First, the sample size only includes students from one university and thus, the results may not be generalizable to students from other higher education institutions. Second, data collection for this study relied on use of self-report measures, which can cause social desirability and mono-method biases. Lastly, since data were collected through online survey, it was not possible to employ random sampling that can ensure fair selection of students with disabilities to be part of the study.

Assumptions

In this study, it was assumed that: 1) students understood the contents and responded honestly to the survey, and 2) scales used in this study accurately captured the constructs of attitudes in requesting for accommodations and academic well-being of college students with disabilities.

Definition of Terms

Academic well-being. It refers to a state wherein an individual recognizes his/her own potentials, ability to combat life's stressors, can produce positive results for a work

done, and contributes to the community (Mental health: a state of well-being, 2014). In this study, academic well-being is measured through the College Student Subjective Wellbeing Questionnaire (CSSWQ: Renshaw, 2016), which comprises of four domains: academic satisfaction, academic efficacy, school connectedness, and college gratitude.

Accommodations. The term is defined by the Americans with Disabilities act as, the diminution of barriers associated with a disability by providing alternative resources that can be used to aide in the completion of required course materials (U.S. Department of Justice: Civil Rights Division , 2008). This study will define accommodations as extended test time, assignment extensions, attendance, quiet test environment, recording devices, advanced notes, housing accommodations, copy of lecture notes, emotional support animals, note taking proxies, use of calculators, alternative assignments, priority registration, digital books, large print material, and academic coaching.

Attitudes toward requesting accommodations. It refers to how a student feels about availing to accommodations and is measured in this study through the Attitudes Towards Requesting Accommodations Scale (Barnard-Brak et al., 2010).

Disabilities. As adopted in this study, Section 504 defines disability as having or being regarded as having an impairment, either mental or physical that limits at least one major life activity. Major life activities can include manual tasks, walking, talking, seeing, hearing, learning, communicating, etc.

Overview

Chapter 2 presents, analyzes, and summarizes theoretical and empirical literature relevant to the variables of the study. Content of the chapter includes profile of college

students with disabilities, an overview of accommodations, perceptions and attitudes of faculty and students, positive psychology and theory of resiliency, and academic well-being in students with disabilities.

Chapter 3 describes the methods and procedures employed in this study.

Information included in the chapter are: settings and participants, measures, procedures, and data analysis.

Chapter 4 presents the statistical results of the survey using of tables. Findings are interpreted in light of the hypotheses of the study.

Chapter 5 discusses the key findings in relation to the hypotheses of the study.

Implications for practice and recommendation for future research are also discussed.

Chapter 2

Review of Literature

Profile of College Students with Disabilities

Enrollment into higher education programs of college students with disabilities has been increasing greatly, since 1990, when the ADA began requiring accommodations to be available to students in need. However, the amount of students reaching degree completion is still minimal in number, and if they are it is at a slower pace than the typical population (Quick, Lehmann, & Deniston, 2003). A study conducted by Wolanin & Steele (2004), revealed that students with disabilities wait on average three years after high school to apply to college, and it takes on average twice as long to complete their degrees. A topic that is often discussed in research done on students with disabilities, at the college level, is the conflict between access and success. The laws put in place do make sure that students with disabilities have equal opportunity to be accepted into a program, but there are many things they do not regulate. For instance, the laws say that colleges must have accommodations available for students, but this does not specify the quality, types, or a specific standard for professors for accommodations. Because students with disabilities were previously directly given accommodations in high school there may possibly be a lack of preparedness to deal with a higher level of education without their normal accommodations (Barnard-Brak, Lechtenberger, & Yan, 2010; Harris, Ho, Markle, & Wessel, 2011; Hong, et al., 2007; Marshak, Van Wieren, Ferrell, Swiss, & Dugan, 2010). For this reason, it is important that they advocate to receive the accommodations necessary to help them be successful in college.

Accommodations for College Students with Disabilities

Universities and colleges must provide students with disabilities accommodations in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. The ADA requires universities to consider students with disabilities when creating academic programs, and to provide reasonable accommodations for exams and other evaluations (Barnard-Brak, Lan, & Lechtenberger, 2010). There are different types of accommodations for students who may experience a range of disabilities. Technological advances being made in assistive technology for disabled students have greatly increased the accommodations that universities are able to make available to this student population (Konur, 2006; O'Day & Goldstein, 2005; Rocco, 2002; Thomas, 2000; Wolf, 2001).

Newman, et al., (2011) reported that extended test time was the most commonly used accommodation in the university setting. This research stated that 80% of students were availing to this accommodation that were using accommodations, and students reported that this accommodation was very beneficial to their academic wellbeing (Newman, et al., 2011). Assistive technology is commonly used for aloud screen reading and voice to text to type essays for the visually impaired; students with these accommodations often report them as being vital to their success in college (Newman, et al., 2011). Other common accommodations seen at the college level are: student proxies' in class to assist in note taking during lectures, sign language interpreters, and scribes to dictate for students (Lehman, Davies, & Laurin, 2000; Wilson, Getzel, & Brown, 2000).

Universities testing centers often provide the testing accommodation for students registered with their disabilities office. The schools testing centers may be more equipped with the technology required during testing, allow more time for the test to be taken, or even allow dictation of the test for some students. Some professors may prefer that they give the test at a later time, so they can assist the student personally.

On average, about 9% of the college student population reports having a disability, but it is estimated that less than half of that proportion actually avail of the accommodations available to them (Hartman, 1993). College students may not be availing of accommodations, because unlike primary school where accommodations were provided, these students must go seek and apply for accommodations themselves. Students with disabilities must first provide complete disclosure in order to receive services from their universities. Accommodations may include documentation of the student's disability from an appropriate licensed professional and also self-identifying as disabled to the disability office (Barnard-Brak, Lan, & Lechtenberger, 2010). Once students are granted eligibility to accommodations they can inform their professors about the accommodations they need.

A controversy surrounding accommodations is that some believe that accommodations are unfair (Lerner, 2004; Zuriff, 200) and this argument as been especially persistent in regard to extended time on exams (Bolt & Thurlow, 2004; Stretch & Osborne, 2005). Student accommodations regarding testing time were created around the idea that all students must participate in testing assessments for their classes, and that modifications given would even the playing field for students with special needs that inhibited them from taking standard tests (Lovett, 2010). Certain disabilities often make it

hard for students to show their true level of understanding (of the material) within the standard testing time as compared to students without disabilities. For example, a student with a learning disability in reading may read slower than the typical student, and therefore take longer to read the questions and in turn take longer to complete the test (Lovett, 2010). This means that a student with disability and a typically developing student taking a test within the same time limit may have varying grades not because the student with disabilities knows less about the material, but because the student with disabilities suffers from a variance due to a construct-irrelevant skill, such as reading speed (Lovett, 2010).

Despite these facts that accommodations even the playing field for students with disabilities some educators consider accommodations as unfair. Some fanatic opponents of test taking accommodations argue that some students with higher socioeconomic status find ways to obtain a false disability diagnosis just so they can receive academic accommodations (Lerner, 2004; Lichtenberg, 2004). More moderate adversaries have been known to suggest that testing taking accommodations may not be always necessary regarding the specific disability, and disability type should be a consideration in regards to this accommodation (Koretz & Barton, 2003-2004; Pitoniak & Royer, 2001). Research evidences often do not support these opinions, and yet these stigmas by educators about accommodations for students with disabilities exist (Kieffer et al., 2009; Lovett, 2010).

Perceptions and Attitudes of Faculty and Students

Students with disabilities often report that asking their professor to provide accommodations can be uncomfortable and awkward (Barnard-Brak, Lan, &

Lechtenberger, 2010). A study done by Greenbaum, Graham, and Scales (1995), revealed that when asked why they discontinued their enrollment in higher education, students with disabilities often stated, "...a lack of understanding and cooperation from faculty and administrators..." (p. 468). Students with disabilities often report feeling as though faculty and administration are not understanding of their level of accommodations needed, the faculty lacks knowledge of how to handle accommodation situations, or seem agitated by needing to accommodate (Hill, 1996; Lehman, Davies, & Laurin, 2000; Wilson, Getzel, & Brown, 2000).

It is often a belief of students with disabilities that their need for accommodation of any type is hindered by stereotypical beliefs and discrimination. They themselves consider faculty and students to have a lack of understanding and knowledge in relation to disabilities in general (Gmelch, 1998). Although this may not be the case with every professor and student, it may still be considered a belief held largely by the disabled student population. Due to students with disabilities beliefs about continued discrimination from the general population, they may feel apprehensive when it comes to receiving accommodations available to them (Norton, 1997).

Many students feel that faculty members appeared uncomfortable while students were disclosing their disability, and had limited training on how to handle providing accommodations. Students often report having to negotiate with faculty members when they are hesitant to provide accommodations (Norton, 1997). Although these students can report ADA noncompliance when professors are not willing to give them the accommodations they usually do not. These students often report being fearful to do so (Norton, 1997). On average, one in ten students had experienced this issue, but the

student may be reluctant to report it (Torkelson Lynch & Gussel, 1996). Often students with disabilities reported trying to go without their necessary accommodations so they do not have to disclose to faculty that they are disabled (Barnard-Brak, Lan, & Lechtenberger, 2010).

Research done by Rao (2004) indicated that faculty and staff also feel that they need to be better informed about students with disabilities and be trained to better understand the protocol behind dealing with accommodations as well as addressing the needs of students with disabilities. In a study by Barnard-Brak, Lan, & Lechtenberger (2010) indicated that, although students with disabilities have had some negative experiences with faculty members in disclosing their disability, they felt it was worth seeking accommodations. In addition, students reported being able to remember some faculty that went above and beyond to make sure they received the accommodations necessary, and that they felt these faculty wanted them to succeed (Barnard-Brak, Lan, & Lechtenberger, 2010).

Quinlan, Bates, and Angell (2012) conducted a qualitative research study on students with disabilities and found three common themes regarding ways faculty treat accommodations. The first theme they discussed (which was least likely to occur) is that of “non-accommodation,” which describes professors who either come off strong and rigid regarding their syllabus and the way class will be run, and those who refuse to modify the way their class is run in the form of accommodations (Quinlan, Bates, & Angell, 2012).

The second theme they discussed is “formal accommodation,” which describes professors who refer students to resources that can help them with their work but does not directly state that anyone needing accommodations see them (Quinlan, Bates, & Angell, 2012). An example of a “formal accommodation environment would be where a professor indicates on the syllabus that if any student who needs accommodation assistance, he/she can “call this number,” but never specifically directs the student to speak with them regarding this issue; but if asked, the professor can try to respond to the student to the best of his/her ability (Quinlan, Bates, & Angell, 2012).

The third and last theme is “accommodation for all,” which describes professors who recognize that students have different learning styles and needs, and therefore they create a very enabling classroom for anyone having an issue. These are the professors who make sure that students with disabilities are not singled out or treated differently because of their accommodations (Quinlan, Bates, & Angell, 2012). Students with disabilities often report that having professors who are welcoming and supportive of all students’ learning needs and make that clear when introducing themselves, create an environment that not only helped them succeed, but benefitted all students.

Higher education faculty members often report having limited knowledge of the disability laws, limited experience in interacting with students with disabilities, limited training from academic support services on how to handle accommodation situations, and limited knowledge on how to properly and fairly implement accommodations (Baggett, 1994; Burgstahler & Doe, 2006; Cawthon and Cole, 2010; Leyser et.al., 1998; Leyser et al., 2003; Vasek, 2005; Vogel, Holt, Sligar, & Leake, 2008; Vreeburg Izzo et al., 2008). This may not be true for every higher education institution; however, if problems do exist

in a general sense than it is something that needs to be addressed. It is highly recommended in the existing research that higher education institutions provide faculty with avenues to increase disability awareness and sensitivity training (Barga, 1996; Houck, Asselin, Troutman et al., 1992; Quinlan, Bates, & Angell, 2012). As a group of leaders, professors are constantly modeling behaviors and that, it is important that they create a safe and welcoming environment for all students.

Professor's positive attitudes and the implementation of accommodations are often reported as a major factor in the success of students with disabilities (Fichten, 1988). A study done by Timmerman & Mulvihill (2015) found that students with disabilities often cited that faculty and the general student population do not understand the academic accommodation needs of students with disabilities. However, when they do understand, it can improve these students' attitudes towards college. For this reason, it is critical that future research can explore on evaluating the attitudes of faculty and general students toward students with disabilities.

Assessing Attitudes of Students on Accommodations

Research is limited on the reception of opinions from college students with disabilities regarding their education and accommodations (Fuller, et al., 2004; Tinklin, Riddell, & Wilson, 2004; Vickerman & Blundell, 2010). While there were studies that explore on the self-identity of students with disabilities, some studies have focused on faculty attitudes towards students with disabilities or accommodations (Wolanin & Steele, 2004). While perceptions of others are valuable, assessment of attitudes directly from students with disabilities is warranted in research (Carney, Ginsberg, Lee, Li, &

Orr, 2007). For example, in a study done by Vickerman and Blundell (2010), results showed that multiple areas of improvement were needed on studies involving students with disabilities, including direct consultation with the students. Because this specific population in colleges is struggling, it is important to measure responses from the students directly about academic adversities they face (Wolanin & Steele, 2004). A main reason for this is that, the beliefs students' hold about their academic successes or failures have important consequences on their thoughts, predictions, feelings, and actions (Weiner, 1986).

Students with disabilities who are academically successful consistently report accommodations being critical to their college success (Monagle, 2015). A qualitative study done by Timmerman & Mulvihill (2015) aimed to discover how important accommodations, modifications, and adaptations for program requirements to the success of students' academic college experiences (Timmerman & Mulvihill, 2015). Through interviews, common themes emerged regarding the importance of accommodations. Students cited the accommodation of extra time as being essential to their academic success (Timmerman & Mulvihill, 2015). The students stated that it was important that this accommodation includes extra time during test, extra time to complete reading assignments, and the amount of time it took to get modified class materials that were fitting to their disabilities was extended. Additionally, a study by Sireci et al. (2005) found similar accommodation variables to be steady predictors of academic achievement. To follow up, a quantitative study conducted by Kim & Lee (2016) also found that extended time for testing significantly improved the GPA of students with disabilities.

Another theme that emerged in the interview was that the students found it vital to have a positive attitude in regard to accommodations in addition to overall self-efficacy (Timmerman & Mulvihill, 2015). Students with disabilities believed that accommodations combined with self-efficacy gave them the confidence they need to stay in school and complete their degrees.

The last common theme that emerged from students' interviews was that students felt some students and faculty did not understand their need for academic accommodations, and how truly important it was that faculty work with them in a positive way (Timmerman & Mulvihill, 2015). This lack of understanding is often cited in within the study, and may have been a contributing factor as to why some students did not avail of accommodations at all. Also, some students were registered with disability services but often chose not to mention their disability to professors.

A study done by Barnard-Brak et al., (2010) led to the development and validation of the Attitudes Towards Requesting Accommodations (ATRA) scale for college students with disabilities. Using the ATRA scale, it was found that attitudes towards accommodations and type of college were predictors of students' use of accommodations. This study found that students with more positive attitudes about accommodations were more likely to use them (Barnard-Brak et al., 2010). There were also studies that looked at disability category as the main predictor of likelihood of requesting accommodations. In Barnard-Brak (2010) disability was not a significant factor, but they believed that this was an idea that can be further studied. Monagle (2015) explored further into attitudes of college students toward requesting accommodations as a factor, and also looked at demographics as factors in requesting accommodations. The

research concluded that students' year in school was a contributing factor to whether or not they request accommodations (Monagle, 2015). The research showed that students were more likely to not start requesting accommodations until their sophomore or junior year (Monagle, 2015). This case was mentioned in some studies because students were not aware of how rigorous college is going to be compared to high school as well as did not realize the need for academic accommodations until the following year (Monagle 2015; Sidelinger and Brann, 2015). Lightener (2016) also supported this finding of students' deciding not to avail of accommodations and experienced poor grades, and eventually decided to seek out accommodations to help improve their GPA.

Monagle (2015) also found that type of disability did not significantly factor into students' decision of whether or not to request accommodations but number of disabilities did. Students with multiple disabilities were more likely to request accommodations was evident in a number of studies (Barnard-Brak, et al., 2009; Newman et al., 2011). Newman et al, (2011) found that students with physical disabilities were more likely to use accommodations compared to those with learning disabilities.

Whether students' disability is visible or invisible has often been discussed as a contributing factor to students' decisions to request accommodations. A study done by Korb, Lucia, Wenzel, & Anderson (2011) found that students may be more hesitant to request accommodations if their disability was invisible, for the fear that professors may not understand how imperative receiving accommodations was for them. More research on this topic may be beneficial in understanding how much this factor can contribute to students' use of accommodations.

Positive Psychology & Theory of Resiliency

The theoretical framework to support this study revolves around positive psychology and the theory of resilience. As stated in Chapter 1, a large population of students with disabilities can be at risk of either not graduating on time or failing out of college (Wolanin & Steele, 2004). This study explores the idea that positive attitudes may motivate students to use accommodations, which in turn can enhance academic well-being. The resilience theory supports the hypotheses to be tested in this study.

Resilience theory emerged from a positive psychology perspective. The goal of the resilience model is to promote well-being from positivity (Masten, 2011). This theory was developed while psychologists were studying children with developmental issues (Yates, Tyrell, & Masten, 2015). These children were labeled as “at risk” due to developmental disadvantages and adversities they were facing in their lives (Wolanin & Steele, 2004). Prominent scholars in the development of resilience theory include Norman Garmezy, Lois Murphy, Michael Rutter, and Emmy Werner (Masten & Powell, 2003). They wanted to investigate why some children with developmental issues were able to adapt well when faced with hardships, and others were not able to cope (Yates, Tyrell, & Masten, 2015). Their research led to the idea of resilience.

The American Psychological Association (2016) defines resilience as, “the process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of stress... it is associated with behaviors, thoughts and actions that can be learned and developed by anyone” (n.p). The resiliency theory’s *protective factor model* states that promotive factors can reduce the effects of the association between risks and negative outcomes” (Zimmerman, 2013). The risk-protective model revolves

around the idea that positive resources will diminish the effects that risks have on the outcome of situations (Masten, 2011). One of the core fundamentals of positive psychology and the resilience theory is that it is a strengths-based approach, which focuses on positive outcomes rather than individual deficits (Zimmerman, 2013). This approach looks at individual assets, promotive factors, and adaptive capacities (Zimmerman, 2013).

Competence is the capacity to adapt successfully from adversity and meet cultural and social expectations (Yates, Tyrell, & Masten, 2015). The theory of resilience states that there are some internal and external factors pertinent to retaining competence. The internal factors necessary for competence are good health, positive well-being, happiness, or a cohesive sense of self (Wolanin & Steele, 2004). On the other hand, external factors related to competence are required for positive work environment, school achievement, and quality of relationships (Yates, Tyrell, & Masten, 2015).

Risk factors are what threaten an individual's ability to adapt and remain competent in a given situation (Yates, Tyrell, & Masten, 2015). They are factors that could lead to negative outcomes for the individual. Risk factors for students with disabilities may be their attitudes towards accommodations, not availing of accommodations, and faculty & student attitudes towards them. To be successful, students with disabilities who may be struggling academically can consider accommodations as resource factor (Monagle, 2015).

Resource factors are promotive factors that assist an individual in producing desirable outcomes (Yates, Tyrell, & Masten, 2015). This study is stating that use of

accommodations may be academically beneficial and could be a promotive resource factor for students with disabilities. The more resource factors an individual is able to access, the more likely he/she may become resilient in any given situation.

Existing research has identified some risk factors for students with disabilities. Students starting college without the necessary prerequisite academic skills are often identified as at risk of dropout (Guy, Shin, Lee, & Thurlow, 2000; Snyder et al., 2009; Stodden, Whelley, Chang, & Harding, 2001). At times, under-developed academic skills can make it harder to keep up with the heavier workload and to work with other students who already have the requisite academic skills. Many students with disabilities also take off some time when transitioning from high school to college (Mamiseishvili and Koch, 2011). Coming from first generation family is another risk factor for many students with disabilities in which, both parents did not receive college education (Mamiseishvili and Koch, 2011). Having parents that have gone through college is often reported as making college easier for their kin. Parents that have gone to college understand the application process, understand the stressors involved in being a college students, and may possibly understand how to better help their child with these things. Finally, the fact that most college students live at home with their parents and commute is considered as a risk factor (Engle & Tinto, 2008; Horn & Carroll, 1998; Ishitani, 2003, 2006; Lohfink & Paulsen, 2005; McCarron & Inkelas, 2006; Tinto, 2004; Warburton et al., 2001). These students are more likely to be less involved in the social aspect of college life that makes many students feel welcome and experience a sense of belonging. Kim & Lee (2016) concurred to these risk factors because they relate to higher risks of retention and

persistence. These risk factors often contributed to the high dropout rate of students with disabilities (Kim & Lee, 2016).

Academic Well-Being in Students with Disabilities

Positive psychology's increase in popularity has brought with it new considerations on how important happiness is to everyday lives of human population (Sivis-Cetinkaya, 2013). Happiness is often defined as an individual's subjective well-being (Sivis-Cetinkaya, 2013; Strack et al. 1991; Veenhoven 1991). There is currently no one set definition of academic well-being, and the reason for this is that research has not exhausted all possible factors related to well-being (Pollard & Lee, 2003). Research discovering the factors that contribute to well-being is what helps the academic community understand what can truly define well-being.

General well-being of a person is often defined by two things: affect and cognitions (Diener 2000; Diener et al. 1999). A person's affect refers to their pleasant positive feelings about his/her life. The cognitive aspect refers to the level of contentment a person feels when he/she thinks about life (Sivis-Cetinkaya, 2013). An individual with a more positive affect and cognitions is more likely to have a more pleasant state of well-being.

Affect and cognition are just two factors that research has correlated to wellbeing. A person's wellbeing is subjective and complex, with multitude of factors contributing to it (Sivis-Cetinkaya, 2013). Research on well-being proposes that factors can be both environmental and internal (Sivis-Cetinkaya, 2013). Positive psychology most often looks at subjective well-being in relation to internal factors, which might be

what the individual views as their current psychological strengths (Diener and Seligman 2002; Furnham and Petrides 2003; Hayes and Joseph 2003). Others psychological theories focus more on the relationship between subjective well-being and external factors, such as demographics (Clark and Oswald 2002).

Subjective well-being as conceptualized in the College Student Subjective Wellbeing Questionnaire (CSSWQ) developed by Renshaw and Bolognino (2014) encompasses academic efficacy, college gratitude, school connectedness, and academic satisfaction. On the other hand, Korhonen, Linnanmäki, and Aunio (2014) describe well-being to include self-concept and general happiness.

A lower academic well-being has been found as strongly related to student dropout (Janosz, LeBlanc, Boulerice, & Tremblay, 2000). This finding has significant implications for college students with disabilities who are known to be at risk of dropping out from college. The literature shows that very few studies have focused on the relationship between academic achievement and well-being (Ayyash-Abdo and Sanchez-Ruiz 2011; Sivis-Cetinkaya, 2013). For example, a quantitative study with 1,248 students at Pennsylvania State University found that academic accommodations greatly improved academic achievement (Kim & Lee, 2016). Academic well-being may serve as an important protective factor for students with disabilities to be successful in college (Renshaw & Bolognino, 2014). In addition, how students with disabilities view their abilities to learn and the quality of their school experiences may contribute to their academic well-being (Goetz et al., 2010, Tuominen-Soini et al., 2008; Tuominen-Soini et al., 2012).

A qualitative study done by Timmerman & Mulvihill (2015) found that high levels of self-efficacy were vital to degree completion of students with disabilities. These students stated that having a disability often comes with negative perceptions of others being directed at them (Timmerman & Mulvihill, 2015). These negative attitudes from others make it harder for them to have confidence to continue in their programs but they believe that, "...strong self-advocacy skills, a willingness to disclose their disability, and a positive "can-do" attitude" is what continues to make them successful students (Timmerman & Mulvihill, 2015).

Another factor that research has shown as indicator of academic well-being is family and peer support (Dowrick, Anderson, Heyer, & Acosta, 2006). Studies involving general student population often reported that social support is vital to well-being (Wang & Castañeda-Sound, 2008). A study by Solberg and Villareal (1997) produced results that showed students who feel they have adequate social support reported lower distress scores compared to those students who reported having less than sufficient social support. Students with disabilities often report that social inclusion and acceptance by peers increases their subjective well-being, and is as important as academic accommodations (Belch, 2004).

Often low satisfaction with peer interaction and acceptance is considered as a common issue for students with disabilities that may lead to decrease in overall well-being (Stodden et al., 2001; Webster, 2004). Support from peers can play a major role in the college adjustment of students with disabilities. Acceptance from peers can reduce perceived stigma related to disabilities and negative attitudes that students with disabilities may have held about peer interactions (Conyers et al., 1998). Students with

disabilities in this study reported interest from their families about their education which they said encourages success and contributes to academic and overall wellbeing (Lundberg et al., 2008). There is much research on peer and family support for children and adolescent but seems to be limited on students at the university level.

According to Kemp (1999), quality of life (QOL) is negatively impacted by disability. Good quality of life is often associated with an individual's positive well-being (Reinschmiedt, 2008). Lawton (1997) describes QOL as having multiple factors, which include opportunities for achieving personal potential, positive social involvement, and well-being (Schalock et al., 2002). Quality of life has often been described as including education (Carr, Thompson, & Kirwan, 1996). Subjective positive well-being in academics has been known to contribute to a high quality of life.

Synthesis of the Related Literature

This chapter presented an overview of factors that affect college students with disabilities. The studies reviewed show that academic accommodations play a role in the academic success of students. Research on attitude towards accommodations and its relationship to academic success is still in its early stages.

Studies on academic accommodations report inconsistent findings on what factors influence students' satisfaction and dissatisfaction with accommodations. Academic accommodations are an important factor for students with disabilities because they have been known to improve quality of life and wellbeing (Reinschmiedt, 2008). The theory of resilience tells us that academic well-being may serve an important protective factor for students with disabilities to be successful in college (Renshaw &

Bolognino, 2014). Research shows that students with disabilities have reported that they view higher education as an opportunity to experience a higher quality of life, which in turn can promote their subjective well-being (Dijkers, 1999; Lawton, 1997; Lau, Cummins, & McPherson, 2005).

Resilience theory supports both hypotheses of this study, specifically, the concept of protective and risk factors (Masten, 2011). This study is stating that negative attitudes towards accommodations and not using accommodations are risk factors for students with disabilities (Yates, Tyrell, & Masten, 2015). This study is hinged on the idea that positive attitudes and using accommodations are protective factors for students with disabilities, which in turn can lead to higher academic well-being (Yates, Tyrell, & Masten, 2015).

Although there has been much research done on well-being in general within the resilience theory; the research done on academic well-being is still in its early stages (Barnard, Stevens, Siwatu, & Lan, 2008). Well-being has been explored in students struggling with poverty, racism, sudden loses of a loved one, medical illnesses, and natural disasters (Yates, Tyrell, & Masten, 2015). Yet, well-being of students with disabilities is topic worth pursuing.

Chapter 3

Method

Setting and Participants

Participants of this study were 92 college students with disabilities who have been registered with the academic services office of a Northeastern public university. Of this number, 74 students were receiving accommodations and the remaining 18 students were not receiving any accommodations. Out of 1,100 students enrolled with disability services office, only 800 students were receiving accommodations. Because data were collected through an online survey, convenience-sampling technique was employed in selecting participants.

The demographic profile of participants included 69.8% females, 27.1% males, and 3.1% chose not to indicate their gender. Participants' ages ranged from 18 to 57 years, with an average of 23 years. Participants self-reported a spectrum of ethnical backgrounds with 75% Caucasian, 8.3% Hispanic/Latino, 8.3% Asian/Pacific Islander, 5.2% African American, and 3.1% multiracial.

When asked about current year in college, 26.6% reported being freshman, 12.8% sophomores, 31.9% juniors, and 28.7% seniors. A broad range of degree programs were reported by participants including: 5.2% biomedical sciences, 6.3% business, 12.5% communications & creative arts, 14.6% education, 13.5% engineering, 16.7% humanities & social sciences, 4.2% performing arts, and 27.1% science & mathematics. Finally, disability diagnosis was reported with 14.7% of participants diagnosed with a learning disability, 26.3% psychiatric/mental health disability, 14.7% physical/medical disability, 15.8% attention deficit/hyperactivity disorder (ADHD), 7.4% Autism Spectrum Disorder (ASD), and 21.1% multiple disabilities (MD).

Measures

Participants completed an online survey that comprised of three sections: survey on demographic factors, disability information, and information regarding accommodation services, the Attitudes Toward Accommodations (ATRA) scale, and the College Student Subjective Wellbeing Questionnaire (CSSWQ) scale. Each section is described in detail below.

Demographics survey. The section on demographic survey contained 12 questions. It asked about accommodations students were currently using and their diagnosis. It also included questions regarding demographic characteristics and GPA.

The Attitudes Toward Accommodations (ATRA) Scale. ATRA was developed by Barnard-Brak, et al. (2009) to quantify students' attitudes toward requesting accommodations at the college level.) It is made up of 32 Likert-type items that were grouped into the following subscales based on the results of factor analysis: academic integrity (7 items), disability disclosure (7 items), disability acceptance (9 items), and accommodations process (9 items). Response options range from 1 (strongly agree) to 5 (strongly disagree). Item responses per subscale were summed up to yield a total score, with higher total scale scores suggesting more unfavorable attitudes (Barnard-Brak, et al., 2010). Possible total scores range from 32 to 160. Construct validity of the ATRA scale has established through confirmatory factor analysis (Monagle, 2015). Reliability estimate was acceptable at coefficient alpha of .91. ATRA scale is included in the Appendix on page 53.

The College Student Subjective Wellbeing Questionnaire Scale (CSSWQ). CSSWQ was developed by Tyler L. Renshaw and Sarah J. Bolognin (2014). The CSSWQ is a short 16-item multidimensional domain-specific scale that accesses college

students' covitality. Covitality is measured by four first-level constructs of academic efficacy, college gratitude, school connectedness, and academic satisfaction; and a second-order construct of college student covitality (Renshaw & Bolognino, 2014). All 16 items are positively worded and response options are on a seven-point scale (1- strongly disagree, 2- disagree, 3- slightly disagree, 4- neutral, 5- slightly agree, 6- agree, 7- strongly agree).

Factor analyses were used to examine validity in support of the CSSWQ structure (Renshaw & Bolognino, 2014). Statistical analyses of the CSSWQ indicated that there was a good data model fit across factors and scales (H and $\alpha \geq .80$), with standardized loadings ranging from .62 to .86, contributing to strong latent construct reliability ($H = .87$; Renshaw, 2016). CSSWQ's single higher-order factor (covitality/generalized college student wellbeing) was a strong predictor of both domain general psychological distress ($\beta = -.70$) and psychological wellbeing ($\beta = .97$). CSSWQ was a good predictor of academic achievement (Renshaw & Bolognino, 2014).

CSSWQ was reported to have strong internal consistency, with Cronbach alpha at .80 (Renshaw & Bolognino, 2014). Overall responses by students to the composite scale further indicated adequate to strong internal consistency ($\alpha \geq .79$). The CSSWQ scale is included in the Appendix on page 55.

Procedure

Preceding the release of the survey to potential participants, several vital steps were taken to ensure the protection of students who participated in the survey. An electronic IRB application was submitted for review and approval. Potential participants were contacted through an email sent out via the university office of academic services to

participate in the online survey through a link included in the email message. The online survey was conducted for two months, with reminder messages to prospective participants sent out every two weeks to increase response rates. The survey included an option for participants to enter to win a \$25.00 gift card.

Data Analysis

Data from the survey were recorded electronically and downloaded from QUALTRICS in a format compatible to the requirements of the Statistical Package for the Social Sciences (SPSS). SPSS was used in the data analysis. Specifically, descriptive statistics (i.e., mean, standard deviation, range, skewness, and kurtosis) and nonparametric Mann-Whitney U were calculated. Alpha at .05 or less will be adopted to reject the null hypothesis.

Chapter 4

Results

Disability Diagnosis

Table 1 displays the different diagnoses reported by the participants. Majority of the participants reported having psychiatric or mental health problem (26%) followed by multiple diagnoses (21%). A number of students also reported being diagnosed with ADHD (16%), learning disability (15%), or physical or medical disability (15%). Autism spectrum disorder (7%) has the least number of students reporting this diagnosis.

Table 1

Disability Diagnosis Profile of Participants

Diagnosis	<i>n</i>	%
Psychiatric/Mental health	25	26
Multiple diagnoses (MD)	20	21
Attention deficit/hyperactivity disorder (ADHD)	15	16
Learning disability	14	15
Physical/Medical disability	14	15
Autism spectrum disorder	7	7

Types of Accommodations

Of the 92 students included in the study, 69 or 73% indicated receiving one or more accommodations. As shown in Table 2, students reported receiving various accommodations that pertain to examination as well as class lectures and assignments. Very few students indicated that accommodations that address their mental health (e.g., emotional support animals) and living (e.g., housing accommodation) condition. Extended test time and taking exam in a room with reduced distractions were the most common types of examination accommodation. On the other hand, extended time on assignments and modification on attendance policy were the most common types of class and assignment accommodations.

Table 2

Types of Accommodations Reported by the Participants

Accommodations	<i>f</i>	<i>Rank</i>
Extended test time	75	1
Assignment extension	21	2
Modification on attendance policy	18	3
Taking exam in a room with reduced distractions	14	4
Recording devices	7	5
Advanced notes	6	6
Housing accommodations	5	7
Copy of lecture notes	3	8
Emotional support animals	2	10.5
Note taking proxy	2	10.5
Use of calculator	2	10.5
Alternative assignments	2	10.5
Priority registration	1	14.5
Digital books	1	14.5
Large print materials	1	14.5
Academic coaching	1	14.5

Descriptive Statistics of the Primary Study Variables

The primary variables of the study were attitude towards accommodation, GPA, and well-being of students with disabilities. Descriptive statistics for each of these variables are summarized in Table 3 that includes mean, median, standard deviation. In addition, skewness and kurtosis were calculated to determine normality of the variables' distributions. Resulting skewness and kurtosis values of all the variables were within -2 and +2, suggesting that distributions met normality assumptions (Meyers, Gamst, & Guarino, 2017).

Table 3

Descriptive Statistics of Attitudes Toward Accommodations, GPA, and Wellbeing

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>Skewness</i>	<i>Kurtosis</i>
ATRA	84	3.26	.44	3.31	-.08	.03
GPA	90	3.31	.48	3.45	-.94	.90
Academic satisfaction	91	5.25	1.39	5.50	-1.16	.92
Academic self-efficacy	92	5.63	1.13	5.75	-1.02	1.32
School connectedness	92	5.35	1.05	5.50	-.58	-.13
College gratitude	91	6.44	.56	6.50	-1.06	.82
Overall well-being	88	5.67	.79	5.84	-.90	.98

Note. ATRA- Attitudes towards accommodations; GPA- Grade point average

ATRA of Students Receiving and Not Receiving Accommodations

Table 4 presents results of the Mann-Whitney U test to determine differences in ATRA of students receiving and not receiving accommodations. There was a significant difference in the ATRA scores between those receiving and those not receiving accommodations, $U = 709.50, p \leq .01$. As expected, students receiving accommodations ($Mdn = 3.38, n = 69$) had more favorable attitudes than those students who were not receiving accommodations ($Mdn = 2.97, n = 15$). Hence, the hypothesis that there is a significant difference in the attitudes between those receiving and not receiving accommodations was supported.

Table 4

Differences in ATRA Between Students Receiving and Not Receiving Accommodations

Accommodation	<i>Mdn</i>	<i>U</i>	<i>z</i>
Yes (n = 69)	3.38	236.00	-3.29***
No (n = 15)	2.97		

Note. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

GPA of Students Receiving and Not Receiving Accommodations

GPA of students receiving and not receiving accommodations were compared using Mann-Whitney U test. Results of the statistical analysis summarized in Table 5 show that GPA of students receiving accommodations ($Mdn = 3.47, n = 73$) was higher than GPA of students not receiving accommodations ($Mdn = 3.40, n = 18$). However, the differences in the GPAs between these groups was not sufficient to yield statistical significance, $U = 573.00, p \geq .05$. Hence, the hypothesis that there is significant difference in the GPAs of receiving and not receiving accommodations was not supported.

Table 5

Differences in GPA Between Students Receiving and Not Receiving Accommodations

GPA	<i>Mdn</i>	<i>U</i>	<i>z</i>
Yes (n = 73)	3.47	573.00	-.83
No (n= 18)	3.40		

Note. * $p \leq .05$; ** $p \leq .01$ ** $p \leq .001$ ***

Well-Being of Students Receiving and Not Receiving Accommodations

Scale and overall well-being of students receiving and not receiving accommodations were compared using Mann-Whitney U test. Results of the statistical analysis summarized in Table 6 suggest that academic satisfaction of students receiving and not receiving accommodations were significantly different, $U = 407.50, p \leq .01$.

Students receiving accommodations ($Mdn = 5.75, n = 74$) had higher academic satisfaction than those who were not receiving accommodations ($Mdn = 5.25, n = 17$).

On the other hand, the two groups of students were comparable in academic efficacy ($U = 648.50, p \geq .05$), school connectedness ($U = 475.50, p \geq .05$), college gratitude ($U = 492.00, p \geq .05$), and overall well-being ($U = 455.00, p \geq .05$).

Based on the results, the hypothesis that there is a significant difference in well-being between those receiving and not receiving accommodations was partially supported.

Table 6

Differences in Well-Being Between Students Receiving and Not Receiving Accommodations

	<i>Mdn</i>		<i>U</i>	<i>z</i>
	Receiving	Not Receiving		
Academic satisfaction	5.75 (n=74)	5.25 (n=17)	407.50	-2.26**
Academic efficacy	5.75 (n=74)	5.75 (n=18)	648.50	-.17**
School connectedness	5.75 (n=74)	5.13 (n=18)	475.50	-1.88**
College gratitude	6.63 (n=74)	6.50 (n=17)	492.00	-1.42**
Overall well-being	5.88 (n=72)	5.69 (n=16)	455.00	-1.31**

Note. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Chapter 5

Discussion, Conclusions, and Recommendations

Discussion

The study was conducted to examine attitudes towards accommodations, academic achievement, and well-being of college students with disabilities. Results indicated that students who were using accommodations had more favorable attitudes towards accommodations and were more academically satisfied than their peers who were not using accommodations. Although students using accommodations had higher academic achievement and overall well-being (including its dimensions such as academic self-efficacy, school connectedness, and college gratitude) than students who were not using accommodations, their differences were not statistically significant.

The finding that students with disabilities have more positive attitudes toward accommodations is consistent with the study of Barnard-Brak et. al. (2009) that reported that students with more favorable attitudes about accommodations were more likely to use them. Likewise, a study conducted by Monagle (2015) found that students with disabilities who are academically successful consistently report accommodations being critical to their college success. Extended time in test and assignment were the highly utilized accommodations reported by majority of students with disabilities. Timmerman & Mulvihill (2015) and Kim & Lee (2016) considered these accommodations as essential to academic success of students with disabilities. Furthermore, alternative or modified assignments reported by a significant number of students in this study was indicated by Sireci et al. (2005) to be a stable predictor of academic achievement.

In the current study, students using accommodations reported higher overall well-being and its subscales (academic satisfaction, school connectedness, and college gratitude) than their peers who were not using accommodations. Both groups had comparable level of academic self-efficacy. However, only in the academic satisfaction subscale that a statistical difference was found to be significant. The higher academic satisfaction of students using accommodations can be associated with the types of accommodations used by them. As reported in Table 2, almost all accommodations used by students were those that addressed their academic needs especially modifications related to examinations, class lectures, and assignments. Quinlan, Bates, & Angell's (2012) found that students with disabilities who reported higher academic satisfaction were those who had used accommodations and received support from their instructors. Non-statistical differences in the overall well-being and in the other subscales can be attributed to the highly unequal sample sizes of students using and not using accommodations. As can be noted in Table 6, the sample size of students using accommodations four times larger than the number of students not using accommodations.

Students using accommodations had higher academic achievement (as measured by semester's GPA) than students not using accommodations. However, this difference in academic achievement was not statistically significant which can be attributed again to unequal sample sizes of the two groups of students. Similar findings was also reported by Monangle (2015) with a very uneven sample sizes of 195 students who were receiving accommodations compared to only 46 student not receiving accommodations. Despite unequal sample sizes, this study and other studies (e.g., Kim & Lee, 2016 and Cejda,

Kaylor, & Rewey, 1998) seem to support a general trend that use of accommodation can significantly improve academic achievement of students with disabilities.

Conclusions

This study contributed to empirical literature regarding how accommodations and other support services for college students with disabilities may impact academic well-being. Insights gained from this research may be beneficial to developing intervention programs that may change student's attitudes regarding the use of accommodations. Results show that a more positive attitudes significantly impact student's decisions to use accommodations, which in turn may contribute to overall academic functioning. College persistence of students can be impacted by use of accommodations, positive attitudes, better academic achievement, and higher psychological well-being.

Recommendations

Since the present study only covered students with disabilities from one university, future research can consider a larger and more diverse sample size of students from multiple universities. A more diverse sample characteristics can allow a deeper analysis of data that can draw more specific implications in academic needs and promoting well-being of students with disabilities. Also, the findings of this study can be utilized by the office of disability services in program planning and evaluation to further promote use of accommodations and enhance academic well-being of students with disabilities.

The current literature highlights the important role of faculty in supporting the use of accommodations to students with disabilities. Future studies may consider exploring

best practices of faculty in collaborating with the office of disability services in implementing use of accommodations.

The study found that school connectedness had a marginally significant relation to academic well-being. It may be beneficial for the university to consider creative and innovative approaches to strengthen disability awareness of the general student population, which can hopefully make students with disabilities feel more significantly connected to their university community. A positive campus climate may enhance positive attitudes for students with disabilities.

Lastly, it may be beneficial for future research to use a mixed methods approach to help researchers gain a more in-depth understanding of the college experience and well-being of students with disabilities.

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Appendix

Measurements Used in Survey

The ATRA Scale Items

1. Accommodations are unfair to other students.
2. I want to prove I can do college.
3. Accommodations are for academically weaker students.
4. I want to stand on my own two feet.
5. Accommodations are for lazier students.
6. Students should try to get along without accommodations.
7. I have never felt like I needed accommodations.
8. I don't like to admit that I have a disability.
9. I don't like talking about my disability.
10. I don't want professors to know that I have a disability.
11. I don't like people knowing private and personal information about me such as my disability.
12. The cost of talking about my disability to get accommodations outweighs the benefits.
13. I have a right to privacy regarding my disability.

14. I don't want friends to know that I have a disability.
15. My family doesn't think I am disabled enough to need accommodations.
16. I don't think I am disabled enough to need accommodations.
17. I don't know sometimes whether I am really all that disabled.
18. I prefer to be treated as a nondisabled person.
19. I want to be like other college students.
20. I want to have a normal college experience.
21. There's nothing wrong with me.
22. I was afraid of being labeled.
23. People don't think I am disabled.
24. The Student Disability Services office was unhelpful.
25. The Student Disability Services office was unapproachable.
26. The Student Disability Services office did NOT assist me.
27. I don't trust Student Disability Services to keep my information confidential.
28. I don't trust professors to keep my information confidential.
29. I didn't know anything about disability accommodations when I started college.
30. Going to Student Disability Services is awkward.

31. Requesting accommodations from professors can be awkward.
32. Student disability services were not discussed at my new student or transfer Orientation.

The CSSWQ Scale Items

1. I have had a great academic experience at my university.
2. I am a hard worker in my class.
3. I feel like a real part of my university.
4. I am so thankful that I'm getting a college education.
5. I am happy with how I've done in my classes.
6. I am a diligent student.
7. People at this school are friendly to me.
8. I am grateful to the professors and other students who have helped me in class.
9. I am satisfied with my academic achievements since coming to my university.
10. I am an organized and effective student.
11. I can really be myself at this school.
12. I feel thankful for the opportunity to learn so many new things.
13. I am pleased with how my college education is going so far.
14. I study well for my classes.
15. Other students here like me the way I am.
16. I am grateful for the people who have helped me succeed in college.